## MINIMUM SEARCH SPACE AND EFFICIENT METHODS FOR STRUCTURAL CLUSTER OPTIMIZATION

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# Minimum search space and efficient methods for structural cluster optimization

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#### Abstract

A novel unification for the problem of search of optimal clusters under a well pair potential function is presented. My formulation introduces appropriate sets and lattices from where efficient methods can address this problem. First, as results of my propositions a discrete set is depicted such that the solution of a continuous and discrete search of an optimal cluster is the same. Then, this discrete set is approximated by a special lattice IF. IF stands for a lattice that combines lattices IC and FC together. In fact, two lattices IF with 9483 and 1739 particles are obtained with the property that they include all putative optimal clusters from 2 trough 1000 particles, even the difficult optimal Lennard-Jones clusters,  $C_{38}^*$ ,  $C_{98}^*$ , and the Ino's decahedrons.  $C_{98}^*$  is the only cluster where its initial configuration has a different geometry than the putative optimal cluster in term of the adjacency matrix stated by Hoare. My paper is not a benchmark, I develop a theory and a numerical experiment for the state of the art of the optimal Lennard-Jones clusters and even I found new optimal Lennard-Jones clusters with a greedy search method called Modified Peeling Method. The paper includes all the necessary data to allow the researchers reproduce the state of the art of the optimal Lennard-Jones clusters at April 8, 2005. This novel formulation unifies the geometrical motifs of the optimal Lennard-Jones clusters and gives new insight towards the understanding of the complexity of the NP problems.

**Keywords**: 02.60.Pn Numerical optimization, 21.60.Gx Cluster models, 31.15.Qg Molecular dynamics and other numerical methods, 36.40.Qv Stability and fragmentation of clusters

#### 1 Introduction

Many methods have been proposed for the problem of search of optimal clusters (SOC) [2, 4, 3, 5, 6, 7, 8, 10, 9, 13, 15, 16, 17, 18, 19, 20, 21, 24, 25, 28, 30, 31]. It takes a while until a novel method is able to validity its performance and found new putative optimal Lennard-Jones (LJ) clusters. Nowadays, Shao *et al.* are pushing the frontier of the size of the putative optimal LJ clusters over 309 particles [4, 3, 12, 30, 21, 22, 23]. The author has kept contact with this group for collaboration. Huang *et al.* [11] give equivalent formulations for LJ Potential. Xue [32] presents several properties of the LJ Potential formulation  $\frac{1}{x^{12}} - \frac{2}{r^6}$ . Pardalos *et al.* [18] describe the conditions of a well pair potential function and present several optimization methods for SOC.

Maranas and Floudas [16] present a method of global optimization for molecules:

"Given the connectivity of the atoms in a molecule and the force field according to which they interact, find the molecular conformation(s) in the three-dimensional Euclidian space involving the global minimum potential energy".

This method uses the connectivity of atoms in a molecule to partitioning in several sets based on the distance of pairs of atoms. Several properties are presented and a global optimization algorithm is presented. The complexity of this algorithm is exponential over the number of variables.

Some Authors resist adding to much knowledge and heuristics for the design of an algorithm or method for SOC. However, successful methods based on molecular dynamics, molecular chemistry or physics [9, 27, 14, 31, 17, 15, 25, 7, 8, 30] reduce the Hoare complexity  $\exp(-2.5176 + 0.3572n + 0.028n^2)$  [9] to a polynomial time  $(0.05 \pm 0.02)n^{2.8\pm0.1}$  [8],  $0.02n^{2.9}$  [4], and other polynomial times bigger than the previous ones (some can be found in [27]). However even with the help of previous knowledge, the complexity of a discrete SOC is the same of the NP class of problems, and this is the challenging impulse for the creation of novel methods. Here, I do not included an extent review of methods for SOC but some reviews are [27, 13, 18]. In addition, for the limitation of time and space is not possible to review or mention all previous methods or classify them, instead the article focus in the closed related methods under my perspective. My apologies, if I omit a relevant method but if this happens, it is without prejudice.

It is probable that methods with a good background on the knowledge of the problem and using adaptive search, simulated annealing, lattices, basin hopping, funnels, phenotypes, fusion, evolutionary, and genetic operations have advantages over other methods because they are exploring the discrete search spaces of my lattice IF (hereafter only IF, see Figs. 2, and 3). It was stated by Northby [17]:

"The complexity of the problem lies in the fact that while it is always possible with a computer to allow a particular initial configuration to relax to the adjacent minimum of the potential energy surface, unless the starting configuration has been chosen to lie in the proper valley, or "catchment basin, the resulting configuration will not correspond to the absolute minimum."

Considering this remark, the mentioned methods can relax efficiently but the global minimum could escape from the initial selection in a particular lattice, making necessary the exhaustive creation of good initial clusters from different lattices or the transformation in good ones before the relaxation. Some successful methods use random selection of clusters and particles in a random way from the well know lattices type IC, FC, ID, TO and so on. Here, my propositions close the gap stated by Northby between the initial configuration and the global minimum cluster, in the sense that exist a lattice or a set as an appropriate search space from where it is possible to repeat all the putative optimal LJ clusters reported in The Cambridge Cluster Database (CCD) [26]. As an example, a lattice and a set are presented, IF9483 and MIF1739 respectively, such that they contain particular clusters that match with the putative optimal LJ clusters from  $n = 2, \ldots, 100$  in one relaxation (minimization procedure). The complexity of this type of telephone directory method on IF is at most  $O(n^3)$  (the complexity of the relaxation multiplying by the complexity of the evaluation of a pair potential function for n particles). However, this is not a lower bound for the complexity of discrete methods of SOC using IF. There are cases where it is possible to reduce the numbers of operations in the evaluation of the potential of a cluster by the symmetry inherited from IF.  $C_{13}^*$  is an example where the cost of computing the potential is 4 instead of 91 operations (section 4.1 depicts this). IF allows to have automatic classification of clusters, a measurement in term of the number of adjustment for solving SOC in discrete fashion, and let to study NP complexity.

IF (as a discrete search space) coincides with the well know result from Quantum Mechanic that the particles interact in discrete fashion. Moreover, the existence of particles forming an IF can be seeing as particles in a hot temperature where the positions IC and FC could be occupied with equal likelihood. What it makes difficult to predict the geometric shape of small clusters is the mobility of the potential energy surface (PES). PES changes from small cluster to larger ones in the sense that the displacement of a particle in the outer shell from its lattice's position has more free in the small clusters than in large ones in order to reduce the total cluster energy. On the other hand, for large clusters the transition to stable structures corresponds to a change of geometrical structure from IC to a decahedral lattice [13, 23] where the PES has less freedom. Section 6 has Figures where the normalized gradient is depicted. From these figures the PES's mobility for the particles in the outer shells of a small cluster can be explained.

The notation and some conventions used in this report are given in Section 2. Section 3 describes the properties of the potential where this methodology can be applied. Sections 4 and 5 describe the special IF9483, MIF1739 and methods for them. Section 6 presents MIF1739. It contains all the putative optimal LJ clusters, tables 28-60 give in an efficient and short notation all the indices to build the initial clusters, tables 18-27 present the geometrical type, the initial and minimum LJ potential, and a measure of the adjustment necessary to transform from  $C_{n+1}$ to  $C_n$ , and tables 2-17 give the coordinates of MIF1739 in order to reproduce the numerical results presented here. In addition, this section includes novel figures of the difficult clusters inside of IF9483, and novel descriptions of some clusters. Finally, Section 7 presents my conclusions and future work.

### 2 Notation

 $\mathbb{N}$  is the set of the natural numbers,  $\mathbb{Q}$  is the set of the rational numbers, and  $\mathbb{R}$  is the set of the real numbers.

A lattice,  $\Omega = \{p_i\}_{i \in \mathbb{I}}, p_i \in \mathbb{R}^3 \forall i \in \mathbb{I}$  where I is a set of indexes  $(I=\mathbb{R} \text{ or } I=\mathbb{N})$  is a set of points in a regular pattern in  $\mathbb{R}^3$ .

A cluster of size n is  $C_n = \{p_{i_1}, p_{i_2}, \dots, p_{i_n}\}, p_{i_j} \in \Omega, \forall j = 1, \dots, n.$ 

 $\overrightarrow{\cdot}: L \to \mathbb{R}^{3} \text{ means } \overrightarrow{\cdot}(C_n) = \overrightarrow{C}_n = \left(p_{i_1}, p_{i_2}, ..., p_{i_N}\right) \in \mathbb{R}^{3N}, \text{ it is a vector representation of a cluster where } p_{i_l} = (x_{i_l}, y_{i_l}, z_{i_l}) \text{ is mapped into cylindrical coordinates } (\rho_{i_l}, \alpha_{i_l}, \beta_{i_l}), \rho_{i_l} \in \mathbb{R}^+, \alpha_{i_l} \in [0, \pi] \text{ is zero on the semi-axes } Y^+ \text{ and the } \theta_{i_l} \in [0, 2\pi]. \text{ Then coordinates } p_{i_l} \leq p_{i_m}, l \leq m \text{ if } \rho_{i_l} \leq \rho_{i_n}; \text{ or if } \rho_{i_l} = \rho_{i_n} \text{ and } \alpha_{i_l} \leq \alpha_{i_m}; \text{ or if } \rho_{i_l} = \rho_{i_n} \text{ and } \beta_{i_l} \leq \beta_{i_m}.$ 

 $\overrightarrow{C}_n$  is used as an element of the metric space  $\mathbb{R}^{3n}$ .

Let  $p_j, p_k \in \mathbb{R}^3$  and  $r_{j,k} = \sqrt{(x_j - x_k)^2 + (y_j - y_k)^2 + (z_j - z_k)^2}$ . Some potential functions [16] are Buckingham Potential (BU):

$$\text{VBU}_{i,j} = \alpha_{i,j} e^{\beta_{i,j} r_{i,j}} + \frac{\gamma_{i,j}}{r_{i,j}^6}$$

where  $\alpha_{i,j}$ ,  $\beta_{i,j}$ , and  $\gamma_{i,j}$  are parameters for the type of particles.

Kihara Potential (KI):

$$VKI_{i,j} = 4\epsilon_0 \left[ \left( \frac{1-\gamma}{r_{i,j}/\sigma - \gamma} \right)^{12} + \left( \frac{1-\gamma}{r_{i,j}/\sigma - \gamma} \right)^6 \right]$$

where  $\epsilon_0$ ,  $\sigma$ , and  $\gamma$  are parameters for the type of particles.

Lennard-Jones potential (LJ):

$$\mathrm{VLJ}_{i,j} = V_{i,j} = 4\epsilon_0 \left[ \left( \frac{\sigma_{i,j}}{r_{i,j}} \right)^{12} - \left( \frac{\sigma_{i,j}}{r_{i,j}} \right)^6 \right]$$

where  $\epsilon_0$  and  $\sigma_{i,j}$  are parameters for the type of particles. For the examples in this paper,  $\epsilon_0 = \sigma_{i,j} = 1$ . Morse Potential (MO) [9] is

$$VMO_{i,j} = \left(1 - e^{-\alpha(1 - r_{i,j})}\right)^2 - 1$$

where  $\alpha$  is a parameter.

A pair potential can represented by

$$VXX_{j,k} = EXX(\{p_j, p_k\}) = EXX(p_j, p_k) = EXX(r_{j,k})$$

where XX can be BU for Buckingham, KI for Kihara, LJ for Lennard-Jones, and MO for Morse Potentials. The complete potential of a cluster is

$$\mathrm{EXX}\left(C_{n}\right) = \sum_{i=1}^{n-1} \sum_{j=i+1}^{n} \mathrm{VXX}_{j,k}$$

The Lennard-Jones Potential (LJ) is written also as

$$E(C_n) = E\left(\vec{C}_n\right) = 4\sum_{i=1}^{n-1}\sum_{j=i+1}^n \left(\frac{1}{r_{jk}^{12}} - \frac{1}{r_{jk}^6}\right)$$

when there is not confusion with the other potentials.

The conventions follows in the paper for the problems are:

SOC denotes the problem of search of optimal clusters.

SOCC denotes SOC solved in a continuous search space.

SOCD denotes SOC solved in a discrete search space. Here it is assumed that an appropriate discrete set or lattice of points in  $\mathbb{R}^3$  exists.

SOC(n) denotes SOC for clusters of size n.

SOCC(n) denotes SOCC for clusters of size n.

SOCD(n) denotes SOCD for clusters of size n.

SOCYXX denotes one of the previous problems, where Y=C or Y=D, and XX is BU, KI, LJ, and MO Potentials.

SOCYXX(n) denotes one of the previous problems for clusters of size n.

For  $n \in \mathbb{N}$ ,  $n \ge 2$  SOCCXX(n) can be stated:

Given  $A \subset \mathbb{R}^3$ , look for  $\overrightarrow{C}_n^* = (x_1, \ldots, x_n) \in \mathcal{A}^n$  such that  $\mathrm{EXX}(\overrightarrow{C}_n^*) \leq \mathrm{EXX}(x), \forall x \in A^n$  where  $A^n = C_n^n$  $A \times \cdots \times A$  (n times).

In similar way SOCDXX(n) can be stated:

Given a lattice  $\Omega = \{p_i \mid p_i \in \mathbb{R}^3, i = 1, \dots, N \mid N \gg n, N \in \mathbb{N}\}$ , find  $\vec{C}_n^* = (p_{l_1}, \dots, p_{l_n})$ , such that  $\text{EXX}(\vec{C}_n^*)$  $\leq \text{EXX}\left(\overrightarrow{C}_{I^k}\right), \forall I^k \subset \mathbb{N}, |I^k| = n \text{ where } |\cdot| \text{ is the number of elements of a set. This means EXX}\left(\overrightarrow{C}_n^*\right) \text{ is less or } I^k \subset \mathbb{N}, |I^k| = n \text{ where } |\cdot| \text{ is the number of elements of a set. This means EXX}\left(\overrightarrow{C}_n^*\right)$ equal than the potential of any other cluster of n points from  $\Omega$ .

The function adjust is defined as  $\operatorname{Adj}: 2^{\Omega} \times 2^{\Omega} \to \mathbb{N}$ ,  $\operatorname{Adj}(C_n, C_m) = |(C_n \setminus C_m) \cup (C_m \setminus C_n)|$ .

The function On is defined as  $\operatorname{On:2}^{\widetilde{\Omega}} \times 2^{\widetilde{\Omega}} \to \mathbb{N}$ ,  $\operatorname{On}(C_n, C_m) = |C_m \setminus C_n|$ .

The function Off is defined as  $Off: 2^{\Omega} \times 2^{\Omega} \to \mathbb{N}$ ,  $Off(C_n, C_m) = |C_n \setminus C_m|$ .

It is easy to see that  $\operatorname{Adj}(C_n, C_m) = \operatorname{On}(C_n, C_m) + \operatorname{Off}(C_n, C_m).$ 

There are several references that explains how to build IC and FC [15, 30, 24], in particular Northby [17] called to the combination of both IF. Hereafter, ICn represent a subset of n points of type IC, and similarly for FC and IF.

 $C_j \to C_j^*$  means  $C_j^* = \min(C_j)$  under some potential function and where min is a minimization procedure. The results reported here were computed with a version the Conjugated Gradient Method (CGM). Also, in the text when there is not confusion  $C_i^*$  means the putative optimal LJ cluster.

In some figures the normalized gradient of LJ is depicted. This vector correspond to  $\nabla$  VXX  $(x^*) / \parallel \nabla$  VXX  $(x^*) \parallel$ . The corresponding component of the gradient is drawn as a vector in  $\mathbb{R}^3$  on each particle of a given cluster.

#### 3 **Properties of the LJ Potential**

Note that LJ, BU, and KI but MO Potentials share the well potential's properties [18]:

- 1.  $\lim_{r \to r_0} \text{VXX}(r) = \infty$
- 2. Each cluster under a pair potential has a basin.

Moreover in one dimension, given two particles, the first is fixed on (0,0,0), and the second with coordinates (r, 0, 0) is free to move on axes X. The following properties are satisfied for E (similar results are given by Xue [32]):

1. 
$$E(r) = 4(\frac{1}{r^{12}} - \frac{1}{r^6}).$$

2. E'(r) = 
$$24\frac{-2+r^6}{r^{13}}$$

- 2.  $E'(r) = 24 \frac{-2+r^6}{r^{13}}$ 3.  $E''(r) = -24 \frac{-26+7r^6}{r^{14}}$
- 4.  $E(r) < 0, r > 1, \lim_{r \to \infty} E(r) = 0.$
- 5.  $r^* = \sqrt[6]{2}$ , is the global minimum of E.  $E(r^*) = -1.0$ ,  $E'(r^*) = 0 E''(r^*) > 0$

6. 
$$E(r^* + \xi) \approx -1 + O(\xi^2), 0 \le |\xi| << 1$$
. By a series expansion  $E(r^* + \xi) = 4\left(\frac{1}{(\sqrt[6]{2}+\xi)^{12}} - \frac{1}{(\sqrt[6]{2}+\xi)^6}\right) = -1 + \left(18\left(\sqrt[3]{2}\right)^2\right)\xi^2 + O(\xi^3)$ , with  $0 \le |\xi| << 1$ ,  $E(\sqrt[6]{2}+\xi) \approx -1 + K\xi^2, K = 18\left(\sqrt[3]{2}\right)^2$ .



Figure 1: a) E(r), b) E'(r), and c) E''(r).

7. The basin region of E is the interval  $(1.053666\,8, 1.2444551)$ . E''  $(r) > 0, \forall r \in (1.053666\,8, 1.2444551)$ . Therefore E(r) is convex and E $(r) < -0.786\,982\,15, \forall r \in (1.053666\,8, 1.2444551)$ .

Figure 1 depicts E(r), E'(r), and E''(r) in (1.0536668, 1.2444551).

#### 4 Unified Lattice

This section explains what is the relationship between the discrete and continuous SOC. The main proposition is: Exist a discrete set for all optimal clusters where their potential has the same value as in the solution of the continuous search of optimal clusters. This type of potential function must fulfill the conditions of a well potential [18]:

- 1. Potential function creates a infinite repulsion force when distance between two particles goes to 0.
- 2. Each cluster under this potential has a basin.

Note that BU and LJ functions comply 1. KI function and MO function do not comply with 1.

Proposition 1. Exist a discrete set,  $\Omega$ , where  $\forall j \in N, j \geq 2$ , the potential of SOCDXX(j) has the same optimal value of SOCCXX(j) for a potential function such that

1.  $\lim_{r_{i,j}\to 0} \text{VXX}(r_{i,j}) = \infty.$ 

2.  $\nabla^2 \text{VXX}(x^*)$  semi-positive,  $\|\nabla \text{VXX}(x^*)\| \ll 1$  and  $\frac{\|\nabla \text{VXX}(x^*)\|}{|\text{VXX}(x^*)|} < \delta_0$ , where  $0 < \delta_0 \ll 1$ 

where XX is BU or LJ.

*Proof.* Without lost of generality, I assume a continuous search for a cluster of size j in  $A = \{p = (x, y, z) \in \mathbb{R}^3 \mid ||p|| \leq r\}$ , a ball of ratio,  $r \gg 0$  from where  $\overrightarrow{\cdot} : A \to \mathbb{R}^{3j}$ . The continuous search can be stated as generate

k random vectors  $\left\{ \overrightarrow{C}_{j}^{l} \right\}_{l=1,\dots,k}$  with coordinates in A and using a minimization routine to compute  $\overrightarrow{C}_{j}^{(\mathbb{R})}_{l} = (x_{l_{1}}, x_{l_{2}}, \dots, x_{l_{N}})$  such that the property 2 is fulfill. Then select  $x^{*} = \overrightarrow{C}_{j}^{*} = \min_{l=1,\dots,k} \left\{ \overrightarrow{C}_{j}^{(\mathbb{R})}_{l} \right\} = (x_{1}^{*}, \dots, x_{j}^{*})$ . Repeating this procedure, A is exhaustively explored, therefore this must provide a solution of SOCCXX(j). This means,  $\mathrm{EXX}(x^{*}) \leq \mathrm{EXX}(x), \forall x = (p_{1}, \dots, p_{j}) \in \mathbb{R}^{3N}, p_{l} \in A, l = 1, \dots, j$ .

The first property does not allow to have  $p_m = p_n$  with  $m \neq n$ . Therefore,  $p_i$ ,  $i = 1, \ldots, j$  are separate points in  $A \subset \mathbb{R}^3$ . Moreover, we can translate and set  $x_1 = (0, 0, 0)$  without changing the value of EXX. Therefore  $\exists \varepsilon_0 > 0$ for solving SOCCXX(j) and there is not need of the points,  $p \in \mathbb{R}^3$  such that  $||p|| < \varepsilon_0$  because they are never going to participate by the condition 1.

For other coordinates of  $x^*$ , the second property provides a basin or convexity region around it. A Taylor series for a potential function around of  $x^* \in \mathbb{R}^{3j}$  for a direction  $d \in \mathbb{R}^{3j}$  with  $0 < \varepsilon \ll 1$  is

$$VXX (x^* + \varepsilon d) = VXX (x^*) + \varepsilon d \cdot \nabla VXX (x^*) + \frac{1}{2} \varepsilon^2 d \cdot \nabla^2 VXX (x^*) \cdot d + O(\varepsilon^3).$$

By the convexity,  $\frac{1}{2}\varepsilon^2 d \cdot \nabla^2 V(x^*) \cdot d \ge 0$ . Therefore

$$\begin{aligned} |\mathrm{VXX}\left(x^* + \varepsilon d\right) - \mathrm{VXX}\left(x^*\right)| &\leq |\varepsilon| \left\|d\right\| \left\|\nabla \mathrm{VXX}\left(x^*\right)\right\| \\ &\frac{|\mathrm{VXX}\left(x^* + \varepsilon d\right) - \mathrm{VXX}\left(x^*\right)|}{|\mathrm{VXX}\left(x^*\right)|} \leq |\varepsilon \delta_0| \,. \end{aligned}$$

This property allows to select a truncated representation of  $x^*$  for some  $\varepsilon_1 = \varepsilon \delta_0 > 0$ . Therefore,  $x = (p_1, \ldots, p_j) \in \mathbb{R}^{3j}$  such that  $||x - x^*|| < \varepsilon_1$  and  $||p_l - p_l^*|| < \varepsilon_0$   $l = 1, \ldots, j$  are not necessary to consider because they are never going to improve the potential of  $x^*$ . Let  $\varepsilon_j = \min \{\varepsilon_0, \varepsilon_1\}$ .

Finally,  $\Omega^{o} = \bigcup_{j=2}^{\infty} C_{j}^{*}$  for  $\varepsilon^{*} = \min \{\varepsilon_{j}\}_{j=2}^{\infty}$  and by the construction of  $\Omega^{o}$  it follows immediately that SOCDXX(j) and SOCCXX(j) have the same solution  $\forall j \in \mathbb{N}, j \geq 2$ .

Remark 1. In the previous proposition, A is a subset of  $\mathbb{R}$ . A has the cardinality of  $\mathbb{R}$  but the proposition states that a discrete set of points of A is sufficient in order to have the same solution between SOCDXX(j) and SOCCXX(j) where XX is BU or LJ.

Proposition 2. The set  $\Omega^l = \{p_{i_j} \in C_j^k \mid C_j^k \text{ is a local optimal cluster, such that } C_j^k = \{p_{i_j}\}, i_j \in I^k, |I^k| = j\}$ under a well potential function (a potential that fulfill the properties of the Proposition 1) is numerable.

Proof. Let assume that the  $\bigcup_{j=1,\dots,N,|I^k|=j}C_j^k$ , is not numerable. This means  $\exists K_j = \bigcup_{|I^k|=j}I^k$  is not numerable. From the previous proposition, clusters can be created from the continuous search depicted in the previous proposition, therefore each one fulfill properties 1) and 2) and we add the coordinates of each  $C_j$  founded to some  $\Omega$ . Then for j,  $\exists \varepsilon_j$  such that  $\overrightarrow{C}_j^m, \overrightarrow{C}_j^n \in \mathbb{R}^{3j}$  and  $\overrightarrow{C}_j^m \neq \overrightarrow{C}_j^n$  for  $\forall m \neq n, m, n \in K_j$ . But each  $\overrightarrow{C}_j^m$  can be approximated  $\overrightarrow{C}_j^m \in \mathbb{Q}^{3j}$  if  $\left\| \overrightarrow{C}_j^m - \overrightarrow{C}_j^m \right\| < \varepsilon_j \ \forall m \in K_j$ , which imply that  $\bigcup_{m \in K_j} \underbrace{C}_j^m \subset \mathbb{Q}^3$  is not numerable!

Proposition 3. The set  $\Omega^{o} = \{ p \in C_{i}^{*} \mid C_{i}^{*}$  is the global optimal cluster  $\forall j \in \mathbb{N} \}$  is numerable.

*Proof.*  $\Omega^{o}$  is the union of finite set of points, therefore is numerable.

Proposition 4. The set  $\Omega^b = \{ p \in C_j^{k'} \mid C_j^{k'} \text{ is a cluster in a basin for the optimal local clusters } C_j^k \text{ of size } j, \forall j \in \mathbb{N} \}$  is not numerable.

Proof. Given an optimal local cluster  $C_j^k$  by the condition 2 of Proposition 1,  $\exists \delta_0 > 0$  and  $d \in \mathbb{R}^{3j}$  such that  $\forall 0 \leq \delta \leq \delta_0 \ \overrightarrow{C}_j^{k\delta} = \overrightarrow{C}_j^k + \delta d$ , then  $\overrightarrow{C}_j^{k\delta} \to C_j^k$ ,  $\forall 0 \leq \delta \leq \delta_0$ . Therefore,  $\Omega^b$  is union of non-numerable sets for each optimal local cluster.

Proposition 5. Exist a set,  $\Omega^*$  such that  $\exists C'_k \in \Omega^*, C'_k \to C^*_k \in \Omega^o \ \forall k \ge 2.$ 

*Proof.* The results follows from  $\Omega^b \cap \mathbb{Q}^3 \neq \emptyset$ .

Remark 2. The last proposition states that  $\Omega^* = \Omega^b \cap \mathbb{Q}^3$  is one trivial set where  $\exists C_j$ , such that  $C_j \to C_j^*$ ,  $\forall j \ge 2$ . In order to find IF, I add each putative optimal LJ cluster,  $C_j^*$ ,  $j=2,\ldots,1000$ . It was a surprise that taking  $C_{13}^*$  and adjusting the other putative optimal LJ clusters to it, the IF structure show up naturally. The next proposition states that is not possible to find a function from  $\mathbb{N}$  to  $\Omega$  capable to give all optimal clusters. Hereafter,  $\Omega$  is a numerable set and could be  $\Omega^l$  or  $\Omega^*$ .

Proposition 6.  $\nexists s : \mathbb{N} \to \Omega, \ s(j) = C_j = \{x_{i_1}, \dots, x_{i_j}\}, \ x_{i_k} \in \Omega \ \forall k = 1, \dots, j \text{ such that } s(j) = C_j^*, \forall j \in \mathbb{N}.$ 

*Proof.* The proof is based in building a Cantor's Diagonal schema. Suppose that such selection function, s, exists for some order in  $\Omega$ , which is numerable. Then changing the first particle in  $\Omega$  that belong to the  $C_2^*$  for any other different and far way from this one, the new order  $\Omega_2$  is an order where s can not give  $C_2^*$ . This procedure is repeated for  $C_k^*$ ,  $k = 3, \ldots, \infty$  giving  $\Omega_k$ ,  $k = 3, \ldots, \infty$  where s can not give  $C_k^*$ . The set of points that belong to the diagonal differs from all the enumerations  $\Omega_k$ ,  $k = 2, \ldots \infty$  which are all the possible enumerations of  $\Omega$ !

Proposition 7. It is not possible to find an algorithm with polynomial complexity to solve  $SOCD(j), \forall j \in \mathbb{N}$ .

*Proof.* If such algorithm exist, it means that it is possible to find  $M \in \mathbb{N}$ , M > 0,  $T(j) \leq O(j^M) \forall j \in \mathbb{N}$  where T is the time to take this algorithm to find  $C_j^*$ . But this means that such algorithm is the function s of the previous proposition!

Remark 3. The last proposition states that it is not possible to build a selection function in computational time for finding all the optimal clusters from  $j \ge 2, j \in \mathbb{N}$ . In particular, it states that the complexity of finding all the optimal clusters from  $j = 2, \ldots, \infty$  cannot be derived from some arbitrary inhered order of  $\Omega$  (numerable).

One of the reason of the success of the methods for SOCCXX(j) and SOCDXX(j) is the combination of different lattices, which are subsets of  $\Omega^*$ . Moreover, from the cardinality point of view,  $\Omega^*$  is a smaller set than  $\mathbb{R}^3$ , and it seems to be the right search space to explore the complexity of the NP problem SOCDXX(j),  $\forall j \geq 2$ .

The Proposition 1 permits to build a discrete set of points after the solution of the SOCDXX(j),  $\forall j \ge 2$  and also proofs that exist a set where SOCC and SOCD have the same solution, therefore SOCC is not efficient way for SOC.

It was not easy to build a set of points as a discrete lattice from basin regions for solving SOCDLJ(j),  $\forall j \geq 2$ for the putative optimal clusters, i.e., a set of points in  $\mathbb{R}^3$  with a regular structure. However, combining IC and FC with an appropriate separation was the surprising answer. Section 6 presents numerical experiment of the propositions of this section. Particularly, for SOCDLJ(j) a lattice and a set, IF9483 and MIF1739, are presented with the property,  $\exists C_j \to C_j^*$ ,  $j = 2, \ldots, 1000$  in the sense that  $\text{ELJ}(C_j^*)$  are the putative optimal potential LJ values from [26] or better ones.

#### 4.1 Symmetry reduces the Complexity of Potential's Evaluation

For SOC, the symmetry inhered from a lattice  $\Omega^*$  can reduce the number of operations to evaluate a potential function. A simple example, taking  $\Omega^* = \text{IF}$  and  $C_{13}$  as a centered icosahedron inside of a ball of ratio,  $r^* = \sqrt[6]{2}$ . Here, without lost of generality the points of  $C_{13} = \{p_1, \ldots, p_{13}\}$  are:

- $p_2 = (0.00000000000, 1.081838288553, 0.00000000000),$
- $p_3 = (0.967625581547, 0.483812790773, 0.000000000000),$
- $p_4 = (0.299012748890, 0.483812790773, -0.920266614664),$
- $p_5 = (-0.782825539663, 0.483812790773, -0.568756046574),$
- $p_6 = (5, -0.782825539663, 0.483812790773, 0.568756046574),$
- $p_7 = (0.299012748890, 0.483812790773, 0.920266614664),$
- $p_8 = (0.782825539663, -0.483812790773, -0.568756046574),$
- $p_9 = (-0.299012748890, -0.483812790773, -0.920266614664),$
- $p_{10} = (-0.967625581547, -0.483812790773, 0.00000000000),$
- $p_{11} = (-0.299012748890, -0.483812790773, 0.920266614664),$
- $p_{12} = (0.782825539663, -0.483812790773, 0.568756046574)$ , and
- $p_{13} = (0.00000000000, -1.081838288553, 0.000000000000).$

Then by the symmetry on these points,  $EXX(C_{13}) = 12VXX_{1,2} + 30VXX_{2,3} + 30VXX_{2,8} + 6VXX_{2,13}$ 

which requires five points  $\{p_1, p_2, p_3, p_8, p_{13}\}$  and the four factors VXX<sub>1,2</sub>, VXX<sub>2,3</sub>, VXX<sub>2,8</sub>, and VXX<sub>2,13</sub> for any potential function. But without symmetry,  $EXX(C_{13}) = \sum_{i=0}^{n-1} \sum_{j=i+1}^{13} VXX_{i,j}$  needs thirteen points and 13(13+1)/2 = 91 factors VXX<sub>i,j</sub>. In particular for this cluster  $ELJ(C_{13}) = -44.326801 = ELJ(C_{13}^*)$ .

#### 5 Methods for IF

There are several references that explains how to build IC and FC [13, 15, 24, 30]. I build an IF for the Lennard-Jones Potential using the propositions of the previous section. The first approach was to use Proposition 1 to build a set from the  $C_j^*$ , j = 2, ..., 1000 by adding in growing order the points of each  $C_j^*$  but after few numerical experiments, a fixed combination of an IC and an FC together with an step ratio,  $r^* = 1.08183839$ , between shells makes possible to build an IF such that  $\exists C_j \to C_j^*$  using a minimization procedure based on the CGM. The possibility to find a lattice was predicted by Proposition 5. The value  $r^*$  correspond to the icosahedron described in section 4.1. In addition, this is the only cluster where SOCDLJ(13) does not need a relaxation, moreover,  $\text{ELJ}(C_{13}) = ELJ(C_{13}^*)$ . Note that the particular order of the sequence of points is very important to reproduce the putative optimal LJ clusters, therefore tables 2-17 give all the coordinates of MIF1739.

Give the result in IF9483 is lengthy but with MIF1739 is a short way to present it. Meanwhile MIF1739 contains only 1739 points, the complete IF with the same property needs 9443 points. The number of points of the IF9483 comes from sum of the magic numbers of the particles of the complete shells IC and FC for the shells 0 to 11. Figure 2 depicts IF75, IF509, and IF9483. Figure 3 depicts MIF1739 alone and inside of an IF9483.

The construction of the MIF1739 is done by the following algorithm:

- 1:  $C'_{1000}$  is a rotation of  $C_{1000}$  to set as many particles as possible of the last shell over the semi-axes  $Y^+$ .
- **2:** for j=999, 2
- 3:  $C'_{j} = \min \operatorname{Adj}(C'_{j+1}, C_{j})$  over all rotations of  $C_{j}$  based on the symmetry of the centered icosahedron in IF.
- 4: end for
- 5: MIF= $\cup_{j=2,...,1000}C'_{j}$

Remark 4. In the step 3, for the clusters that are not centered IC or FC as the  $C_{38}^*$ ,  $C_{98}^*$  and the Ino's decahedrons the rotation are five and they are around of the axes Y. In addition, these clusters exist on infinity positions of an infinite IF, therefore they were manually translated to closed position toward the center of IF and over the semi-axes  $Y^+$ .

The tables 28-60 allow to build all the  $C_i^*$  from MIF1739. The algorithm is

1:  $C_{1000} = \{ p_i \in \text{MIF}1739 \mid i \text{ is in the column On in tables 28-60 for } C_{1000} \}.$ 

- **2:**  $C_{1000}^* = \min(C_{1000}).$
- **3:** for j=999 to 2
- 4:  $C_j = C_{j+1} \setminus \{p_i \in MIF1739 \mid i \text{ is in the column Off in tables 28-60 for } C_j\} \cup \{p_i \in MIF \mid i \text{ is in the column On in tables 28-60 for } C_j\} \cup \{p_i \in MIF \mid i \text{ is in the column On in tables 28-60 for } C_j\}$
- 5:  $C_j^* = \min(C_j).$

**6:** end for.

The tables 18-27 give the type of the putative optimal LJ clusters in IF as: 1=IC, 2=Ino's decahedron (ID), 3= truncated octahedron (TO), and 5=FC; the initial, optimal and difference of LJ, and the value of  $\operatorname{Adj}(C'_{i+1}, C_j)$ .

The classification of cluster is done automatically by identified the particles of a cluster with the type of particles of MIF1739, type is IC when all the particles of a cluster are only IC around the center of IF, type is ID if there is a particle in the cluster close to the center of mass of the cluster, such that it is on the semi-axes  $Y^+$ , type is TO when all particles are IC and they are inside of a tetrahedron formed by three internal axis of the IF, type is FC when at least one particle of the cluster is FC.

#### 5.1 Methods for search in IF

The classification of the algorithms for SOC has many different approaches [27]. Here tree classes are depicted on a scale from comparisons versus properties (necessary and sufficient conditions of a problem):

**Exhaustive Algorithm** It explores a search space of a problem verifying that the global optimum is founded. Here, for the comparisons an objective function is used to provide the way to determine the optimum. For small discrete and continuous problems, the algorithm's complexity is not an issue. There are many global optimization methods that work fine for low dimension problems. By example, the classical Grid Method divides the search space in small boxes. Therefore, it can locate the global minimum by an exhaustive search. Generally, the complexity grows rapidly, exponentially and for the NP problems, there is not hope that exist a polynomial complexity algorithm.

- Scout Algorithm It is a fact widely accepted that using previous knowledge and natural (Physical, Chemical, Thermodynamical, Biological, Medical, and so on) understanding of the process and phenomena involved in a problem will help to design an efficient method. Here, some authors argue about how much and what type of knowledge could be used. Other authors apply the rule: "Achievements kill doubt". From a practical point of view, this category contains algorithms that can use all or a part of whatever is available. Most of the methods for clusters optimization belong to this category. A method in this category could find a novel solution without a guarantee of optimality. Most of the justifications for algorithm's efficiency are done by numerical experiments on a set of problems (benchmark). This type of analysis depends on the researcher and his/her particular computers and working conditions. Therefore, a claim that SOC can be done in polynomial time  $O(n^3)$  is a very strong statement. If this could be extended and proved then the NP problems will be class P! Exploring IF is like a travel in one axes of the IF towards axes Y<sup>+</sup>. MIF1739 is also the minimum region to explore without to many repetitions caused by the icosahedral symmetry.
- Wizard Algorithm There are problems where necessary and sufficient optimal conditions can be established for the solution. Generally these methods are efficient and they do not need to do exhaustive comparisons. By example, an optimization problem with a convex function can be efficiently solved by the Conjugate Gradient method or by the large family of Newton and Quasi-Newton methods.

In [1] the Peeling Method was presented. This method is similar to the algorithm 4.1 of Maier *et al.* [15]. It executes a greedy strategy to set Off the particles on the outer shell of a cluster and to set On particles inside of a lattice that are neighbor of the previous ones. In this way, an small change is done and a minimization routine computes the potential of this cluster. The Modified Peeling Method has three basic operations: forward, backward, itself. Moreover, the basic idea is to adjust a cluster by turning on a neighbor particle and turning Off a particle in the outer shell of a cluster or the centered particle. The complexity of each operation is  $O(n^3)$  for a forward ( $C_n$  to  $C_{n+1}$ ) and backward ( $C_n$  to $C_{n-1}$ ), and  $O(n^4)$  for itself. These operations are quite similar to the proposed pivot algorithm [31], reverse greedy operator by Leary [13], the "final repair" step of Hartke [8], Fusion Process by adding one particle to  $C_n$  of Solov'yov *et al.* [24], and the greedy search method [29] but the novelty is that in right search space this Modified Peeling Method is capable to find new solutions or reproduce the existent ones.

Given  $C_n = \{p_{i_1}, p_{i_2}, ..., p_{i_n}\}, p_{i_j} \in IF, \forall j = 1, ..., n$ , computes the sets:

 $K_C = \{ i_k \mid i_k \text{ such that } \exists p_{i_k} \in C_n, \exists p_{i_l} \in \text{ IF } \setminus C_n, \text{ where } p_{i_k} \text{ and } p_{i_l} \text{ are neighbors or } i_l = 0 \text{ (centered particle of } C_n) \}.$ 

 $K_{\text{IF}} = \{i_l \mid i_l \text{ such that } \exists p_{i_k} \in C_n, \, p_{i_l} \in \text{ IF } \setminus C_n, \, \text{where } p_{i_k} \text{ and } p_{i_l} \text{ are neighbors} \}.$ 

The Modified Peeling Method executes this three operations: forward:  $C_{n+1}^* = \min_{\text{set On } j \in K_{\text{IF}}} \{ p_j \} \bigcup C_n \}.$ backward:  $C_{n-1}^* = \min_{\text{set Off } k \in K_C} C_n \setminus \{p_k \}.$ itself:  $C_n^* = \min_{\text{set Off } k \in K_C}$ , set On  $_{j \in K_{\text{IF}}} C_n \setminus \{p_k \} \bigcup \{ p_j \}.$ 

Remark 5. These operations do not guarantee global optimality.

For SOCD, it seems that a wise algorithm only could exist after founded the optimal clusters. One of the reason is that the global optimality is an open question for clusters with more than five particles [27]. The efficient method after founded the optimal cluster is a telephone directory method. This type of method uses a table with the data needed. The only operation is retrieving an entry of the table by an index, i.e., given the indexed table  $(t[1], \ldots, t[K]), K \in \mathbb{N}, K > 0$  and  $j \in [1, K]$  then retrieve t[j].

Proposition 8. The telephone directory method in  $\Omega^{o}$  (see Proposition 2) has complexity O(1).

*Proof.* Here, the only operation is to select the points of  $\Omega^o$  from a table with the collection of the indexes of each optimal cluster. Therefore the complexity is only one operation.

Remark 6.  $\Omega^{o}$  is not symmetric because the PES of small clusters. If the function s of the Proposition 6 exists, its complexity would be one!

Proposition 9. The telephone directory method on  $\Omega^*$ , and particularly on IF has complexity  $O(n^3)$ .

*Proof.* This limit comes from the complexity of the relaxation multiplying by the complexity of the evaluation of a pair potential function for n particles. It is well know that the a minimization method as the CGM converges in at most the number of variables of the problem, which in this case is 3n and the worst case for evaluation of the potential is  $O(n^2)$ .

For space consideration, a table of the optimal clusters for a telephone directory method is not given. However, this table can be obtained from the tables 28-60. The algorithm for the telephone directory method on this table is:

1:  $C_n = \{ p_i \in MIF1739 \mid i \text{ is in the column On in the telephone table of optimal clusters } \}.$ 

**2:** 
$$C_n^* = \min(C_n)$$

Remark 7. The telephone directory method with MIF1739 or IF9483 has polynomial complexity  $O(n^3)$  for SOCD(n). An estimation of complexity less than  $O(n^3)$  by other authors is probably biased by the particular data and environment of their numerical experiments. It is possible that this small difference was influenced by the data over the number of iterative steps of the relaxation or minimization procedure on a very good initial population of clusters, which is highly possible if an algorithm gets initial random clusters from IC, ID, and FC lattices.

The results presented in the next Section show that optimal clusters are not always around on the same localization in IF. Therefore exploring IF by Exhaustive Algorithms is hard and it has exponential complexity caused by the combinations of possible particles.

Proposition 10. The function Adj is not bounded.

*Proof.* Let assume that  $\exists M > 0$  such that  $\operatorname{Adj}(C_n, C_m) < M \ \forall n, m \ge 2$ . This means that for  $m \gg M$  because the number of adjust is bounded, the complexity of founding  $\operatorname{SOCD}(m)$  from  $\operatorname{SOCD}(m-1)$  or from  $\operatorname{SOCD}(m+1)$  is  $O(m^2)$  which imply the existence of the function s of Proposition 6.

Remark 8. Also, if Adj is bounded, the complexity of a telephone directory method in an sufficient large appropriate lattice IF or set  $\Omega^l$  (see Proposition 2) is greater than  $O(m^2)$ , the complexity of SOCD(m) for large clusters, which is also impossible, moreover then SOCD is not NP!

Adding previous knowledge to build an scout algorithm is seemed to be the way to address SOCD, and the complexity can be decreased by symmetry. However, it easy to see that exists a cluster where symmetry cannot reduce the worst case of the complete pair potential's evaluation for some clusters, which is  $O(n^2)$ . Finally, by the Proposition 9,  $O(n^3)$  is a lower limit of the complexity of SOCD(n) in IF.

#### 6 Results

MIF1739 is a discrete lattice for LJ where  $\exists C_n$ , such that  $C_n^* = \min(C_n)$  under LJ and  $C_n^*$  is the putative optimal cluster for  $n = 2, \ldots, 1000$ . I took the data from CCD [26] to verify that my results. Data for  $C_n^* n = 148, \ldots, 309$  came from Romero, Barrón, and Gómez [20] and data for  $C_n^*$ ,  $n = 310, \ldots, 1000$  came from the recently results of Shao *et al.* [30, 29]. I was able to repeat and even improve some of the putative optimal LJ clusters. From this comparison new putative optimal LJ clusters are  $C_{537}^*$ ,  $C_{542}^*$ ,  $C_{543}^*$ ,  $C_{546}^*$ ,  $C_{547}^*$ ,  $C_{564}^*$ ,  $C_{664}^*$ , and  $C_{813}^*$ . The particular interest are the  $C_{542}^*$ ,  $C_{546}^*$ ,  $C_{546}^*$ ,  $C_{547}^*$ , and  $C_{548}^*$  because to my knowledge they are first optimal LJ clusters type IC with central vacancy (CV) reported in the shell 310-561. The prediction of CV was stated in [22] for the next shell, 562-923. Table 1 summarizes these new results.

What is easy to accept from our classification is that a cluster type ID is contained on any of the twelve axis of symmetry of IF (here the clusters type ID are on the semi-axes  $Y^+$ ), a cluster type TO is in a centered tetrahedron formed by the center and three axis of symmetry forming four triangular faces. One controversial result of this automatic classification is the cluster's type for  $C_{98}^*$ , moreover, this is the only cluster in MIF1739 where the adjacency matrix [9] is not the same between  $C_{98}$  and  $C_{98}^*$ , however,  $C_{98}^* = \min(C_{98})$ . The right type of  $C_{98}^*$  is tetrahedral (depicted by Leary [14]). The different type reported here comes from the distance between  $C_{98}$  and  $C_{98}^*$  but it is a fact that the basin around  $C_{98}^*$  attracts this  $C_{98}$  of type FC. Figures 8 and 9 depict novel views of  $C_{98}$  and  $C_{98}^*$ .

Figure 7 a) depicts  $C_{664}$  inside of IF9483 and b) depicts  $C_{664}^*$  as ID.

n	$E^{\mathrm{new}*}$	$E^{\text{old}*}$	$E^{\text{new}*} - E^{\text{old}*}$	Т
537	-3659.52825	-3659.70629	-0.17804	1
542	-3698.95403	-3699.22727	-0.27324	1/CV
543	-3706.94784	-3708.21090	-1.26306	1/CV
546	-3730.50408	-3730.69222	-0.18814	1/CV
547	-3738.38788	-3738.68065	-0.29277	1/CV
548	-3746.37071	-3747.67942	-1.30871	1/CV
664	-4596.1978	-4596.1971	-0.0007	2
813	-5712.2517	-5712.2506	-0.0011	1

Table 1: Novel  $C_n^*$ .



Figure 2: a) IF75, b) IF509, and c) IF9483, where IF = IC  $\bigcup$  FC.



Figure 3: a) MIF1739 and b) MIF1739 inside of IF9483. MIF1739 and IF9483 contain  $C_n$ , such that  $C_n^* = \min(C_n)$  $n = 2, \ldots, 1000$ .



Figure 4: a)  $C_{55}^*$ =IC55<sup>\*</sup> and b) IF75 with gradient.

Wales and Doye [25] have been used basin for search of optimal LJ clusters and get through the barrier of the PES caused be the deformation of the particles on the surface. Figure 6 b) gives another perspective of this. Because,  $C_{37}^*$  and  $C_{39}^*$  are close to the center of IF,  $C_{38}^*$  is a jump from the center of IF to the first truncated octahedron in one of the tetrahedron formed by three axes of symmetry of IF. From table 60, the indices of the particles for these three clusters show that they do not share any particle. This is the unique case in the results where there is not intersection between three consecutive clusters. Figure 6 a) depicts  $C_{38}^*$  with gradient, where  $\|\nabla VXX(x^*)\| \sim 3.7 \cdot 10^{-6}$ . The gradient looks big by the normalization. The gradient of  $C_{38}^*$  shows that this cluster is stable and elastic in the sense that it can be deformed by  $\alpha \nabla VXX(x^*)$  for some small values of  $\alpha$  and with a minimization routine, the deformed  $C_{38}$  will return to  $C_{38}^*$ . The gradient of the thirty-two particles in the outer shell point toward the center and the six particles of the inner octahedron shell point towards the square faces of the outer shell making this cluster stable to twisting deformations.

Figure 4 a) depicts  $C_{55}^*$  with gradient. Here the gradient shows that the particles on the top of the outer shell can move to close positions around the semi-axes  $Y^+$ , in similar way for the bottom. The gradient of the particles in the inner icosahedron points in diametrical directions and if this effect is combined with an incomplete outer shell is possible to have great displacement of particles from their positions on IF and, also, a possible twisting and shrinking on the top or bottom cap of a cluster. Similar results can be seen from the gradient of  $C_{147}^*$  depicted in figure 5 a).

The graphical representation of the gradient helped to design IF. Our selection of the shell's step size is to have the corresponding component of the gradient for the particles IC and FC pointed towards (0,0,0). Figures 4 b) and 5 b) depicted IF75 and IF227 with their gradient.



Figure 5: a)  $C_1^{\ast}47{=}\mathrm{IC}147^{\ast}$  and b) IF227 with gradient.



Figure 6: a)  $C_{38}^*$  with gradient and b)  $C_{38}$  inside of IF9483.



Figure 7: a)  $C_{664}$  inside of IF9483 and b)  $C^*_{664}.$ 



Figure 8: a)  $C_{98}$  inside of IF9483, b)  $C_{98}$ , c)  $C_{98}^*$ , and d)  $C_{98}^*$  with gradient.



Figure 9: Novel views of tetrahedral shells of  $C_{98}^*$  a) interior shell with 4 particles, b) medium shell with 24, and c) outer shell with 70 particles.

$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	#	$\mathbf{i}_{\mathbf{p}}$	X	Y	$\mathbf{Z}$	#	$\mathbf{i}_{\mathbf{p}}$	X	Y	$\mathbf{Z}$
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1	1	0.00000000	0.00000000	0.00000000	56	56	0.84442563	1.36630937	-0.61351113
$  \begin{array}{ccccccccccccccccccccccccccccccccccc$	2	2	0.00000000	1.08183839	0.00000000	57	57	1.36630937	0.32254189	-0.99268187
$  \begin{array}{ccccccccccccccccccccccccccccccccccc$	3	3	0.96762567	0.48381284	0.00000000	58	58	1.68885127	-0.32254189	0.00000000
	4	4	0.29901278	0.48381284	-0.92026670	59	59	1.04376748	-1.36630937	0.00000000
	5	5	-0.78282561	0.48381284	-0.56875610	60	60	-0.32254189	1.36630937	-0.99268187
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	6	6	-0.78282561	0.48381284	0.56875610	61	61	-0.52188374	0.32254189	-1.60619300
8  8  0.7322561  -0.4831244  -0.56875610  63  63  0.32254189  -1.36630937  -0.9296187    10  10  -0.90702567  -0.4831244  0.90206070  64  66  -0.3630937  -0.32254189  -0.36630937  -0.03254187    11  11  -0.29001278  -0.4831284  0.5020670  67  -0.8442263  -1.36630937  -0.03254189  1.36630937  -0.03254189  1.36630937  -0.03254189  1.36630937  0.03254189  1.36630937  0.03254183  1.03610937  0.03254183  1.03610937  0.03254189  1.36630937  0.92266187    14  0.00000000  15  15  0.96762567  1.3665123  0.990268187  1.06151113  0.00000000  17  17  6  0.00000000  3.2455117  0.00000000  1.27  1.06663123  0.99026870  17  76  0.00000000  3.2455181  0.30676567  1.80757610  17  76  0.00000000  1.28174862  0.66767610  12  1.26663445  0.4944406  0.02002670	$\overline{7}$	7	0.29901278	0.48381284	0.92026670	62	62	0.52188374	-0.32254189	-1.60619300
9  9  -0.29001278  -0.48381284  -0.92026070    10  10  -0.69670507  -0.48381284  0.0000000  66  67  -0.84442663  1.36630937  -0.032254189  1.36630937  0.032254189  1.36630937  0.03255118    11  11  -0.29802187  0.48381284  0.56675610  67  72  0.84442663  1.36630937  0.32254189  1.36630937  0.92268187    14  14  0.00000000  2.16376778  0.00000000  74  0.52188374  0.29264189  1.36630937  0.32254189  1.36630937  0.92268187    16  16  0.29901278  1.56565123  0.56875610  72  7  76  70.90762667  2.64748062  0.6000000    18  18  -0.78282561  1.56565123  0.56875610  73  78  0.29901278  2.64748062  0.66875610    12  1.26663845  0.96762567  1.84053340  78  1.26063845  2.64748062  0.56875610    12  1.266663845  0.96762567	8	8	0.78282561	-0.48381284	-0.56875610	63	63	0.32254189	-1.36630937	-0.99268187
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	9	9	-0.29901278	-0.48381284	-0.92026670	64	66	-1.36630937	-0.32254189	-0.99268187
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	10	10	-0.96762567	-0.48381284	0.00000000	65	67	-0.84442563	-1.36630937	-0.61351113
12  12  0.78282561  -0.48381284  0.56875610    14  14  0.0000000  -1.08183830  0.00000000  68  73  1.36630937  0.5225118  0.90268187    14  14  0.00000000  -1.68650123  0.00000000  70  75  0.32251189  0.90268187  0.902268187    17  1  -0.78282561  1.36565123  -0.502670  71  76  0.0000000  3.24551517  0.0000000    18  18  -0.78282561  1.36565123  0.56875610  78  0.2901278  2.64748962  0.0000000    12  1.26663845  0.96762567  -0.92026670  76  80  -0.78282561  2.64748962  0.56875610    22  2.0.59802555  0.96762567  -1.3751220  78  2.9901278  2.64748962  0.50226670    23  0.44831284  0.96762567  -1.3751220  78  2.9901278  2.64748962  0.50226670    24  1.56565123  0.96762567  1.3751220  78  4.959825	11	11	-0.29901278	-0.48381284	0.92026670	66	68	-0.32254189	1.36630937	0.99268187
13  13  0.00000000  -1.08183839  0.00000000  66  73  1.366630937  0.32254189  0.6061300    14  14  0.00000000  -1.68565123  0.00000000  60  74  0.52218374  -0.32254189  0.6061300    16  16  0.29901278  1.56565123  -0.56675610  77  76  0.32254189  -1.00000000    18  18  -0.78282561  1.56565123  0.56675610  73  78  0.29901278  1.26663453  0.9672567  -0.56875610    19  19  0.29901278  1.56565123  0.9672567  -0.5922567  -0.78282561  2.64748962  0.56875610    22  1.2666345  0.96762567  -1.0000000  74  78  2.03921714  2.04748962  0.56875610    22  1.26656123  0.96762567  -1.34053340  78  83  1.26663453  2.04944066  -0.4922670    24  -1.56565123  0.96762567  1.43902280  85  -0.48381284  2.04944066  -1.48902280	12	12	0.78282561	-0.48381284	0.56875610	67	72	0.84442563	1.36630937	0.61351113
14  14  0.0000000  2.1637678  0.0000000  69  74  0.5218374  -0.32254189  1.66619300    15  16  0.09901278  1.56565123  -0.92026670  77  0.96762567  2.45451517  0.00000000    17  17  -0.78282561  1.56565123  0.56875610  73  78  0.29901278  2.64748962  -0.02026670    19  19  0.29901278  1.56565123  0.50070567  71  78  0.29901278  2.64748962  -0.56875610    20  1.93525134  0.96762567  -1.92026670  76  80  -0.78282561  2.64748962  0.56875610    23  2.04982555  0.96762567  -1.43902280  78  21.93525134  2.04946406  0.0000000    24  -1.56565123  0.96762567  -1.43902280  78  5  -1.66656123  2.04946406  -1.48902280    25  25  -1.56565123  0.96762567  1.43902280  88  9  -0.43831284  2.04946406  -1.48902280	13	13	0.00000000	-1.08183839	0.00000000	68	73	1.36630937	0.32254189	0.99268187
	14	14	0.00000000	2.16367678	0.00000000	69	74	0.52188374	-0.32254189	1.60619300
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	15	15	0.96762567	1.56565123	0.00000000	70	75	0.32254189	-1.36630937	0.99268187
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	16	16	0.29901278	1.56565123	-0.92026670	71	76	0.00000000	3.24551517	0.00000000
18  18  -0.78282561  1.56565123  0.92026670    19  0.29901278  1.56565123  0.92026670  74  79  -0.78282561  2.64748962  -0.92026670    12  1.26663845  0.96762567  0.9000000  76  80  0.29901278  2.64748962  0.92026670    22  0.55802555  0.96762567  -1.48902280  78  83  1.26663845  2.04946406  -0.92026670    24  24  -1.56565123  0.96762567  -1.48902280  78  83  1.26663845  2.04946406  -0.92026670    25  25  -1.56555123  0.96762567  -1.3751220  78  83  1.26663845  2.04946406  -1.48902280    26  26  -1.56555123  0.96762567  1.84902340  88  -1.5565123  2.04946406  1.48902280    27  -0.48381284  0.96762567  1.84902340  88  -1.5565123  2.04946406  1.48902280    30  0.00000000  -1.84902280  89  2.2492677702	17	17	-0.78282561	1.56565123	-0.56875610	72	77	0.96762567	2.64748962	0.00000000
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	18	18	-0.78282561	1.56565123	0.56875610	73	78	0.29901278	2.64748962	-0.92026670
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	19	19	0.29901278	1.56565123	0.92026670	74	79	-0.78282561	2.64748962	-0.56875610
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	20	20	1.93525134	0.96762567	0.00000000	75	80	-0.78282561	2.64748962	0.56875610
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	21	21	1.26663845	0.96762567	-0.92026670	76	81	0.29901278	2.64748962	0.92026670
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	22	22	0.59802555	0.96762567	-1.84053340	77	82	1.93525134	2.04946406	0.00000000
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	23	23	-0.48381284	0.96762567	-1.48902280	78	83	1.26663845	2.04946406	-0.92026670
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	24	24	-1.56565123	0.96762567	-1.13751220	79	84	0.59802555	2.04946406	-1.84053340
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	25	25	-1.56565123	0.96762567	0.00000000	80	85	-0.48381284	2.04946406	-1.48902280
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	26	26	-1.56565123	0.96762567	1.13751220	81	86	-1.56565123	2.04946406	-1.13751220
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	27	27	-0.48381284	0.96762567	1.48902280	82	87	-1.56565123	2.04946406	0.00000000
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	28	28	0.59802555	0.96762567	1.84053340	83	88	-1.56565123	2.04946406	1.13751220
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	29	29	1.26663845	0.96762567	0.92026670	84	89	-0.48381284	2.04946406	1.48902280
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	30	30	1.75045129	0.00000000	-0.56875610	85	90	0.59802555	2.04946406	1.84053340
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	31	31	1.08183839	0.00000000	-1.48902280	86	91	1.26663845	2.04946406	0.92026670
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	32	32	0.00000000	0.00000000	-1.84053340	87	92	2.90287702	1.45143851	0.00000000
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	33	33	-1.08183839	0.00000000	-1.48902280	88	93	2.23426412	1.45143851	-0.92026670
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	34	34	-1.75045129	0.00000000	-0.56875610	89	94	1.56565123	1.45143851	-1.84053340
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	35	35	-1.75045129	0.00000000	0.56875610	90	95	0.89703833	1.45143851	-2.76080010
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	36	36	-1.08183839	0.00000000	1.48902280	91	96	-0.18480006	1.45143851	-2.40928950
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	37	37	0.00000000	0.00000000	1.84053340	92	97	-1.26663845	1.45143851	-2.05777890
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	38	38	1.08183839	0.00000000	1.48902280	93	98	-2.34847684	1.45143851	-1.70626830
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	39	39	1.75045129	0.00000000	0.56875610	94	99	-2.34847684	1.45143851	-0.56875610
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	40	40	1.56565123	-0.96762567	-1.13751220	95	100	-2.34847684	1.45143851	0.56875610
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	41	41	0.48381284	-0.96762567	-1.48902280	96	101	-2.34847684	1.45143851	1.70626830
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	42	42	-0.59802555	-0.96762567	-1.84053340	97	102	-1.26663845	1.45143851	2.05777890
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	43	43	-1.26663845	-0.96762567	-0.92026670	98	103	-0.18480006	1.45143851	2.40928950
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	44	44	-1.93525134	-0.96762567	0.00000000	99	104	0.89703833	1.45143851	2.76080010
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	45	45	-1.26663845	-0.96762567	0.92026670	100	105	1.56565123	1.45143851	1.84053340
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	46	46	-0.59802555	-0.96762567	1.84053340	101	106	2.23426412	1.45143851	0.92026670
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	47	47	0.48381284	-0.96762567	1.48902280	102	107	2.71807696	0.48381284	-0.56875610
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	48	48	1.56565123	-0.96762567	1.13751220	103	108	2.04946406	0.48381284	-1.48902280
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	49	49	1.56565123	-0.96762567	0.00000000	104	109	1.38085117	0.48381284	-2.40928950
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	50	50	0.78282561	-1.56565123	-0.56875610	105	110	0.29901278	0.48381284	-2.76080010
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	51	51	-0.29901278	-1.56565123	-0.92026670	106	111	-0.78282561	0.48381284	-2.40928950
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	52	52	-0.96762567	$-1.5656512\overline{3}$	0.00000000	107	112	-1.86466400	$0.4838128\overline{4}$	-2.05777890
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	53	53	$-0.2990127\overline{8}$	$-1.5656512\overline{3}$	0.92026670	108	113	-2.53327690	$0.4838128\overline{4}$	-1.13751220
55  55  0.00000000  -2.16367678  0.0000000  110  115  -2.53327690  0.48381284  1.13751220	54	54	$0.7828256\overline{1}$	$-1.5656512\overline{3}$	0.56875610	109	114	$-2.5332769\overline{0}$	$0.4838128\overline{4}$	0.00000000
	55	55	0.00000000	-2.16367678	0.00000000	110	115	-2.53327690	0.48381284	$1.1375122\overline{0}$

Table 2: MIF1739 contains  $C_n$ , such that  $C_n^* = \min(C_n) \ n = 2, \dots, 1000$ .

#	$\mathbf{i}_{\mathbf{p}}$	X	Y	$\mathbf{Z}$	#	$\mathbf{i}_{\mathbf{p}}$	$\mathbf{X}$	Y	$\mathbf{Z}$
111	116	-1.86466400	0.48381284	2.05777890	166	171	2.15891033	-0.22453832	-1.56854017
112	117	-0.78282561	0.48381284	2.40928950	167	172	2.36183488	0.83798841	-0.94400263
113	118	0.29901278	0.48381284	2.76080010	168	173	1.62764697	0.83798841	-1.95452560
114	119	1.38085117	0.48381284	2.40928950	169	174	2.46563538	-0.83798841	-0.62453754
115	120	2.04946406	0.48381284	1.48902280	170	175	2.66855993	0.22453832	0.00000000
116	121	2.71807696	0.48381284	0.56875610	171	176	2.46563538	-0.83798841	0.62453754
117	122	2 53327690	-0.48381284	-1.13751220	172	177	1 85218529	-1.83057152	-0.62453754
118	123	1.86466400	-0.48381284	-2.05777890	173	178	0.99258310	-2.48724915	0.00000000
119	124	0.78282561	-0.48381284	-2.40928950	174	179	1.85218529	-1.83057152	0.62453754
120	125	-0.29901278	-0.48381284	-2.76080010	175	180	-0.30672505	2.48724915	-0.94400263
121	126	-1.38085117	-0.48381284	-2.40928950	176	181	0.02161377	1 83057152	-1.95452560
122	120	-2.04946406	-0.48381284	-1.48902280	177	182	-1.16632723	1.83057152	-1.56854017
123	128	-2.71807696	-0.48381284	-0.56875610	178	183	-0.82463037	-0.22453832	-253795131
120	120	-2.71807696	-0.48381284	0.56875610	170	184	-0.16795273	0.83798841	-2.53795131
121	130	-2.04946406	-0.48381284	1 48902280	180	185	-1.35589374	0.83798841	-2.15196588
126	131	_1 38085117	-0.48381284	2 /0928950	181	186	0 16795273	-0.83798841	-2 53795131
120	$\frac{101}{132}$	-0.29901278	-0.48381284	2.10920990	182	187	0.82463037	0.22453832	-2.53795131
121	133	0.23301210	-0.48381284	2.10000010	183	188	1 35589374	-0.83798841	-2.15196588
120	134	1 86466400	-0.48381284	2.10520590	184	189	-0.02161377	-1.83057152	-1.95452560
130	135	2 53327600	-0.48381284	1 13751220	185	100	0.30672505	-2 48724915	094400263
130	136	2.53327690	-0.48381284	0.0000000	186	101	1 16632723	-1.83057152	-1 5685/017
132	130	2.33327030	-0.40301204 -1.45143851	-1.70626830	187	$\frac{191}{102}$	-0.99258310	-1.03037132 2 48724915	0.0000000
132	138	1 26663845	-1.45143851	-2.05777890	188	102	-1.85218529	1 83057152	-0.62453754
130	130	0.18/180006	-1.45143851	-2 /0928950	180	10/	-1.85218529	1.83057152	0.62453754
135	140	-0.89703833	-1.45143851	-2.76080010	100	101	-2.66855993	-0.22/53832	0.02100101
136	140	-1.56565123	-1.45143851		101	196	-2.000000000000000000000000000000000000	0.22405052	-0.62453754
137	142	-2.23426412	-1.45143851	-0.92026670	101	197	-2.46563538	0.83798841	0.62453754
138	143	-2.90287702	-1.45143851	0.00000000	193	204	-0.30672505	2 48724915	0.94400263
139	144	-2.23426412	-1.45143851	0.92026670	100	201	-1.16632723	1 83057152	1 56854017
140	145	-1.56565123	-1.45143851	1 84053340	195	206	0.02161377	1.83057152	1.95452560
141	146	-0.89703833	-1.45143851	2.76080010	196	207	-0.82463037	-0.22453832	2.53795131
142	147	0.18480006	-1.45143851	2.40928950	197	208	-1.35589374	0.83798841	2.15196588
143	148	1.26663845	-1.45143851	2.05777890	198	209	-0.16795273	0.83798841	2.53795131
144	149	2.34847684	-1.45143851	1.70626830	199	216	0.80301660	2.48724915	0.58342571
145	150	2.34847684	-1.45143851	0.56875610	200	217	1.13135542	1.83057152	1.59394868
146	151	2.34847684	-1.45143851	-0.56875610	200	218	1.86554333	1.83057152	0.58342571
147	152	1.56565123	-2.04946406	-1.13751220	202	219	2.15891033	-0.22453832	1.56854017
148	153	0.48381284	-2.04946406	-1.48902280	203	220	1.62764697	0.83798841	1.95452560
149	154	-0.59802555	-2.04946406	-1.84053340	204	221	2.36183488	0.83798841	0.94400263
150	155	-1.26663845	-2.04946406	-0.92026670	205	222	1.35589374	-0.83798841	2.15196588
151	156	-1.93525134	-2.04946406	0.00000000	206	223	0.82463037	0.22453832	2.53795131
152	157	-1.26663845	-2.04946406	0.92026670	207	224	0.16795273	-0.83798841	2.53795131
153	158	-0.59802555	-2.04946406	1.84053340	208	225	1.16632723	-1.83057152	1.56854017
154	159	0.48381284	-2.04946406	1.48902280	209	226	0.30672505	-2.48724915	0.94400263
155	160	1.56565123	-2.04946406	1.13751220	210	227	-0.02161377	-1.83057152	1.95452560
156	161	1.56565123	-2.04946406	0.00000000	211	228	0.00000000	4.32735356	0.00000000
157	162	0.78282561	-2.64748962	-0.56875610	212	229	0.96762567	3.72932801	0.00000000
158	163	-0.29901278	-2.64748962	-0.92026670	212	230	0.29901278	3,72932801	-0.92026670
159	164	-0.96762567	-2.64748962	0.00000000	213	231	-0.78282561	3.72932801	-0.56875610
160	165	-0.29901278	-2.64748962	0.92026670	215	232	-0.78282561	3.72932801	0.56875610
161	166	0.78282561	-2.64748962	0.56875610	216	233	0.29901278	3.72932801	0.92026670
162	167	0.00000000	-3.24551517	0.00000000	217	234	1.93525134	3.13130245	0.00000000
163	168	0.80301660	2.48724915	-0.58342571	218	235	1.26663845	3.13130245	-0.92026670
164	169	1.86554333	1.83057152	-0.58342571	219	236	0.59802555	3.13130245	-1.84053340
165	170	1.13135542	1.83057152	-1.59394868	220	237	-0.48381284	3.13130245	-1.48902280
	-								

Table 3: MIF1739 contains  $C_n$ , such that  $C_n^* = \min(C_n) \ n = 2, \dots, 1000$  (cont.)

#	$\mathbf{i}_{\mathbf{p}}$	$\mathbf{X}$	Y	$\mathbf{Z}$	#	$\mathbf{i}_{\mathbf{p}}$	$\mathbf{X}$	Y	$\mathbf{Z}$
221	238	-1.56565123	3.13130245	-1.13751220	276	293	-0.48381284	0.96762567	3.32955620
222	239	-1.56565123	3.13130245	0.00000000	277	294	0.59802555	0.96762567	3.68106680
223	240	-1.56565123	3.13130245	1.13751220	278	295	1.67986394	0.96762567	3.32955620
224	241	-0.48381284	3.13130245	1.48902280	279	296	2.34847684	0.96762567	2.40928950
225	242	0.59802555	3.13130245	1.84053340	280	297	3.01708973	0.96762567	1.48902280
226	243	1.26663845	3.13130245	0.92026670	281	298	3.68570263	0.96762567	0.56875610
227	244	2.90287702	2.53327690	0.00000000	282	299	3.50090257	0.00000000	-1.13751220
228	245	2.23426412	2.53327690	-0.92026670	283	300	2.83228968	0.00000000	-2.05777890
229	246	1.56565123	2.53327690	-1.84053340	284	301	2.16367678	0.00000000	-2.97804560
230	247	0.89703833	2.53327690	-2.76080010	285	302	1.08183839	0.00000000	-3.32955620
231	248	-0.18480006	2.53327690	-2.40928950	286	303	0.00000000	0.00000000	-3.68106680
232	249	-1.26663845	2.53327690	-2.05777890	287	304	-1.08183839	0.00000000	-3.32955620
233	250	-2.34847684	2.53327690	-1.70626830	288	305	-2.16367678	0.00000000	-2.97804560
234	251	-2.34847684	2.53327690	-0.56875610	289	306	-2.83228968	0.00000000	-2.05777890
235	252	-2.34847684	2.53327690	0.56875610	290	307	-3.50090257	0.00000000	-1.13751220
236	253	-2.34847684	2.53327690	1.70626830	291	308	-3.50090257	0.00000000	0.00000000
237	254	-1.26663845	2.53327690	2.05777890	292	309	-3.50090257	0.00000000	1.13751220
238	255	-0.18480006	2.53327690	2.40928950	293	$\frac{300}{310}$	-2.83228968	0.00000000	$\frac{2.05777890}{2.05777890}$
239	256	0.89703833	2.53327690	2.76080010	294	311	-2.16367678	0.00000000	2.97804560
240	257	1.56565123	2.53327690	1.84053340	295	312	-1.08183839	0.00000000	3.32955620
241	258	2.23426412	2.53327690	0.92026670	296	313	0.00000000	0.00000000	3.68106680
242	259	3.87050269	1.93525134	0.0000000	200 297	314	1.08183839	0.00000000	3.32955620
243	260	3.20188979	1.93525134	-0.92026670	298	315	2.16367678	0.00000000	2.97804560
244	261	2.53327690	1.93525134	-1.84053340	299	316	2.83228968	0.00000000	$\frac{2.05777890}{2.05777890}$
245	262	1.86466400	1.93525134	-2.76080010	300	317	3.50090257	0.00000000	1.13751220
$\frac{2}{246}$	263	1.19605111	1.93525134	-3.68106680	301	318	3.50090257	0.00000000	0.00000000
247	264	0.11421272	1.93525134	-3.32955620	302	$\frac{319}{319}$	3.31610251	-0.96762567	-1.70626830
248	265	-0.96762567	1.93525134	-2.97804560	303	320	2.64748962	-0.96762567	-2.62653500
249	266	-2.04946406	1.93525134	-2.62653500	304	321	1.56565123	-0.96762567	-2.97804560
250	267	-3.13130245	1.93525134	-2.27502440	305	322	0.48381284	-0.96762567	-3.32955620
251	268	-3.13130245	1.93525134	-1.13751220	306	323	-0.59802555	-0.96762567	-3.68106680
252	269	-3.13130245	1.93525134	0.00000000	307	324	-1.67986394	-0.96762567	-3.32955620
253	270	-3.13130245	1.93525134	1.13751220	308	325	-2.34847684	-0.96762567	-2.40928950
254	271	-3.13130245	1.93525134	2.27502440	309	326	-3.01708973	-0.96762567	-1.48902280
255	272	-2.04946406	1.93525134	2.62653500	310	327	-3.68570263	-0.96762567	-0.56875610
256	273	-0.96762567	1.93525134	2.97804560	311	328	-3.68570263	-0.96762567	0.56875610
257	274	0.11421272	1.93525134	3.32955620	312	329	-3.01708973	-0.96762567	1.48902280
258	275	1.19605111	1.93525134	3.68106680	313	330	-2.34847684	-0.96762567	2.40928950
259	276	1.86466400	1.93525134	2.76080010	314	331	-1.67986394	-0.96762567	3.32955620
260	277	2.53327690	1.93525134	1.84053340	315	332	-0.59802555	-0.96762567	3.68106680
261	278	3.20188979	1.93525134	0.92026670	316	333	0.48381284	-0.96762567	3.32955620
262	279	3.68570263	0.96762567	-0.56875610	317	334	1.56565123	-0.96762567	2.97804560
263	280	3.01708973	0.96762567	-1.48902280	318	335	2.64748962	-0.96762567	2.62653500
264	281	2.34847684	0.96762567	-2.40928950	319	336	3.31610251	-0.96762567	1.70626830
265	282	1.67986394	0.96762567	-3.32955620	320	337	3.31610251	-0.96762567	0.56875610
266	283	0.59802555	0.96762567	-3.68106680	321	338	3.31610251	-0.96762567	-0.56875610
267	284	-0.48381284	0.96762567	-3.32955620	322	339	3.13130245	-1.93525134	-2.27502440
268	285	-1.56565123	0.96762567	-2.97804560	323	340	2.04946406	-1.93525134	-2.62653500
269	286	-2.64748962	0.96762567	-2.62653500	324	341	0.96762567	-1.93525134	-2.97804560
270	287	-3.31610251	0.96762567	-1.70626830	325	342	-0.11421272	-1.93525134	-3.32955620
271	288	-3.31610251	0.96762567	-0.56875610	326	343	-1.19605111	-1.93525134	-3.68106680
272	289	-3.31610251	0.96762567	0.56875610	327	344	-1.86466400	-1.93525134	-2.76080010
273	290	-3.31610251	0.96762567	1.70626830	328	345	-2.53327690	-1.93525134	-1.84053340
274	291	-2.64748962	0.96762567	2.62653500	329	346	-3.20188979	-1.93525134	-0.92026670
275	292	-1.56565123	0.96762567	2.97804560	330	347	-3.87050269	-1.93525134	0.00000000
-									

Table 4: MIF1739 contains  $C_n$ , such that  $C_n^* = \min(C_n) \ n = 2, \dots, 1000$  (cont.)

#	$\mathbf{i}_{\mathbf{p}}$	$\mathbf{X}$	Y	$\mathbf{Z}$	#	$\mathbf{i}_{\mathbf{p}}$	$\mathbf{X}$	Y	$\mathbf{Z}$
331	348	-3.20188979	-1.93525134	0.92026670	386	416	-1.97744435	2.30531085	-2.14059242
332	349	-2.53327690	-1.93525134	1.84053340	387	417	-0.81793346	2.30531085	-2.51734034
333	350	-1.86466400	-1.93525134	2.76080010	388	418	-1.13841439	2.94627270	-1.53100147
334	351	-1.19605111	-1.93525134	3.68106680	389	419	0.02109650	2.94627270	-1.90774939
335	352	-0.11421272	-1.93525134	3.32955620	390	438	-0.96882835	3.58723456	0.00000000
336	353	0.96762567	-1.93525134	2.97804560	391	439	-2.64688828	2.30531085	-1.21918190
337	354	2.04946406	-1.93525134	2.62653500	392	440	-2.64688828	2.30531085	1.21918190
338	355	3.13130245	-1.93525134	2.27502440	393	441	-2.64688828	2.30531085	0.00000000
339	356	3.13130245	-1.93525134	1.13751220	394	442	-1.80785831	2.94627270	0.60959095
340	357	3.13130245	-1.93525134	0.00000000	395	443	-1.80785831	2.94627270	-0.60959095
341	358	3.13130245	-1.93525134	-1.13751220	396	462	-0.29938442	3.58723456	0.92141052
342	359	2.34847684	-2.53327690	-1.70626830	397	463	-1.97744435	2.30531085	2.14059242
343	360	1.26663845	-2.53327690	-2.05777890	398	464	0.34157743	2.30531085	2.89408827
344	361	0.18480006	-2.53327690	-2.40928950	399	465	-0.81793346	2.30531085	2.51734034
345	362	-0.89703833	-2.53327690	-2.76080010	400	466	0.02109650	2.94627270	1.90774939
346	363	-1.56565123	-2.53327690	-1.84053340	401	467	-1.13841439	2.94627270	1.53100147
347	364	-2.23426412	-2.53327690	-0.92026670	402	468	-1.12537603	-0.73771364	3.46355129
348	365	-2.90287702	-2.53327690	0.00000000	403	469	-2.16247410	1.33648249	2.71005543
349	366	-2.23426412	-2.53327690	0.92026670	404	470	0.15654768	1.33648249	3.46355129
350	367	-1.56565123	-2.53327690	1.84053340	405	471	-1.00296321	1.33648249	3.08680336
351	368	-0.89703833	-2.53327690	2.76080010	406	472	-0.48441418	0.29938442	3.46355129
352	369	0.18480006	-2.53327690	2.40928950	407	473	-1.64392507	0.29938442	3.08680336
353	370	1.26663845	-2.53327690	2.05777890	408	486	0.78379860	3.58723456	0.56946302
354	371	2.34847684	-2.53327690	1.70626830	409	487	1.42476046	2.30531085	2.54214077
355	372	2.34847684	-2.53327690	0.56875610	410	488	2.85799474	2.30531085	0.56946302
356	373	2.34847684	-2.53327690	-0.56875610	411	489	2.14137760	2.30531085	1.55580189
357	374	1.56565123	-3.13130245	-1.13751220	412	490	1.82089667	2.94627270	0.56946302
358	375	0.48381284	-3.13130245	-1.48902280	413	491	1.10427953	2.94627270	1.55580189
359	376	-0.59802555	-3.13130245	-1.84053340	414	510	0.00000000	5.40919195	0.00000000
360	377	-1.26663845	-3.13130245	-0.92026670	415	511	0.96762567	4.81116640	0.00000000
361	378	-1.93525134	-3.13130245	0.00000000	416	512	0.29901278	4.81116640	-0.92026670
362	379	-1.26663845	-3.13130245	0.92026670	417	513	-0.78282561	4.81116640	-0.56875610
363	380	-0.59802555	-3.13130245	1.84053340	418	514	-0.78282561	4.81116640	0.56875610
364	381	0.48381284	-3.13130245	1.48902280	419	515	0.29901278	4.81116640	0.92026670
365	382	1.56565123	-3.13130245	1.13751220	420	516	1.93525134	4.21314084	0.00000000
366	383	1.56565123	-3.13130245	0.00000000	421	517	1.26663845	4.21314084	-0.92026670
367	384	0.78282561	-3.72932801	-0.56875610	422	518	0.59802555	4.21314084	-1.84053340
368	385	-0.29901278	-3.72932801	-0.92026670	423	519	-0.48381284	4.21314084	-1.48902280
369	386	-0.96762567	-3.72932801	0.00000000	424	520	-1.56565123	4.21314084	-1.13751220
370	387	-0.29901278	-3.72932801	0.92026670	425	521	-1.56565123	4.21314084	0.00000000
371	388	0.78282561	-3.72932801	0.56875610	426	522	-1.56565123	4.21314084	1.13751220
372	389	0.00000000	-4.32735356	0.00000000	427	523	-0.48381284	4.21314084	1.48902280
373	390	0.78379860	3.58723456	-0.56946302	428	524	0.59802555	4.21314084	1.84053340
374	391	2.85799474	2.30531085	-0.56946302	429	525	1.26663845	4.21314084	0.92026670
375	392	1.42476046	2.30531085	-2.54214077	430	526	2.90287702	3.61511529	0.00000000
376	393	2.14137760	2.30531085	-1.55580189	431	527	2.23426412	3.61511529	-0.92026670
377	394	1.10427953	2.94627270	-1.55580189	432	528	1.56565123	3.61511529	-1.84053340
378	395	1.82089667	2.94627270	-0.56946302	433	529	0.89703833	3.61511529	-2.76080010
379	397	3.34240892	1.33648249	-0.92141052	434	530	-0.18480006	3.61511529	-2.40928950
380	398	1.90917463	1.33648249	-2.89408827	435	531	-1.26663845	3.61511529	-2.05777890
381	399	2.62579177	1.33648249	-1.90774939	436	532	-2.34847684	3.61511529	-1.70626830
382	400	2.42772367	0.29938442	-2.51734034	437	533	-2.34847684	3.61511529	-0.56875610
383	401	3.14434081	0.29938442	-1.53100147	438	534	-2.34847684	3.61511529	0.56875610
384	414	-0.29938442	3.58723456	-0.92141052	439	535	-2.34847684	3.61511529	1.70626830
385	415	0.34157743	2.30531085	-2.89408827	440	536	-1.26663845	3.61511529	2.05777890

Table 5: MIF1739 contains  $C_n$ , such that  $C_n^* = \min(C_n) \ n = 2, \dots, 1000$  (cont.)

#	$\mathbf{i}_{\mathbf{p}}$	X	$\mathbf{Y}$	$\mathbf{Z}$	#	$\mathbf{i}_{\mathbf{p}}$	X	Y	$\mathbf{Z}$
441	537	-0.18480006	3.61511529	2.40928950	496	592	-0.18480006	1.45143851	-4.24982290
442	538	0.89703833	3.61511529	2.76080010	497	593	-1.26663845	1.45143851	-3.89831230
443	539	1.56565123	3.61511529	1.84053340	498	594	-2.34847684	1.45143851	-3.54680170
444	540	2.23426412	3.61511529	0.92026670	499	595	-3.43031523	1.45143851	-3.19529110
445	541	3.87050269	3.01708973	0.00000000	500	596	-4.09892812	1.45143851	-2.27502440
446	542	3.20188979	3.01708973	-0.92026670	501	597	-4.09892812	1.45143851	-1.13751220
447	543	2.53327690	3.01708973	-1.84053340	502	598	-4.09892812	1.45143851	0.00000000
448	544	1.86466400	3.01708973	-2.76080010	503	599	-4.09892812	1.45143851	1.13751220
449	545	1.19605111	3.01708973	-3.68106680	504	600	-4.09892812	1.45143851	2.27502440
450	546	0.11421272	3.01708973	-3.32955620	505	601	-3.43031523	1.45143851	3.19529110
451	547	-0.96762567	3.01708973	-2.97804560	506	602	-2.34847684	1.45143851	3.54680170
452	548	-2.04946406	3.01708973	-2.62653500	507	603	-1.26663845	1.45143851	3.89831230
453	549	-3.13130245	3.01708973	-2.27502440	508	604	-0.18480006	1.45143851	4.24982290
454	550	-3.13130245	3.01708973	-1.13751220	509	605	0.89703833	1.45143851	4.60133350
455	551	-3.13130245	3.01708973	0.00000000	510	606	1.97887672	1.45143851	4.24982290
456	552	-3.13130245	3.01708973	1.13751220	511	607	2.64748962	1.45143851	3.32955620
457	553	-3.13130245	3.01708973	2.27502440	512	608	3.31610251	1.45143851	2.40928950
458	554	-2.04946406	3.01708973	2.62653500	513	609	3.98471541	1.45143851	1.48902280
459	555	-0.96762567	3.01708973	2.97804560	514	610	4.65332830	1.45143851	0.56875610
460	556	0.11421272	3.01708973	3.32955620	515	611	4.46852824	0.48381284	-1.13751220
461	557	1.19605111	3.01708973	3.68106680	516	612	3.79991535	0.48381284	-2.05777890
462	558	1.86466400	3.01708973	2.76080010	517	613	3.13130245	0.48381284	-2.97804560
463	559	2.53327690	3.01708973	1.84053340	518	614	2.46268956	0.48381284	-3.89831230
464	560	3.20188979	3.01708973	0.92026670	519	615	1.38085117	0.48381284	-4.24982290
465	561	4.83812836	2.41906418	0.00000000	520	616	0.29901278	0.48381284	-4.60133350
466	562	4.16951547	2.41906418	-0.92026670	521	617	-0.78282561	0.48381284	-4.24982290
467	563	3.50090257	2.41906418	-1.84053340	522	618	-1.86466400	0.48381284	-3.89831230
468	564	2.83228968	2.41906418	-2.76080010	523	619	-2.94650239	0.48381284	-3.54680170
469	565	2.16367678	2.41906418	-3.68106680	524	620	-3.61511529	0.48381284	-2.62653500
470	566	1.49506388	2.41906418	-4.60133350	525	621	-4.28372818	0.48381284	-1.70626830
471	567	0.41322549	2.41906418	-4.24982290	526	622	-4.28372818	0.48381284	-0.56875610
472	568	-0.66861290	2.41906418	-3.89831230	527	623	-4.28372818	0.48381284	0.56875610
473	569	-1.75045129	2.41906418	-3.54680170	528	624	-4.28372818	0.48381284	1.70626830
474	570	-2.83228968	2.41906418	-3.19529110	529	625	-3.61511529	0.48381284	2.62653500
475	571	-3.91412807	2.41906418	-2.84378050	530	626	-2.94650239	0.48381284	3.54680170
476	572	-3.91412807	2.41906418	-1.70626830	531	627	-1.86466400	0.48381284	3.89831230
477	573	-3.91412807	2.41906418	-0.56875610	532	628	-0.78282561	0.48381284	4.24982290
478	574	-3.91412807	2.41906418	0.56875610	533	629	0.29901278	0.48381284	4.60133350
479	575	-3.91412807	2.41906418	1.70626830	534	630	1.38085117	0.48381284	4.24982290
480	576	-3.91412807	2.41906418	2.84378050	535	631	2.46268956	0.48381284	3.89831230
481	577	-2.83228968	2.41906418	3.19529110	536	632	3.13130245	0.48381284	2.97804560
482	578	-1.75045129	2.41906418	3.54680170	537	633	3.79991535	0.48381284	2.05777890
483	579	-0.66861290	2.41906418	3.89831230	538	634	4.46852824	0.48381284	1.13751220
484	580	0.41322549	2.41906418	4.24982290	539	635	4.46852824	0.48381284	0.00000000
485	581	1.49506388	2.41906418	4.60133350	540	636	4.28372818	-0.48381284	-1.70626830
486	582	2.16367678	2.41906418	3.68106680	541	637	3.61511529	-0.48381284	-2.62653500
487	583	2.83228968	2.41906418	2.76080010	542	638	2.94650239	-0.48381284	-3.54680170
488	584	3.50090257	2.41906418	1.84053340	543	639	1.86466400	-0.48381284	-3.89831230
489	585	4.16951547	2.41906418	0.92026670	544	640	0.78282561	-0.48381284	-4.24982290
490	586	4.65332830	1.45143851	-0.56875610	545	641	-0.29901278	-0.48381284	-4.60133350
491	587	3.98471541	1.45143851	-1.48902280	546	642	-1.38085117	-0.48381284	-4.24982290
492	588	3.31610251	1.45143851	-2.40928950	547	643	-2.46268956	-0.48381284	-3.89831230
493	589	2.64748962	1.45143851	-3.32955620	548	644	-3.13130245	-0.48381284	-2.97804560
494	590	1.97887672	1.45143851	-4.24982290	549	645	-3.79991535	-0.48381284	-2.05777890
495	591	0.89703833	1.45143851	-4.60133350	550	646	-4.46852824	-0.48381284	-1.13751220

Table 6: MIF1739 contains  $C_n$ , such that  $C_n^* = \min(C_n) \ n = 2, \dots, 1000$  (cont.)

#	$\mathbf{i}_{\mathbf{p}}$	X	Y	$\mathbf{Z}$	#	$\mathbf{i}_{\mathbf{p}}$	$\mathbf{X}$	Y	$\mathbf{Z}$
551	647	-4.46852824	-0.48381284	0.00000000	606	702	-0.41322549	-2.41906418	4.24982290
552	648	-4.46852824	-0.48381284	1.13751220	607	703	0.66861290	-2.41906418	3.89831230
553	649	-3.79991535	-0.48381284	2.05777890	608	704	1.75045129	-2.41906418	3.54680170
554	650	-3.13130245	-0.48381284	2.97804560	609	705	2.83228968	-2.41906418	3.19529110
555	651	-2.46268956	-0.48381284	3.89831230	610	706	3.91412807	-2.41906418	2.84378050
556	652	-1.38085117	-0.48381284	4.24982290	611	707	3.91412807	-2.41906418	1.70626830
557	653	-0.29901278	-0.48381284	4.60133350	612	708	3.91412807	-2.41906418	0.56875610
558	654	0.78282561	-0.48381284	4.24982290	613	709	3.91412807	-2.41906418	-0.56875610
559	655	1.86466400	-0.48381284	3.89831230	614	710	3.91412807	-2.41906418	-1.70626830
560	656	2.94650239	-0.48381284	3.54680170	615	711	3.13130245	-3.01708973	-2.27502440
561	657	3.61511529	-0.48381284	2.62653500	616	712	2.04946406	-3.01708973	-2.62653500
562	658	4.28372818	-0.48381284	1.70626830	617	713	0.96762567	-3.01708973	-2.97804560
563	659	4.28372818	-0.48381284	0.56875610	618	714	-0.11421272	-3.01708973	-3.32955620
564	660	4.28372818	-0.48381284	-0.56875610	619	715	-1.19605111	-3.01708973	-3.68106680
565	661	4.09892812	-1.45143851	-2.27502440	620	716	-1.86466400	-3.01708973	-2.76080010
566	662	3.43031523	-1.45143851	-3.19529110	621	717	-2.53327690	-3.01708973	-1.84053340
567	663	2.34847684	-1.45143851	-3.54680170	622	718	-3.20188979	-3.01708973	-0.92026670
568	664	1.26663845	-1.45143851	-3.89831230	623	719	-3.87050269	-3.01708973	0.00000000
569	665	0.18480006	-1.45143851	-4.24982290	624	720	-3.20188979	-3.01708973	0.92026670
570	666	-0.89703833	-1.45143851	-4.60133350	625	721	-2.53327690	-3.01708973	1.84053340
571	667	-1.97887672	-1.45143851	-4.24982290	626	722	-1.86466400	-3.01708973	2.76080010
572	668	-2.64748962	-1.45143851	-3.32955620	627	723	-1.19605111	-3.01708973	3.68106680
573	669	-3.31610251	-1.45143851	-2.40928950	628	724	-0.11421272	-3.01708973	3.32955620
574	670	-3.98471541	-1.45143851	-1.48902280	629	725	0.96762567	-3.01708973	2.97804560
575	671	-4.65332830	-1.45143851	-0.56875610	630	726	2.04946406	-3.01708973	2.62653500
576	672	-4.65332830	-1.45143851	0.56875610	631	727	3.13130245	-3.01708973	2.27502440
577	673	-3.98471541	-1.45143851	1.48902280	632	728	3.13130245	-3.01708973	1.13751220
578	674	-3.31610251	-1.45143851	2.40928950	633	729	3.13130245	-3.01708973	0.00000000
579	675	-2.64748962	-1.45143851	3.32955620	634	730	3.13130245	-3.01708973	-1.13751220
580	676	-1.97887672	-1.45143851	4.24982290	635	731	2.34847684	-3.61511529	-1.70626830
581	677	-0.89703833	-1.45143851	4.60133350	636	732	1.26663845	-3.61511529	-2.05777890
582	678	0.18480006	-1.45143851	4.24982290	637	733	0.18480006	-3.61511529	-2.40928950
583	679	1.26663845	-1.45143851	3.89831230	638	734	-0.89703833	-3.61511529	-2.76080010
584	680	2.34847684	-1.45143851	3.54680170	639	735	-1.56565123	-3.61511529	-1.84053340
585	681	3.43031523	-1.45143851	3.19529110	640	736	-2.23426412	-3.61511529	-0.92026670
586	682	4.09892812	-1.45143851	2.27502440	641	737	-2.90287702	-3.61511529	0.00000000
587	683	4.09892812	-1.45143851	1.13751220	642	738	-2.23426412	-3.61511529	0.92026670
588	684	4.09892812	-1.45143851	0.00000000	643	739	-1.56565123	-3.61511529	1.84053340
589	685	4.09892812	-1.45143851	-1.13751220	644	740	-0.89703833	-3.61511529	2.76080010
590	686	3.91412807	-2.41906418	-2.84378050	645	741	0.18480006	-3.61511529	2.40928950
591	687	2.83228968	-2.41906418	-3.19529110	646	742	1.26663845	-3.61511529	2.05777890
592	688	1.75045129	-2.41906418	-3.54680170	647	743	2.34847684	-3.61511529	1.70626830
593	689	0.66861290	-2.41906418	-3.89831230	648	744	2.34847684	-3.61511529	0.56875610
594	690	-0.41322549	-2.41906418	-4.24982290	649	745	2.34847684	-3.61511529	-0.56875610
595	691	-1.49506388	-2.41906418	-4.60133350	650	746	1.56565123	-4.21314084	-1.13751220
596	692	-2.16367678	-2.41906418	-3.68106680	651	747	0.48381284	-4.21314084	-1.48902280
597	693	-2.83228968	-2.41906418	-2.76080010	652	748	-0.59802555	-4.21314084	-1.84053340
598	694	-3.50090257	-2.41906418	-1.84053340	653	749	-1.26663845	-4.21314084	-0.92026670
599	695	-4.16951547	-2.41906418	-0.92026670	654	750	-1.93525134	-4.21314084	0.00000000
600	696	-4.83812836	-2.41906418	0.00000000	655	751	-1.26663845	-4.21314084	0.92026670
601	697	-4.16951547	-2.41906418	0.92026670	656	752	-0.59802555	-4.21314084	1.84053340
602	698	-3.50090257	-2.41906418	1.84053340	657	753	0.48381284	-4.21314084	1.48902280
603	699	-2.83228968	-2.41906418	2.76080010	658	754	1.56565123	-4.21314084	1.13751220
604	700	-2.16367678	-2.41906418	3.68106680	659	755	1.56565123	-4.21314084	0.00000000
605	701	-1.49506388	-2.41906418	4.60133350	660	756	0.78282561	-4.81116640	-0.56875610
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Table 7: MIF1739 contains  $C_n$ , such that  $C_n^* = \min(C_n) \ n = 2, \dots, 1000$  (cont.)

#	$\mathbf{i}_{\mathbf{p}}$	$\mathbf{X}$	Y	$\mathbf{Z}$	#	$\mathbf{i_p}$	X	Y	$\mathbf{Z}$
661	757	-0.29901278	-4.81116640	-0.92026670	716	962	0.00000000	6.49103034	0.00000000
662	758	-0.96762567	-4.81116640	0.00000000	717	963	0.96762567	5.89300479	0.00000000
663	759	-0.29901278	-4.81116640	0.92026670	718	964	0.29901278	5.89300479	-0.92026670
664	760	0.78282561	-4.81116640	0.56875610	719	965	-0.78282561	5.89300479	-0.56875610
665	761	0.00000000	-5.40919195	0.00000000	720	966	-0.78282561	5.89300479	0.56875610
666	767	1.40459143	3.41577344	-2.50615402	721	967	0.29901278	5.89300479	0.92026670
667	768	2.11106408	3.41577344	-1.53377783	722	968	1.93525134	5.29497923	0.00000000
668	770	1.08864726	4.04766179	-1.53377783	723	969	1.26663845	5.29497923	-0.92026670
669	882	-0.29514631	4.67955013	0.90836695	724	970	0.59802555	5.29497923	-1.84053340
670	884	0.65268621	2.78388509	3.82549550	725	971	-0.48381284	5.29497923	-1.48902280
671	885	-0.49041055	2.78388509	3.45408085	726	972	-1.56565123	5.29497923	-1.13751220
672	886	-1.63350731	2.78388509	3.08266620	727	973	-1.56565123	5.29497923	0.00000000
673	887	0.33674203	3.41577344	2.85311932	728	974	-1.56565123	5.29497923	1.13751220
674	888	-0.80635473	3.41577344	2.48170467	729	975	-0.48381284	5.29497923	1.48902280
675	889	-1.94945149	3.41577344	2.11029002	730	976	0.59802555	5.29497923	1.84053340
676	890	0.02079786	4.04766179	1.88074314	731	977	1.26663845	5.29497923	0.92026670
677	891	-1.12229890	4.04766179	1.50932848	732	978	2.90287702	4.69695368	0.00000000
678	892	-1.42538929	-1.23847892	4.38689716	733	979	2.23426412	4.69695368	-0.92026670
679	894	0.47027575	1.82877155	4.38689716	734	980	1.56565123	4.69695368	-1.84053340
680	895	-0.67282101	1.82877155	4.01548250	735	981	0.89703833	4.69695368	-2.76080010
681	896	-1.81591777	1.82877155	3.64406785	736	982	-0.18480006	4.69695368	-2.40928950
682	897	-0.16161259	0.80635473	4.38689716	737	983	-1.26663845	4.69695368	-2.05777890
683	898	-1.30470936	0.80635473	4.01548250	738	984	-2.34847684	4.69695368	-1.70626830
684	899	-2.44780612	0.80635473	3.64406785	739	985	-2.34847684	4.69695368	-0.56875610
685	900	-0.79350094	-0.21606210	4.38689716	740	986	-2.34847684	4.69695368	0.56875610
686	901	-1.93659770	-0.21606210	4.01548250	741	987	-2.34847684	4.69695368	1.70626830
687	922	0.77270308	4.67955013	0.56140165	742	988	-1.26663845	4.69695368	2.05777890
688	923	1.72053561	2.78388509	3.47853020	743	989	-0.18480006	4.69695368	2.40928950
689	924	3.83995356	2.78388509	0.56140165	744	990	0.89703833	4.69695368	2.76080010
690	925	3.13348091	2.78388509	1.53377783	745	991	1.56565123	4.69695368	1.84053340
691	926	2.42700826	2.78388509	2.50615402	746	992	2.23426412	4.69695368	0.92026670
692	927	2.81753673	3.41577344	0.56140165	747	993	3.87050269	4.09892812	0.00000000
693	928	2.11106408	3.41577344	1.53377783	748	994	3.20188979	4.09892812	-0.92026670
694	929	1.40459143	3.41577344	2.50615402	749	995	2.53327690	4.09892812	-1.84053340
695	930	1.79511991	4.04766179	0.56140165	750	996	1.86466400	4.09892812	-2.76080010
696	931	1.08864726	4.04766179	1.53377783	751	997	1.19605111	4.09892812	-3.68106680
697	932	3.73171761	-1.23847892	2.71125155	752	998	0.11421272	4.09892812	-3.32955620
698	933	2.19809237	1.82877155	3.82549550	753	999	-0.96762567	4.09892812	-2.97804560
699	935	3.61103768	1.82877155	1.88074314	754	1000	-2.04946406	4.09892812	-2.62653500
700	936	2.90456502	1.82877155	2.85311932	755	1001	-3.13130245	4.09892812	-2.27502440
701	937	4.12224609	0.80635473	1.50932848	756	1002	-3.13130245	4.09892812	-1.13751220
702	938	3.41577344	0.80635473	2.48170467	757	1003	-3.13130245	4.09892812	0.00000000
703	939	2.70930079	0.80635473	3.45408085	758	1004	-3.13130245	4.09892812	1.13751220
704	940	3.92698185	-0.21606210	2.11029002	759	1005	-3.13130245	4.09892812	2.27502440
705	941	3.22050920	-0.21606210	3.08266620	760	1006	-2.04946406	4.09892812	2.62653500
706	942	2.95901453	-1.82877155	3.27265320	761	1007	-0.96762567	4.09892812	2.97804560
707	943	1.42538929	1.23847892	4.38689716	762	1008	0.11421272	4.09892812	3.32955620
708	944	-0.47027575	-1.82877155	4.38689716	763	1009	1.19605111	4.09892812	3.68106680
709	945	0.16161259	-0.80635473	4.38689716	764	1010	1.86466400	4.09892812	2.76080010
710	946	0.79350094	0.21606210	4.38689716	765	1011	2.53327690	4.09892812	1.84053340
711	947	0.67282101	-1.82877155	4.01548250	766	1012	3.20188979	4.09892812	0.92026670
712	948	1.30470936	-0.80635473	4.01548250	767	1013	4.83812836	3.50090257	0.00000000
713	949	1.93659770	0.21606210	4.01548250	768	1014	4.16951547	3.50090257	-0.92026670
714	950	1.81591777	-1.82877155	3.64406785	769	1015	3.50090257	3.50090257	-1.84053340
715	951	2.44780612	-0.80635473	3.64406785	770	1016	2.83228968	3.50090257	-2.76080010

Table 8: MIF1739 contains  $C_n$ , such that  $C_n^* = \min(C_n) \ n = 2, \dots, 1000$  (cont.)

#	$\mathbf{i}_{\mathbf{p}}$	X	Y	$\mathbf{Z}$		#	$\mathbf{i}_{\mathbf{p}}$	$\mathbf{X}$	Y	$\mathbf{Z}$
771	1017	2.16367678	3.50090257	-3.68106680	8	326	1072	2.94650239	1.93525134	-4.24982290
772	1018	1.49506388	3.50090257	-4.60133350	8	327	1073	2.27788950	1.93525134	-5.17008960
773	1019	0.41322549	3.50090257	-4.24982290	8	328	1074	1.19605111	1.93525134	-5.52160021
774	1020	-0.66861290	3.50090257	-3.89831230	8	329	1075	0.11421272	1.93525134	-5.17008960
775	1021	-1.75045129	3.50090257	-3.54680170	8	30	1076	-0.96762567	1.93525134	-4.81857900
776	1022	-2.83228968	3.50090257	-3.19529110	8	31	1077	-2.04946406	1.93525134	-4.46706840
777	1023	-3.91412807	3.50090257	-2.84378050	8	32	1078	-3.13130245	1.93525134	-4.11555780
778	1024	-3.91412807	3.50090257	-1.70626830	ŝ	33	1079	-4.21314084	1.93525134	-3.76404720
779	1025	-3.91412807	3.50090257	-0.56875610	ŝ	334	1080	-4.88175374	1.93525134	-2.84378050
780	1026	-3.91412807	3.50090257	0.56875610	ŝ	35	1081	-4.88175374	1.93525134	-1.70626830
781	1027	-3.91412807	3.50090257	1.70626830	8	36	1082	-4.88175374	1.93525134	-0.56875610
782	1028	-3.91412807	3.50090257	2.84378050	ŝ	37	1083	-4.88175374	1.93525134	0.56875610
783	1029	-2.83228968	3.50090257	3.19529110	8	38	1084	-4.88175374	1.93525134	1.70626830
784	1030	-1.75045129	3.50090257	3.54680170	ŝ	39	1085	-4.88175374	1.93525134	2.84378050
785	1031	-0.66861290	3.50090257	3.89831230	8	340	1086	-4.21314084	1.93525134	3.76404720
786	1032	0.41322549	3.50090257	4.24982290	8	341	1087	-3.13130245	1.93525134	4.11555780
787	1033	1.49506388	3.50090257	4.60133350	8	342	1088	-2.04946406	1.93525134	4.46706840
788	1034	2.16367678	3.50090257	3.68106680	8	343	1089	-0.96762567	1.93525134	4.81857900
789	1035	2.83228968	3.50090257	2.76080010	8	344	1090	0.11421272	1.93525134	5.17008960
790	1036	3.50090257	3.50090257	1.84053340	8	345	1091	1.19605111	1.93525134	5.52160021
791	1037	4.16951547	3.50090257	0.92026670	8	346	1092	2.27788950	1.93525134	5.17008960
792	1038	5.80575403	2.90287702	0.00000000	8	347	1093	2.94650239	1.93525134	4.24982290
793	1039	5.13714114	2.90287702	-0.92026670	8	348	1094	3.61511529	1.93525134	3.32955620
794	1040	4.46852824	2.90287702	-1.84053340	8	349	1095	4.28372818	1.93525134	2.40928950
795	1041	3.79991535	2.90287702	-2.76080010	8	350	1096	4.95234108	1.93525134	1.48902280
796	1042	3.13130245	2.90287702	-3.68106680	8	51	1097	5.62095397	1.93525134	0.56875610
797	1043	2.46268956	2.90287702	-4.60133350	8	552	1098	5.43615392	0.96762567	-1.13751220
798	1044	1.79407666	2.90287702	-5.52160021	8	53	1099	4.76754102	0.96762567	-2.05777890
799	1045	0.71223827	2.90287702	-5.17008960	8	554	1100	4.09892812	0.96762567	-2.97804560
800	1046	-0.36960012	2.90287702	-4.81857900	8	55	1101	3.43031523	0.96762567	-3.89831230
801	1047	-1.45143851	2.90287702	-4.46706840	8	56	1102	2.76170233	0.96762567	-4.81857900
802	1048	-2.53327690	2.90287702	-4.11555780	8	57	1103	1.67986394	0.96762567	-5.17008960
803	1049	-3.61511529	2.90287702	-3.76404720	8	558	1104	0.59802555	0.96762567	-5.52160021
804	1050	-4.69695368	2.90287702	-3.41253660	8	559	1105	-0.48381284	0.96762567	-5.17008960
805	1051	-4.69695368	2.90287702	-2.27502440	8	60	1106	-1.56565123	0.96762567	-4.81857900
806	1052	-4.69695368	2.90287702	-1.13751220	8	61	1107	-2.64748962	0.96762567	-4.46706840
807	1053	-4.69695368	2.90287702	0.00000000	8	62	1108	-3.72932801	0.96762567	-4.11555780
808	1054	-4.69695368	2.90287702	1.13751220	8	63	1109	-4.39794090	0.96762567	-3.19529110
809	1055	-4.69695368	2.90287702	2.27502440	8	64	1110	-5.06655380	0.96762567	-2.27502440
810	1056	-4.69695368	2.90287702	3.41253660	8	65	1111	-5.06655380	0.96762567	-1.13751220
811	1057	-3.61511529	2.90287702	3.76404720	8	666	1112	-5.06655380	0.96762567	0.00000000
812	1058	-2.53327690	2.90287702	4.11555780	8	67	1113	-5.06655380	0.96762567	1.13751220
813	1059	-1.45143851	2.90287702	4.46706840	8	68	1114	-5.06655380	0.96762567	2.27502440
814	1060	-0.36960012	2.90287702	4.81857900	8	69	1115	-4.39794090	0.96762567	3.19529110
815	1061	0.71223827	2.90287702	5.17008960	8	370	1116	-3.72932801	0.96762567	4.11555780
816	1062	1.79407666	2.90287702	5.52160021	8	871	1117	-2.64748962	0.96762567	4.46706840
817	1063	2.46268956	2.90287702	4.60133350	8	372	1118	-1.56565123	0.96762567	4.81857900
818	1064	3.13130245	2.90287702	3.68106680	8	373	1119	-0.48381284	0.96762567	5.17008960
819	1065	3.79991535	2.90287702	2.76080010	8	374	1120	0.59802555	0.96762567	5.52160021
820	1066	4.46852824	2.90287702	1.84053340	8	575	1121	1.67986394	0.96762567	5.17008960
821	1067	5.13714114	2.90287702	0.92026670	8	5/6	1122	2.76170233	0.96762567	4.81857900
822	1068	5.62095397	1.93525134	-0.56875610	8	011	1123	3.43031523	0.96762567	3.89831230
823	1059	4.95234108	1.93525134	-1.48902280	8	018	1124	4.09892812	0.96762567	2.97804560
824	1070	4.283(2818	1.93525134	2 2005500	8	019	1125	4.70754102	0.90762567	2.03///890
825	1071	3.01511529	1.93525134	-3.32955620		80	1120	5.43015392	0.90762567	1.13/51220

Table 9: MIF1739 contains  $C_n$ , such that  $C_n^* = \min(C_n) \ n = 2, \dots, 1000$  (cont.)

ski  1127  5.4481.582  0.90702567  0.0000000    988  1128  3.27382801  0.900702567  3.1158529110    888  1129  4.58271066  0.00000000  -2.62653500  933  1184  5.0665388  0.9072567  2.2750240    884  1130  3.24551517  0.0000000  -4.4670840  941  1185  5.0665388  0.9972567  -1.13751220    885  1133  1.0818838  0.00000000  -5.17008900  941  1187  5.0665388  0.9972567  -1.3751220    888  1134  0.00000000  -5.17008900  942  1188  4.28173374  -1.33525134  -4.4170843    890  1136  -2.1635778  0.00000000  -5.17008900  944  1191  2.04944466  -1.33525144  -4.447070843    813  136  -2.21635767  0.00000000  -5.271002  941  1191  -2.9450233  -3.5114  -4.44707084    8141  140  -5.22135386  0.00000000  -5.657610	#	$\mathbf{i_p}$	$\mathbf{X}$	Y	$\mathbf{Z}$	#	$\mathbf{i_p}$	$\mathbf{X}$	Y	$\mathbf{Z}$
882  1128  5.23133586  0.0000000  1.70268830  937  1183  4.3070400  0.090702567  3.19452110    884  1120  A.5271066  0.0000000  3.74481170  938  1184  5.06655380  0.090702567  2.1037126    885  1131  3.91412847  0.00000000  -1.81857900  941  1186  5.06655380  0.99772567  1.13751220    875  1133  1.0818383  0.00000000  -5.517008900  941  1189  4.21311081  -1.9355114  -2.4478056    889  1135  -1.08183839  0.00000000  -5.517008900  941  1190  3.1310052114  -4.40708400    8113  0.00000000  -2.4670786  0.00000000  -4.8170806  944  1191  2.0946606  -1.93525114  -4.8177890    81130  -4.5827086  0.00000000  -4.8170806  944  1191  2.0946606  -1.93525114  -4.8177890    81131  -5.2313536  0.00000000  -5.6468977  1.33525114  -4.2482240 <td>881</td> <td>1127</td> <td>5.43615392</td> <td>0.96762567</td> <td>0.00000000</td> <td>936</td> <td>1182</td> <td>3.72932801</td> <td>-0.96762567</td> <td>4.11555780</td>	881	1127	5.43615392	0.96762567	0.00000000	936	1182	3.72932801	-0.96762567	4.11555780
883  1129  4.58274096  0.0000000  -2.62835300  938  1181  5.06655380  -0.9672567  2.27502140    884  1130  3.24551517  0.00000000  -4.4700840  930  1185  5.06655380  -0.9672567  0.0000000    886  1133  2.1637678  0.0000000  -5.1700860  941  1187  5.06655380  -0.9672567  -1.13751220    887  1133  1.01853830  0.60000000  -5.1700860  941  1189  4.81175374  -1.93325134  -3.7644708    888  1136  -2.1037677  0.00000000  -5.1700860  941  1190  3.13130245  -1.93325134  -4.8700840    891  1137  -2.613777  0.00000000  -3.4680170  941  1193  -0.11421272  -1.93325134  -4.8709840    891  1140  -5.23153346  0.00000000  -3.6680170  941  1193  -0.11421272  -1.93325134  -5.2160021    894  1140  -5.231533546  0.00000000  -5.6756	882	1128	5.25135386	0.00000000	-1.70626830	937	1183	4.39794090	-0.96762567	3.19529110
84  1130  3.91412807  0.0000000  -3.4680170  939  1185  5.06655380  -0.9672567  1.13751220    888  1131  2.16387678  0.0000000  -4.4708440  940  1184  5.06655380  -0.9672567  -1.97571220    887  1133  1.08185350  0.0000000  -5.17008960  941  1187  5.06655380  -0.9672567  -1.93525134  -2.476404720    888  1134  -0.00000000  -5.17008960  941  1189  4.28175374  -1.93525134  -4.4708440    811  1137  -3.2165117  0.0000000  -4.31657900  941  1190  -1.1155776  0.9352134  -4.4708440    811  1137  -5.2163506  940  1192  -0.9676267  -1.93525134  -5.1708560    811  1139  -6.521353586  0.00000000  -2.675830  941  1194  -1.10505111  -1.93525134  -5.2705697    814  -6.521353586  0.00000000  -0.6675610  951  1194  -2.13535161	883	1129	4.58274096	0.00000000	-2.62653500	938	1184	5.06655380	-0.96762567	2.27502440
885  1131  3 24551517  0.0000000  -4.48750840  940  1186  5.06655380  -0.9672567  0.0000000    888  1132  1.08158359  0.0000000  -5.17008900  941  1188  4.88175374  -1.93252134  -2.8475055    889  1135  -1.08183839  0.0000000  -5.17008900  941  1189  -1.03325134  -3.76404720    890  1136  -2.1636767  0.00000000  -4.4706840  941  1193  -3.1330245  -1.93325134  -4.6706840    981  1137  -5.2455350  0.00000000  -2.46553500  944  1193  -0.11421272  -1.93325134  -5.52100896    983  1140  -5.52135356  0.00000000  -2.62653500  940  1195  -2.24758950  -3.9325134  -5.2160596    989  1144  -5.23135366  0.00000000  2.46675701  990  1197  -3.01511629  -1.93325134  -1.8992280    989  1144  -4.5234066  0.00000000  2.46767610 <td< td=""><td>884</td><td>1130</td><td>3.91412807</td><td>0.00000000</td><td>-3.54680170</td><td>939</td><td>1185</td><td>5.06655380</td><td>-0.96762567</td><td>1.13751220</td></td<>	884	1130	3.91412807	0.00000000	-3.54680170	939	1185	5.06655380	-0.96762567	1.13751220
886  1132  2.16367675  0.0000000  -4.81857900  941  1187  E.50655380  -0.9672567  -1.3751220    888  1133  0.00000000  5.17069800  942  1188  4.817374  -1.93325134  -2.8478600    889  1135  -1.08185339  0.00000000  -5.17069800  941  1190  -2.1618774  -1.93325134  -4.4670640    891  1135  -2.16387678  0.00000000  -4.81867000  941  1190  -0.1672267  -1.93325134  -4.4670640    813  1139  -6.5274096  0.00000000  -2.6665500  941  1194  -1.10605111  -1.93325134  -4.4670640    814  144  -5.25135386  0.00000000  -2.676857610  941  1194  -1.10605111  -1.93325134  -4.248728290    898  1442  -5.25135386  0.00000000  2.6265500  931  1196  -2.4355171  -3.3325734  -4.8922980    898  1445  -5.2455587  0.00000000  2.6265500  9	885	1131	3.24551517	0.00000000	-4.46706840	940	1186	5.06655380	-0.96762567	0.00000000
847  1133  1.08183839  0.00000000  -5.52160021  942  1188  4.2131084  -1.93325134  -2.8137603    848  1133  -1.08188359  0.00000000  -5.52160021  943  1189  4.2131084  -1.93325134  -3.61601720    849  1137  -2.16367678  0.00000000  -4.46706840  944  1190  2.01946406  -1.93325134  -4.1875700    849  1134  -3.8247056  0.00000000  -2.6436300  944  1192  0.6675677  1.93325134  -5.17008960    841  1140  -5.52335386  0.00000000  0.56875610  950  1196  -2.247589502  -1.93325134  -3.2495520    849  1144  -5.5233586  0.00000000  0.56875610  950  1196  -2.2478815  -1.93325134  -3.2495520    849  1144  -4.58274096  0.0000000  2.6263500  953  1199  -4.95234108  -1.93325134  -2.4292890    910  1146  -3.24551517  0.0000000	886	1132	2.16367678	0.00000000	-4.81857900	941	1187	5.06655380	-0.96762567	-1.13751220
888  1134  0.00000000  -0.52160021  943  1189  4.21314084  -1.93525134  -3.76404720    890  1136  -2.16367678  0.00000000  -5.1700890  944  1190  3.13124.5  -1.93525134  -4.1670840    811  1137  -3.24671517  0.0000000  -5.4700840  944  1192  2.01916066  -1.93525134  -5.17008960    811  1137  -3.24671517  0.00000000  -5.6265300  944  1193  -0.11421272  -1.93525134  -5.52160021    81141  -5.25135386  0.00000000  -1.70526830  949  1195  -2.27789850  -1.93525134  -3.249255620    897  1143  -5.52135386  0.00000000  2.62653500  953  1198  -9.4352134  -3.249255620    899  1145  -3.31412807  0.00000000  3.54680170  954  1200  -5.62095397  -1.93525134  -1.42082280    910  1147  -1.6367678  0.00000000  5.5160021  955  1201	887	1133	1.08183839	0.00000000	-5.17008960	942	1188	4.88175374	-1.93525134	-2.84378050
889  1135  -108188383  0.00000000  -4.11857900  944  1190  3.13130245  -1.93325134  -4.411557750    891  1137  -3.24551517  0.0000000  -4.46706840  946  1192  0.06762567  -1.93325134  -4.61706840    891  1137  -3.24551517  0.0000000  -2.62653500  948  1194  -1.19605111  -1.93325134  -5.2160021    894  1140  -5.2513386  0.00000000  -5.6676510  950  1196  -2.94602334  -2.9325134  -3.24982290    896  1144  -5.2513386  0.00000000  2.62653500  951  1197  -3.61511529  -1.93325134  -2.4082980    899  1144  -4.52713386  0.00000000  2.62653500  953  1199  -4.95234108  -1.93525134  -3.06875610    901  1147  -2.3656767  0.0000000  3.1618070  955  1200  -5.6296397  -1.93325134  -3.46875761    901  1144  -2.8676778  0.0000000	888	1134	0.00000000	0.00000000	-5.52160021	943	1189	4.21314084	-1.93525134	-3.76404720
890  1136  -2.16367678  0.00000000  -4.4670840  946  1191  2.0494406  -1.93525134  -4.4670840    810  1137  -3.2455157  0.00000000  -3.54680170  947  1193  -0.11421272  -1.93525134  -4.34670840    813  1139  -4.58274096  0.00000000  -7.062880  948  1194  -1.19635134  -5.51260021    814  144  -5.25135386  0.00000000  0.56875610  951  1197  -3.61511529  -1.93525134  -3.24028502    897  1143  -5.5135386  0.00000000  2.62653500  953  1199  -4.28372181  -1.93525134  -3.24028502    898  1144  -3.547678  0.00000000  2.62653500  953  1290  -5.62093397  -1.93525134  -1.84092280    901  1146  -3.3455157  0.00000000  5.71008960  956  1201  -5.62093397  -1.93525134  1.48902280    911  116  0.00000000  5.52160021  956  1202	889	1135	-1.08183839	0.00000000	-5.17008960	944	1190	3.13130245	-1.93525134	-4.11555780
941  1137  -3.24551517  0.0000000  -2.46705810  946  1192  0.97672677  -1.9325134  -4.517008960    883  1139  -4.58274096  0.0000000  -2.563500  948  1194  -1.1965111  -1.93525134  -5.52160021    884  1140  -5.25133386  0.00000000  -5.6875610  950  1196  -2.9768850  -1.33525134  -3.12982290    971  1143  -5.25135386  0.00000000  1.568875610  951  1197  -3.6151529  -1.33525134  -3.2925523    989  1144  -4.5274096  0.0000000  2.62633500  953  1199  -4.96234108  -1.33525134  -1.48002280    990  1146  -3.24551517  0.0000000  4.46706840  955  1201  -5.62095397  -1.93525134  -1.36825134  -1.48002280    901  1146  -3.24551517  0.0000000  5.51160021  955  1201  -5.62095397  -1.93525134  -2.48072814  -3.3525134  -4.48002280    901	890	1136	-2.16367678	0.00000000	-4.81857900	945	1191	2.04946406	-1.93525134	-4.46706840
8/92  1138  -3.91412807  0.0000000  -3.54680170  947  1133  -0.11421272  -1.93525134  -5.52160021    8/93  1140  -5.25135386  0.0000000  -2.6265300  948  1194  -1.9665111  -1.93525134  -5.17008960    8/95  1141  -5.25135386  0.00000000  -5.6875610  950  1196  -2.94650239  -1.93525134  -4.29255263    8/97  1143  -5.25135386  0.00000000  2.6265500  952  1198  -4.28372818  -1.93525134  -4.39225400    8/90  1146  -3.21551517  0.00000000  3.54680170  955  1201  -5.6205397  -1.93525134  -4.8092280    910  1147  -2.16367678  0.00000000  5.517008960  957  1203  -4.28372818  -1.93525134  -4.302280    911  1150  1.0818383  0.00000000  5.517008960  959  1205  -2.9465023  -1.93525134  4.34982200    911  1151  2.16367678  0.000000000	891	1137	-3.24551517	0.00000000	-4.46706840	946	1192	0.96762567	-1.93525134	-4.81857900
898  1130  -4.58274096  0.0000000  -2.62653500  948  1144  -1.19605111  -1.93525134  -5.52160021    896  1141  -5.25135386  0.0000000  -0.56875610  950  1196  -2.27788950  -1.93525134  -4.24982290    896  1142  -5.25133586  0.00000000  1.5668530  951  1197  -3.61511262  -1.93525134  -4.24982290    898  1144  -4.5221058  0.00000000  2.62653500  953  1199  -4.28372818  -1.33525134  -1.490228050    991  1145  -9.9112807  0.00000000  3.51680170  956  1200  -5.62005397  -1.93525134  -1.68902850    901  1147  -2.16367678  0.00000000  5.17008960  956  1201  -5.62005397  -1.93525134  -2.4092850    903  1144  -0.08367678  0.00000000  5.17008960  956  1201  -5.62065397  -1.93525134  -2.40282290    904  1150  1.68183830  0.00000000	892	1138	-3.91412807	0.00000000	-3.54680170	947	1193	-0.11421272	-1.93525134	-5.17008960
894  1140  -5.25135386  0.0000000  -1.76626830  949  1195  -2.27788950  -1.9325134  -5.17089860    896  1142  -5.25135386  0.0000000  0.56875610  950  1197  -3.61511529  -1.93525134  -3.2925520    897  1143  -5.25135386  0.0000000  2.6663500  952  1198  -4.28723037  -1.93525134  -3.2925520    899  1144  -5.25135386  0.0000000  3.54680170  954  1200  -5.62095397  -1.93525134  -0.56875610    901  1147  -2.16367678  0.0000000  4.81857900  955  1201  -5.62095397  -1.93525134  1.48902280    902  1148  -1.08183839  0.00000000  5.17008660  957  1203  -4.28723418  -1.93525134  1.48902280    904  1150  1.01813839  0.00000000  4.8765700  960  1206  -2.2778895  -1.93525134  4.2492290    907  1153  3.91412807  0.00000000	893	1139	-4.58274096	0.00000000	-2.62653500	948	1194	-1.19605111	-1.93525134	-5.52160021
895  1141  -5.25135386  0.0000000  0.56875610  950  1197  -3.61511529  -1.93525134  -4.2492290    898  1144  -5.25135386  0.0000000  1.7626830  951  1197  -3.61511529  -1.93525134  -2.40928950    898  1144  -5.25135386  0.0000000  3.56480170  952  1198  -4.28372818  -1.93525134  -2.40928950    900  1146  -3.24551517  0.00000000  3.4680170  955  1201  -6.2095397  -1.93525134  -1.4802280    901  1147  -0.00000000  0.00000000  5.100021  958  1204  -3.61511529  -1.93525134  -1.4802280    903  1152  3.24551517  0.00000000  5.100021  958  1204  -3.61511529  -1.93525134  -1.2085085620    904  1150  1.08138333  0.00000000  5.7100860  961  1207  -1.19055111  -1.93525134  5.17008900    906  1152  3.24551517  0.00000000	894	1140	-5.25135386	0.00000000	-1.70626830	949	1195	-2.27788950	-1.93525134	-5.17008960
896  1142  -5.25135386  0.00000000  1.70626830  951  1197  -3.8111292  -1.93525134  -3.32555620    897  1143  -5.25135386  0.00000000  2.6263300  952  1198  -4.28372818  -1.93525134  -2.40928950    898  1144  -5.8274966  0.00000000  2.6263300  953  1199  -4.28372818  -1.93525134  -0.58875610    901  1146  -3.24551517  0.0000000  4.81857900  956  1202  -4.28372818  -1.93525134  1.48902280    903  1149  0.00000000  0.0000000  5.17008960  957  1203  -4.28773818  -1.93525134  3.24505142  2.40928950    904  1150  1.01813839  0.00000000  5.17008960  959  1205  -2.34505114  -1.93525134  4.2492290    907  1153  3.2455117  0.00000000  2.6633500  961  1207  -1.93525134  4.1805900    906  1152  5.25135386  0.00000000  -5.	895	1141	-5.25135386	0.00000000	-0.56875610	950	1196	-2.94650239	-1.93525134	-4.24982290
syr  1143  -5.25135386  0.00000000  1.70626830  952  1198  -4.58274198  -1.93525134  -2.40928950    898  1144  -4.58274096  0.00000000  3.54680170  953  1199  -4.95234108  -1.93525134  -2.40928950    900  1146  -3.9412807  0.00000000  4.46706840  955  1201  -5.62095397  -1.93525134  -0.56875610    900  1148  -1.08183839  0.00000000  5.17008960  956  1202  -4.55234108  -1.93525134  2.49028950    901  1150  1.08183839  0.00000000  5.17008960  957  1203  -2.34652313  3.3295520    905  1151  2.16367678  0.00000000  4.81857900  960  1206  -2.178050  -1.93525134  4.24982290    905  1153  3.91412807  0.00000000  4.8185700  960  1200  -0.14912172  -1.93525134  4.18706840    910  1155  5.25135386  0.00000000  .56875610 <td< td=""><td>896</td><td>1142</td><td>-5.25135386</td><td>0.00000000</td><td>0.56875610</td><td>951</td><td>1197</td><td>-3.61511529</td><td>-1.93525134</td><td>-3.32955620</td></td<>	896	1142	-5.25135386	0.00000000	0.56875610	951	1197	-3.61511529	-1.93525134	-3.32955620
sys  1144 1.58274066  0.00000000  2.62653500  953  1199 0.5529377  -1.93525134  -1.48902280    899  1145  -3.91412807  0.00000000  3.4680100  954  1200  -5.62095397  -1.93525134  -0.56875610    901  1147  -2.16367678  0.00000000  4.48706840  955  1201  -5.62095397  -1.93525134  0.56875610    901  1147  -2.16367678  0.0000000  5.17008960  957  1203  -4.2372818  -1.93525134  3.32955620    903  1149  0.00000000  5.17008960  957  1203  -2.93525134  3.32955620    904  1150  1.208367678  0.00000000  4.4870840  961  1207  -1.93525134  5.17008960    905  1153  3.91412807  0.00000000  4.46706840  961  1207  -1.93525134  4.41555700    909  1155  5.25135386  0.00000000  .56875610  965  1211  3.13130245  -1.93525134<	897	1143	-5.25135386	0.00000000	1.70626830	952	1198	-4.28372818	-1.93525134	-2.40928950
999  1145  -3.91412807  0.00000000  3.54680170  954  1200  -5.62095397  -1.93525134  -0.56875610  955  1201  -5.62095397  -1.93525134  -0.56875610  956  1202  -4.53234108  -1.93525134  -0.56875610  956  1202  -4.53234108  -1.93525134  -0.56875610  956  1202  -4.53234108  -1.93525134  -1.9402280  -1.93525134  -1.94092280  -1.93525134  -1.94092280  -1.93525134  -1.94092280  -1.93525134  -1.94092280  -1.93525134  -1.93525134  -1.94092280  -1.93525134  -1.94092280  -1.93525134  -1.94092280  -1.93525134  -1.9428290  -1.93525134	898	1144	-4.58274096	0.00000000	2.62653500	953	1199	-4.95234108	-1.93525134	-1.48902280
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	899	1145	-3.91412807	0.00000000	3.54680170	954	1200	-5.62095397	-1.93525134	-0.56875610
901  1147  -2.16367678  0.0000000  4.81857900    902  1148  -1.08183839  0.0000000  5.17008960    903  1149  0.0000000  5.17008960    904  1150  1.08183839  0.0000000  5.2160021    905  1151  2.16367678  0.0000000  4.81857900    906  1152  3.24551517  0.0000000  4.81857900    906  1152  3.24551517  0.0000000  3.54680170    907  1153  3.91412807  0.00000000  2.62653500    908  1154  4.58274096  0.00000000  2.66853500    901  1155  5.25135386  0.00000000  -5.6875610    901  1155  5.25135386  0.0000000  -5.6875610    911  1155  5.25135386  0.096762567  -2.27502440    911  1155  5.25135281  -0.96762567  -4.18557900    912  1164  2.64748962  -0.96762567  -4.18557900    911	900	1146	-3.24551517	0.00000000	4.46706840	955	1201	-5.62095397	-1.93525134	0.56875610
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	901	1147	-2.16367678	0.00000000	4.81857900	956	1202	-4.95234108	-1.93525134	1.48902280
003  1149  0.00000000  5.52160021  958  1204  -3.61511529  -1.93525134  3.2955620    904  1150  1.08183839  0.00000000  5.17008960  959  1205  -2.94650239  -1.93525134  5.17008960    905  1151  2.16367678  0.00000000  4.4670840  960  1206  -2.27788950  -1.93525134  5.17008960    906  1154  4.58274096  0.00000000  2.62653500  963  1209  0.96762567  -1.93525134  4.8185700    909  1155  5.25135386  0.0000000  0.56875610  965  1211  3.13130245  -1.93525134  4.481875780    911  1157  5.25135386  0.0000000  0.56875610  966  1211  3.13130245  -1.93525134  3.76404720    911  1157  5.25135386  0.0000000  0.56875610  966  1214  4.88175374  -1.93525134  3.76404720    911  1157  5.2160021  906  1214  4.88175374	902	1148	-1.08183839	0.00000000	5.17008960	957	1203	-4.28372818	-1.93525134	2.40928950
904  1150  1.08183839  0.00000000  5.17008960  959  1205  -2.94650239  -1.93525134  5.17008960  960  1206  -2.9778950  -1.93525134  5.17008960  960  1207  -1.19605111  -1.93525134  5.17008960  961  1207  -1.19605111  -1.93525134  5.2160021  961  1207  -1.19605111  -1.93525134  5.2160021  961  1207  -1.19605111  -1.93525134  5.2160021  961  1207  -1.19605111  -1.93525134  4.8187900  962  1208  -0.11421272  -1.93525134  4.46706840  963  1209  0.96762567  -1.93525134  -1.93525134  4.46706840  966  1211  3.13130245  -1.93525134  -1.	903	1149	0.00000000	0.00000000	5.52160021	958	1204	-3.61511529	-1.93525134	3.32955620
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	904	1150	1.08183839	0.00000000	5.17008960	959	1205	-2.94650239	-1.93525134	4.24982290
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	905	1151	2.16367678	0.00000000	4.81857900	960	1206	-2.27788950	-1.93525134	5.17008960
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	906	1152	3.24551517	0.00000000	4.46706840	961	1207	-1.19605111	-1.93525134	5.52160021
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	907	1153	3.91412807	0.00000000	3.54680170	962	1208	-0.11421272	-1.93525134	5.17008960
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	908	1154	4.58274096	0.00000000	2.62653500	963	1209	0.96762567	-1.93525134	4.81857900
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	909	1155	5.25135386	0.00000000	1.70626830	964	1210	2.04946406	-1.93525134	4.46706840
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	910	1156	5.25135386	0.00000000	0.56875610	965	1211	3.13130245	-1.93525134	4.11555780
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	911	1157	5.25135386	0.00000000	-0.56875610	966	1212	4.21314084	-1.93525134	3.76404720
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	912	1158	5.06655380	-0.96762567	-2.27502440	967	1213	4.88175374	-1.93525134	2.84378050
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	913	1159	4.39794090	-0.96762567	-3.19529110	968	1214	4.88175374	-1.93525134	1.70626830
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	914	1160	3.72932801	-0.96762567	-4.11555780	969	1215	4.88175374	-1.93525134	0.56875610
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	915	1161	2.64748962	-0.96762567	-4.46706840	970	1216	4.88175374	-1.93525134	-0.56875610
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	916	1162	1.56565123	-0.96762567	-4.81857900	971	1217	4.88175374	-1.93525134	-1.70626830
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	917	1163	0.48381284	-0.96762567	-5.17008960	972	1218	4.69695368	-2.90287702	-3.41253660
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	918	1164	-0.59802555	-0.96762567	-5.52160021	973	1219	3.61511529	-2.90287702	-3.76404720
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	919	1165	-1.67986394	-0.96762567	-5.17008960	974	1220	2.53327690	-2.90287702	-4.11555780
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	920	1166	-2.76170233	-0.96762567	-4.81857900	975	1221	1.45143851	-2.90287702	-4.46706840
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	921	1167	-3.43031523	-0.96762567	-3.89831230	976	1222	0.36960012	-2.90287702	-4.81857900
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	922	1168	-4.09892812	-0.96762567	-2.97804560	977	1223	-0.71223827	-2.90287702	-5.17008960
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	923	1169	-4.76754102	-0.96762567	-2.05777890	978	1224	-1.79407666	-2.90287702	-5.52160021
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	924	1170	-5.43615392	-0.96762567	-1.13751220	979	1225	-2.46268956	-2.90287702	-4.60133350
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	925	1171	-5.43615392	-0.96762567	0.00000000	980	1226	-3.13130245	-2.90287702	-3.68106680
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	926	1172	-5.43615392	-0.96762567	1.13751220	981	1227	-3.79991535	-2.90287702	-2.76080010
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	927	1173	-4.76754102	-0.96762567	2.05777890	982	1228	-4.46852824	-2.90287702	-1.84053340
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	928	1174	-4.09892812	-0.96762567	2.97804560	983	1229	-5.13714114	-2.90287702	-0.92026670
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	929	1175	-3.43031523	-0.96762567	3.89831230	984	1230	-5.80575403	-2.90287702	0.00000000
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	930	1176	$-2.7\overline{6170233}$	-0.96762567	$4.8\overline{1857900}$	985	1231	-5.13714114	-2.90287702	0.92026670
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	931	1177	$-1.6798\overline{6394}$	$-0.9676\overline{2567}$	5.17008960	986	1232	$-4.4685\overline{2824}$	$-2.9028\overline{7702}$	$1.8405\overline{3340}$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	932	1178	-0.59802555	-0.96762567	5.52160021	987	1233	-3.79991535	$-2.90\overline{28770}\overline{2}$	2.76080010
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	933	$11\overline{79}$	$0.48\overline{3}81284$	$-0.96\overline{762567}$	5.17008960	988	$12\overline{34}$	$-3.13\overline{130245}$	$-2.90\overline{287702}$	$3.68\overline{106680}$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	934	1180	$1.5656512\overline{3}$	$-0.9676256\overline{7}$	4.81857900	989	1235	$-2.4626895\overline{6}$	$-2.9028770\overline{2}$	4.60133350
	935	1181	2.64748962	$-0.9676256\overline{7}$	4.46706840	990	1236	$-1.7940766\overline{6}$	$-2.9028770\overline{2}$	5.52160021

Table 10: MIF1739 contains  $C_n$ , such that  $C_n^* = \min(C_n) \ n = 2, \dots, 1000$  (cont.)

#	$\mathbf{i_p}$	$\mathbf{X}$	Y	$\mathbf{Z}$	#	$\mathbf{i_p}$	$\mathbf{X}$	Y	$\mathbf{Z}$
991	1237	-0.71223827	-2.90287702	5.17008960	1046	1292	3.13130245	-4.09892812	-1.13751220
992	1238	0.36960012	-2.90287702	4.81857900	1047	1293	2.34847684	-4.69695368	-1.70626830
993	1239	1.45143851	-2.90287702	4.46706840	1048	1294	1.26663845	-4.69695368	-2.05777890
994	1240	2.53327690	-2.90287702	4.11555780	1049	1295	0.18480006	-4.69695368	-2.40928950
995	1241	3.61511529	-2.90287702	3.76404720	1050	1296	-0.89703833	-4.69695368	-2.76080010
996	1242	4.69695368	-2.90287702	3.41253660	1051	1297	-1.56565123	-4.69695368	-1.84053340
997	1243	4.69695368	-2.90287702	2.27502440	1052	1298	-2.23426412	-4.69695368	-0.92026670
998	1244	4.69695368	-2.90287702	1.13751220	1053	1299	-2.90287702	-4.69695368	0.00000000
999	1245	4.69695368	-2.90287702	0.00000000	1054	1300	-2.23426412	-4.69695368	0.92026670
1000	1246	4.69695368	-2.90287702	-1.13751220	1055	1301	-1.56565123	-4.69695368	1.84053340
1001	1247	4.69695368	-2.90287702	-2.27502440	1056	1302	-0.89703833	-4.69695368	2.76080010
1002	1248	3.91412807	-3.50090257	-2.84378050	1057	1303	0.18480006	-4.69695368	2.40928950
1003	1249	2.83228968	-3.50090257	-3.19529110	1058	1304	1.26663845	-4.69695368	2.05777890
1004	1250	1.75045129	-3.50090257	-3.54680170	1059	1305	2.34847684	-4.69695368	1.70626830
1005	1251	0.66861290	-3.50090257	-3.89831230	1060	1306	2.34847684	-4.69695368	0.56875610
1006	1252	-0.41322549	-3.50090257	-4.24982290	1061	1307	2.34847684	-4.69695368	-0.56875610
1007	1253	-1.49506388	-3.50090257	-4.60133350	1062	1308	1.56565123	-5.29497923	-1.13751220
1008	1254	-2.16367678	-3.50090257	-3.68106680	1063	1309	0.48381284	-5.29497923	-1.48902280
1009	1255	-2.83228968	-3.50090257	-2.76080010	1064	1310	-0.59802555	-5.29497923	-1.84053340
1010	1256	-3.50090257	-3.50090257	-1.84053340	1065	1311	-1.26663845	-5.29497923	-0.92026670
1011	1257	-4.16951547	-3.50090257	-0.92026670	1066	1312	-1.93525134	-5.29497923	0.00000000
1012	1258	-4.83812836	-3.50090257	0.00000000	1067	1313	-1.26663845	-5.29497923	0.92026670
1013	1259	-4.16951547	-3.50090257	0.92026670	1068	1314	-0.59802555	-5.29497923	1.84053340
1014	1260	-3.50090257	-3.50090257	1.84053340	1069	1315	0.48381284	-5.29497923	1.48902280
1015	1261	-2.83228968	-3.50090257	2.76080010	1070	1316	1.56565123	-5.29497923	1.13751220
1016	1262	-2.16367678	-3.50090257	3.68106680	1071	1317	1.56565123	-5.29497923	0.00000000
1017	1263	-1.49506388	-3.50090257	4.60133350	1072	1318	0.78282561	-5.89300479	-0.56875610
1018	1264	-0.41322549	-3.50090257	4.24982290	1073	1319	-0.29901278	-5.89300479	-0.92026670
1019	1265	0.66861290	-3.50090257	3.89831230	1074	1320	-0.96762567	-5.89300479	0.00000000
1020	1266	1.75045129	-3.50090257	3.54680170	1075	1321	-0.29901278	-5.89300479	0.92026670
1021	1267	2.83228968	-3.50090257	3.19529110	1076	1322	0.78282561	-5.89300479	0.56875610
1022	1268	3.91412807	-3.50090257	2.84378050	1077	1323	0.0000000	-6.49103034	0.0000000
1023	1269	3.91412807	-3.50090257	1.70626830	1078	1492	-1.70445005	-3.89026788	-3.44600888
1024	$\frac{1270}{1071}$	3.91412807	-3.50090257	0.56875610	1079	1493	-1.39145969	-4.51624861	-2.482(2359)
1025	$\frac{12(1)}{1272}$	3.91412807	-3.50090257	-0.50875010	1080	1494	-1.07840932 2.71720814	-0.14222933	-1.51943831
1020 1027	$\frac{1272}{1972}$	3.91412607	-3.30090237	-1.70020830	1081	$\frac{1493}{1406}$	-2.11130814 2.40421778	-3.20428710	-3.44000888
1027	$\frac{1273}{1974}$	2.04046406	4.09892812	-2.27502440	1082	$\frac{1490}{1407}$	-2.40431778	-3.69020766	-2.46272339
1028	$\frac{1274}{1975}$	2.04940400	4.09892812	-2.02053500	1084	1497	-2.09132741 1 77822705	-4.01024601 5 14000000	-1.31943631
1029	$\frac{1275}{1276}$	-0.11421272	-4.09892812	-2.37004500	1084	1490	-1.11033103 -3.41717587	-3.14222300 -3.26428716	-0.0010002 -2.48272350
1030	$\frac{1270}{1277}$	-0.11421272 -1.19605111	-4.09892812	-3.68106680	1085	1433	-3.10418550	-3.20420710 -3.89026788	-2.40272009 -1.510/3831
1031	$\frac{1277}{1278}$	-1.86466400	-4.09892812	-2.76080010	1087	1500	-2.79119514	-4.51624861	-0.55615302
1032	$\frac{1270}{1279}$	-253327690	-4.09892812	-1.84053340	1087	$\frac{1001}{1502}$	-4.11704359	-3.26428716	-1.51943831
1034	$\frac{1210}{1280}$	-3.20188979	-4.09892812	-0.92026670	1089	1502	-3.80405323	-3.89026788	-0.55615302
1035	1280	-3.87050269	-4.09892812	0.00000000	1090	1586	4.39669693	1.30524504	2.45850282
1036	1282	-3.20188979	-4.09892812	0.92026670	1091	1587	3.69682920	1.30524504	3.42178811
1037	1283	-2.53327690	-4.09892812	1.84053340	1092	1590	4.20325825	0.29238695	3.05384587
1038	1284	-1.86466400	-4.09892812	2.76080010	1093	$\frac{1000}{1624}$	0.00000000	7.57286873	0.00000000
1039	1285	-1.19605111	-4.09892812	3.68106680	1094	1625	0.96762567	6.97484318	0.00000000
1040	1286	-0.11421272	-4.09892812	3.32955620	1095	1626	0.29901278	6.97484318	-0.92026670
1041	1287	0.96762567	-4.09892812	2.97804560	1096	1627	-0.78282561	6.97484318	-0.56875610
1042	1288	2.04946406	-4.09892812	2.62653500	1097	1628	-0.78282561	6.97484318	0.56875610
1043	1289	3.13130245	-4.09892812	2.27502440	1098	1629	0.29901278	6.97484318	0.92026670
1044	1290	3.13130245	-4.09892812	1.13751220	1099	1630	1.93525134	6.37681762	0.00000000
1045	1291	3.13130245	-4.09892812	0.00000000	1100	1631	1.26663845	6.37681762	-0.92026670
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Table 11: MIF1739 contains  $C_n$ , such that  $C_n^* = \min(C_n) \ n = 2, \dots, 1000$  (cont.)

#	$\mathbf{i}_{\mathbf{p}}$	$\mathbf{X}$	Y	$\mathbf{Z}$	#	$\mathbf{i_p}$	X	Y	$\mathbf{Z}$
1101	1632	0.59802555	6.37681762	-1.84053340	1156	1687	-3.91412807	4.58274096	-0.56875610
1102	1633	-0.48381284	6.37681762	-1.48902280	1157	1688	-3.91412807	4.58274096	0.56875610
1103	1634	-1.56565123	6.37681762	-1.13751220	1158	1689	-3.91412807	4.58274096	1.70626830
1104	1635	-1.56565123	6.37681762	0.00000000	1159	1690	-3.91412807	4.58274096	2.84378050
1105	1636	-1.56565123	6.37681762	1.13751220	1160	1691	-2.83228968	4.58274096	3.19529110
1106	1637	-0.48381284	6.37681762	1.48902280	1161	1692	-1.75045129	4.58274096	3.54680170
1107	1638	0.59802555	6.37681762	1.84053340	1162	1693	-0.66861290	4.58274096	3.89831230
1108	1639	1.26663845	6.37681762	0.92026670	1163	1694	0.41322549	4.58274096	4.24982290
1109	1640	2.90287702	5.77879207	0.00000000	1164	1695	1.49506388	4.58274096	4.60133350
1110	1641	2.23426412	5.77879207	-0.92026670	1165	1696	2.16367678	4.58274096	3.68106680
1111	1642	1.56565123	5.77879207	-1.84053340	1166	1697	2.83228968	4.58274096	2.76080010
1112	1643	0.89703833	5.77879207	-2.76080010	1167	1698	3.50090257	4.58274096	1.84053340
1113	1644	-0.18480006	5.77879207	-2.40928950	1168	1699	4.16951547	4.58274096	0.92026670
1114	1645	-1.26663845	5.77879207	-2.05777890	1169	1701	5.13714114	3.98471541	-0.92026670
1115	1646	-2.34847684	5.77879207	-1.70626830	1170	1702	4.46852824	3.98471541	-1.84053340
1116	1647	-2.34847684	5.77879207	-0.56875610	1171	1703	3.79991535	3.98471541	-2.76080010
1117	1648	-2.34847684	5.77879207	0.56875610	1172	1704	3.13130245	3.98471541	-3.68106680
1118	$\frac{1010}{1649}$	-2.34847684	5.77879207	$\frac{1.70626830}{1.70626830}$	1173	1705	2.46268956	3.98471541	-4.60133350
1119	1650	-1.26663845	5.77879207	2.05777890	1174	1707	0.71223827	3.98471541	-5.17008960
1120	1651	-0.18480006	5.77879207	2.40928950	1175	1708	-0.36960012	3.98471541	-4.81857900
1121	1652	0.89703833	5.77879207	2.76080010	1176	1709	-1.45143851	3.98471541	-4.46706840
1122	1653	1.56565123	5.77879207	1.84053340	1177	1710	-2.53327690	3.98471541	-4.11555780
1123	1654	2.23426412	5.77879207	0.92026670	1178	1711	-3.61511529	3.98471541	-3.76404720
1124	1655	3.87050269	5.18076651	0.00000000	1179	1713	-4.69695368	3.98471541	-2.27502440
1125	1656	3 20188979	5 18076651	-0.92026670	1180	1714	-4.69695368	3 98471541	-1.13751220
1126	1657	2 53327690	5 18076651	-1.84053340	1181	1715	-4.69695368	3 98471541	0.0000000
1127	1658	1 86466400	5 18076651	-2.76080010	1182	1716	-4.69695368	3 98471541	1 13751220
1128	1659	1.19605111	5.18076651	-3.68106680	1183	1717	-4.69695368	3.98471541	2.27502440
1120	1660	0 11421272	5 18076651	-3.32955620	1184	1718	-4.69695368	3 98471541	3 41253660
1130	1661	-0.96762567	5 18076651	-2.97804560	1185	1719	-3.61511529	3 98471541	3 76404720
1131	$\frac{1661}{1662}$	-2.04946406	5 18076651	-2.62653500	1186	$\frac{1710}{1720}$	-253327690	3 98471541	4 11555780
1132	1663	-3.13130245	5 18076651	-2.27502440	1187	1721	-1.45143851	3 98471541	4 46706840
1133	1664	-3.13130245	5 18076651	-1.13751220	1188	1722	-0.36960012	3 98471541	4 81857900
1134	1665	-3.13130245	5 18076651	0.0000000	1180	1723	0.71223827	3 98471541	5 17008960
1135	1666	-313130245	5 18076651	$\frac{0.00000000}{1.13751220}$	1190	1724	1 79407666	3 98471541	5 52160021
1136	1667	-313130245	5 18076651	2 27502440	1191	1725	2 46268956	3 98471541	4 60133350
1137	1668	-2.04946406	5.18076651	2.62653500	1192	1726	3.13130245	3.98471541	3.68106680
1138	1669	-0.96762567	5 18076651	2 97804560	1193	1727	3 79991535	3 98471541	2 76080010
1139	1670	0.11421272	5.18076651	3.32955620	1194	1728	4.46852824	3.98471541	1.84053340
1140	1671	1.19605111	5.18076651	3.68106680	1195	1729	5.13714114	3.98471541	0.92026670
1141	1672	1.86466400	5.18076651	2.76080010	1196	1746	-5.47977929	3.38668985	-1.70626830
1142	1673	2.53327690	5.18076651	1.84053340	1197	1747	-5.47977929	3.38668985	-0.56875610
1143	1674	3.20188979	5.18076651	0.92026670	1198	1748	-5.47977929	3.38668985	0.56875610
1144	1675	4.83812836	4.58274096	0.00000000	1199	1749	-5.47977929	3.38668985	1.70626830
1145	1676	4.16951547	4.58274096	-0.92026670	1200	1753	-3.31610251	3.38668985	4.68431390
1146	1677	3.50090257	4.58274096	-1.84053340	1201	1754	-2.23426412	3.38668985	5.03582450
1147	1678	2.83228968	4.58274096	-2.76080010	1202	1755	-1.15242573	3.38668985	5.38733510
1148	1679	2.16367678	4.58274096	-3.68106680	1203	1756	-0.07058734	3.38668985	5.73884570
1149	1680	1.49506388	4.58274096	-4.60133350	1204	1760	3.43031523	3.38668985	4.60133350
1150	1681	0.41322549	4.58274096	-4.24982290	1205	1761	4.09892812	3.38668985	3.68106680
1151	1682	-0.66861290	4.58274096	-3.89831230	1206	1762	4.76754102	3.38668985	2.76080010
1152	1683	-1.75045129	4.58274096	-3.54680170	1207	1763	5.43615392	3.38668985	1.84053340
1153	1684	-2.83228968	4.58274096	-3.19529110	1208	1780	-5.66457935	2.41906418	-2.27502440
1154	1685	-3.91412807	4.58274096	-2.84378050	1209	1781	-5.66457935	2.41906418	-1.13751220
1155	1686	-3.91412807	4.58274096	-1.70626830	1210	1782	-5.66457935	2.41906418	0.00000000
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Table 12: MIF1739 contains  $C_n$ , such that  $C_n^* = \min(C_n) \ n = 2, \dots, 1000$  (cont.)

#	$\mathbf{i}_{\mathbf{p}}$	X	Y	$\mathbf{Z}$	#	$\mathbf{i_p}$	X	Y	$\mathbf{Z}$
1211	1783	-5.66457935	2.41906418	1.13751220	1266	2086	1.26663845	-5.77879207	-2.05777890
1212	1784	-5.66457935	2.41906418	2.27502440	1267	2087	0.18480006	-5.77879207	-2.40928950
1213	1815	-5.84937941	1.45143851	-1.70626830	1268	2098	2.34847684	-5.77879207	0.56875610
1214	1816	-5.84937941	1.45143851	-0.56875610	1269	2099	2.34847684	-5.77879207	-0.56875610
1215	1817	-5.84937941	1.45143851	0.56875610	1270	2100	1.56565123	-6.37681762	-1.13751220
1216	1818	-5.84937941	1.45143851	1.70626830	1271	2101	0.48381284	-6.37681762	-1.48902280
1217	1840	2.46268956	0.48381284	-5.73884570	1272	2109	1.56565123	-6.37681762	0.00000000
1218	1841	1.38085117	0.48381284	-6.09035631	1273	2536	0.00000000	8.65470712	0.00000000
1219	1850	-6.03417947	0.48381284	-1.13751220	1274	2537	0.96762567	8.05668157	0.00000000
1220	1851	-6.03417947	0.48381284	0.00000000	1275	2538	0.29901278	8.05668157	-0.92026670
1221	1852	-6.03417947	0.48381284	1.13751220	1276	2539	-0.78282561	8.05668157	-0.56875610
1222	1874	2.94650239	-0.48381284	-5.38733510	1277	2540	-0.78282561	8.05668157	0.56875610
1223	1875	1.86466400	-0.48381284	-5.73884570	1278	2541	0.29901278	8.05668157	0.92026670
1224	1876	0.78282561	-0.48381284	-6.09035631	1279	2542	1.93525134	7.45865601	0.00000000
1225	1885	-6.21897953	-0.48381284	-0.56875610	1280	2543	1.26663845	7.45865601	-0.92026670
1226	1886	-6.21897953	-0.48381284	0.56875610	1281	2544	0.59802555	7.45865601	-1.84053340
1227	1908	3.43031523	-1.45143851	-5.03582450	1282	2545	-0.48381284	7.45865601	-1.48902280
1228	1909	2.34847684	-1.45143851	-5.38733510	1283	2546	-1.56565123	7.45865601	-1.13751220
1229	1910	1.26663845	-1.45143851	-5.73884570	1284	2547	-1.56565123	7.45865601	0.00000000
1230	1911	0.18480006	-1.45143851	-6.09035631	1285	2548	-1.56565123	7.45865601	1.13751220
1231	1942	3.91412807	-2.41906418	-4.68431390	1286	2549	-0.48381284	7.45865601	1.48902280
1232	1943	2.83228968	-2.41906418	-5.03582450	1287	2550	0.59802555	7.45865601	1.84053340
1233	1944	1.75045129	-2.41906418	-5.38733510	1288	2551	1.26663845	7.45865601	0.92026670
1234	1945	0.66861290	-2.41906418	-5.73884570	1289	2552	2.90287702	6.86063046	0.00000000
1235	1946	-0.41322549	-2.41906418	-6.09035631	1290	2553	2.23426412	6.86063046	-0.92026670
1236	1977	3.31610251	-3.38668985	-4.68431390	1291	2554	1.56565123	6.86063046	-1.84053340
1237	1978	2.23426412	-3.38668985	-5.03582450	1292	2555	0.89703833	6.86063046	-2.76080010
1238	1979	1.15242573	-3.38668985	-5.38733510	1293	2556	-0.18480006	6.86063046	-2.40928950
1239	1980	0.07058734	-3.38668985	-5.73884570	1294	2557	-1.26663845	6.86063046	-2.05777890
1240	2011	3.61511529	-3.98471541	-3.76404720	1295	2558	-2.34847684	6.86063046	-1.70626830
1241	2012	2.53327690	-3.98471541	-4.11555780	1296	2559	-2.34847684	6.86063046	-0.56875610
1242	2013	1.45143851	-3.98471541	-4.46706840	1297	2560	-2.34847684	6.86063046	0.56875610
1243	2014	0.36960012	-3.98471541	-4.81857900	1298	2561	-2.34847684	6.86063046	1.70626830
1244	2015	-0.71223827	-3.98471541	-5.17008960	1299	2562	-1.26663845	6.86063046	2.05777890
1245	2036	4.69695368	-3.98471541	1.13751220	1300	2563	-0.18480006	6.86063046	2.40928950
1246	2037	4.69695368	-3.98471541	0.00000000	1301	2564	0.89703833	6.86063046	2.76080010
1247	2038	4.69695368	-3.98471541	-1.13751220	1302	2565	1.56565123	6.86063046	1.84053340
1248	2039	4.69695368	-3.98471541	-2.27502440	1303	2566	2.23426412	6.86063046	0.92026670
1249	2040	3.91412807	-4.58274096	-2.84378050	1304	2567	3.87050269	6.26260490	0.00000000
1250	2041	2.83228968	-4.58274096	-3.19529110	1305	2568	3.20188979	6.26260490	-0.92026670
1251	2042	1.75045129	-4.58274096	-3.54680170	1306	2569	2.53327690	6.26260490	-1.84053340
1252	2043	0.66861290	-4.58274096	-3.89831230	1307	2570	1.86466400	6.26260490	-2.76080010
1253	2044	-0.41322549	-4.58274096	-4.24982290	1308	2571	1.19605111	6.26260490	-3.68106680
1254	2061	3.91412807	-4.58274096	1.70626830	1309	2572	0.11421272	6.26260490	-3.32955620
1255	2062	3.91412807	-4.58274096	0.56875610	1310	2573	-0.96762567	6.26260490	-2.97804560
1256	2063	3.91412807	-4.58274096	-0.56875610	1311	2574	-2.04946406	6.26260490	-2.62653500
1257	2064	3.91412807	-4.58274096	-1.70626830	1312	2575	-3.13130245	6.26260490	-2.27502440
1258	2065	3.13130245	-5.18076651	-2.27502440	1313	2576	-3.13130245	6.26260490	-1.13751220
1259	2066	2.04946406	-5.18076651	-2.62653500	1314	2577	-3.13130245	6.26260490	0.00000000
1260	2067	0.96762567	-5.18076651	-2.97804560	1315	2578	-3.13130245	6.26260490	1.13751220
1261	2068	-0.11421272	-5.18076651	-3.32955620	1316	2579	-3.13130245	6.26260490	2.27502440
1262	2082	3.13130245	-5.18076651	1.13751220	1317	2580	-2.04946406	6.26260490	2.62653500
1263	2083	3.13130245	-5.18076651	0.00000000	1318	2581	-0.96762567	6.26260490	2.97804560
1264	2084	3.13130245	-5.18076651	-1.13751220	1319	2582	0.11421272	6.26260490	3.32955620
1265	2085	2.34847684	-5.77879207	-1.70626830	1320	2583	1.19605111	6.26260490	3.68106680

Table 13: MIF1739 contains  $C_n$ , such that  $C_n^* = \min(C_n) \ n = 2, \dots, 1000$  (cont.)

#	$\mathbf{i_p}$	$\mathbf{X}$	Y	$\mathbf{Z}$	#	$\mathbf{i}_{\mathbf{p}}$	$\mathbf{X}$	Y	$\mathbf{Z}$
1321	2584	1.86466400	6.26260490	2.76080010	1376	2658	-5.47977929	4.46852824	-1.70626830
1322	2585	2.53327690	6.26260490	1.84053340	1377	2659	-5.47977929	4.46852824	-0.56875610
1323	2586	3.20188979	6.26260490	0.92026670	1378	2660	-5.47977929	4.46852824	0.56875610
1324	2587	4.83812836	5.66457935	0.00000000	1379	2661	-5.47977929	4.46852824	1.70626830
1325	2588	4.16951547	5.66457935	-0.92026670	1380	2662	-5.47977929	4.46852824	2.84378050
1326	2589	3.50090257	5.66457935	-1.84053340	1381	2664	-4.39794090	4.46852824	4.33280330
1327	2590	2.83228968	5.66457935	-2.76080010	1382	2665	-3.31610251	4.46852824	4.68431390
1328	2591	2.16367678	5.66457935	-3.68106680	1383	2666	-2.23426412	4.46852824	5.03582450
1329	2592	1.49506388	5.66457935	-4.60133350	1384	2667	-1.15242573	4.46852824	5.38733510
1330	2593	0.41322549	5.66457935	-4.24982290	1385	2668	-0.07058734	4.46852824	5.73884570
1331	2594	-0.66861290	5.66457935	-3.89831230	1386	2669	1.01125105	4.46852824	6.09035631
1332	2595	-1.75045129	5.66457935	-3.54680170	1387	2671	2.76170233	4.46852824	5.52160021
1333	2596	-2.83228968	5.66457935	-3.19529110	1388	2672	3.43031523	4.46852824	4.60133350
1334	2597	-3.91412807	5.66457935	-2.84378050	1389	2673	4.09892812	4.46852824	3.68106680
1335	2598	-3.91412807	5.66457935	-1.70626830	1390	2674	4.76754102	4.46852824	2.76080010
1336	2599	-3.91412807	5.66457935	-0.56875610	1391	2675	5.43615392	4.46852824	1.84053340
1337	2600	-3.91412807	5.66457935	0.56875610	1392	3738	0.00000000	9.73654551	0.00000000
1338	2601	-3.91412807	5.66457935	1.70626830	1393	3739	0.96762567	9.13851996	0.00000000
1339	2602	-3.91412807	5.66457935	2.84378050	1394	3740	0.29901278	9.13851996	-0.92026670
1340	2603	-2.83228968	5.66457935	3.19529110	1395	3741	-0.78282561	9.13851996	-0.56875610
1341	2604	-1.75045129	5.66457935	3.54680170	1396	3742	-0.78282561	9.13851996	0.56875610
1342	2605	-0.66861290	5.66457935	3.89831230	1397	3743	0.29901278	9.13851996	0.92026670
1343	2606	0.41322549	5.66457935	4.24982290	1398	3744	1.93525134	8.54049440	0.00000000
1344	2607	1.49506388	5.66457935	4.60133350	1399	3745	1.26663845	8.54049440	-0.92026670
1345	2608	2.16367678	5.66457935	3.68106680	1400	3746	0.59802555	8.54049440	-1.84053340
1346	2609	2.83228968	5.66457935	2.76080010	1401	3747	-0.48381284	8.54049440	-1.48902280
1347	2610	3.50090257	5.66457935	1.84053340	1402	3748	-1.56565123	8.54049440	-1.13751220
1348	2611	4.16951547	5.66457935	0.92026670	1403	3749	-1.56565123	8.54049440	0.00000000
1349	2613	5.13714114	5.06655380	-0.92026670	1404	3750	-1.56565123	8.54049440	1.13751220
1350	2614	4.46852824	5.06655380	-1.84053340	1405	3751	-0.48381284	8.54049440	1.48902280
1351	2615	3.79991535	5.06655380	-2.76080010	1406	3752	0.59802555	8.54049440	1.84053340
1352	2616	3.13130245	5.06655380	-3.68106680	1407	3753	1.26663845	8.54049440	0.92026670
1353	2617	2.46268956	5.06655380	-4.60133350	1408	3754	2.90287702	7.94246885	0.00000000
1354	2619	0.71223827	5.06655380	-5.17008960	1409	3755	2.23426412	7.94246885	-0.92026670
1355	2620	-0.36960012	5.06655380	-4.81857900	1410	3756	1.56565123	7.94246885	-1.84053340
1356	2621	-1.45143851	5.06655380	-4.46706840	1411	3757	0.89703833	7.94246885	-2.76080010
1357	2622	-2.53327690	5.06655380	-4.11555780	1412	3758	-0.18480006	7.94246885	-2.40928950
1358	2623	-3.61511529	5.06655380	-3.76404720	1413	3759	-1.26663845	7.94246885	-2.05777890
1359	2625	-4.69695368	5.06655380	-2.27502440	1414	3760	-2.34847684	7.94246885	-1.70626830
1360	2626	-4.69695368	5.06655380	-1.13751220	1415	3761	-2.34847684	7.94246885	-0.56875610
1361	2627	-4.69695368	5.06655380	0.00000000	1416	3762	-2.34847684	7.94246885	0.56875610
1362	2628	-4.69695368	5.06655380	1.13751220	1417	3763	-2.34847684	7.94246885	1.70626830
1363	2629	-4.69695368	5.06655380	2.27502440	1418	3764	-1.26663845	7.94246885	2.05777890
1364	2630	-4.69695368	5.06655380	3.41253660	1419	3765	-0.18480006	7.94246885	2.40928950
1365	2631	-3.61511529	5.06655380	3.76404720	1420	3766	0.89703833	7.94246885	2.76080010
1366	2632	-2.53327690	5.06655380	4.11555780	1421	3767	1.56565123	7.94246885	1.84053340
1367	2633	-1.45143851	5.06655380	4.46706840	1422	3768	2.23426412	7.94246885	0.92026670
1368	2634	-0.36960012	5.06655380	4.81857900	1423	3769	3.87050269	7.3444329	0.00000000
1369	2635	0.71223827	5.06655380	5.17008960	1424	3770	3.20188979	7.3444329	-0.92026670
1370	2636	1.79407666	5.06655380	5.52160021	1425	3771	2.53327690	7.3444329	-1.84053340
1371	2637	2.46268956	5.06655380	4.60133350	1426	3772	1.86466400	7.3444329	-2.76080010
1372	2638	3.13130245	5.06655380	3.68106680	1427	3773	1.19605111	7.3444329	-3.68106680
1373	2639	3.79991535	5.06655380	2.76080010	1428	3774	0.11421272	7.3444329	-3.32955620
1374	2640	4.46852824	5.06655380	1.84053340	1429	3775	-0.96762567	7.3444329	-2.97804560
1375	2641	5.13714114	5.06655380	0.92026670	1430	3776	-2.04946406	7.3444329	-2.62653500

Table 14: MIF1739 contains  $C_n$ , such that  $C_n^* = \min(C_n) \ n = 2, \dots, 1000$  (cont.)

#	$\mathbf{i}_{\mathbf{p}}$	X	$\mathbf{Y}$	$\mathbf{Z}$	#	$\mathbf{i}_{\mathbf{p}}$	$\mathbf{X}$	Y	$\mathbf{Z}$
1431	3777	-3.13130245	7.34444329	-2.27502440	1486	3835	-1.45143851	6.14839219	4.46706840
1432	3778	-3.13130245	7.34444329	-1.13751220	1487	3836	-0.36960012	6.14839219	4.81857900
1433	3779	-3.13130245	7.34444329	0.00000000	1488	3837	0.71223827	6.14839219	5.17008960
1434	3780	-3.13130245	7.34444329	1.13751220	1489	3838	1.79407666	6.14839219	5.52160021
1435	3781	-3.13130245	7.34444329	2.27502440	1490	3839	2.46268956	6.14839219	4.60133350
1436	3782	-2.04946406	7.34444329	2.62653500	1491	3840	3.13130245	6.14839219	3.68106680
1437	3783	-0.96762567	7.34444329	2.97804560	1492	3841	3.79991535	6.14839219	2.76080010
1438	3784	0.11421272	7.34444329	3.32955620	1493	3842	4.46852824	6.14839219	1.84053340
1439	3785	1.19605111	7.34444329	3.68106680	1494	3843	5.13714114	6.14839219	0.92026670
1440	3786	1.86466400	7.34444329	2.76080010	1495	3860	-5.47977929	5.55036663	-1.70626830
1441	3787	2 53327690	7 34444329	1 84053340	1496	3861	-547977929	5 55036663	-0.56875610
1442	3788	3.20188979	7.34444329	0.92026670	1497	3862	-5.47977929	5.55036663	0.56875610
1443	$\frac{3780}{3789}$	4.83812836	6.74641774	0.00000000	1498	3863	-5.47977929	5.55036663	1.70626830
1444	3790	4 16951547	6 74641774	-0.92026670	1499	3864	-547977929	5 55036663	2 84378050
1445	3791	3 50090257	6 74641774	-1.84053340	1500	3866	-4.39794090	5 55036663	4 33280330
1446	3792	2.83228968	6 74641774	-2.76080010	1501	3867	-3.31610251	5 55036663	4 68431390
1440 1/1/7	3793	2.16367678	6 74641774	-3.68106680	1501	3868	-2.23426412	5 55036663	5.03582450
1448	$\frac{3793}{3794}$	1 49506388	6 74641774	-4.60133350	1502	3869	-1.15242573	5 55036663	5 38733510
1440	3795	0.41322549	6 74641774	-4 24982290	1503	3870	-0.07058734	5 55036663	5 73884570
1450	3706	-0.66861200	6 74641774	-3.80831230	1505	3871	1.01125105	5 55036663	6.00035631
1450 1/51	3707	-0.00801290 -1.75045120	6 74641774	-3.54680170	1506	3873	2.76170233	5 55036663	5 52160021
1451	3708	2 83228068	6 74641774	-3.04000170 3.10520110	1500	3874	2.70170200	5 55036663	4 60133350
1452	3790	-2.83228908	6 74641774	-3.19529110 2.84378050	1507	3875	4.00802812	5 55036663	3 68106680
1455	3800	-3.91412807	6 74641774	-2.84378030 1 70626830	1500	3876	4.09892812	5 55036663	2 76080010
1454	2801	-3.91412807	6 74641774	-1.70020830	1510	2077	5 42615202	5.55030003	1.84052240
1400	- 3001	-3.91412607	0.74041774	-0.50875010	1510	5077	0.0000000	10.01000000	0.0000000
1450	$\frac{-3602}{-2802}$	-3.91412807	6 74641774	1.70626820	1511	5270	0.00000000	10.01030390	0.00000000
1457	$\frac{3803}{2804}$	-3.91412807	6 74641774	2.84278050	1512	5271	0.90702507	10.22033633	0.00000000
1400	3004	-3.91412607	0.74041774	2.04370030	1515	5272	0.29901278	10.22033633	-0.92020070
1409	2806	-2.03220900	6 74641774	2 54680170	1514	5273	-0.78282501 0.78282561	10.22033633	-0.50875010
1400	$\frac{3800}{2807}$	-1.75045129	6 74641774	2 20221220	1516	5274	-0.78282301	10.22033633	0.00075010
1401	- 3007	-0.00801290 0.41222540	0.74041774 6.74641774	3.09031230	1510	5275	0.29901278	10.22050650	0.92020070
1402	2800	1 40506289	6 74641774	4.24962290	1517	5270	1.93525134	9.02233219	0.00000000
1405	$\frac{3009}{2910}$	1.49500588	6 74641774	2 69106690	1510	5277	0.50802555	9.02200279	-0.92020070
1404	$\frac{-3610}{-9911}$	2.10307078	0.74041774	3.08100080	1519	5270	0.39602333	9.02200279	-1.84033340
1400	$\frac{-3611}{-2010}$	2.03220900	0.74041774	2.70080010	1520	5279	-0.46361264	9.02200279	-1.46902260
1400	$\frac{-3612}{-2012}$	3.30090237	0.74041774	0.02026670	1521	5260	-1.30303123	9.02200279	-1.15751220
1407	- 2015	4.10951547	0.74041774	0.92020070	1522	5201	-1.50505125	9.02200279	1 12751000
1408	$\frac{-3610}{-9916}$	0.10/14114	6 14820210	-0.92020070	1525	5262	-1.30303123	9.02200279	1.13731220
1409	$\frac{3010}{2017}$	4.40032024	6 14820210	-1.64055540	1524	5200	-0.46361264	9.02200279	1.46902260
1470	$\frac{-3017}{-9010}$	2 12120245	6 14820210	2.68106680	1525	5204	1 26662945	9.02200279	0.02026670
1471	$\frac{3010}{2010}$	3.13130243	6 14820210	-3.08100080	1520	5200	1.20003643	9.02233279	0.92020070
1472	$\frac{-3619}{-2001}$	2.40206930	6 14820210	-4.00155550	1527	5200	2.90287702	9.02450724	0.00000000
1473	- 3021	0.71223627	6 14820210	-3.17008900	1520	5201	2.23420412	9.02430724	-0.92020070
1474	3822	-0.30900012 1 45143851	6 14830210	4.6706840	1529	5280	0.80703833	9.02430724	-1.84033340 2 76080010
1475	3824	-1.43143631	6 14830210	4 11555780	1530	5200	0.89703833	9.02430724	-2.70030010
1470	2024	-2.00027090	6 14820210	2 76404720	1501	5290	1 26662845	9.02430724	-2.40928930
1411	3827	4 60605269	6 1/820210	-3.10404120	1592	5291	-1.20003043	9.02430724	-2.00111090
1470	3820	-4.09090008 -4.60605269	6 1/920210	-2.27002440 -1.13751990	1500 1504	5292	-2.34041004 -2.34047604	9.02430724	-1.10020030 -0.56875610
1/180	3820	-4.09090008	6 1/1820210	$\frac{-1.13731220}{0.0000000}$	1595	5204	-2.34047004	9.02430724	0.56875610
1/91	3830	-4.03030300	6 1/820210	1 13751990	1526	5205	-2.04047004	9.02430724	1 70696830
1/89	3821	-4.09090000	6 1/820210	2 27502440	1597	5206	-1.04047004	9.02430724	2 05777800
1/82	3830	-4 60605368	6 1/830210	3 41952660	1528	5207	_0 18/80006	9 09/3079/	2.00111090
1/8/	3833	-4.03030300	6 1/820210	3 76/0/720	1520	5208	0.20702822	9.02430724	2.40920930
1/25	3834	-9.53397600	6 1/820210	111555780	1540	5200	1 56565192	9.02430724	1.8/0533/0
1400	0004	-2.00027090	0.14039219	4.11000700	1040	5299	1.00000120	9.02400724	1.04000040

Table 15: MIF1739 contains  $C_n$ , such that  $C_n^* = \min(C_n) \ n = 2, \dots, 1000$  (cont.)

#	$\mathbf{i_p}$	$\mathbf{X}$	Y	$\mathbf{Z}$	#	$\mathbf{i_p}$	$\mathbf{X}$	Y	$\mathbf{Z}$
1541	5300	2.23426412	9.02430724	0.92026670	1596	5357	-3.61511529	7.23023058	-3.76404720
1542	5301	3.87050269	8.42628168	0.00000000	1597	5359	-4.69695368	7.23023058	-2.27502440
1543	5302	3.20188979	8.42628168	-0.92026670	1598	5360	-4.69695368	7.23023058	-1.13751220
1544	5303	2.53327690	8.42628168	-1.84053340	1599	5361	-4.69695368	7.23023058	0.00000000
1545	5304	1.86466400	8.42628168	-2.76080010	1600	5362	-4.69695368	7.23023058	1.13751220
1546	5305	1.19605111	8.42628168	-3.68106680	1601	5363	-4.69695368	7.23023058	2.27502440
1547	5306	0.11421272	8.42628168	-3.32955620	1602	5364	-4.69695368	7.23023058	3.41253660
1548	5307	-0.96762567	8.42628168	-2.97804560	1603	5365	-3.61511529	7.23023058	3.76404720
1549	5308	-2.04946406	8.42628168	-2.62653500	1604	5366	-2.53327690	7.23023058	4.11555780
1550	5309	-3.13130245	8.42628168	-2.27502440	1605	5367	-1.45143851	7.23023058	4.46706840
1551	5310	-3.13130245	8.42628168	-1.13751220	1606	5368	-0.36960012	7.23023058	4.81857900
1552	5311	-3.13130245	8.42628168	0.00000000	1607	5369	0.71223827	7.23023058	5.17008960
1553	5312	-3.13130245	8.42628168	$\frac{1.13751220}{1.13751220}$	1608	5370	1.79407666	7.23023058	5.52160021
1554	5313	-3.13130245	8.42628168	2.27502440	1609	5371	2.46268956	7.23023058	4.60133350
1555	5314	-2.04946406	8.42628168	2.62653500	1610	5372	3.13130245	7.23023058	3.68106680
1556	5315	-0.96762567	8.42628168	2.97804560	1611	5373	3,79991535	7.23023058	2.76080010
1557	5316	0 11421272	8 42628168	3 32955620	1612	5374	4 46852824	7 23023058	1 84053340
1558	5317	1 19605111	8 42628168	3 68106680	1612	5375	5 13714114	7 23023058	0.92026670
1559	5318	1 86466400	8 42628168	2 76080010	1614	5392	-547977929	6.63220502	-1.70626830
1560	5319	2 53327690	8 42628168	1 84053340	1615	5393	-547977929	6 63220502	-0.56875610
1561	5320	3 20188979	8 42628168	0.92026670	1616	5394	-547977929	6.63220502	0.56875610
1562	5321	4 83812836	7 82825613	0.0000000	1617	5395	-547977929	6.63220502	1 70626830
1563	5322	4 16951547	7.82825613	-0.92026670	1618	5396	-547977929	6.63220502	2 84378050
1564	5323	3 50090257	7.82825613	-1.84053340	1610	5308	-4 39794090	6 63220502	4 33280330
1565	5324	2 83228068	7 82825613	-2.76080010	1620	5300	-3.31610251	6.63220502	4.68431300
1566	5325	2.16367678	7.82825613	-2.70000010 -3.68106680	1620	5400	-3.31010231 -2.23426412	6 63220502	5.03582450
1500 1567	5326	1 40506388	7.82825613	-4.60133350	1621	5401	-1.15949573	6 63220502	5 38733510
1568	5327	0.41322549	7.82825613	-4 24982290	1622	5402	-0.07058734	6 63220502	5 73884570
1560	5328	-0.66861200	7.82825613	-3 80831230	1624	5402	1.01125105	6 63220502	6.00035631
1509 1570	5320	-0.00801290 -1.75045120	7.82825613	-3.54680170	1624	5405	2 76170233	6 63220502	5 52160021
1570	5330	-1.73045123 -2.83228068	7.82825613	-3.04000170 -3.10520110	1626	5406	3 /2031523	6 63220502	4 60133350
1571 1572	5331	-3.91412807	7.82825613	-2.84378050	1627	5407	4 09892812	6.63220502	3 68106680
1572	5332	-3.91412807	7.82825613	-1.70626830	1621	5408	4.05052012	6 63220502	2 76080010
1574	5333	-3.91412807	7.82825613	-0.56875610	1620	5400	5 43615302	6 63220502	1.84053340
1575	5334	-3.91412807	7.82825613	0.56875610	1630	$\frac{5405}{7172}$	0.0000000	11 900220002	0.0000000
1576	5335	-3.91412807 -3.91412807	7.82825613	1 70626830	1631	7172	0.00000000	$\frac{11.300222223}{11.30210674}$	0.00000000
1577	5336	-3.91412807 -3.91412807	7.82825613	2 8/378050	1632	7174	0.30102301	$\frac{11.30219074}{11.30210674}$	-0.00000000000000000000000000000000000
1578	5337	2 83228068	7.82825613	2.84578050	1632	7175	0.23301218	$\frac{11.30219074}{11.30210674}$	0.56875610
1570	5338	-2.83228908 1 75045120	7.82825613	$\frac{3.19529110}{3.54680170}$	1634	7176	-0.78282501 0.78282561	$\frac{11.30219074}{11.30210674}$	-0.50875010
1580	5330	-1.75045129 -0.66861200	7.82825613	3 80831230	1635	7177	-0.18282301 0.20001278	$\frac{11.30219074}{11.30210674}$	0.00070010
1581	5340	-0.00801290 0.41322540	7.82825613	4 24082200	1636	7178	1.03525134	10.70/17118	0.92020010
1589	5341	1 40506388	7.82825613	4.24902290	1637	7170	1.35525154	10.70417118	0.00000000
1582	5342	1.49500588 2.16367678	7.82825613	3 68106680	1638	7180	0.50802555	10.70417118	-0.92020070 1 84053340
1584	53/3	2.10307078	7.82825613	2 76080010	1630	7181	-0.48381284	10.70417118	-1.84000000
1585	5344	3 50090257	7.82825613	1.84053340	1640	7182	-0.40501204 -1.56565123	10.70417118	-1.48502280 -1.13751220
1586	5345	4 16951547	7.82825613	0.92026670	1641	7183	-1.56565123	10 70417118	0.0000000
1587	5347	5 1371/11/	7.02020010	-0.92020070	1642	7184	-1.56565123	10.70417118	1 13751220
1588	5348	1 46852824	7.23023058	-0.92020070 1 84053340	1642	7185	-1.30303123 0.48381284	10.70417118	1.13751220
1580	53/0	3 70001525	7 23023030	-2.76080010	1644	7186	0.50802555	10.70417110	1.40902200
1500	5350	3 131309/5	7 23023058	-3 68106680	1645	7187	1 266638/15	10.70/17118	0.92026670
1501	5351	2 46268056	7 23023058	-4 60133350	16/6	7188	2 90287702	10 1061/562	0.0000000
1592	5353	0.71223827	7 23023058	-5 17008960	1647	7189	2.33426412	10 10614563	-0.92026670
1503	5354	-0.36960019	7 23023058		16/8	7100	1 56565193	10 1061/569	-1 840533/0
150/	5355	-1.451/(3851)	7 23023058	-4 46706840	16/0	7101	0.89703833	10.1061/1563	-2.76080010
1505	5356	-253327600	7 23023058	-4 11555780	1650	7102	-0.18/80006	10 1061/563	-2 40028050
1090	0000	2.00021030	1.20020000	-111000100	1050	1134	0.1040000	10.10014000	2.40920990

Table 16: MIF1739 contains  $C_n$ , such that  $C_n^* = \min(C_n) \ n = 2, \dots, 1000$  (cont.)

#	$\mathbf{i_p}$	$\mathbf{X}$	Y	$\mathbf{Z}$
1651	7193	-1.26663845	10.10614563	-2.05777890
1652	7194	-2.34847684	10.10614563	-1.70626830
1653	7195	-2.34847684	10.10614563	-0.56875610
1654	7196	-2.34847684	10.10614563	0.56875610
1655	7197	-2.34847684	10.10614563	1.70626830
1656	7198	-1.26663845	10.10614563	2.05777890
1657	7199	-0.18480006	10.10614563	2.40928950
1658	7200	0.89703833	10.10614563	2.76080010
1659	7201	1.56565123	10.10614563	1.84053340
1660	7202	2.23426412	10.10614563	0.92026670
1661	7203	3.87050269	9.50812007	0.00000000
1662	7204	3.20188979	9.50812007	-0.92026670
1663	7205	2.53327690	9.50812007	-1.84053340
1664	7206	1.86466400	9.50812007	-2.76080010
1665	7207	1.19605111	9.50812007	-3.68106680
1666	7208	0.11421272	9.50812007	-3.32955620
1667	7209	-0.96762567	9.50812007	-2.97804560
1668	7210	-2.04946406	9.50812007	-2.62653500
1669	7211	-3.13130245	9.50812007	-2.27502440
1670	7212	-3.13130245	9.50812007	-1.13751220
1671	7213	-3.13130245	9.50812007	0.00000000
1672	7214	-3.13130245	9.50812007	1.13751220
1673	7215	-3.13130245	9.50812007	2.27502440
1674	7216	-2.04946406	9.50812007	2.62653500
1675	7217	-0.96762567	9.50812007	2.97804560
1676	7218	0.11421272	9.50812007	3.32955620
1677	7219	1.19605111	9.50812007	3.68106680
1678	7220	1.86466400	9.50812007	2.76080010
1679	7221	2.53327690	9.50812007	1.84053340
1680	7222	3.20188979	9.50812007	0.92026670
1681	7223	4.83812836	8.91009452	0.00000000
1682	7224	4.16951547	8.91009452	-0.92026670
1683	7225	3.50090257	8.91009452	-1.84053340
1684	7226	2.83228968	8.91009452	-2.76080010
1685	7227	2.16367678	8.91009452	-3.68106680
1686	7229	0.41322549	8.91009452	-4.24982290
1687	7230	-0.66861290	8.91009452	-3.89831230
1688	7231	-1.75045129	8.91009452	-3.54680170
1689	7232	-2.83228968	8.91009452	-3.19529110
1690	7233	-3.91412807	8.91009452	-2.84378050
1691	7234	-3.91412807	8.91009452	-1.70626830
1692	7235	-3.91412807	8.91009452	-0.56875610
1693	7236	-3.91412807	8.91009452	0.56875610
1694	7237	-3.91412807	8.91009452	1.70626830
1695	7238	-3.91412807	8.91009452	2.84378050
1696	7239	-2.83228968	8.91009452	3.19529110
1697	7240	-1.75045129	8.91009452	3.54680170
1698	7241	-0.66861290	8.91009452	3.89831230
1699	7242	0.41322549	8.91009452	4.24982290
1700	7243	1.49506388	8.91009452	4.60133350
1701	7244	2.16367678	8.91009452	3.68106680
1702	7245	2.83228968	8.91009452	2.76080010
1703	7246	3.50090257	8.91009452	1.84053340
1704	7247	4.16951547	8.91009452	0.92026670
1705	7249	5.13714114	8.31206897	-0.92026670

Z	#	$\mathbf{i}_{\mathbf{p}}$	X	Y	Z
5777890	1706	7250	4.46852824	8.31206897	-1.84053340
0626830	1707	7251	3.79991535	8.31206897	-2.76080010
5875610	1708	7252	3.13130245	8.31206897	-3.68106680
6875610	1709	7256	-0.36960012	8.31206897	-4.81857900
0626830	1710	7257	-1.45143851	8.31206897	-4.46706840
5777890	1711	7258	-2.53327690	8.31206897	-4.11555780
0928950	1712	7259	-3.61511529	8.31206897	-3.76404720
5080010	1713	7261	-4.69695368	8.31206897	-2.27502440
4053340	1714	7262	-4.69695368	8.31206897	-1.13751220
2026670	1715	7263	-4.69695368	8.31206897	0.00000000
000000	1716	7264	-4.69695368	8.31206897	1.13751220
2026670	1717	7265	-4.69695368	8.31206897	2.27502440
4053340	1718	7267	-3.61511529	8.31206897	3.76404720
6080010	1719	7268	-2.53327690	8.31206897	4.11555780
8106680	1720	7269	-1.45143851	8.31206897	4.46706840
2955620	1721	7270	-0.36960012	8.31206897	4.81857900
7804560	1722	7271	0.71223827	8.31206897	5.17008960
2653500	1723	7273	2.46268956	8.31206897	4.60133350
7502440	1724	7274	3.13130245	8.31206897	3.68106680
3751220	1725	7275	3.79991535	8.31206897	2.76080010
0000000	1726	7276	4.46852824	8.31206897	1.84053340
3751220	1727	7277	5.13714114	8.31206897	0.92026670
7502440	1728	7294	-5.47977929	7.71404341	-1.70626830
2653500	1729	7295	-5.47977929	7.71404341	-0.56875610
7804560	1730	7296	-5.47977929	7.71404341	0.56875610
2955620	1731	7297	-5.47977929	7.71404341	1.70626830
8106680	1732	7301	-3.31610251	7.71404341	4.68431390
3080010	1733	7302	-2.23426412	7.71404341	5.03582450
4053340	1734	7303	-1.15242573	7.71404341	5.38733510
2026670	1735	7304	-0.07058734	7.71404341	5.73884570
000000	1736	7308	3.43031523	7.71404341	4.60133350
2026670	1737	7309	4.09892812	7.71404341	3.68106680
4053340	1738	7310	4.76754102	7.71404341	2.76080010
3080010	1739	7311	5.43615392	7.71404341	1.84053340
8106680					

Table 17: MIF1739 contains  $C_n$ , such that  $C_n^* = \min(C_n) \ n = 2, \dots, 1000 \ (\text{cont.})$ 

n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj	n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj
1000	1	6993.629435	7128.821829	135.192394	0	946	1	6593.942750	6721.248620	127.305870	1
999	1	6985.902614	7120.842638	134.940023	1	945	1	6586.835928	6713.940121	127.104193	1
998	1	6978.241464	7113.103883	134.862419	5	944	1	6579.729107	6706.631600	126.902493	1
997	1	6971.087388	7105.735481	134.648093	1	943	1	6571.915736	6698.737233	126.821497	3
996	1	6963.933352	7098.367102	134.433750	1	942	1	6564.808928	6691.428659	126.619731	1
995	1	6955.926596	7090.208621	134.282025	1	941	1	6557.196696	6683.553791	126.357095	5
994	1	6948.023102	7082.249979	134.226877	3	940	1	6549.888846	6676.224783	126.335937	7
993	1	6940.869074	7074.881405	134.012331	1	939	1	6542.281572	6668.356219	126.074648	5
992	1	6932.864440	7066.725015	133.860575	1	938	1	6535.129201	6660.986510	125.857309	1
991	1	6924.961703	7058.765030	133.803327	3	937	1	6527.366545	6653.157765	125.791221	3
990	1	6917.807708	7051.396344	133.588636	1	936	1	6520.214710	6645.788882	125.574172	1
989	1	6909.803103	7043.239479	133.436376	1	935	1	6512.609625	6637.923024	125.313399	5
988	1	6902.030783	7035.349936	133.319153	5	934	1	6505.035252	6630.868620	125.833368	23
987	1	6894.876803	7027.981154	133.104351	1	933	1	6497.968941	6623.609245	125.640304	1
986	1	6886.872360	7019.824521	132.952161	1	932	1	6490.902670	6616.349914	125.447244	1
985	1	6879.172616	7012.262026	133.089410	61	931	1	6483.836439	6609.090626	125.254187	1
984	1	6872.065567	7004.954394	132.888827	1	930	1	6476.770164	6601.831262	125.061099	1
983	1	6864.958520	6997.646753	132.688233	1	929	1	6469.703891	6594.571901	124.868010	1
982	1	6857.851475	6990.339103	132.487628	1	928	1	6462.637620	6587.312542	124.674922	1
981	1	6850.036687	6982.453534	132.416846	3	927	1	6455.571240	6580.053022	124.481782	1
980	1	6842.929649	6975.145854	132.216204	1	926	1	6448.504861	6572.793503	124.288642	1
979	1	6835.114884	6967.259714	132.144830	3	925	1	6441.438485	6565.533988	124.095503	1
978	1	6828.007853	6959.952005	131.944153	1	924	1	6434.332368	6558.225148	123.892780	1
977	1	6820.161938	6952.028508	131.866571	3	923	1	6437.852486	6552.722600	114.870114	23
976	1	6813.086086	6944.757565	131.671479	1	922	1	6421.908138	6546.271539	124.363400	1
975	1	6805.129064	6936.619136	131.490072	1	921	1	6414.841845	6539.012175	124.170330	1
974	1	6797.256767	6928.563000	131.306232	5	920	1	6407.775591	6531.752854	123.977263	1
973	1	6790.059868	6921.278396	131.218527	9	919	1	6400.709376	6524.493575	123.784199	1
972	1	6782.255647	6913.714239	131.458591	25	918	1	6393.643164	6517.234300	123.591136	1
971	1	6775.189273	6906.454831	131.265557	1	917	1	6386.576954	6509.975026	123.398072	1
970	1	6768.122939	6899.195466	131.072527	1	916	1	6379.510784	6502.715796	123.205013	1
969	1	6761.056348	6891.935744	130.879396	1	915	1	6372.444577	6495.456527	123.011950	1
968	1	6753.989758	6884.676024	130.686266	1	914	1	6365.378409	6488.197300	122.818891	1
967	1	6746.923103	6877.416196	130.493093	1	913	1	6358.312244	6480.938076	122.625832	1
966	1	6739.856274	6870.156135	130.299861	1	912	1	6351.246081	6473.678854	122.432773	1
965	1	6732.749336	6862.848135	130.098799	1	911	1	6344.179957	6466.419675	122.239718	1
964	1	6725.642401	6855.540126	129.897726	1	910	1	6337.113874	6459.160539	122.046665	1
963	1	6717.828309	6847.650109	129.821801	3	909	1	6328.294012	6450.140769	121.846757	1
962	1	6710.721380	6840.342072	129.620692	1	908	1	6320.468251	6442.132656	121.664405	1
961	1	6703.105164	6832.457397	129.352233	5	907	1	6312.742740	6434.224282	121.481543	1
960	1	6695.800389	6825.143469	129.343080	7	906	1	6305.552394	6426.853350	121.300956	3
959	1	6688.189198	6817.264754	129.075556	5	905	1	6298.486315	6419.594218	121.107903	1
958	1	6681.036191	6809.895503	128.859312	1	904	1	6289.667453	6410.575785	120.908332	1
957	1	6673.268269	6802.065906	128.797638	3	903	1	6281.842185	6402.568020	120.725835	
956	1	6666.115273	6794.696561	128.581288	1	902	1	6274.117166	6394.659807	120.542641	1
955	1	6658.500433	6786.813661	128.313228	7	901	1	6266.927214	6387.288891	120.361676	3
954	1	6651.150418	6779.462540	128.312123	9	900	1	6259.861151	6380.029779	120.168629	1
953		6643.407817	6772.065512	128.657695	23	899		6251.042781	6371.011483	119.968702	1
952		6636.341520	0764.806171	128.464651	1	898		0243.218512	6363.005202	119.786690	1
951		0029.275211	0757.546799	128.271588	<u> </u>	897		0235.493697	0355.096967	119.003269	<u> </u>
950	1	0022.208903	0750.287429	128.078525	<u> </u>	896	1	0228.304429	0347.726230	119.421801	3
949		0015.142344	6745.027703	127.885360	<u> </u>	895		6221.238379	0340.467138	119.228759	1
948		0008.075824	0/35./68021	127.092197	1	894		0212.420035	0331.448071	119.028636	1
947	1	0001.009267	0728.508299	127.499032	1	893		0204.595791	0323.442320	118.846529	1

Table 18: Results from MIF1739: type, initial, minimum, and difference of potential, and  $\operatorname{Adj}(C_{n+1}, C_n)$ .

n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj	n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj
892	1	6196.870994	6315.533826	118.662832	1	838	1	5789.342198	5901.636273	112.294075	7
891	1	6189.681742	6308.162614	118.480872	3	837	1	5782.276279	5894.377564	112.101285	1
890	1	6182.615707	6300.903543	118.287835	1	836	1	5774.735034	5886.706637	111.971603	5
889	1	6173.769778	6291.887710	118.117931	1	835	1	5767.669481	5879.448440	111.778959	1
888	1	6165.973161	6283.878319	117.905158	3	834	1	5760.603572	5872.189749	111.586176	1
887	1	6158.248389	6275.969721	117.721332	1	833	1	5752.877886	5864.257422	111.379536	1
886	1	6151.059154	6268.598027	117.538873	3	832	1	5745.136150	5856.444416	111.308266	5
885	1	6143.993135	6261.338978	117.345843	1	831	1	5738.070245	5849.185743	111.115498	1
884	1	6135.147333	6252.323028	117.175695	1	830	1	5730.917342	5841.836126	110.918784	1
883	1	6126.142214	6244.427426	118.285212	35	829	1	5722.945480	5833.731091	110.785611	1
882	1	6119.076185	6237.168391	118.092205	1	828	1	5715.044003	5825.829051	110.785049	5
881	1	6111.533654	6229.505624	117.971970	5	827	1	5707.908971	5818.502232	110.593261	1
880	1	6104.467596	6222.246563	117.778967	1	826	1	5700.179597	5810.600094	110.420498	1
879	1	6097.401577	6214.987544	117.585966	1	825	1	5692.472470	5802.605436	110.132967	9
878	1	6089.859404	6207.324053	117.464650	5	824	1	5685.273522	5795.202927	109.929405	11
877	1	6082.793356	6200.065009	117.271653	1	823	2	5640.540570	5787.452061	146.911491	1201
876	1	6075.727347	6192.806006	117.078659	1	822	2	5633.043473	5779.768096	146.724623	1
875	1	6067.754177	6184.703843	116.949667	1	821	2	5625.467608	5772.084288	146.616680	3
874	1	6059.949893	6176.732121	116.782228	1	820	2	5618.007058	5764.577273	146.570215	5
873	1	6051.980095	6168.630532	116.650437	1	819	2	5611.094122	5757.354578	146.260456	9
872	1	6044.631522	6161.282869	116.651347	3	818	2	5603.444963	5749.670074	146.225111	7
871	1	6036.900670	6153.387416	116.486746	1	817	1	5632.704578	5742.081610	109.377032	1087
870	1	6029.170269	6145.491276	116.321007	1	816	2	5588.560634	5734.477393	145.916758	1091
869	1	6021.207242	6137.389533	116.182291	1	815	2	5581.495638	5727.254474	145.758836	17
868	1	6014.091772	6129.908389	115.816617	9	814	1	5611.035654	5719.889178	108.853524	1087
867	1	6005.820118	6121.863695	116.043577	11	813	1	5603.539800	5712.251749	108.711950	5
866	1	5998.304229	6114.031451	115.727222	7	812	1	5596.473942	5704.993260	108.519318	1
865	1	5991.075351	6106.601284	115.525934	7	811	1	5589.367962	5697.697979	108.330017	1
864	1	5983.345427	6098.704534	115.359107	1	810	1	5580.973034	5689.923053	108.950019	23
863	1	5975.623916	6091.408213	115.784297	23	809	1	5573.906800	5682.669719	108.762919	1
862	1	5968.557897	6084.149283	115.591385	1	808	1	5567.044096	5675.681568	108.637472	3
861	1	5961.491919	6076.890393	115.398475	1	807	1	5559.977956	5668.428355	108.450399	1
860	1	5953.950674	6069.226173	115.275498	5	806	1	5553.115169	5661.439825	108.324656	3
859	1	5946.884666	6061.967261	115.082595	1	805	1	5546.049123	5654.186734	108.137611	1
858	1	5939.818697	6054.708390	114.889693	1	804	1	5538.984456	5646.930187	107.945731	1
857	1	5932.277458	6047.043737	114.766279	5	803	1	5531.919829	5639.673682	107.753853	1
856	1	5925.211460	6039.784843	114.573384	1	802	1	5524.855204	5632.417178	107.561974	1
855	1	5918.145501	6032.525990	114.380490	1	801	1	5517.790581	5625.160676	107.370095	1
854	1	5910.173165	6024.423236	114.250070	1	800	1	5510.725997	5617.904215	107.178218	1
853	1	5902.387568	6016.456651	114.069084	3	799	1	5503.660170	5610.645858	106.985688	1
852	1	5894.633819	6008.497839	113.864020		798	1	5495.701333	5602.537500	106.836167	1
851	1	5887.070438	6000.993302	113.922865	5	797	1	5487.904229	5594.570648	106.666419	1
850	1	5879.698107	5993.301055	113.602949	7	796	1	5480.152640	5586.607063	106.454423	3
849	1	5872.498281	5985.898651	113.400371	1	795	1	5472.607848	5579.086419	106.478571	5
848	1	5864.530113	5977.796569	113.266456	1	794	1	5465.217433	5571.405561	106.188127	7
847		5856.668546	5969.960883	113.292337		793		5458.019144	5564.001405	105.982261	1
846		5849.486591	5962.578501	113.091910	<u> </u>	792		5450.064475	5555.893926	105.829451	1
845		5841.756965	5954.680186	112.923221	7	791		5442.209306	5548.042380	105.833074	3
844		5834.051674	5946.673717	112.622043	9	790		5435.028887	5540.657899	105.629012	1
843		5826.852198	5939.271635	112.419437	1	789		5427.306056	5532.765423	105.459367	7
842		5818.746032	5931.353202	112.607169	13	788		5419.553258	5524.788962	105.235704	·/
841		5802.040010	5923.823608	112.808661	23	181		5412.385742	5517.353762	104.968019	5
840		5803.949019	5916.564882	112.015803		180		5404.031701	5509.611098	104.979336	3
839	1	5796.407993	5908.894773	112.486780	5	785		5397.451747	5502.226799	104.775051	1

Table 19: Results from MIF1739: type, initial, minimum, and difference of potential, and  $\operatorname{Adj}(C_{n+1}, C_n)$  (cont.).

n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj	n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj
784	1	5389.030236	5494.160631	105.130395	23	730	1	4991.452265	5088.472966	97.020701	9
783	1	5381.965653	5486.904329	104.938676	1	729	1	4984.281993	5081.042333	96.760340	5
782	1	5374.901110	5479.648067	104.746957	1	728	1	4976.531159	5073.284623	96.753464	13
781	1	5367.835486	5472.390187	104.554701	1	727	1	4969.351473	5065.896282	96.544809	15
780	1	5360.293437	5464.707535	104.414099	5	726	1	4960.988873	5057.800861	96.811988	31
779	1	5353.228903	5457.451291	104.222387	1	725	1	4953.925068	5050.546387	96.621319	1
778	1	5346.163522	5450.193696	104.030174	1	724	1	4946.860866	5043.291232	96.430366	27
777	1	5338.439371	5442.257421	103.818049	1	723	1	4939.757131	5035.994450	96.237319	27
776	1	5330.698224	5434.438365	103.740140	5	722	1	4932.258457	5028.346115	96.087658	5
775	1	5323.632860	5427.180826	103.547966	7	721	1	4925.194497	5021.091222	95.896725	25
774	1	5316.481493	5419.829556	103.348062	7	720	1	4918.090962	5013.794518	95.703556	25
773	1	5308.757594	5411.893332	103.135739	7	719	1	4910.264293	5005.931540	95.667246	3
772	1	5301.102403	5404.167708	103.065305	5	718	1	4903.191938	4998.669249	95.477311	21
771	1	5293.951170	5396.816491	102.865322	1	717	1	4904.651693	4991.660582	87.008890	19
770	1	5286.800054	5389.465326	102.665272	1	716	1	4888.736052	4984.410587	95.674535	1
769	1	5278.845753	5381.353744	102.507991	1	715	1	4890.723551	4977.414567	86.691016	3
768	1	5270.964299	5373.460266	102.495967	3	714	1	4874.808087	4970.163701	95.355613	1
767	1	5263.813226	5366.108742	102.295517	1	713	1	4876.595698	4962.912199	86.316501	3
766	1	5256.090660	5358.212959	102.122299	7	712	1	4869.531949	4955.661206	86.129257	1
765	1	5248.338065	5350.233771	101.895705	1	711	1	4862.468373	4948.407145	85.938772	1
764	1	5241.159607	5342.800525	101.640918	11	710	1	4855.404837	4941.153121	85.748283	1
763	1	5233.416762	5335.050154	101.633392	13	709	1	4848.341341	4933.899132	85.557791	1
762	2	5192.475873	5327.706748	135.230876	991	708	1	4832.426516	4926.642617	94.216101	1
761	2	5185.411783	5320.483317	135.071534	1	707	1	4824.703394	4918.698384	93.994991	1
760	2	5177.786537	5312.718230	134.931693	1	706	1	4825.812477	4910.881054	85.068576	5
759	2	5170.963727	5305.477507	134.513780	5	705	1	4809.898060	4903.616305	93.718246	1
758	2	5163.717919	5298.253262	134.535343	1	704	1	4802.747721	4896.261781	93.514060	1
757	2	5156.051225	5290.488239	134.437014	5	703	1	4795.024622	4888.317218	93.292596	1
756	2	5149.151492	5283.248304	134.096812	3	702	1	4787.369654	4880.589099	93.219445	5
755	2	5141.905696	5276.024042	134.118346	1	701	1	4780.219332	4873.234479	93.015147	1
754	2	5134.043399	5267.902856	133.859456	1	700	1	4773.069017	4865.879825	92.810807	1
753	1	5159.513844	5260.486552	100.972708	983	699	1	4765.345942	4857.934939	92.588997	1
752	1	5161.506224	5253.376181	91.869957	7	698	1	4757.690995	4850.206297	92.515302	5
751	1	5145.585437	5246.240920	100.655483	5	697	1	4750.540697	4842.851550	92.310853	1
750	1	5147.577647	5239.131663	91.554015	3	696	1	4743.390405	4835.496768	92.106363	1
749	1	5131.657036	5231.995215	100.338179	1	695	1	4735.436565	4827.378185	91.941620	1
748	1	5124.592416	5224.742084	100.149668	1	694	1	4727.555156	4819.465378	91.910223	5
747	1	5117.527914	5217.489081	99.961167	<u> </u>	693	1	4720.404874	4812.110308	91.705434	7
746	1	5110.464308	5210.234680	99.770372	1	692	1	4712.682769	4804.209895	91.527126	1
745	1	5103.400704	5202.980280	99.579576	1	691	2	4675.388705	4796.534940	121.146236	867
744	1	5096.336252	5195.724475	99.388223	<u> </u>	690 690	1	4697.586809	4788.862655	91.275846	855
743	1	5089.271840	5188.468706	99.196866	<u> </u>	689	2	4660.828876	4781.514121	120.685245	853
742	1	5081.548598	5180.529718	98.981120		688	2	4653.582022	4774.294327	120.712305	1
(41	1	5073.807488	51/2./06364	98.898876	5	687 686	2	4646.090604	4766.617576	120.526972	11
740	1	5066.743092	5165.450663	98.707570	<u> </u>	686 685	2	4039.141/02	4759.274013	120.132251	
739	1	5059.592035 F0F1 900411	5158.098279	98.303044	<u> </u>	080	2	4031.777085	4732.033380	120.270300	1
100	1	5031.809411	5130.138874	90.209402	E	692	2	4024.525520	4744.570499	120.030973	
131 796	1	5037 062024	5135.070541	90.21/000	<u></u>	600	2	4017.100120	4720 812220	119.0/9/49	0 1
795 795	1	5020 012485	5107 796076	90.010017	<u> </u>	002 691	2 1	4010.000010	4729.012209	<u>119.720424</u> <u>81.810498</u>	8/5
737	1	5029.919409	5110 611670	07 659369	<u> </u>	680	1	4633 873700	4715 569864	81 680074	040 2
734	1	5021.333300	5111 708608	97.002002	<u></u>	670	1	4626 810500	4708 211551	81 500051	1
730	1	5014.077020	5104 355789	07 / 28588	7	678	1	4610 747596	4701 060363	81 319837	1
734	1	4999 204735	5096 457618	07 252882	7	677	1	4612 68/052	4693 808949	81 123200	1
101	1	4000.204100	0000.401010	51.202002	1	011	1	1012.004302	1050.000242	01.120230	T

Table 20: Results from MIF1739: type, initial, minimum, and difference of potential, and  $\operatorname{Adj}(C_{n+1}, C_n)$  (cont.).

n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj	n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj
676	1	4605.622417	4686.556156	80.933739	1	622	1	4212.818660	4285.785595	72.966935	5
675	1	4598.558789	4679.303997	80.745207	1	621	1	4205.668824	4278.428797	72.759973	1
674	1	4591.495168	4672.051833	80.556665	1	620	1	4189.767363	4270.926392	81.159029	1
673	1	4575.585597	4664.692986	89.107389	1	619	1	4182.045625	4262.967594	80.921969	1
672	1	4567.862777	4656.743036	88.880259	1	618	1	4183.148787	4255.392520	72.243733	5
671	1	4568.967545	4649.022423	80.054878	5	617	1	4175.999673	4248.036524	72.036850	1
670	1	4561.817349	4641.668692	79.851343	7	616	1	4160.098779	4240.525779	80.426999	1
669	1	4545.908345	4634.299877	88.391532	9	615	1	4161.072959	4232.860448	71.787489	3
668	1	4538.186248	4626.349994	88.163746	1	614	1	4145.172434	4225.342009	80.169575	1
667	1	4539.295837	4618.644337	79.348500	5	613	1	4146.330756	4217.643274	71.312517	7
666	1	4532.146364	4611.291368	79.145003	1	612	1	4130.430429	4210.124370	79.693941	1
665	1	4516.237926	4603.912775	87.674849	1	611	1	4131.404469	4202.467061	71.062592	3
664	2	4479.879176	4596.197823	116.318647	831	610	1	4115.504510	4194.940511	79.436001	5
663	2	4472.515260	4588.975495	116.460234	7	609	1	4116.480722	4187.291689	70.810966	3
662	2	4464.969689	4581.205775	116.236086	1	608	1	4100.581132	4179.757692	79.176561	1
661	2	4458.074424	4573.952330	115.877906	5	607	1	4101.736213	4172.072641	70.336429	7
660	2	4450.828707	4566.730001	115.901294	7	606	1	4085.836820	4164.538164	78.701344	1
659	2	4443.283153	4558.959717	115.676564	5	605	1	4086.812572	4156.896269	70.083698	3
658	2	4436.387581	4551.706161	115.318579	3	604	1	4079.261858	4149.486406	70.224548	45
657	2	4429.024024	4544.483116	115.459092	7	603	1	4072.198969	4142.233179	70.034210	1
656	2	4421.519974	4536.712799	115.192825	5	602	1	4065.136086	4134.979952	69.843866	1
655	2	4414.583100	4529.460139	114.877039	3	601	1	4058.073210	4127.726727	69.653517	1
654	2	4407.337742	4522.237084	114.899342	1	600	1	4050.970757	4120.428618	69.457862	1
653	2	4399.389090	4514.127901	114.738811	1	599	1	4043.868310	4113.130489	69.262179	1
652	2	4391.620860	4506.152061	114.531201	1	598	1	4036.765870	4105.832339	69.066469	1
651	2	4384.707146	4498.828911	114.121765	5	597	1	4020.867708	4098.273955	77.406247	1
650	2	4376.990536	4490.882106	113.891569	1	596	1	4021.647351	4090.920981	69.273630	23
649	1	4406.629243	4483.231116	76.601873	797	595	1	4014.793714	4083.948931	69.155218	3
648	1	4390.723235	4475.807040	85.083805	1	594	1	4007.731603	4076.696662	68.965059	1
647	1	4391.730943	4468.096464	76.365520	3	593	1	4000.669523	4069.444445	68.774922	1
646	1	4384.371622	4461.078058	76.706436	19	592	1	3993.607561	4062.192358	68.584797	1
645	1	4377.309873	4453.827853	76.517980	1	591	1	3986.545145	4054.939563	68.394418	1
644	1	4370.448463	4446.837306	76.388843	3	590	1	3979.482735	4047.686770	68.204034	1
643	1	4363.386895	4439.587263	76.200368	1	589	1	3972.420234	4040.433756	68.013522	1
642	1	4356.324533	4432.336003	76.011470	1	588	1	3965.357411	4033.180253	67.822841	1
641	1	4349.261582	4425.083803	75.822221	1	587	1	3958.255166	4025.881619	67.626453	1
640	1	4342.198749	4417.831733	75.632984	1	586	1	3951.152926	4018.582963	67.430036	1
639	1	4335.135493	4410.578935	75.443443	1	585	1	3935.256754	4010.990978	75.734224	1
638	1	4328.072243	4403.326136	75.253893	1	584	1	3935.955170	4003.590347	67.635177	23
637	1	4320.969630	4396.029728	75.060098	1	583	1	3929.247892	3996.736300	67.488408	1
636	1	4305.065613	4388.569826	83.504213	1	582	1	3922.540639	3989.882038	67.341399	1
635	1	4306.073719	4380.895395	74.821676	3	581	1	3915.478575	3982.629525	67.150950	1
634	1	4290.170070	4373.428774	83.258705	1	580	1	3908.416629	3975.377143	66.960513	1
633	1	4291.122144	4366.074217	74.952073	19	579	1	3901.354713	3968.124799	66.770086	1
632	1	4284.782012	4359.590022	74.808010	1	578	1	3894.292803	3960.872458	66.579654	1
631	1	4277.720957	4352.341083	74.620126	1	577	1	3887.230453	3953.619403	66.388950	1
630	1	4270.658724	4345.089534	74.430809	1	576	1	3880.168220	3946.366479	66.198259	1
629	1	4263.595816	4337.836978	74.241162	1	575	1	3873.105879	3939.113424	66.007545	1
628	1	4256.533026	4330.584553	74.051527	1	574	1	3866.043655	3931.860500	65.816845	1
627	1	4249.470243	4323.332127	73.861884	1	573	1	3858.941629	3924.561134	65.619506	1
626	1	4242.407466	4316.079701	73.672235	1	572	1	3851.839608	3917.261719	65.422110	1
625	1	4235.344807	4308.827405	73.482598	1	571	5	3839.705722	3909.961214	70.255492	41
624	1	4219.442780	4301.333497	81.890717	1	570	1	3837.107930	3902.741575	65.633645	23
623	1	4211.720320	4293.374481	81.654161	1	569	1	3830.407630	3895.895147	65.487517	1

Table 21: Results from MIF1739: type, initial, minimum, and difference of potential, and  $\operatorname{Adj}(C_{n+1}, C_n)$  (cont.).

n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj	n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj
568	1	3823.709861	3889.051094	65.341234	1	514	1	3429.039452	3487.179880	58.140429	1
567	1	3816.647847	3881.798364	65.150517	1	513	1	3421.978326	3479.926793	57.948467	1
566	1	3809.585951	3874.545764	64.959813	1	512	1	3414.449890	3472.314244	57.864354	5
565	1	3802.524173	3867.293295	64.769122	1	511	1	3407.388678	3465.061048	57.672370	1
564	5	3795.116425	3860.238707	65.122283	13	510	1	3400.327585	3457.807978	57.480394	1
563	5	3788.439649	3853.287758	64.848109	1	509	1	3392.799163	3450.193949	57.394787	5
562	1	3782.730387	3847.376685	64.646298	3	508	1	3385.737983	3442.940773	57.202790	1
561	1	3777.819423	3842.393626	64.574203	1	507	1	3378.676922	3435.687722	57.010800	1
560	1	3770.757437	3835.140762	64.383325	1	506	1	3370.719156	3427.621193	56.902037	1
559	1	3763.695568	3827.888028	64.192460	1	505	1	3362.815204	3419.730528	56.915323	3
558	1	3756.633818	3820.635426	64.001608	1	504	1	3355.754161	3412.477434	56.723273	1
557	1	3749.572074	3813.382827	63.810753	1	503	1	3348.044682	3404.627600	56.582918	1
556	1	3742.510336	3806.130232	63.619895	1	502	1	3340.259486	3397.196422	56.936937	15
555	1	3735.448717	3798.877768	63.429050	1	501	1	3333.200659	3389.946441	56.745782	1
554	1	3728.386989	3791.625175	63.238186	1	500	1	3326.139753	3382.693487	56.553734	1
553	1	3721.325379	3784.372712	63.047334	1	499	1	3319.078965	3375.440662	56.361698	1
552	1	3714.263775	3777.120254	62.856479	1	498	1	3312.017951	3368.187444	56.169493	1
551	1	3707.202178	3769.867800	62.665621	1	497	1	3304.489924	3360.564557	56.074633	5
550	1	3700.140700	3762.615476	62.474777	1	496	1	3297.429168	3353.311762	55.882594	1
549	1	3693.079339	3755.363284	62.283945	1	495	1	3290.368187	3346.058571	55.690383	1
548	1	3677.189367	3747.679419	70.490053	1	494	1	3282.839389	3338.432495	55.593106	5
547	1	3668.377049	3738.680646	70.303597	1	493	1	3275.779483	3331.180850	55.401367	1
546	1	3660.558832	3730.692217	70.133385	1	492	1	3268.718534	3323.927687	55.209153	1
545	1	3661.549412	3723.174136	61.624724	5	491	1	3260.999612	3316.048882	55.049270	1
544	1	3654.488069	3715.921811	61.433742	1	490	1	3253.288591	3308.285790	54.997200	5
543	1	3638.599528	3708.210901	69.611373	1	489	1	3246.227656	3301.032607	54.804951	1
542	1	3629.764001	3699.227269	69.463268	1	488	1	3239.081518	3293.718435	54.636917	1
541	1	3630.147093	3691.070873	60.923780	5	487	1	3231.338642	3285.966242	54.627601	3
540	1	3622.967724	3683.741345	60.773621	3	486	1	3224.209993	3278.672947	54.462954	1
539	1	3615.906427	3676.488957	60.582530	1	485	1	3216.571856	3271.723567	55.151712	31
538	1	3607.112108	3667.569346	60.457238	1	484	1	3209.509134	3264.493944	54.984810	1
537	1	3599.311889	3659.706286	60.394397	1	483	1	3202.655502	3257.513447	54.857945	3
536	1	3591.572622	3651.645144	60.072523	5	482	1	3195.593069	3250.284319	54.691250	1
535	1	3584.395665	3644.316423	59.920758	3	481	1	3188.739181	3243.302482	54.563300	3
534	1	3577.334415	3637.063978	59.729564	1	480	1	3181.677038	3236.073847	54.396809	1
533	1	3567.755933	3628.252883	60.496950	23	479	1	3174.823656	3229.090010	54.266354	3
532	1	3560.694566	3620.999928	60.305362	1	478	1	3167.761801	3221.861849	54.100047	1
531	1	3553.633317	3613.747101	60.113784	1	477	1	3160.908926	3214.876229	53.967303	3
530	1	3546.100926	3606.138371	60.037445	5	476	1	3153.847360	3207.648521	53.801161	1
529	1	3539.039591	3598.885418	59.845827	1	475	1	3146.994228	3200.661820	53.667591	3
528	1	3531.978353	3591.632543	59.654191	1	474	1	3139.932952	3193.434565	53.501613	1
527	1	3524.447114	3584.021780	59.574666	5	473	1	3132.875069	3186.185673	53.310604	1
526	1	3517.385789	3576.768781	59.382991	1	472	1	3125.817305	3178.936910	53.119604	1
525	1	3510.324583	3569.515910	59.191328	1	471	1	3118.759548	3171.688153	52.928605	1
524	1	3502.794474	3561.903096	59.108622	5	470	1	3111.701796	3164.439402	52.737605	1
523	1	3495.733182	3554.650103	58.916921	1	469	1	3104.644164	3157.190780	52.546616	1
522	1	3488.672008	3547.397239	58.725231	1	468	1	3097.583389	3149.937648	52.354260	1
521	1	3480.712469	3539.331418	58.618950	1	467	1	3089.639323	3141.864153	52.224831	1
520	1	3472.791168	3531.446857	58.655689	3	466	1	3081.743494	3133.956743	52.213249	3
519	1	3465.730012	3524.193917	58.463905	1	465	1	3074.682763	3126.703679	52.020915	1
518	1	3458.014162	3516.340448	58.326286	1	464	1	3066.974516	3118.849641	51.875125	1
517	1	3450.222697	3508.938736	58.716039	15	463	1	3059.268800	3110.995000	51.726199	1
516	1	3443.161693	3501.685912	58.524219	1	462	1	3051.665441	3103.692087	52.026646	13
515	1	3436.100696	3494.433094	58.332398	1	461	1	3044.605440	3096.465023	51.859583	1

Table 22: Results from MIF1739: type, initial, minimum, and difference of potential, and  $\operatorname{Adj}(C_{n+1}, C_n)$  (cont.).
n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj	n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj
460	1	3037.549004	3089.218142	51.669138	1	406	1	2652.605944	2696.958552	44.352608	1
459	1	3030.492575	3081.971267	51.478692	1	405	1	2645.550990	2689.713734	44.162745	1
458	1	3023.434904	3074.722501	51.287596	1	404	1	2637.837823	2681.814373	43.976550	1
457	1	3016.377352	3067.473860	51.096507	1	403	1	2630.124666	2674.029018	43.904352	5
456	1	3009.317001	3060.221313	50.904312	1	402	1	2623.069773	2666.784339	43.714566	1
455	1	3001.785917	3052.572975	50.787059	5	401	1	2615.929390	2659.459309	43.529918	1
454	1	2994.728397	3045.324373	50.595976	1	400	1	2608.201551	2651.675335	43.473783	3
453	1	2987.668895	3038.072927	50.404032	1	399	1	2601.078657	2644.371470	43.292813	5
452	1	2979.953367	3030.187369	50.234003	1	398	1	2593.335869	2636.566153	43.230283	3
451	1	2972.242624	3022.415641	50.173017	5	397	1	2586.230465	2629.283637	43.053172	1
450	1	2965.183184	3015.164293	49.981109	1	396	1	2578.931626	2622.026782	43.095156	15
449	1	2958.040440	3007.846605	49.806165	1	395	1	2571.876147	2614.796092	42.919944	1
448	1	2950.313589	3000.081058	49.767470	3	394	1	2564.820539	2607.564869	42.744331	17
447	1	2943.188333	2992.783729	49.595396	11	393	1	2557.766809	2600.322076	42.555267	1
446	1	2935.630276	2985.461112	49.830836	15	392	1	2551.004763	2593.731432	42.726668	15
445	1	2928.573948	2978.214367	49.640419	1	391	1	2544.671625	2587.251965	42.580340	1
444	1	2921.516481	2970.965828	49.449347	1	390	1	2537.616558	2580.021240	42.404682	1
443	1	2914.584533	2964.265503	49.680970	17	389	1	2530.759464	2573.024522	42.265058	3
442	1	2907.525591	2957.035985	49.510394	1	388	1	2523.704424	2565.793770	42.089345	1
441	1	2900.670065	2950.044086	49.374022	3	387	1	2516.847400	2558.796497	41.949097	3
440	1	2893.611411	2942.814971	49.203560	1	386	1	2509.792388	2551.565720	41.773333	1
439	1	2886.755616	2935.822327	49.066712	3	385	1	2502.737827	2544.335413	41.597587	1
438	1	2879.698026	2928.593271	48.895244	5	384	1	2495.682322	2537.103074	41.420752	1
437	1	2872.842008	2921.599324	48.757315	3	383	1	2488.626842	2529.870662	41.243821	1
436	1	2865.783671	2914.370506	48.586834	1	382	1	2481.574043	2522.629194	41.055151	1
435	1	2858.928421	2907.376080	48.447660	3	381	1	2474.521363	2515.387833	40.866471	1
434	1	2851.870111	2900.147182	48.277071	1	380	1	2466.808870	2507.480023	40.671153	1
433	1	2844.812253	2892.918777	48.106524	1	379	1	2459.095741	2499.684891	40.589150	5
432	1	2837.756882	2885.673325	47.916443	1	378	1	2452.043122	2492.443691	40.400569	1
431	1	2830.701518	2878.427881	47.726363	1	377	1	2444.903414	2485.115011	40.211597	1
430	1	2823.644171	2871.179553	47.535382	1	376	1	2437.199711	2477.339088	40.139377	3
429	1	2816.586943	2863.931336	47.344392	1	375	1	2430.077492	2470.032175	39.954683	1
428	1	2808.873502	2856.041341	47.167839	1	374	1	2422.728585	2462.567918	39.839333	3
427	1	2801.162262	2848.263899	47.101638	5	373	1	2415.607141	2455.261852	39.654711	1
426	1	2794.105095	2841.015818	46.910723	1	372	1	2408.376257	2448.145557	39.769300	13
425	1	2786.964438	2833.695861	46.731423		371	1	2401.322711	2440.915149	39.592438	1
424	1	2779.236276	2825.919312	46.683037	3	370	1	2394.268315	2433.683009	39.414694	1
423	1	2772.113108	2818.620347	46.507239		369	1	2387.213555	2426.449891	39.236336	1
422	1	2764.369996	2810.822287	46.452291	3	368	1	2380.088918	2419.406128	39.317210	15
421	1	2757.027147	2803.561840	46.534694	15	367	1	2373.756078	2412.928006	39.171928	1
420	1	2749.970208	2796.332973	46.362764	1	366	1	2367.058364	2406.102774	39.044410	1
419	1	2742.913081	2789.103123	46.190042	15	365	1	2360.005041	2398.871608	38.800307	1
418	1	2/35.95/333	2782.294096	40.330703	15	364	1	2353.157306	2391.887487	38.730182	3
417	1	2729.023001	2773.814039	40.190977	1	303	1	2340.104010	2384.030310	38.332300	1
410	1	2715 710252	2/08.3833/8	40.017522		302 261	1	2339.200909	2377.070000	38.413097	3
410	1	2713.710233	2701.369207	45.879014	<u> </u>	260 260	1	2002.207041	2370.443427	28 058060	1
414	1	2708.055557	2704.009101	45.705014		300	1	2323.133349	2303.212317	27 00016	1
413 419	1	2101.191011	2141.303113	40.000202	<u>う</u> 1	320 320	1	2310.099307	2000.919123	37.042466	7
412 /11	1	2034.140023	2740.100027	45.532004	<u>1</u> 2	357	1	2310.030049	2340.102313	37 8/0/25	<u>ו</u> ד
411 /10	1	2680 898176	2705.107002	45.202700	<u> </u>	356	1	2004.401242	2342.300077	37 705/8/	1
410	1	2673 771066	2720.307420	40.019249	<u> </u>	350 255	1	2230.110300	2303.024444	37 561097	1
409	1	2666 716207	2710.077731	44 739300	1	354	1	2231.101129	2323.346210	37 389186	1
407	1	2659 661017	2704 203470	44 549463	<u> </u>	353	1	2204.154030	2314 882331	37 2024/3	1
101	-	2000.001011	2101.200113	11.012100		000	-	2211.015001	2014.002001	01.202110	T

Table 23: Results from MIF1739: type, initial, minimum, and difference of potential, and  $\operatorname{Adj}(C_{n+1}, C_n)$  (cont.).

n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj	n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj
352	1	2270.626129	2307.648892	37.022763	1	298	1	1898.393646	1927.638785	29.245140	1
351	1	2263.572396	2300.415404	36.843008	1	297	1	1891.343530	1920.405571	29.062041	1
350	1	2256.518688	2293.181867	36.663179	1	296	1	1882.550887	1911.461967	28.911080	1
349	1	2249.465430	2285.948844	36.483414	1	295	1	1874.752345	1903.525774	28.773429	1
348	1	2242.416025	2278.712819	36.296794	1	294	1	1867.054052	1895.687896	28.633843	1
347	1	2234.704330	2270.792335	36.088006	1	293	1	1859.902111	1888.427400	28.525288	3
346	1	2226.994520	2262.986228	35.991708	5	292	1	1852.852066	1881.193243	28.341177	1
345	1	2219.941303	2255.752944	35.811641	1	291	1	1844.086525	1872.335299	28.248774	1
344	1	2212.802392	2248.419339	35.616947	1	290	1	1836.329593	1864.509413	28.179820	1
343	1	2205.099362	2240.629347	35.529985	3	289	1	1828.640014	1857.246000	28.605985	15
342	1	2197.977940	2233.317755	35.339815	1	288	1	1821.590181	1850.010842	28.420662	1
341	1	2190.631024	2225.849333	35.218309	3	287	1	1814.539448	1842.774084	28.234636	1
340	1	2183.340089	2218.615332	35.275244	13	286	1	1807.489165	1835.537846	28.048681	1
339	1	2176.287220	2211.382035	35.094814	1	285	1	1800.439333	1828.302131	27.862797	1
338	1	2169.234478	2204.148933	34.914456	1	284	1	1792.939032	1820.787123	27.848091	5
337	5	2149.955703	2197.741651	47.785948	61	283	1	1785.888890	1813.550736	27.661846	1
336	5	2142.902576	2190.508068	47.605492	1	282	1	1778.319798	1806.565298	28.245501	15
335	5	2137.753526	2183.512126	45.758600	3	281	1	1771.276824	1799.338553	28.061729	1
334	5	2130.700413	2176.278417	45.578003	5	280	1	1764.429412	1792.417316	27.987904	3
333	5	2125.554212	2169.283670	43.729458	3	279	1	1757.386493	1785.190407	27.803914	1
332	1	2128.239949	2162.436139	34.196190	47	278	1	1750.344025	1777.964004	27.619979	1
331	1	2121.547006	2155.607546	34.060540	1	277	1	1743.301140	1770.737074	27.435934	1
330	1	2114.494242	2148.373452	33.879209	1	276	1	1736.258706	1763.510651	27.251945	1
329	1	2107.672594	2141.430727	33.758134	3	275	1	1729.209231	1756.274006	27.064775	1
328	5	2091.695343	2134.488722	42.793378	39	274	1	1722.159781	1749.037375	26.877594	1
327	5	2086.345213	2128.150926	41.805713	1	273	1	1715.109863	1741.799810	26.689947	1
326	5	2079.292206	2120.916339	41.624133	1	272	1	1708.060395	1734.562757	26.502362	1
325	5	2074.149991	2113.917005	39.767014	3	271	1	1700.514961	1727.556298	27.041338	15
324	5	2067.097290	2106.682396	39.585106	1	270	1	1693.475651	1720.333106	26.857456	5
323	1	2067.000774	2099.995344	32.994570	31	269	1	1686.631238	1713.405225	26.773987	3
322	1	2060.311945	2093.169666	32.857721	1	268	1	1679.592470	1706.182605	26.590135	1
321	1	2053.623257	2086.343410	32.720153	1	267	1	1672.553224	1698.959265	26.406041	1
320	1	2046.570605	2079.108659	32.538054	1	266	1	1665.511040	1691.731780	26.220740	1
319	1	2039.518404	2071.874428	32.356024	1	265	1	1658.468881	1684.504305	26.035423	1
318	5	2028.271381	2064.797071	36.525689	23	264	1	1651.419656	1677.266825	25.847170	1
317	5	2022.926151	2058.468188	35.542037	1	263	1	1643.908390	1670.097576	26.189186	17
316	5	2017.582740	2052.140774	34.558034	1	262	1	1636.816262	1662.887875	26.071613	1
315	1	2013.045245	2044.980920	31.935675	13	261	1	1630.460154	1656.388419	25.928265	23
314	1	2006.371760	2038.173131	31.801371	1	260	1	1623.421049	1649.164496	25.743447	1
313	1	1999.726918	2031.396713	31.669795	1	259	1	1616.377673	1642.110092	25.732419	25
312	1	1993.110717	2024.652123	31.541407	1	258	1	1610.763219	1636.390612	25.627392	1
311	1	1986.399461	2017.838110	31.438648	1	257	1	1603.708683	1629.213139	25.504456	1
310	5	1980.786610	2012.098565	31.311955	3	256	1	1596.879165	1622.245574	25.366409	3
309	1	1975.959254	2007.218985	31.259731	1	255	1	1589.825777	1615.070412	25.244635	1
308	1	1968.906749	1999.983300	31.076551	1	254	1	1582.995245	1608.097732	25.102487	3
307	1	1961.854695	1992.748134	30.893439	1	253	1	1575.943006	1600.924857	24.981852	1
306	1	1954.803092	1985.513488	30.710396	1	252	1	1569.118887	1593.947314	24.828427	3
305	1	1947.751514	1978.278824	30.527311	1	251	1	1562.067796	1586.776382	24.708586	1
304	1	1940.699961	1971.044144	30.344183	1	250	1	1555.238948	1579.794975	24.556027	3
303	1	1933.648858	1963.809983	30.161125	1	249	1	1548.189006	1572.626135	24.437129	1
302	1	1926.597340	1956.575239	29.977899	1	248	1	1541.362858	1565.641242	24.278384	3
301	1	1919.546272	1949.341015	29.794742	1	247	1	1534.314064	1558.474329	24.160265	1
300	1	1912.495230	1942.106775	29.611545	1	246	1	1527.275854	1551.250719	23.974865	1
299	1	1905.444212	1934.872520	29.428308	1	245	1	1520.238095	1544.027626	23.789532	1

Table 24: Results from MIF1739: type, initial, minimum, and difference of potential, and  $\operatorname{Adj}(C_{n+1}, C_n)$  (cont.).

n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj	n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj
244	1	1512.956517	1536.882829	23.926312	13	190	2	1133.097035	1161.301939	28.204904	1
243	1	1505.908421	1529.712151	23.803729	1	189	2	1125.783551	1153.637019	27.853468	5
242	1	1499.076971	1522.723264	23.646293	7	188	2	1118.572796	1146.439107	27.866311	1
241	1	1492.030024	1515.554577	23.524553	1	187	1	1122.743390	1139.455696	16.712305	201
240	1	1485.202483	1508.562918	23.360435	3	186	1	1116.076450	1132.669966	16.593516	1
239	1	1478.156685	1501.396062	23.239377	1	185	1	1109.046091	1125.493794	16.447704	1
238	2	1458.401342	1494.438248	36.036906	295	184	1	1102.422710	1118.767663	16.344953	9
237	2	1451.355838	1487.236324	35.880485	1	183	1	1096.108775	1112.315227	16.206453	1
236	2	1444.136501	1480.034329	35.897828	1	182	1	1089.796282	1105.863712	16.067431	1
235	1	1450.218429	1473.095365	22.876936	273	181	1	1083.483930	1099.411614	15.927684	1
234	1	1443.173666	1465.923516	22.749850	1	180	1	1076.821821	1092.632624	15.810803	1
233	1	1436.340559	1458.930499	22.589940	3	179	1	1069.792070	1085.454779	15.662709	1
232	1	1429.719290	1452.263306	22.544016	9	178	5	1049.498537	1079.083854	29.585318	63
231	1	1423.401107	1445.811016	22.409909	1	177	5	1043.485944	1072.614798	29.128855	1
230	1	1417.082949	1439.358239	22.275289	1	176	1	1050.356342	1065.678130	15.321788	59
229	1	1410.038740	1432.183492	22.144752	1	175	1	1044.045454	1059.229971	15.184517	1
228	1	1403.205405	1425.193032	21.987627	3	174	1	1037.734707	1052.781192	15.046485	1
227	1	1396.162344	1418.020129	21.857784	1	173	1	1031.426491	1046.334455	14.907964	1
226	1	1389.331708	1411.028063	21.696354	3	172	1	1024.397403	1039.154907	14.757504	1
225	1	1382.289796	1403.856865	21.567068	1	171	1	1017.367075	1031.971855	14.604780	1
224	1	1375.454585	1396.859048	21.404463	3	170	1	1010.339278	1024.791797	14.452518	1
223	1	1368.412800	1389.687271	21.274470	1	169	1	1003.311622	1017.611215	14.299593	1
222	1	1361.581309	1382.690887	21.109578	3	168	5	987.367107	1010.726765	23.359659	51
221	1	1354.539653	1375.518589	20.978936	1	167	5	980.337548	1003.545072	23.207524	1
220	1	1347.500528	1368.349193	20.848665	1	166	5	974.519257	996.549774	22.030517	3
219	1	1340.483272	1361.365568	20.882297	17	165	5	967.661743	990.405689	22.743946	5
218	1	1333.443544	1354.192036	20.748493	1	164	5	962.265188	984.111386	21.846198	1
217	1	1326.660286	1347.250525	20.590239	3	163	5	956.868740	977.816007	20.947267	1
216	1	1320.158515	1340.711237	20.552723	7	162	5	949.839467	970.632016	20.792550	1
215	1	1313.840756	1334.258220	20.417464	1	161	5	944.656735	963.733556	19.076822	3
214	1	1307.523043	1327.804472	20.281429	1	160	5	938.062815	957.110858	19.048043	3
213	1	1301.205376	1321.349995	20.144619	1	159	5	931.922786	951.091036	19.168251	3
212	1	1294.166257	1314.173556	20.007300	1	158	5	926.528159	944.793386	18.265227	1
211	1	1287.333727	1307.181286	19.847559	3	157	5	921.133763	938.494113	17.360350	1
210	1	1280.295756	1300.006412	19.710656	1	156	5	914.105430	931.307705	17.202274	
209	1	1273.462409	1293.010784	19.548374	3	155	5	908.957589	924.445646	15.488057	3
208	1	1266.424566	1285.835602	19.411036		154	1	905.577353	918.020913	12.443560	15
207	1	1259.591424	1278.838727	19.247303	<u> </u>	153	5	896.345363	911.707448	15.362085	13
206	1	1252.553709	12/1.00324/	19.109538	1	152	5	890.961168	905.429627	14.408459	1
203	1	1243.316323	1204.490370	18.972043	1	151	0 1	<u>881 206607</u>	899.101011	11.082560	
204	1	1230.403072	1237.320013 1250.106610	18.650500	1	140	1	874 820750	895.51025	11.90000	1
200	1	1201.400102	1230.100010	18.690260	15	149	1	860 202004	881.072071	11.872055	1
202	1	$\frac{1224.010330}{1217.583720}$	1243.296016 1226 124256	18.540537	10	140	1	864 701158	876 461207	11.704007	1
201	1	1217.363720	$\frac{1230.124230}{1220.184776}$	18 383508	2	147	1	857 763306	860 272573	11.500177	1
100	1	$\frac{1210.801208}{1204.202347}$	$\frac{1229.104770}{1222.627677}$	18.335330	7	140	1	850 738164	862 087012	11.309177	1
108	1	1107 070031	1222.021011	18 106073	1	140	1	843 715463	854 004400	11.180036	1
107	1	1101 663252	1210.170003	18.058035	1	144	1	836 602004	847 721608	11.103030	1
196	1	1185 350005	1203.121201	17 918653	1	149	1	829 670485	840 538610	10 868125	1
195	1	1178.315975	1196.092140	17.776166	1	141	1	822.650598	833.358586	10.707987	1
194	1	1171.480383	1189.094682	17.614298	3	140	1	815.628375	826.174676	10.546302	
193	1	1164.446481	1181.917924	17.471443	1	139	1	808.608682	818,993848	10.385166	1
192	2	1147.357058	1175.697144	28.340086	211	138	1	801.589131	811.812780	10.223649	
191	$\frac{-}{2}$	1140.313601	1168.499654	28.186052	1	137	1	794.569721	804.631473	10.061752	1
				_0.100001			_ <b>*</b>	.01.000121	501.001110	10.001102	

Table 25: Results from MIF1739: type, initial, minimum, and difference of potential, and  $\operatorname{Adj}(C_{n+1}, C_n)$  (cont.).

n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj	n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj
136	1	787.552841	797.453259	9.900418	1	82	1	435.141809	440.550425	5.408616	1
135	1	780.538494	790.278120	9.739626	1	81	5	418.751871	434.343643	15.591772	49
134	1	771.888084	782.206157	10.318073	13	80	5	413.174252	428.083564	14.909313	1
133	1	764.872103	775.023203	10.151101	1	79	5	407.599164	421.810897	14.211734	1
132	1	757.624997	768.042203	10.417206	7	78	5	400.623898	414.794401	14.170503	1
131	1	752.079580	762.441558	10.361978	1	77	2	399.485644	409.083517	9.597873	109
130	1	745.074713	755.271073	10.196360	1	76	2	393.350121	402.894866	9.544745	1
129	1	738.279709	748.460647	10.180939	3	75	2	388.190437	397.492331	9.301894	1
128	1	731.308859	741.332100	10.023241	1	74	5	378.446458	390.908500	12.462042	101
127	1	724.482803	734.479629	9.996826	3	73	5	373.082314	384.789377	11.707063	1
126	1	717.512263	727.349853	9.837590	1	72	5	364.499634	378.637253	14.137620	3
125	1	711.424362	721.303235	9.878873	7	71	5	362.311459	373.349661	11.038202	1
124	1	705.142336	714.920896	9.778560	1	70	5	356.747752	366.892251	10.144500	1
123	1	698.182341	707.802109	9.619768	1	69	5	349.799241	359.882566	10.083325	1
122	1	691.352363	700.939379	9.587016	3	68	5	344.492689	353.394542	8.901853	5
121	1	684.392677	693.819577	9.426900	1	67	5	338.297850	347.252007	8.954157	3
120	1	677.617362	687.021982	9.404619	5	66	5	332.929651	341.110599	8.180948	1
119	1	672.090051	681.419158	9.329107	1	65	5	327.471672	334.971532	7.499860	5
118	1	665.537834	674.769635	9.231801	1	64	5	322.181399	329.620147	7.438749	3
117	1	659.162875	668.282701	9.119826	1	63	5	316.828430	323.489734	6.661304	1
116	1	653.782018	662.809353	9.027335	1	62	5	311.476582	317.353901	5.877319	1
115	1	646.746131	655.756307	9.010175	1	61	5	306.189880	312.008896	5.819016	3
114	1	640.000618	648.833100	8.832482	3	60	5	300.845135	305.875476	5.030340	1
113	1	632.971571	641.794704	8.823133	1	59	5	295.504198	299.738070	4.233872	1
112	1	626.255287	634.874626	8.619339	3	58	5	290.323295	294.378148	4.054853	3
111	1	619.538575	628.068416	8.529841	1	57	5	285.036337	288.342625	3.306288	1
110	1	613.318206	621.788224	8.470018	5	56	1	281.080918	283.643105	2.562187	3
109	1	607.045416	615.411166	8.365751	1	55	1	276.790160	279.248470	2.458311	1
108	1	600.773449	609.033011	8.259562	1	54	1	269.848550	272.208631	2.360081	1
107	1	593.759216	602.007110	8.247895	1	53	1	262.935582	265.203016	2.267435	1
106	1	587.033279	595.061072	8.027793	3	52	1	256.051255	258.229991	2.178736	1
105	1	580.334412	588.266501	7.932089	1	51	1	249.168536	251.253964	2.085428	1
104	2	568.508947	582.086642	13.577695	143	50	1	242.200014	244.549926	2.349912	3
103	2	562.265046	575.766131	13.501085	131	49	1	236.765545	239.091864	2.326319	1
102	2	556.100851	569.363652	13.262801	1	48	1	229.965239	232.199529	2.234290	1
101	1	555.880448	563.411308	7.530860	109	47	1	223.683123	226.012256	2.329133	1
100	1	549.614026	557.039820	7.425793	1	46	1	218.395108	220.680330	2.285222	1
99	1	543.347746	550.666526	7.318780	1	45	1	211.606180	213.784862	2.178682	1
98	5	459.466678	543.665361	84.198682	61	44	1	205.444733	207.688728	2.243995	<u> </u>
97	1	529.610737	536.681383	7.070646	59	43	1	200.177436	202.364664	2.187228	
96	1	522.915049	529.879146	6.964098	1	42	1	194.121809	196.277534	2.155724	1
95	1	516.759218	523.640211	6.880994	9	41	1	188.430439	190.536277	2.105838	<u> </u>
94	1	510.493659	517.264131	6.770472	<u> </u>	40	1	183.215073	185.249839	2.034766	<u> </u>
93		504.224814	510.877688	6.652874		39	1	178.099956	180.033185	1.933230	
92	1	498.630804	505.185309	6.554505	5	38	3	169.861663	173.928427	4.066764	77
91	1	492.365755	498.811060	6.445305	<u> </u>	37	1	165.169257	167.033672	1.864415	(5
90		480.101025	492.433908	0.332883	1	30 25	1	154.027440	101.825363	1.710202	
89		479.830015	486.053911	0.21/295	1	35 94		154.037442	155./50643	1.(19202	
88		4/2.858084	479.032630	0.1/4540 F 056551		34 22	1	148.578752	150.044528	1.005////	3
01 06		400.141013	4(2.098105	5.950551	<u></u>	- პპ ეი	1	143.278037	144.842/19	1.304082	1 1
00 07	1 F	409.020844	400.084493	0.003000	<u>(</u>	32 91	1	130.177010	109.000024	1.400500	
00 01	0 1	442.401/94	459.055799	10.394003 5 607770	01 FO	31 20	1 E	132.177919	133.380422	6.007565	1
84 82		447.029433	432.03/214	5.02///9		30 20	D F	122.189000	120.2803/1	5 020707	29 E
రెన	1	441.399403	440.924094	0.024092		29	Э	111.154514	123.38/3/1	5.852797	5

Table 26: Results from MIF1739: type, initial, minimum, and difference of potential, and  $\operatorname{Adj}(C_{n+1}, C_n)$  (cont.).

n	Т	- $\mathbf{E}^{MIF}$	- E*	$-(\mathbf{E}^* - \mathbf{E}^{MIF})$	Adj
28	5	111.743771	117.822402	6.078631	1
27	5	107.676832	112.873584	5.196752	1
26	5	103.329759	108.315616	4.985858	5
25	5	97.407732	102.372663	4.964931	1
24	5	93.391233	97.348815	3.957582	1
23	5	88.925087	92.844472	3.919385	1
22	5	84.331772	86.809782	2.478011	1
21	5	79.125778	81.684571	2.558793	1
20	5	74.676835	77.177043	2.500207	1
19	5	70.292142	72.659782	2.367641	1
18	5	65.765646	66.530949	0.765303	1
17	5	60.528902	61.317995	0.789092	3
16	5	56.232985	56.815742	0.582756	1
15	5	51.945217	52.322627	0.377411	1
14	5	47.721697	47.845157	0.123460	1
13	1	44.326801	44.326801	0.000000	1
12	1	37.877723	37.967600	0.089876	1
11	1	32.422747	32.765970	0.343224	1
10	1	27.961871	28.422532	0.460661	1
9	1	23.601244	24.113360	0.512117	1
8	1	19.340866	19.821489	0.480623	1
7	1	16.074589	16.505384	0.430795	1
6	5	9.257755	12.712062	3.454307	5
5	1	8.825643	9.103852	0.278209	3
4	1	5.798470	6.000000	0.201530	1
3	1	2.982303	3.000000	0.017697	1
2	1	0.994101	1.000000	0.005899	1

Max	0.005899	1201
Avrg	63.283163	17
Min	146.911491	1

Table 27: Results from MIF1739: type, initial, minimum, and difference of potential, and  $\operatorname{Adj}(C_{n+1}, C_n)$  (cont.).

$      \begin{array}{ c c c c c c c c c c c c c c c c c c c$	n	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
$8 \ 9 \ 10 \ 11 \ 12$ 265 266 267544 545 54613 14 15 16288 289 270547 548 54917 18 19 20271 272 273550 551 55221 22 23 24274 275 276553 545 55525 26 27 28277 278 270556 557 55829 30 31 32280 281 282359 560 56133 34 35 36283 281 282365 565 75737 38 39 40286 287 288365 566 56741 42 43 44299 201568 569 57045 46 47 48292 293 294577 573 57653 54 55 76298 299 300577 578 37353 54 55 76298 299 300577 578 37377 77 79 80301 302 303580 581 58281 82 83 84304 305 306583 584 58585 86 87 88307 308 309586 587 58889 90 91 92310 311 312589 599 591101 102 103319 320 321588 598 597101 102 103319 320 321598 599 600104 105 106322 323 524601 602 603107 108 109325 326 327604 605 606110 111 112328 323610 611 612111 111 112337 338 339616 617 618112 123 124347 348622 623 624122 124347 348622 633 634133 134 343 4345622 633 644122 124 127343 344 345622 633 644122 124 127343 333610 611 612134 135 136359 360637 638 639134 141 145361 362 363643 644 647 648122 123 124363 369643 644 647 648	1000	$2\ 3\ 4\ 5\ 6\ 7$	/ 0	1000	262 263 26	54	1000	541 542 543	
131415162829027127227355055155221222324274275276553554555252627282772782795565575582930313228028128256056556556556533343536283284285562566566567568567568567568567568567568567568567558563554557573573576573573573573573573575575575573573575 <t< td=""><td></td><td>8 9 10 11 12</td><td></td><td></td><td><math>265 \ 266 \ 26</math></td><td>57</td><td></td><td>544 545 546</td><td></td></t<>		8 9 10 11 12			$265 \ 266 \ 26$	57		544 545 546	
1718192027272735505515522122232424275276270566557558293031322802812825595665673334536628328428428656556656733345366283284286285288565566567414243442892902915885895705745755764554545447482922932945715755765354557629629730057757857977777778703013023035805815828586578830730830956655758885909192310314315592596597101102103319320321589590501104105106322323324601602603107108109325326327604605666110111112288329600616616616616110110111121328		13 14 15 16			$268 \ 269 \ 27$	70		547 548 549	
212223242727655355455325262728277270558565565565293031322802812825605613334353628328428556256656734442434442922902915685665674546474829229292457157557653545572082989005715755765354557208298900566587587777879803013023035805815828430430530658358458559659793909192310311312589590591939495963133143155925935949495963133143155925935949599909192310311312328329600601101102103319303321638598599600104105106322323324616616616626110111112328329<		17 18 19 20			271 $272$ $27$	73		550 551 552	
22       26       27       28       279       56       57       58         23       34       35       36       283       284       285       562       563       564         33       34       35       36       283       284       285       562       563       564         34       34       35       36       283       284       285       562       563       564       576         41       42       44       42       290       901       568       560       570         45       56       47       48       292       293       294       571       575       576         53       54       57       66       298       290       300       577       578       579         77       78       78       80       313       314       315       592       591 <t< td=""><td></td><td>21 <math>22</math> <math>23</math> <math>24</math></td><td></td><td></td><td>274 <math>275</math> <math>27</math></td><td>76</td><td></td><td>553 554 555</td><td></td></t<>		21 $22$ $23$ $24$			274 $275$ $27$	76		553 554 555	
29       90       31       32       280       281       282       285       562       563       564         37       38       39       40       286       287       288       565       566       567         44       42       43       44       289       290       291       565       565       571       572       573         45       46       47       48       292       293       294       571       575       575         53       54       557       56       298       290       300       577       578       579         53       54       557       60       303       303       308       386       887       588         80       90       91       92       310       311       312       598       596       597         101       102       103       319       303       320       321       598       596       597         101       102       103       319       303       320       323       601       602       603         104       105       106       322       323       334		25 $26$ $27$ $28$			$277 \ 278 \ 27$	79		556 557 558	
33       34       35       36       283       244       285       562       564       567         44       42       43       44       289       290       291       568       560       570         44       50       51       52       295       296       297       574       575       576         53       54       55       76       298       299       300       577       575       576         77       78       78       78       80       301       302       303       580       581       582       586       587       588       580       591		29 30 31 32			280 281 28	32		559 560 561	
3738302862872886656666674444289290291568569570446748292293294571572573445051522952962975745755765354557629829030057757857957977787080301302303580581582858667883073083095865875888990919231031131259559559113949596313314315592593594596597101102103319320321598596597591591595595595591591592593594596597591592593594596597591592593596597591591591591591592593596591		33 34 35 36			283 284 28	35		562 563 564	
4142434428929029156856977045464748292293294571575576353545576629829930057757557977787878787878785805815825805815825855858587588580581582586587588586587588586587588589591595596597591595596597591595596597591595596597591595596597591595596597591595596597591595596597591595596597591595596597591595596597591595596597591595596597591591595596597591591595596597591591591595596597591591595596596597591<		37 38 39 40			286 287 28	38		565 566 567	
45464040571572573495051522962975745755765354557629829930057757857977787980301302303580581582818283443043053065835845858586878830730830958658758889909192310311312596590591103499596313314315592596597101102103319320321598590600104105106322323323601602603107108109325326327604606606110111112328329330607608606110111114115331332333616617618122123124340341342622626627131132133349350351628629630134135136352353354636634644645140144144364363363636643644645		41 42 43 44			289 290 29	)1		568 569 570	
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155 $156$ $157$ $373$ $374$ $375$ $652$ $653$ $654$ $158$ $159$ $160$ $376$ $377$ $378$ $655$ $656$ $657$ $161$ $162$ $163$ $379$ $380$ $381$ $658$ $659$ $660$ $164$ $165$ $166$ $382$ $383$ $384$ $661$ $662$ $663$ $167$ $228$ $229$ $385$ $386$ $387$ $664$ $665$ $666$ $230$ $231$ $232$ $388$ $389$ $510$ $667$ $668$ $669$ $233$ $234$ $235$ $511$ $512$ $513$ $670$ $671$ $672$ $236$ $237$ $238$ $514$ $515$ $516$ $673$ $674$ $675$ $239$ $240$ $241$ $517$ $518$ $519$ $676$ $677$ $678$ $242$ $243$ $244$ $520$ $521$ $522$ $682$ $683$ $684$ $248$ $249$ $250$ $526$ $527$ $528$ $685$ $686$ $687$ $251$ $252$ $253$ $529$ $533$ $534$ $691$ $692$ $693$ $254$ $255$ $256$ $532$ $533$ $534$ $691$ $692$ $693$ $257$ $258$ $259$ $535$ $536$ $537$ $694$ $695$ $696$ $260$ $261$ $538$ $539$ $540$ $697$ $698$ $699$		$152 \ 153 \ 154$			$370 \ 371 \ 37$	72		649 $650$ $651$	
158 $159$ $160$ $376$ $377$ $378$ $655$ $656$ $657$ $161$ $162$ $163$ $379$ $380$ $381$ $658$ $659$ $660$ $164$ $165$ $166$ $382$ $383$ $384$ $661$ $662$ $663$ $167$ $228$ $229$ $385$ $386$ $387$ $664$ $665$ $666$ $230$ $231$ $232$ $388$ $389$ $510$ $667$ $668$ $669$ $233$ $234$ $235$ $511$ $512$ $513$ $670$ $671$ $672$ $236$ $237$ $238$ $514$ $515$ $516$ $673$ $674$ $675$ $239$ $240$ $241$ $517$ $518$ $519$ $676$ $677$ $678$ $242$ $243$ $244$ $520$ $521$ $522$ $682$ $683$ $684$ $245$ $246$ $247$ $523$ $524$ $525$ $682$ $686$ $687$ $251$ $252$ $253$ $529$ $530$ $531$ $688$ $689$ $690$ $254$ $255$ $256$ $532$ $533$ $534$ $691$ $692$ $693$ $257$ $258$ $259$ $535$ $536$ $537$ $694$ $695$ $696$ $260$ $261$ $538$ $539$ $540$ $697$ $698$ $699$		$155 \ 156 \ 157$			$373 \ 374 \ 37$	75		652 $653$ $654$	
161162163379380381658659660164165166382383384661662663167228229385386387664665666230231232388389510667668669233234235511512513670671672236237238514515516673674675239240241517518519676677678242243244520521522682683684245246247523524525682683684248249250526527528685686687251252253529530531688689690254255256532536537694695696260261538539540697698699		$158 \ 159 \ 160$			376 377 37	78		655 $656$ $657$	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		$161 \ 162 \ 163$			379 380 38	31		658 $659$ $660$	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		$164 \ 165 \ 166$			382 383 38	34		661 662 663	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		$167 \ 228 \ 229$			385 386 38	37		664 $665$ $666$	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		230 231 232			388 389 51	10		667 668 669	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		233 $234$ $235$			511 512 51	13		670 671 672	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		236 $237$ $238$			514 515 53	16		673 $674$ $675$	
242       243       244       520       521       522       679       680       681         245       246       247       523       524       525       682       683       684         248       249       250       526       527       528       685       686       687         251       252       253       529       530       531       688       689       690         254       255       256       532       533       534       691       692       693         257       258       259       535       536       537       694       695       696         260       261       538       539       540       697       698       699		239 $240$ $241$			517 518 51	9		676 677 678	
245246247523524525682683684248249250526527528685686687251252253529530531688689690254255256532533534691692693257258259535536537694695696260261538539540697698699		242 243 244			520 521 52	22		679 $680$ $681$	
248249250526527528685686687251252253529530531688689690254255256532533534691692693257258259535536537694695696260261538539540697698699		245 246 247			523 524 52	25		682 683 684	
251252253529530531688689690254255256532533534691692693257258259535536537694695696260261538539540697698699		248 249 250			526 527 52	28		685 $686$ $687$	
254       255       256       532       533       534       691       692       693         257       258       259       535       536       537       694       695       696         260       261       538       539       540       697       698       699		251 $252$ $253$			529 530 53	31		688 689 690	
257       258       259       535       536       537       694       695       696         260       261       538       539       540       697       698       699		254 $255$ $256$			532 533 53	34		691 692 693	
260 261 538 539 540 697 698 699		257 $258$ $259$			535 536 53	37		694 695 696	
		260 261			$538 \ 539 \ 54$	)		$697 \ 698 \ 699$	

Table 28:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$ .

n	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
1000	700 701 702		1000	1040 1041		1000	1149 1150	
	703 704 705			1042 1043			1151 1152	
	706 707 708			1045 1046			1153 1154	
	709 710 711			1047 1048			1155 1156	
	712 713 714			1049 1050			1157 1158	
	715 716 717			1051 1052			1159 1160	
	718 719 720			1053 1054			1161 1162	
	721 722 723			1055 1057			1163 1164	
	724 725 726			1058 1059			1165 1166	
	727 728 729			1060 1061			1167 1168	
	730 731 732			1063 1064			1169 1170	
	733 734 735			1065 1066			1171 1172	
	736 737 738			1067 1068			1173 1174	
	739 740 741			1069 1070			1175 1176	
	742 743 744			1071 1072			1177 1178	
	745 $746$ $747$			1073 1074			1179 1180	
	748 749 750			1075 1076			1181 1182	
	751 752 753			1077 1078			1183 1184	
	754 $755$ $756$			1079 1080			1185 1186	
	757 758 759			1081 1082			1187 1188	
	760 $761$ $962$			1083 1084			1189 1190	
	963 $964$ $965$			1085 1086			1191 1192	
	$966 \ 967 \ 968$			1087 1088			1193 1194	
	$969 \ 970 \ 971$			1089 1090			1195 1196	
	972 $973$ $974$			1091 1092			1197 1198	
	975 $976$ $977$			1093 1094			1199 1200	
	978 $979$ $980$			1095 1096			1201 1202	
	981 $982$ $983$			1097 1098			1203 1204	
	984 $985$ $986$			1099 1100			1205 1206	
	987 $988$ $989$			1101 1102			1207 1208	
	$990 \ 991 \ 992$			1103 1104			1209 1210	
	$993 \ 994 \ 995$			1105  1106			1211 1212	
	996  997  998			1107 1108			1213 1214	
	999 1000			1109 1110			1215  1216	
	1001 1002			1111 1112			1217 1219	
	1003 1004			1113 1114			1220 1221	
	1005  1006			1115 1116			1222 1223	
	1007 1008			1117 1118			1225  1226	
	1009 1010			1119 1120			1227 1228	
	1011  1012			1121 1122			1229  1231	
	1013 1014			1123 1124			1232 1233	
	1015  1016			1125 1126			1234  1235	
	1017 1018			1127 1128			1237 1238	
	1019  1020			1129 1130			1239  1240	
	1021 1022			1131 1132			1241  1243	
	1023 1024			1133 1134			1244 1245	
	1025  1026			1135 1136			1246 1247	
	1027 1028			1137 1138			1248 1249	
	1029 1030			1139 1140			1250 1251	
	1031  1032			1141 1142			1252  1253	
	1033 1034			1143 1144			1254  1255	
	1035  1036			1145 1146			1256  1257	
	1037 1039			1147 1148			$1258 \ 1259$	

Table 29:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
1000	1260 1261		1000	1668 1669		985	1818 1850	1674 1677
	1262 1263			1670 1671			1851 1852	1678 1679
	1264 1265			1672 1673			1885 1886 /	1696 1697
	1266 1267			1674 1676			30	1698 / 31
	1268 1269			1677 1678		984	/ 0	1062 / 1
	1270 1271			1679 1681		983	/ 0	1044 / 1
	1272 1273			1682 1683		982	/ 0	1230 / 1
	1274 1275			1684 1685		981	1062 / 1	1885 1886 /
	1276 1277			1686 1687			,	2
	1278 1279			1688 1689		980	/ 0	1062 / 1
	1280 1281			1691 1692		979	1230 1885	1681 1694
	1282 1283			1693 1694			1886 / 3	1708 1722 /
	1284 1285			1696 1697			,	4
	1286 1287			1698 1699		978	/ 0	1230 / 1
	1288 1289			1702 1703		977	1062 / 1	1885 1886 /
	1290 1291			1704 1708			,	2
	1292 1293			1709 1710		976	/ 0	1062 / 1
	1294 1295			1711 1713		975	/ 0	1637 / 1
	1296 1297			1714 1715		974	1885 1886 /	1636 1651
	1298 1299			1716 1720			2	1670 / 3
	1300 1301			1721 1722		973	1636 1637	1633 1644
	1302 1303			1726 1727			1651 1670 /	1660 1885
	1304 1305			1728 / 1000			4	1886 / 5
	1306 1307		999	/ 0	1050 / 1	972	1038 1044	1056 1634
	1308 1309		998	1056 1062 /	1685 1711		1062 1218	1635  1636
	1310 1311			2	1713 / 3		1224 1230	1637  1645
	1312 1313		997	/ 0	1056 / 1		1236 1242	1646  1647
	1314 1315		996	/ 0	1062 / 1		1323 1840	1648 1649
	1316 1317		995	/ 0	1726 / 1		1841 1874	1650  1651
	1318 1319		994	1050 / 1	1727 1728 /		1875 1876	1661 1662
	1320 1321				2		1908 1909	1663  1664
	1322  1625		993	/ 0	1050 / 1		1910 1911	1665  1666
	1626  1627		992	/ 0	1702 / 1		1942 1943	1667  1668
	1628 1629		991	1050 / 1	1703 1704 /		1944  1945	1669  1670
	1630  1631				2		1946  1977	1682  1683
	1632  1633		990	/ 0	1050 / 1		1978  1979	1684  1685
	1634  1635		989	/ 0	1722 / 1		1980 2011	1686  1687
	1636  1637		988	1050 1722 /	1655 1676		2012 2013	1688  1689
	1638  1639			2	1699 / 3		2014 2015	1690  1691
	1640  1641		987	/ 0	1050 / 1		2036 2037	1692  1693
	1642  1643		986	/ 0	1708 / 1		2038 2039	1709  1710
	1644  1645		985	1044 1050	1625 1626		2040 2041	1711  1713
	1646  1647			1056 1062	1627  1628		2042 2043	1714  1715
	1648  1649			1230 1685	1629  1630		2044 2061	1716  1717
	1650  1651			1690 1708	1631  1632		2062 2063	1719  1720
	1652  1653			1711 1713	1638  1639		2064 2065	1721  1746
	1654  1655			1717 1719	1640 1641		2066 2067	1747 1748
	1656  1657			1746 1747	1642  1643		2068 2082	1749  1780
	1658   1659			1748 1749	1652  1653		2083 2084	1781 1782
	1660 1661			1780 1781	1654  1656		2085 2086	1783  1784
	1662 1663			1782 1783	1657  1658		2087 2098	1815 1816
	1664  1665			1784 1815	1659  1671		2099 2100	1817 1818
	$1666 \ 1667$			1816 1817	$1672 \ 1673$		$2101\ 2109\ /$	$1850\ 1851$
							60	

Table 30:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
972		1852 / 61	954	1746 1780 /	1670 1694	923	1062 1218	1816 1817
971	/ 0	1062 / 1		4	1722 / 5		1224 1236	1818 1850
970	/ 0	962 / 1	953	962 1038	1649 1650		1242 1323 /	1851 1852
969	/ 0	1050 / 1		1044 1062	1667 1668		11	1885 1886 /
968	/ 0	1236 / 1		1218 1224	1669 1690			12
967	/ 0	1230 / 1		1230 1236	1691 1692	922	/ 0	1 / 1
966	/ 0	1038 / 1		1323 1885	1693 1719	921	/ 0	1323 / 1
965	/ 0	1242 / 1		1886 / 11	1720 1721 /	920	/ 0	1218 / 1
964	/ 0	1044 / 1		,	12	919	/ 0	1224 / 1
963	962 1050	1218 1224	952	/ 0	1218 / 1	918	/ 0	1230 / 1
	1056 1062	1323 1840	951	/ 0	1038 / 1	917	/ 0	1050 / 1
	1635  1636	1841 1874	950	/ 0	1323 / 1	916	/ 0	1044 / 1
	1637 1647	1875 1876	949	/ 0	1236 / 1	915	/ 0	1242 / 1
	1648 1649	1908 1909	948	/ 0	1062 / 1	914	/ 0	1038 / 1
	1650  1651	1910 1911	947	/ 0	1044 / 1	913	/ 0	1236 / 1
	1664  1665	1942 1943	946	/ 0	1224 / 1	912	/ 0	1056 / 1
	1666 1667	1944 1945	945	/ 0	1230 / 1	911	/ 0	1062 / 1
	1668 1669	1946  1977	944	/ 0	962 / 1	910	/ 0	962 / 1
	1670 1686	1978 1979	943	1230 / 1	1647 1648 /	909	/ 0	1195 / 1
	1687 1688	1980 2011			2	908	/ 0	1225 / 1
	1689  1690	2012 2013	942	/ 0	1230 / 1	907	/ 0	1194 / 1
	1691  1692	2014 2015	941	$1647\ 1648\ /$	1713 1746	906	1062 / 1	$1223 \ 1253 \ /$
	1693  1694	2036 2037		2	1780 / 3			2
	1713 1714	2038 2039	940	1713  1746	1647 1648	905	/ 0	1062 / 1
	1715  1716	2040 2041		1780 / 3	$1885\ 1886\ /$	904	/ 0	1219 / 1
	1717  1719	2042 2043			4	903	/ 0	1248 / 1
	1720  1721	2044 2061	939	$1647 \ 1648 \ /$	1717  1749	902	/ 0	1189 / 1
	1722  1746	2062  2063		2	1784 / 3	901	1062 / 1	$1188 \ 1247 \ /$
	1747 1748	2064 2065	938	/ 0	1056 / 1			2
	1749 1780	2066 2067	937	1056 / 1	1647 1648 /	900	/ 0	1062 / 1
	1781 1782	2068 2082		1.0	2	899	/ 0	1073 / 1
	1783 1784	2083 2084	936	/ 0	1056 / 1	898	/ 0	1074 / 1
	1815 1816	2085 2086	935	1885 1886 /	1713 1746	897	/ 0	1045 / 1
	1817 1818	2087 2098	0.0.1	2	1780 / 3	896	1062 / 1	1018 1043 /
	1850 1851	2099 2100	934	962 1038	1664 1665	005		2
	1852 / 53	2101 2109 /		1044 1056	1666 1686	895	/ 0	1062 / 1
000		54 1000 / 1		1062 1218	1687 1688	894	/ 0	1068 / 1
902	/ U	$\frac{1002 / 1}{1712 - 1746}$		1224 $12501926$ $1949$	1009 1714	090 000	/ 0	$\frac{1039 / 1}{1007 / 1}$
901	1000 1000 /	1713 1740 1780 / 3		1230 $12421323 / 11$	1713 1710 1747 1748 /	092 801	1226 / 1	$\frac{1097}{1013}$ $\frac{1}{1067}$ /
060	2 1713 1746	$\frac{1700 / 3}{1604 - 1722}$		1323 / 11	1747 1740 /	091	1230 / 1	1013 1007 /
900	1713 $17401780 / 3$	1094 1722	033	/ 0	$\frac{12}{1218 / 1}$	800	/ 0	<u> </u>
	1700 / 5	1005 1000 /	900	/ 0	$\frac{1210 / 1}{1242 / 1}$	880	/ 0	$\frac{1230 / 1}{1042 / 1}$
959	1885 1886 /	$\frac{-4}{1635}$	932 031	/ 0	$\frac{1242 / 1}{1038 / 1}$	888	1042 / 1	$\frac{1042}{963}$
505	2	1637 / 3	930	/ 0	$\frac{1000 / 1}{1323 / 1}$	887	/ 0	965 / 1
958	- / 0	$\frac{1001}{962}$ / 1	929	/ 0	$\frac{1020}{1062}$ / 1	886	1236 / 1	966 967 / 2
957	962 / 1	1885 1886 /	928	/ 0	1044 / 1	885	/ 0	1236 / 1
		2	927	/ 0	1224 / 1	884	/ 0	997 / 1
956	/ 0	962 / 1	926	/ 0	962 / 1	883	965 966 967	968 969 970
955	962 1694	1050 1713	925	/ 0	1236 / 1		1067 1068	978 979 980
	1722 / 3	$1746 \ 1780 \ /$	924	/ 0	1056 / 1		1097 1188	$981 \ 993 \ 994$
	,	4	923	1 962 1038	1781 1782		1189 1194	$995\ 996\ 1014$
954	1050 1713	962 1651		1044  1056	$1783 \ 1815$		$1195\ 1219$	$1015 \ 1016$

Table 31:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

883         883           883         882           881         880           879         878           877         876           875         874           873         872           871         872	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	851 850 849 848 847 846 845	566 1075 / 2 1069 1070 1071 / 3 / 0 / 0 566 / 1 1069 1070 1071 / 3	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
882 881 880 879 878 877 876 875 874 873 873 872 871	$\begin{array}{c ccccc} 1236 & 1247 \\ 1248 & 1253 \ / \\ 17 \\ \hline \\ 10 \\ 1236 & 1323 \ / \\ 2 \\ \hline \\ / 0 \\ \hline \\ 1230 & 1323 \ / \\ 2 \\ \hline \\ / 0 \\ \hline \\ 1098 \ / 1 \\ \end{array}$	$\begin{array}{c ccccc} 1041 & 1042 & / \\ 18 \\ \hline 1236 & / 1 \\ 965 & 966 & 967 \\ / & 3 \\ \hline 1323 & / 1 \\ 1236 & / 1 \\ \hline 1067 & 1068 \\ 1097 & / & 3 \\ \hline 1230 & / & 1 \\ \hline 1323 & / & 1 \\ \hline 1069 & / & 1 \\ \hline 1098 & / & 1 \\ \hline 1072 & / & 1 \\ \hline \end{array}$	<ul> <li>850</li> <li>849</li> <li>848</li> <li>847</li> <li>846</li> <li>845</li> </ul>	1069 1070 1071 / 3 / 0 / 0 566 / 1 1069 1070 1071 / 3	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
882 881 880 879 878 877 876 875 874 873 872 872 871	1248 1253 / 17 / 0 1236 1323 / 2 / 0 / 0 1230 1323 / 2 / 0 / 0 / 0 / 0 / 0 / 0 / 0 / 0 / 0 / 0	18 1236 / 1 965 966 967 / 3 1323 / 1 1236 / 1 1067 1068 1097 / 3 1230 / 1 1323 / 1 1069 / 1 1098 / 1 1098 / 1	850 849 848 847 846 845	1069       1070         1071 / 3         / 0         / 0         566 / 1         1069       1070         1071 / 3	$\begin{array}{c cccccc} 1075 & 1102 \\ 1103 & 1104 \ / \\ 4 \\ \hline 566 \ / \ 1 \\ \hline 1069 \ / \ 1 \\ \hline 1070 & 1071 \ / \\ 2 \\ \hline 566 & 1076 \\ 1077 & 1078 \ / \end{array}$
882 881 880 879 878 877 876 875 874 875 874 873 872 871	17 / 0 1236 1323 / 2 / 0 / 0 1230 1323 / 2 / 0 / 0 / 0 / 0 / 0 / 0 / 0 / 0	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	849 848 847 846 845	1071 / 3 / 0 / 0 566 / 1 1069 1070 1071 / 3	$\begin{array}{c ccccc} 1103 & 1104 & / \\ 4 & & \\ \hline 566 & / & 1 \\ \hline 1069 & / & 1 \\ \hline 1070 & 1071 & / \\ 2 & & \\ \hline 566 & 1076 \\ 1077 & 1078 & / \end{array}$
882 881 880 879 878 877 876 876 875 874 873 872 871	/ 0 1236 1323 / 2 / 0 1230 1323 / 2 / 0 / 0 / 0 / 0 / 0 / 0 / 0 / 0	$\begin{array}{c} 1236 \ / \ 1 \\ \hline 965 \ 966 \ 967 \\ / \ 3 \\ \hline 1323 \ / \ 1 \\ \hline 1236 \ / \ 1 \\ \hline 1067 \ 1068 \\ \hline 1097 \ / \ 3 \\ \hline 1230 \ / \ 1 \\ \hline 1323 \ / \ 1 \\ \hline 1069 \ / \ 1 \\ \hline 1098 \ / \ 1 \\ \hline 1098 \ / \ 1 \\ \hline 1072 \ / \ 1 \\ \hline \end{array}$	849 848 847 846 845	/ 0 / 0 566 / 1 1069 1070 1071 / 3	$\begin{array}{c} 4\\ \hline 566 \ / \ 1\\ \hline 1069 \ / \ 1\\ \hline 1070 \ 1071 \ / \\ 2\\ \hline 566 \ 1076\\ \hline 1077 \ 1078 \ / \end{array}$
881 880 879 878 877 876 875 875 874 873 872 871	1236     1323     /       2     /     0       1230     1323     /       2     /     0       /     0     /       /     0     /       /     0     /       /     0     /       1098     1	965 966 967 / 3 1323 / 1 1236 / 1 1067 1068 1097 / 3 1230 / 1 1323 / 1 1069 / 1 1098 / 1 1072 / 1	849 848 847 846 845	/ 0 / 0 566 / 1 1069 1070 1071 / 3	$\begin{array}{c c} 566 \ / \ 1 \\ \hline 1069 \ / \ 1 \\ \hline 1070 \ 1071 \ / \\ 2 \\ \hline 566 \ 1076 \\ 1077 \ 1078 \ / \end{array}$
880 879 878 877 876 875 874 873 873 872 871	2 / 0 / 2 1230 1323 / 2 / 0 / 0 / 0 / 0 / 0 / 0 / 0 / 0 1098 / 1	$\begin{array}{c} / \ 3 \\ \hline 1323 \ / \ 1 \\ \hline 1236 \ / \ 1 \\ \hline 1067 \ 1068 \\ \hline 1097 \ / \ 3 \\ \hline 1230 \ / \ 1 \\ \hline 1323 \ / \ 1 \\ \hline 1069 \ / \ 1 \\ \hline 1098 \ / \ 1 \\ \hline 1072 \ / \ 1 \\ \end{array}$	848 847 846 845	/ 0 566 / 1 1069 1070 1071 / 3	$\begin{array}{c c} 1069 \ / \ 1 \\ \hline 1070 \ 1071 \ / \\ \hline 2 \\ \hline 566 \ 1076 \\ \hline 1077 \ 1078 \ / \\ \end{array}$
880 879 878 877 876 875 874 873 873 872 871	/ 0 / 0 1230 1323 / 2 / 0 / 0 / 0 / 0 / 0 / 0 1098 / 1	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	847 846 845	566 / 1 1069 1070 1071 / 3	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
379       378       377       376       375       374       373       372       371	/ 0 1230 1323 / 2 / 0 / 0 / 0 / 0 / 0 / 0 / 0 1098 / 1	$\begin{array}{c c} 1236 \ / \ 1 \\ \hline 1067 \ 1068 \\ \hline 1097 \ / \ 3 \\ \hline 1230 \ / \ 1 \\ \hline 1323 \ / \ 1 \\ \hline 1069 \ / \ 1 \\ \hline 1098 \ / \ 1 \\ \hline 1072 \ / \ 1 \end{array}$	846 845	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} 2 \\ \hline 566 & 1076 \\ 1077 & 1078 \end{array}$
378       377       376       375       374       373       372       371	1230 1323 / 2 / 0 / 0 / 0 / 0 / 0 / 0 / 0 1098 / 1	1067     1068       1097 / 3       1230 / 1       1323 / 1       1069 / 1       1098 / 1       1072 / 1	846 845	$\begin{array}{ccc} 1069 & 1070 \\ 1071 \ / \ 3 \end{array}$	566 1076 1077 1078 /
377 376 375 374 373 372 371	2 / 0 / 0 / 0 / 0 / 0 / 0 1098 / 1	1097 / 3       1230 / 1       1323 / 1       1069 / 1       1098 / 1	845	1071 / 3	1077 1078 /
377       376       375       374       373       372       371	/ 0 / 0 / 0 / 0 / 0 / 0 1098 / 1	1230 / 1       1323 / 1       1069 / 1       1098 / 1       1072 / 1	845	,	
376 375 374 373 372 371	/ 0 / 0 / 0 / 0 1098 / 1	1323 / 1       1069 / 1       1098 / 1       1072 / 1	845	1	4
575 574 573 572 571	/ 0 / 0 / 0 1098 / 1	1069 / 1 1098 / 1 1072 / 1		1076 1077	1069 1070
74 73 72 71	/ 0 / 0 1098 / 1	1098 / 1		1078 / 3	$1071 \ 1098 \ /$
73 72 71	/ 0 1098 / 1	1072 / 1		,	4
72 71	1098 / 1	1014 / 1	844	1069 1070	973 974 975
71	,	1070 1071 /		1071 1098 /	$976 \ 977 \ / \ 5$
71		2		4	
<b>7</b> 0	/ 0	1102 / 1	843	/ 0	510 / 1
70	/ 0	1098 / 1	842	510 973 974	1069 1070
69	/ 0	1019 / 1		975 $976$ $977$	1071 1076
368	1069 1070	566 1046		/ 6	1077 1078
	1071 1098 /	1075 1103		1	1098 / 7
	4	1104 / 5	841	566 1051	1099 1100
67	566 1075	971 982 998		1075 1076	1101 1128
	1102 1103	1069 1070		1077 1078	1129 1130
	1104 / 5	1071 / 6		1079 1080	1131 1158
66	971 982 998	1075 1102		1103 1104	1159 1160
	/ 3	1103 1104 /		1236 / 11	1188 1189 /
		4		,	12
65	1069 1070	$566 \ 971 \ 982$	840	/ 0	1236 / 1
	1071 / 3	998 / 4	839	1236 1323 /	1051 1079
64	/ 0	972 / 1		2	1080 / 3
63	566 1067	983 984 999	838	1051 1079	1219 1247
	1068 1072	1000 1001		1080 / 3	$1248 \ 1323 \ /$
	1075  1097	1020 1021			4
	1102 1103	1022 1023	837	/ 0	1236 / 1
	1104 1236	1047  1048	836	1236 1323 /	1051 1079
	1323 / 11	1049 / 12		2	1080 / 3
62	/ 0	1323 / 1	835	/ 0	1323 / 1
61	/ 0	1236 / 1	834	/ 0	1236 / 1
60	1236 1323 /	1051 1079	833	/ 0	566 / 1
	2	1080 / 3	832	566 1236 / 2	1075 1103
59	/ 0	1323 / 1			1104 / 3
58	/ 0	1236 / 1	831	/ 0	1236 / 1
	1236 1323 /	1067 1068	830	/ 0	566 / 1
357		1097 / 3	829	/ 0	1217 / 1
57	2	1236 / 1	828	566 1217 / 2	1076 1077
57	2 / 0	/ -			
57 56 55	2 / 0 / 0	1323 / 1			1078 / 3
57 56 55 54	2 / 0 / 0 / 0	$     \begin{array}{r}       1323 / 1 \\       1037 / 1     \end{array}   $	827	/ 0	1078 / 3 566 / 1
357 356 355 354 353	2 / 0 / 0 / 0 1037 / 1	1323 / 1       1037 / 1       1072 1102 /	827 826	/ 0	1078 / 3 566 / 1 1108 / 1
357 356 355 354 53	2 / 0 / 0 / 0 1037 / 1	1323 / 1       1037 / 1       1072 1102 /       2	827 826 825	/ 0 / 0 1076 1077	1078 / 3 566 / 1 1108 / 1 1037 1066

On / T Off / T 1127 / 5 510 973 974 975 976 977 1127 / 5 / 6  $510 \ 962 \ 963$  $8 \ 9 \ 10 \ 11 \ 12$  $13 \ \ 30 \ \ 31 \ \ 32$  965 966 $33\ \ 34\ \ 35\ \ 36$ 967 968  $970 \ 971 \ 972$  $37 \ 38 \ 39 \ 40$ 973 974 975  $41 \ 42 \ 43 \ 44$  46 47 48976 977  $49 \ 50 \ 51 \ 52$ 979 980 982 983 984  $53\ 54\ 55\ 107$  $993 \ 994 \ 995$ 108 109 110  $996 \ 997 \ 998$ 111 112 113 114 115 116 117 118 119  $120 \ 121 \ 122$  $123 \ 124 \ 125$  $126 \ 127 \ 128$ 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143  $144 \ 145 \ 146$  $147 \ 148 \ 149$ 150 151 152  $153 \ 154 \ 155$ 156 157 158 159 160 161  $162 \ 163 \ 164$ 165 166 167 288 289 291 292 293 295 296 $297 \ 298 \ 299$ 300 301 302  $303 \ 304 \ 305$ 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320  $321 \ 322 \ 323$  $324 \ 325 \ 326$  $327 \ 328 \ 329$ 

 $1678 \ 1679$ 

 $330 \ 331 \ 332$ 

 $333 \ 334 \ 335$ 

Table 32:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
823	1680 1681	342 343 344	823	2588 2589	696 697 698	823	3784 3785	1152 1153
	1682 1683	$345 \ 346 \ 347$		2590 2591	699 700 701		3786 3787	1154 1155
	1684 1685	$348 \ 349 \ 350$		2592 2593	702 703 704		3788 3789	1156 1157
	1686 1687	$351 \ 352 \ 353$		2594 2595	705 $706$ $707$		3790 3791	1161 1162
	1688 1689	$354 \ 355 \ 356$		2596 2597	708 $709$ $710$		3792 3793	1163 1164
	1690 1691	$357 \ 358 \ 359$		2598 2599	711 $712$ $713$		3794 3795	1165 1166
	1692 1693	$360 \ 361 \ 362$		2600 2601	714 $715$ $716$		3796 3797	1167 1168
	1694  1695	$363 \ 364 \ 365$		2602 2603	717 $718$ $719$		3798 3799	1169 1170
	1696   1697	$366 \ 367 \ 368$		2604 2605	720 $721$ $722$		3800 3801	1171 1172
	1698  1699	$369 \ 370 \ 371$		2606 2607	723 $724$ $725$		3802 3803	1173  1174
	1701 1702	372 $373$ $374$		2608 2609	726 $727$ $728$		3804 3805	1175  1176
	1703 1704	$375 \ 376 \ 377$		2610 2611	729 $730$ $731$		3806 3807	1177 1178
	1705   1707	$378 \ 379 \ 380$		2613 2614	732 $733$ $734$		3808 3809	1179 1180
	1708 1709	$381 \ 382 \ 383$		2615 2616	735 $736$ $737$		3810 3811	1181 1182
	1710 1711	$384 \ 385 \ 386$		2617 2619	738 $739$ $740$		3812 3813	1183 1184
	1713 1714	$387 \ 388 \ 389$		2620 2621	741 $742$ $743$		3815 3816	1185  1186
	1715  1716	571 $586$ $587$		2622 2623	744 $745$ $746$		3817 3818	1187 1190
	1717  1719	588 $589$ $590$		2625 2626	747 $748$ $749$		3819 3821	1191  1192
	1720 1721	591 $592$ $593$		2627 2628	750 $751$ $752$		3822 3823	1193  1194
	1722  1723	594 $595$ $596$		2629 2631	753 $754$ $755$		3824 3825	1195  1196
	1724  1725	597 $598$ $599$		2632 2633	756 $757$ $758$		3827 3828	1197  1198
	1726  1727	600 $601$ $602$		2634 2635	759 $760$ $761$		3829 3830	1199  1200
	1728  1729	603 $604$ $605$		2636 2637	1076  1077		3831 3833	1201 1202
	1753  1754	606 $607$ $608$		2638 2639	1078 1081		3834 3835	1203  1204
	1755  1756	609 $610$ $611$		2640 2641	1082 1083		3836 3837	1205  1206
	1760  1761	612 $613$ $614$		2665  2666	1084  1085		3838 3839	1207  1208
	1762  1763	615 $616$ $617$		2667 2668	1086  1087		3840 3841	1209  1210
	2536 $2537$	618 $619$ $620$		2669 2671	1088 1089		3842 3843	1211 1212
	2538  2539	$621 \ \ 622 \ \ 623$		2672  2673	1090  1091		3867 3868	1213  1214
	2540 2541	624 625 626		2674 2675	1092 1093		3869 3870	1215 1216
	2542 2543	627 628 629		3738 3739	1094 1095		3871 3873	1217 1220
	2544 2545	630 631 632		3740 3741	1096 1105		3874 3875	1221 1222
	2546 2547	633 634 635		3742 3743	1106 1107		3876 3877	1223 1225
	2548 2549	636 637 638		3744 3745	1108 1109		5270 5271	1226 1227
	2550 2551	639 640 641		3740 3747	1110 1111		5272 5273	1228 1229
	2002 2003			3748 3749	1112 1113		$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1231 1232
	2004 2000 0556 0557	040 040 047		3750 3751	1114 1115 1116 1117		5210 5211 5978 5970	1233 1234
	2000 2007	$040 \ 049 \ 050$ $651 \ 652 \ 652$		3732 3733 2754 2755	1110 1117		5210 5219	1200 1207
	2500 2509 2560 2561	654 $655$ $656$		3756 3757	1110 1119 1120 1121		5280 5281	1236 1239 1240 1241
	2560 2561 2562 2563	657 $658$ $659$		3758 3759	1120 $11211199$ $1193$		5284 5285	1240  1241  1241  1241
	2502 2505 2564 2565	660 661 662		3760 3761	1122 1125 1194 1195		5286 5287	1245 1244 1244 1245 1246
	2564 2565 2566 2567	663 664 665		3762 3763	1124 1120 1126 1127		5288 5289	1240 1240 1249 1250
	2568 2569	666 667 668		3764 3765	1120  1121  1133		5290 5291	1219  1250  1250  1252
	2570 2571	669 670 671		3766 3767	1134 1135		5292 5293	1251  1252  1254
	2572 $2573$	672 $673$ $674$		3768 3769	1136 1137		5294 5295	1255 $1256$
	2574 $2575$	675 676 677		3770 3771	1138 1139		5296 5297	1257 $1258$
	2576 $2577$	678 679 680		3772 3773	1140 1141		5298 5299	1259 1260
	2578 2579	681 682 683		3774 3775	1142 1143		5300 5301	1261 1262
	2580 2581	684 $685$ $686$		3776 3777	1144 1145		5302 5303	1263 1264
	2582 2583	687 $688$ $689$		3778 3779	1146 1147		5304 5305	1265 1266
	2584 2585	690 $691$ $692$		3780 3781	1148 1149		5306 5307	1267 1268
	$2586 \ 2587$	$693 \ 694 \ 695$		3782 $3783$	$1150\ 1151$		5308  5309	$1269\ 1270$

Table 33:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
823	5310 5311	1271 1272	823	7207 7208		817	53 54 55 107	1637 1638
	5312 5313	1273 1274		7209 7210			108 109 110	1639 1640
	5314 $5315$	1275  1276		7211 7212			111 112 113	1641 1642
	5316 $5317$	1277 1278		7213 7214			114 115 116	1643 1644
	5318 $5319$	1279 1280		7215 7216			117 118 119	1645 1646
	5320 5321	1281 1282		7217 7218			120 121 122	1647 1648
	5322 5323	1283 1284		7219 7220			$123 \ 124 \ 125$	1649 1650
	5324 $5325$	1285 1286		7221 7222			$126 \ 127 \ 128$	1651  1652
	5326 $5327$	1287 1288		7223 7224			$129 \ 130 \ 131$	1653  1654
	5328 $5329$	1289 1290		7225 7226			$132 \ 133 \ 134$	1655  1656
	5330 $5331$	1291  1292		7227 7229			$135 \ 136 \ 137$	1657  1658
	5332 $5333$	1293  1294		7230 7231			138 139 140	1659  1660
	5334 $5335$	1295  1296		7232 7234			$141 \ 142 \ 143$	1661  1662
	5336 $5337$	1297 1298		7235 7236			$144 \ 145 \ 146$	1663  1664
	5338 $5339$	1299 1300		7237 7238			$147 \ 148 \ 149$	1665  1666
	5340 $5341$	1301 1302		7239 7240			$150 \ 151 \ 152$	1667  1668
	5342 $5343$	1303 1304		7241 7242			$153 \ 154 \ 155$	1669  1670
	5344 $5345$	1305  1306		7243 7244			$156 \ 157 \ 158$	1671  1672
	5347 $5348$	1307 1308		7245 7246			$159 \ 160 \ 161$	1673  1674
	5349 $5350$	1309 1310		7247 7249			$162 \ 163 \ 164$	1675  1676
	5351 $5353$	1311  1312		7250 $7251$			$165 \ 166 \ 167$	1677  1678
	5354 $5355$	1313  1314		7252 $7256$			279 280 281	1679  1680
	5356 5357	1315 1316		7257 7258			282 283 284	1681 1682
	5359 5360	1317 1318		7262 7263			285 286 287	1683 1684
	5361 5362	1319 1320		7264 7265			288 289 290	1685 1686
	5363 5365	1321 1322 /		7267 7268			291 292 293	1687 1688
	5366 5367	601		7269 7270			294 295 296	1689 1690
	5368 5369			7271 7273			297 298 299	1691 1692
	5370 5371			(2(4) (2(5)			300 301 302	1693 1694
	0312 0313 E974 E97E			7201 7202			$303 \ 304 \ 305$	1695 1696
	5200 5400			7301 7302			200 207 208	1600 1701
	5401 5400			7303 7304			210 212 214	1099 1701
	5401 5402			7310 7311 /			$312 \ 313 \ 314$ $315 \ 316 \ 317$	1702 1703 1704 1705
	5405 $54055406$ $5407$			600			318 310 317	1704 1705
	5408 5409		822		1753 / 1	-	301 300 3020	1707 1708
	7173 7174		821	1753 / 1	$\frac{1763}{1763}$ 7301 /	-	321 322 323	1703 1710 1713
	7175 7176		021	1100 / 1	2		$327 \ 328 \ 329$	1714 1715
	7177 7178		820	1763 7172 /	7238 7265	-	330 331 332	1716 1717
	7179 7180		020	2	7267 / 3		333 334 335	1719 1720
	7181 7182		819	7238 $7265$	561  1039	-	336 337 338	1721 1722
	7183 7184			7267 7301 /	1067 1763		339 340 341	1723 1724
	7185 7186			4	7172 / 5		342 343 344	1725 1726
	7187 7188		818	561 1039	7238 7265	-	345 346 347	1727 1728
	7189 7190			1067 / 3	7267 7301 /		348 349 350	1729 1753
	7191 7192			,	4		351 352 353	1754 1755
	7193 7194		817	8 9 10 11 12	962 1624		354 $355$ $356$	1756 1760
	7195 7196			$13 \ 30 \ 31 \ 32$	1625 1626		$357 \ 358 \ 359$	1761 1762
	7197 7198			$33 \ 34 \ 35 \ 36$	1627 1628		360 361 362	2536 2537
	7199 7200			$37 \ 38 \ 39 \ 40$	1629 1630		$363 \ 364 \ 365$	2538 2539
	7201 7202			$41 \ 42 \ 43 \ 44$	1631  1632		366 367 368	2540 $2541$
	7203 7204			45 $46$ $47$ $48$	1633  1634		$369 \ 370 \ 371$	2542 2543
	7205 7206			$49 \ 50 \ 51 \ 52$	$1635 \ 1636$		372 373 374	2544 $2545$

Table 34:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off /	' T	n	On /	Υ Τ	Off /	Т
817	375 $376$ $377$	2546 2547	817	729 730 731	3742	3743	817	1177	1178	3876	3877
	378 379 380	2548 2549		732 733 734	3744	3745		1179	1180	5270	5271
	381 382 383	2550 $2551$		735 736 737	3746	3747		1181	1182	5272	5273
	384 385 386	2552 2553		738 739 740	3748	3749		1183	1184	5274	5275
	387 388 389	2554 2555		741 742 743	3750	3751		1185	1186	5276	5277
	566 571 586	2556 2557		744 745 746	3752	3753		1187	1188	5278	5279
	587 588 589	2558 2559		747 748 749	3754	3755		1189	1190	5280	5281
	590 591 592	2560 2561		750 751 752	3756	3757		1191	1192	5282	5283
	593 594 595	2562 2563		753 754 755	3758	3759		1193	1208	5284	5285
	596 597 598	2564 2565		756 757 758	3760	3761		1209	1210	5286	5287
	599 600 601	2566 2567		759 760 761	3762	3763		1200	1210	5288	5289
	602 603 604	2568 2569		1043 1045	3764	3765		1211	1212	5200	5200
	605 606 607	2500 2500 2571		1040 1051	3766	3767		1210	1211	5202	5203
	608 609 610	2570 2571		1049 1061	3768	3769		1210	1210	5294	5295
	611 612 613	2572 2575 2574 2575		1070 1071	3770	3771		1211	1210	5296	5207
	614 615 616	2574 2575 2576 2577		1070  1071  1073	3779	3773		1220	1221	5298	5200
	617 618 610	2578 2570		1072 1075	3774	3775		1222	1200	5300	5301
	620 621 622	2580 2581		$1074 1075 \\ 1076 1077$	3776	3777		1203	1240	5302	5303
	623 624 625	2580 2581 2582 2583		1078 1081	3778	3770		1241	1240 1945	5304	5305
	626 627 628	2584 2585		1070 1001	3780	3781		1244	1240 1947	5306	5307
	620 620 621	2586 2587		1082 1083 1084 1087	3780	3783		1240	1247	5308	5300
	629 $030$ $031632$ $633$ $634$	2588 2580		1084 1087	3784	3785		1240	1249 1951	5310	5211
	635 $636$ $637$	2500 2501		1000 1001	3786	3787		1250	1201	5210	5212
	628 620 640	2590 2591		1090  1091  1002	9700	2780		1202	1204	5914	5915
	641 642 642	2592 2595		1092 1095	2700	3709 2701		1205	1200	5216	5917
	041 042 043	2094 2090		1094 1095	3790	3791		1207	1200	0010 5010	5317
	$644 \ 043 \ 040$ $647 \ 648 \ 640$	2590 2597		1090 1097	3792	3793 2705		1209	1270 1979	5220	5201
	047 048 049	2096 2099		1098 1099	3794	3793		1271	1272	5520	5221
	050 051 052 652 654 655	2000 2001		1100 $11011102$ $1102$	3790	3797		1275	1274	5322	0020 5205
	035 034 033	2002 2005		1102 1105	3790	3799		1270	1270	0024 5296	0020 5207
	050 057 058	2004 2005		1104 $11051106$ $1107$	3800	2802		1200	1207	0020 5000	5327
	662 662 664	2000 2007		1100 1107 1111 1119	2004	2005		1200	1209	5220	5929
	002 003 004	2008 2009		1111 1112 1112 1117	3804 2806	3803 2807		1290	1291	0000 5000	0001 5000
	000 000 007	2010 2011			3800	3807		1292	1293	0332 5004	0000 5005
	000 009 070 671 672 672	2015 2014		1110 1119	0000 2010	0009 0011		1294	1290	0004 5006	2332
	071 072 075	2010 2010		1120 $11211120$ $1121$	0010 2010	0011 2012		1303	1304	0000 5000	0007 500
	074 075 070	2017 2019		1122 1125	0012 0015	3013 2016		1305	1300	5550	5239
	011 018 019	2020 2021		1124 1125	3815	3810		1307	1308	5340	5341
	000 001 002 602 604 605	2022 2023		1120 1127	0017 2010	2010		1309	1310 1917 /	5342	0040 5945
	000 004 000	2020 2020		1120 1129	2019	2021		1310 E 49	1317 /	5344	5545
	680 600 601	2027 2028		1130 $11311120$ $1122$	2022	3023 2025		045		5347	5540
	089 090 091	2029 2031		1102 1100	0024 2007	3020				5349	5550
	692 693 694	2632 2633		1134 1135	3827	3828				5351	5353
	695 697 698 600 700 701	2634 2635		1136 1141	3829	3830				5354	5355
	099 700 701	2030 2037		1142 1147	3831	3833				5350	5357
		2038 2039		1148 1149	3834	3835				0309 F001	030U
		2040 2041		1150 1151	3836	3837				5361	5362
	108 (09 710	2005 2006		1152 1153	3838	3839				5363	5365
		2007 2008		1154 1155	3840	3841				5366	5367
	(14 (15 (10	2009 20/1		1150 1157	3842	3843				0308 5270	0309 5971
	(11 (18 (19	2072 2073		1108 1159	3867	3868				037U	03/1 5070
	720 721 722	2074 2075		1100 1161	3869	3870				5372	5373
	123 124 125	3738 3739		1162 1163	3871	3873				5374	5375
	726 727 728	3740 3741		1164 1165	3874	3875				5399 5	0400

Table 35:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
817		5401 5402	816	962 1624	4 8 9 10 11 12	816	1749 1753	354 $355$ $356$
		5403 5405		1625 1620	$5  13 \ 30 \ 31 \ 32$		1754 1755	$357 \ 358 \ 359$
		5406 5407		1627 1628	3 33 34 35 36		2536 2537	$360 \ 361 \ 362$
		5408 5409		1629 1630	) 37 38 39 40		2538 2539	$363 \ 364 \ 365$
		7173 7174		1631 1633	2  41  42  43  44		2540 2541	$366 \ 367 \ 368$
		7175 7176		1633 1634	$45 \ 45 \ 47 \ 48$		2542 2543	$369 \ 370 \ 371$
		7177 7178		1635 1630	$6  49 \ 50 \ 51 \ 52$		2544 2545	372 $373$ $374$
		7179 7180		1637 1638	$8  53 \ 54 \ 55 \ 107$		2546 2547	375 $376$ $377$
		7181 7182		1639 1640	) 108 109 110		2548 2549	$378 \ 379 \ 380$
		7183 7184		1641 1642	2  111  112  113		2550 2551	$381 \ 382 \ 383$
		7185 7186		1643 1644	114 115 116		2552 2553	384 $385$ $386$
		7187 7188		1645 1640	5  117  118  119		2554 2555	$387 \ 388 \ 389$
		7189 7190		1647 1648	8 120 121 122		2556 2557	561 $566$ $581$
		7191 7192		1649 1650	123 124 125		2558 2559	586 $587$ $588$
		7193 7194		1651 1655	2 126 127 128		2560 2561	589 $590$ $591$
		7195 7196		1653  1654	$129 \ 130 \ 131$		2562 2563	592 $593$ $594$
		7197 7198		1655 1650	5  132  133  134		2564 2565	595 596 597
		7199 7200		1657 1658	8  135  136  137		2566 2567	598 599 600
		7201 7202		1659 1660	) 138 139 140		2568 2569	601 602 603
		7203 7204		1661 1663	2 141 142 143		2570 2571	604 605 606
		7205 7206		1663 1664	1 144 145 146		2572 2573	607 608 609
		7207 7208		1665 1660	147 148 149		2574 2575	$610 \ 611 \ 612$
		7209 7210			5 150 151 152		2576 2577	$613 \ 614 \ 615$
		(211 (212 7912 7914		1671 167	103 104 100		2578 2579	$010 \ 017 \ 018$ $610 \ 620 \ 621$
		7213 $72147215$ $7216$		1071  1072	1 150 160 161		2580 2581	619 020 021 622 623 624
		7213 7210		1075 1074 1675 1676	109 100 101 162 163 164		2584 2585	$622 \ 023 \ 024$ $625 \ 626 \ 627$
		7210 7220		$1675 1070 \\ 1677 1679$	102 105 104 8 165 166 167		2586 2587	628 629 630
		7221 7222		1679 1680	$279\ 280\ 281$		2588 2589	631 $632$ $633$
		7223 7224		1681 1685	2 282 283 284		2590 2591	634 $635$ $636$
		7225 7226		1683 1684	4 285 286 287		2592 2593	637 $638$ $639$
		7227 7229		1685 1680	5 288 289 290		2594 2595	640 641 642
		7230 7231		1687 1688	8 291 292 293		2596 2597	643 $644$ $645$
		7232 7234		1689 1690	) 294 295 296		2598 2599	646 $647$ $648$
		7235 7236		1691 1692	2  297  298  299		2600 2601	649 $650$ $651$
		7237 7239		1693 1694	4  300  301  302		2602 2603	652 $653$ $654$
		7240 7241		1695 1690	$303 \ 304 \ 305$		2604 2605	655 $656$ $657$
		7242 7243		1697 1698	3 306 307 308		2606 2607	658 $659$ $660$
		7244 7245		1699 170	l 309 310 311		2608 2609	$661 \ 662 \ 663$
		7246 7247		1702 1703	3 312 313 314		2610 2611	664 $665$ $666$
		7249 7250		1704 170	5 315 316 317		2613 2614	$667 \ 668 \ 669$
		7251 7252		1707 1708	3 318 319 320		2615 2616	670 671 672
		7256 7257		1709 1710	) 321 322 323		2617 2619	673 674 675
		7258 7262			3 324 325 326		2620 2621	676 677 678
		7263 7264		1714 $17131716$ $1713$	327 328 329		2622 2623	679 680 681
		(268 (269 7970 7971		1/10 $1/11710 1710$	$(330\ 331\ 332$		2625 2626	682 $683$ $684$
		(210 (211 7972 7974		1/18 $1/131720$ $172$	1 333 334 333 1 336 337 338		2027 2028	080 080 087
		1410 1214 7975 7976		1720 $1721720$ $172$	L JJU JJ( JJØ 2 220 940 941		2029 2030	000 009 090 601 609 609
		1210 1210 7977 7909		1725 $172$	5 349 340 341 5 349 343 344		2031 2032	604 605 607
		7303 7304		1720 $1720$ $1720$ $1799$	S 345 346 347		2000 2004 2635 2637	698 600 700
		7308 7309		1729 $1740$	5 348 349 350		2638 2639	701 702 703
		7310 7311 /		1747 1748	351 352 353		2640 2641	704 705 706
		544						

Table 36:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

816         2658         2659         707         708         709         816         3837         3839         1149         1150         816         5363         5364	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	
2662 2664 713 714 715 3842 3843 1153 1154 5367 5368	
2665 2666 716 717 718 3860 3861 1155 1156 5369 5371	
2667         2668         719         720         721         3862         3863         1157         1158         5372         5373	
3738 3739 722 723 724 3864 3866 1159 1160 5374 5375	
3740 3741 725 726 727 3867 3868 1161 1162 5392 5393	
3742 3743 728 729 730 3869 3870 1163 1164 5394 5395	
3744 3745 731 732 733 5270 5271 1165 1177 5396 5398	
3746 3747 734 735 736 5272 5273 1178 1179 5399 5400	
3748 3749 737 738 739 5274 5275 1180 1181 5401 5402	
3750 3751 740 741 742 5276 5277 1182 1183 7172 7173	
3752 3753 743 744 745 5278 5279 1184 1185 7174 7175	
3754 3755 746 747 748 5280 5281 1186 1187 7176 7177	
3756 3757 749 750 751 5282 5283 1188 1189 7178 7179	
3758 3759 752 753 754 5284 5285 1190 1191 7180 7181	
3760         3761         755         756         757         5286         5287         1192         1193         7182         7183	
3762         3763         758         759         760         5288         5289         1208         1209         7184         7185	
3764 3765 761 1039 5290 5291 1210 1211 7186 7187	
3766         3767         1043         1045         5292         5293         1212         1213         7188         7189	
3768         3769         1061         1063         5294         5295         1214         1215         7190         7191	
3770         3771         1067         1068         5296         5297         1216         1217         7192         7193	
3772         3773         1069         1070         5298         5299         1219         1220         7194         7195	
3774         3775         1071         1072         5300         5301         1221         1222         7196         7197	
3776         3777         1073         1074         5302         5303         1238         1239         7198         7199	
3778         3779         1075         1076         5304         5305         1240         1241         7200         7201	
3780         3781         1077         1078         5306         5307         1243         1244         7202         7203	
3782         3783         1081         1082         5308         5309         1245         1246         7204         7205	
3784     3785     1083     1084     5310     5311     1247     1248     7206     7207	
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
3794 $3795$ $1095$ $1096$ $5320$ $5321$ $1268$ $1269$ $7216$ $7217$	
3796 $3797$ $1097$ $1098$ $5322$ $5323$ $1270$ $1271$ $7218$ $7219$	
3798 $3799$ $1099$ $1100$ $5324$ $5325$ $1272$ $1273$ $7220$ $7221$	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
3804         3805         1105         1106         5330         5331         1287         1288         7227         7229           2007         1107         1111         5230         5231         1200         1200         7201	
3806 3807 1107 1111 5332 5333 1289 1290 (230 (231 2909 2900 1110 1112 1294 1294 1291 1200 7299 7294	
3808  3809  1112  1113  5334  5335  1291  1292  (232  (234  2391	
3810         3811         1117         1118         5336         5337         1293         1294         7235         7236           2010         2010         1110         1100         5336         5337         1293         1294         7235         7236	
3812 3813 1119 1120 5338 5339 1295 1303 (237 (238 2915 2916 1191 1192 F240 F241 1204 1205 7020 7040	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
3817 3818 1123 1124 3342 3343 1300 1307 7242 7344 241 7242 7344 7345 1300 1307 7342 7344	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	
3835         3836         1147         1148         5361         5362         7265         7267	

Table 37:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
816	7268 7269		814	315 316 317	1704 1705	814	667 668 669	2613 2614
	7270 7271			$318 \ 319 \ 320$	1707 1708		670 671 672	2615 2616
	7273 7274			$321 \ 322 \ 323$	1709 1710		673 674 675	2617 2619
	7275 7276			324 $325$ $326$	1711 1713		676 677 678	2620 2621
	7295 7296			$327 \ 328 \ 329$	1714 1715		679 680 681	2622 2623
	7297 7301			$330 \ 331 \ 332$	1716 1717		682 683 684	2625 2626
	7302 7303			333 $334$ $335$	1718 1719		685 $686$ $687$	2627 2628
	7304 / 545			$336 \ 337 \ 338$	1720 1721		688 689 690	2629 2630
815	581 1061	571 1049		$339 \ 340 \ 341$	1722 1723		691 692 693	2631 2632
	1063  1756	1051  1746		$342 \ 343 \ 344$	1725  1726		694 $695$ $696$	2633 2634
	7233 7259	7172 7243		$345 \ 346 \ 347$	1727 1728		697 $698$ $699$	2635  2637
	7261 $7294$ /	7271 7273		$348 \ 349 \ 350$	1729 1747		700 701 702	2638 2639
	8	7304 / 9		$351 \ 352 \ 353$	1748  1749		703 704 705	2640  2641
814	8 9 10 11 12	962 1624		354 $355$ $356$	1753  1754		706 707 708	2658  2659
	$13 \ 30 \ 31 \ 32$	1625  1626		$357 \ 358 \ 359$	1755   1756		709 710 711	2660 2661
	$33 \ 34 \ 35 \ 36$	1627  1628		$360 \ 361 \ 362$	2536 $2537$		712 713 714	2662  2664
	$37 \ 38 \ 39 \ 40$	1629  1630		$363 \ 364 \ 365$	2538 2539		715 716 717	2665  2666
	$41 \ 42 \ 43 \ 44$	1631  1632		$366 \ 367 \ 368$	2540 $2541$		718 719 720	2667  2668
	45 $46$ $47$ $48$	1633  1634		$369 \ 370 \ 371$	2542  2543		721 722 723	3738 3739
	$49 \ 50 \ 51 \ 52$	1635  1636		372 $373$ $374$	2544 $2545$		724 725 726	3740  3741
	$53 \ 54 \ 55 \ 107$	1637  1638		375 $376$ $377$	2546  2547		727 728 729	3742  3743
	$108 \ 109 \ 110$	1639  1640		$378 \ 379 \ 380$	2548  2549		730 731 732	3744  3745
	$111 \ 112 \ 113$	1641  1642		381 $382$ $383$	2550 $2551$		733 734 735	3746  3747
	$114 \ 115 \ 116$	1643  1644		384 $385$ $386$	2552  2553		736 737 738	3748  3749
	$117 \ 118 \ 119$	1645  1646		$387 \ 388 \ 389$	2554 2555		739 740 741	3750  3751
	120 121 122	1647 1648		561 566 571	2556 2557		742 743 744	3752 3753
	$123 \ 124 \ 125$	1649 1650		586 587 588	2558 2559		745 746 747	3754 3755
	126 127 128	1651 1652		589 590 591	2560 2561		748 749 750	3756 3757
	129 130 131	1653 1654		592 593 594	2562 2563		751 752 753	3758 3759
	132 133 134	1655 1656		595 596 597	2564 2565		754 755 756	3760 3761
	135 136 137	1657 1658		598 599 600	2566 2567		757 758 759	3762 3763
	138 139 140	1659 1660		601 602 603	2568 2569		1042 1039	3764 3765
	141 142 143	1001 1002 1002 1004		604 $605$ $606$	2570 2571		1043 1045	3700 3707
	144 145 140 147 148 140	1003 1004		610 611 619	2012 2013		1049 1051	3/08 3/09
	$147 140 149 \\150 151 159$	1667 1668		$610 \ 011 \ 012$ $612 \ 614 \ 615$	2576 2577		1007 1008	3110 $31113770$ $3772$
	$150 \ 151 \ 152$ $152 \ 154 \ 155$	1660 1670		$616 \ 617 \ 619$	2570 2571		1009 1070 1071 1072	9774 9775
	155 154 155 156 157 158	$1009 1070 \\1671 1672$		610 620 621	2510 2519		1071  1072  1074	3776 3777
	$150 \ 157 \ 150 \ 161$	1671   1672   1674		622 623 624	2580 2581		1075 $10741075$ $1076$	3778 3779
	169 100 101 162 163 164	$1675 1674 \\1675 1676$		$622 \ 023 \ 024$ $625 \ 626 \ 627$	2584 2585		1073 $10701077$ $1078$	3780 3781
	$162 \ 166 \ 167$	1677  1678		628 629 630	2586 2587		1079 1080	3782 3783
	279 280 281	1679 1680		631 632 633	2588 2589		1081 1082	3784 3785
	282 283 284	1681 1682		634 635 636	2590 2591		1081 1082 1083 1084	3786 3787
	285 286 287	1683 1684		637 $638$ $639$	2592 2593		1085 1086	3788 3789
	288 289 290	1685 1686		640 641 642	2594 $2595$		1087 1088	3790 3791
	291 292 293	1687 1688		643 644 645	2596 2597		1089 1090	3792 3793
	294 295 296	1689 1690		646 647 648	2598 2599		1091 1092	3794 3795
	297 298 299	1691 1692		649 650 651	2600 2601		1093 1094	3796 3797
	300 301 302	1693 1694		652 653 654	2602 2603		1095 1096	3798 3799
	$303 \ 304 \ 305$	1695 1696		655 $656$ $657$	2604 2605		1097 1098	3800 3801
	306 307 308	1697 1698		658 $659$ $660$	2606 2607		1099 1100	3802 3803
	309 310 311	1699 1701		661 $662$ $663$	2608 2609		1101 1102	3804 3805
	$312 \ 313 \ 314$	$1702\ 1703$		$664 \ 665 \ 666$	$2610\ 2611$		1103 1104	$3806 \ 3807$

Table 38:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off / 7	Г	n	On / T	Off / T
814	1105 1106	3808 3809	814	1221 1222	5334	5335	814		7233 7234
	1107 1108	3810 3811		1223 1249	5336	5337			7235 7236
	1109 1110	3812 3813		1250 1251	5338	5339			7237 7238
	1111 1112	3815 3816		1252 1274	5340	5341			7239 7240
	1113 1114	3817 3818		1275 1276	5342	5343			7241 7242
	1115 1116	3819 3821		1294 1295 /	5344	5345			7244 7245
	1117 1118	3822 3823		543	5347	5348			7246 7247
	1119 1120	3824 3825			5349	5350			7250 7251
	1121 1122	3827 3828			5351	5353			7252 7256
	1123 1124	3829 3830			5354	5355			7257 7258
	1125 1126	3831 3832			5356	5357			7259 7261
	1127 1128	3833 3834			5359	5360			7262 7263
	1129 1130	3835 3836			5361	5362			7264 7265
	1131 1132	3837 3839			5363	5364			7267 7268
	1133 1134	3840 3841			5365	5366			7269 7270
	1135 1136	3842 3843			5367	5368			7274 7275
	1137 1138	3860 3861			5369	5371			7276 7294
	1139 1140	3862 3863			5372	5373			7295 7296
	1141 1142	3864 3866			5374	5375			7297 7301
	1143 1144	3867 3868			5392	5393			7302 7303 /
	1145 1146	3869 3870			5394	5395			544
	1147 1148	5270 $5271$			5396	5398	813	761 962 / 2	1194 1195
	1149 1150	5272 $5273$			5399	5400			1223 / 3
	1151  1152	5274 $5275$			5401	5402	812	/ 0	962 / 1
	1153  1154	5276 $5277$			7173	7174	811	/ 0	761 / 1
	1155 1156	5278 $5279$			7175	7176	810	$761\ 962\ 1038$	1220  1221
	1157  1158	5280 $5281$			7177	7178		1044  1050	1222  1249
	1159 1160	5282 $5283$			7179	7180		1056  1062	1250  1251
	1161  1162	5284 $5285$			7181	7182		1194 1195	1252  1274
	1163  1164	5286 $5287$			7183	7184		1212 1213 /	1275 1276
	1165 1166	5288 5289			7185	7186		11	$1294 \ 1295 \ /$
	1167  1168	5290 $5291$			7187	7188			12
	1169 1170	5292 5293			7189	7190	809	/ 0	761 / 1
	1171 1172	5294 5295			7191	7192	808	761 / 1	1212 1213 /
	1173 1174	5296 5297			7193	7194		1.0	2
	1175 1176	5298 5299			7195	7196	807	/ 0	761 / 1
	1177 1178	5300 5301			7197	7198	806	761 / 1	1194 1195 /
	1179 1180	0302 0303 5204 5205			7199	7200	90F	/ 0	<u>Z</u>
	1101 1102	5304 5305 5206 5207			7201	7202	803 804	/ 0	$\frac{701 / 1}{1044 / 1}$
	1103 $11041185$ $1186$	5308 5300			7205	7204	803	/ 0	$\frac{1044}{1050}$ / 1
	1185 1180 1187 1100	5310 5311			7205	7200	802	/ 0	$\frac{1050 / 1}{1056 / 1}$
	1107  1190  1101  1102	5310 5311			7207	7200	802	/ 0	$\frac{1030 / 1}{1038 / 1}$
	1101 1102	5314 5315			7203	7210	800	/ 0	$\frac{1050 / 1}{1062 / 1}$
	1195 1194 1195 1196	5316 5317			7213	7214	799	/ 0	$\frac{1002}{962}$ / 1
	1197 1198	5318 5319			7215	7216	798	/ 0	1211 / 1
	1199 1202	5320 $5321$			7217	7218	797	/ 0	1182 / 1
	1203 $1204$	5322 5323			7219	7220	796	1182 / 1	706 1214 / 2
	1205 $1208$	5324 $5325$			7221	7222	795	706 1214 / 2	1208 1209
	1209 1210	5326 5327			7224	7225		, –	1210 / 3
	1211 1214	5328 5329			7226	7227	794	1209 1210	1176 1177
	1215 1216	5330 5331			7229	7230		1211 / 3	$1178\ 1205\ /$
	$1217 \ 1220$	5332 $5333$			7231 $72$	32			4

Table 39:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	$\mathbf{n}$	On / T	Off / T	n	On / T	Off / T
793	/ 0	701 / 1	765		696 / 1	762	1713 1714	327 328 329
792	/ 0	1202 / 1	764	696 1172	691 1164		1715 1716	$330 \ 331 \ 332$
791	701 / 1	1203 1204 /		1202 1203	1165 1166		1717 1719	333 $334$ $335$
	,	2		1204 / 5	1193 1196 /		1720 1721	$336 \ 337 \ 338$
790	/ 0	701 / 1		,	6		1722 1723	$339 \ 340 \ 341$
789	1202 1203	1182 1209	763	691 1164	1170 1171		1725 1726	$342 \ 343 \ 344$
	1204 / 3	1210 1211 /		1165 1166	1172 1199		1727 1728	$345 \ 346 \ 347$
	,	4		1193 1196 /	1202 1203		1729 2536	$348 \ 349 \ 350$
788	1176 1177	706 1183		6	1204 / 7		2537 2538	$351 \ 352 \ 353$
	1205 / 3	1184 1214 /	762	962 1033	8 9 10 11 12		2539 2540	$354 \ 355 \ 356$
	,	4		1624 1625	$13 \ 30 \ 31 \ 32$		2541 2542	$357 \ 358 \ 359$
787	1209 1210 /	1176 1177		1626 1627	$33 \ 34 \ 35 \ 36$		2543 2544	$360 \ 361 \ 362$
	2	1205 / 3		1628 1629	$37 \ 38 \ 39 \ 40$		2545 2546	$363 \ 364 \ 365$
786	706 / 1	1209 1210 /		1630 1631	$41 \ 42 \ 43 \ 44$		2547 2548	$366 \ 367 \ 368$
	,	2		1632 1633	45 $46$ $47$ $48$		2549 2550	$369 \ 370 \ 371$
785	/ 0	706 / 1		1634 1635	$49 \ 50 \ 51 \ 52$		2551 2552	372 $373$ $374$
784	701 706 962	1091 1092		1636 1637	$53 \ 54 \ 55 \ 107$		2553 $2554$	$375 \ 376 \ 377$
	1044 1050	1120 1121		1638 1639	$108 \ 109 \ 110$		2555 $2556$	$378 \ 379 \ 380$
	1176 1177	1122 1149		1640 1641	$111 \ 112 \ 113$		2557 $2558$	$381 \ 382 \ 383$
	1183 1184	1150 1151		1642 1643	$114 \ 115 \ 116$		2559 $2560$	384 $385$ $386$
	1205 1214 /	1152 1179		1644 1645	$117 \ 118 \ 119$		2561  2562	$387 \ 388 \ 389$
	11	1180 1181 /		1646 1647	$120 \ 121 \ 122$		2563 $2564$	561 $566$ $571$
		12		1648 1649	$123 \ 124 \ 125$		2565 $2566$	581 $586$ $587$
783	/ 0	1044 / 1		1650 1651	$126 \ 127 \ 128$		2567  2568	588 $589$ $590$
782	/ 0	1050 / 1		1652  1653	$129 \ 130 \ 131$		2569  2570	591 $592$ $593$
781	/ 0	962 / 1		1654  1655	$132 \ 133 \ 134$		2571 2572	594 $595$ $596$
780	962 1050 / 2	1033 1061		1656 1657	$135 \ 136 \ 137$		2573 $2574$	597 $598$ $599$
	,	1063 / 3		1658 1659	$138 \ 139 \ 140$		2575 $2576$	600 $601$ $602$
779	/ 0	1050 / 1		1660 1661	$141 \ 142 \ 143$		2577  2578	603 $604$ $605$
778	/ 0	962 / 1		1662 1663	$144 \ 145 \ 146$		2579 $2580$	606 $607$ $608$
777	/ 0	706 / 1		1664 1665	$147\ 148\ 149$		2581 2582	609 $610$ $611$
776	706 962 / 2	1183 1184		1666 1667	$150\ 151\ 152$		2583 2584	612 $613$ $614$
		1214 / 3		1668 1669	$153 \ 154 \ 155$		2585 $2586$	615 $616$ $617$
775	1183 1184	962 1176		1670  1671	$156\ 157\ 158$		2587 $2588$	618 $619$ $620$
	1214 / 3	$1177 \ 1205 \ /$		1672  1673	$159\ 160\ 161$		2589 $2590$	621 $622$ $623$
		4		1674  1675	$162 \ 163 \ 164$		2591  2592	624 $625$ $626$
774	1176 1177	706 1183		1676  1677	$165 \ 166 \ 167$		2593 $2594$	627 $628$ $629$
	1205 / 3	$1184 \ 1214 \ /$		1678  1679	279 $280$ $281$		2595 $2596$	630 $631$ $632$
		4		1680  1681	282 $283$ $284$		2597 $2598$	633 $634$ $635$
773	1183 1184	701 1176		1682 1683	285 $286$ $287$		2599 2600	636 $637$ $638$
	1214 / 3	$1177 \ 1205 /$		1684 1685	288 $289$ $290$		2601 2602	639 $640$ $641$
		4		1686  1687	291 $292$ $293$		2603  2604	642 $643$ $644$
772	701 706 / 2	1183 1184		1688 1689	294 $295$ $296$		2605 $2606$	645 $646$ $647$
		1214 / 3		1690  1691	297 $298$ $299$		2607  2608	648 $649$ $650$
771	/ 0	701 / 1		1692  1693	$300 \ 301 \ 302$		2609 2610	651 $652$ $653$
770	/ 0	706 / 1		1694  1695	$303 \ 304 \ 305$		2611  2613	654 $655$ $656$
769	/ 0	1217 / 1		1696 1697	306 307 308		2614 2615	657 658 659
768	701 / 1	1215 1216 /		1698 1699	309 310 311		2616 2617	660 661 662
		2		1701 1702	312 313 314		2619 2620	663 664 665
767	/ 0	701 / 1		1703 1704	315 316 317		2621 2622	666 667 668
766	1215 1216	1172 1202		1705 1707	318 319 320		2623 2625	669 670 671
	1217 / 3	1203 1204 /		1708 1709	321 322 323		2626 2627	672 673 674
TOP		4		1710 1711	324 325 326		2628 2629	675 676 677
601	/ U							

Table 40:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off /	′ T	n	On /	Т	Off / T
762	2631 2632	678 679 680	762	3839 38	40 1116	1117	762	7172	7173	
	2633 2634	681 $682$ $683$		3841 38	42 1118	1119		7174	7175	
	2635 2637	684 $685$ $686$		3843 52	70 1123	1124		7176	7177	
	2638 2639	687 $688$ $689$		5271 52	72 1125	1126		7178	7179	
	2640 2641	690 $691$ $692$		5273 $52$	74 1127	1128		7180	7181	
	3738 3739	693 $694$ $695$		5275 $52$	76 1129	1130		7182	7183	
	3740 3741	696 697 698		5277 $52$	78 1131	1132		7184	7185	
	3742 3743	699 700 702		5279 $52$	80 1133	1134		7186	7187	
	3744 3745	703 704 705		5281 52	82 1135	1136		7188	7189	
	3746 3747	707 708 709		5283 $52$	84 1137	1138		7190	7191	
	3748 3749	710 711 712		5285 $52$	86 1139	1140		7192	7193	
	3750 3751	713 714 715		5287 52	88 1141	1142		7194	7195	
	3752 3753	716 717 718		5289 $52$	90 1143	1144		7196	7197	
	3754 3755	719 720 721		5291 52	92 1145	1146		7198	7199	
	3756 3757	722 723 724		5293 $52$	94 1147	1148		7200	7201	
	3758 3759	725 726 727		5295 $52$	96 1153	1154		7202	7203	
	3760 3761	728 729 730		5297 $52$	98 1155	1156		7204	7205	
	3762 3763	731 $732$ $733$		5299 $53$	00 1157	1158		7206	7207	
	3764 3765	734 $735$ $736$		5301 53	02 1159	1160		7208	7209	
	3766 3767	737 $738$ $739$		5303 $53$	04 1161	1162		7210	7211	
	3768 3769	740 $741$ $742$		5305 $53$	06 1163	1164		7212	7213	
	3770 3771	743 $744$ $745$		5307 $53$	08 1165	1166		7214	7215	
	3772 3773	746 $747$ $748$		5309 $53$	10 1167	1168		7216	7217	
	3774 3775	749 $750$ $751$		5311 53	12 1169	1173		7218	7219	
	3776 3777	752 $753$ $754$		5313 $53$	14 1174	1175		7220	7221	
	3778 3779	755 $756$ $757$		5315 $53$	16 1185	1186		7222	7224	
	3780 3781	758 $759$ $760$		5317 $53$	18 1187	1190		7225	7226	
	3782 3783	1039 1043		5319 $53$	20 1191	1192		7227	7229	
	3784 3785	1045  1049		5321 53	22 1193	1196		7230	7231	
	3786 3787	1051  1067		5323 $53$	24 1197	1198		7232	7233	
	3788 3789	1068 1069		5325 53	26 1215	1216		7234	7235	
	3790 3791	1070  1071		5327 $53$	28 1217	/ 496		7236	7237	
	3792 3793	1072  1073		5329 53	30			7239	7240	
	3794 3795	1074  1075		5331 53	32			7241	7242	
	3796 3797	1076  1077		5333 53	34			7244	7245	
	3798 3799	1078  1079		5335 53	36			7246	7247	
	3800 3801	1080 1081		5337 53	38			7250	7251	
	3802 3803	1082 1083		5339 53	40			7252	7256	
	3804 3805	1084  1085		5341 53	42			7257	7258	
	3806 3807	1086 1087		5343 53	44			7259	7261	
	3808 3809	1088  1089		5345 53	47			7262	7263	
	3810 3811	1090 1093		5348 53	49			7264	7268	
	3812 3813	1094  1095		5350 53	51			7269	7270	
	3815 3816	1096 1097		5353 53	54			7274	7275	
	3817 3818	1098 1099		5355 53	56			7276 /	495	
	3819 3821	1100 1101		5357 53	59		761	$\frac{1}{0}$		7172 / 1
	3822 3823	1102 1103		5360 53	61 C2		760	/ 0	1.0	7261 / 1
	3824 3825	1104 1105		5362 53	03 66		759	1 7261	/ 2	576 1055 1057 / 2
	3827 3828	1100 1107		5365 53	00 69		750			$\frac{1057/3}{1/1}$
	3829 3830	1108 1109		0307 53 5260 52	Uð 71		158	/ U	62 / 9	1/1
	0001 0003 2024 2025	1110 1111 1110 1119		0009 03 5270 F2	11 73		191	01 10	03 / 2	1200 (209 7961 / 9
	0004 0000 2026 2027	1112 1115 1117 1115		0012 03 5274 5275	10		756	1 / 1		1201 / 3 581 1062 / 9
	2020 2021	1114 1110		0014 0010			100	1/1		JOI 1003 / 2

Table 41:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
755	/ 0	1/1	753	348 349 350	1728 1729	753	698 699 700	3741 3742
754	/ 0	1048 / 1		$351 \ 352 \ 353$	2536  2537		701 702 703	3743  3744
753	8 9 10 11 12	1018 1046		354 $355$ $356$	2538 2539		704 705 706	3745  3746
	$13 \ 30 \ 31 \ 32$	1047  1624		$357 \ 358 \ 359$	2540 2541		707 708 709	3747  3748
	$33 \ 34 \ 35 \ 36$	1625  1626		$360 \ 361 \ 362$	2542 2543		710 711 712	3749  3750
	$37 \ 38 \ 39 \ 40$	1627 1628		$363 \ 364 \ 365$	2544 2545		713 714 715	3751  3752
	$41 \ 42 \ 43 \ 44$	1629 1630		$366 \ 367 \ 368$	2546  2547		716 717 718	3753  3754
	45 $46$ $47$ $48$	1631 1632		$369 \ 370 \ 371$	2548 2549		719 720 721	3755  3756
	$49 \ 50 \ 51 \ 52$	1633 1634		372 $373$ $374$	2550  2551		722 723 724	3757  3758
	$53 \ 54 \ 55 \ 107$	1635  1636		375 $376$ $377$	2552 2553		725 726 727	3759  3760
	$108 \ 109 \ 110$	1637  1638		378 379 380	2554 2555		728 729 730	3761  3762
	$111 \ 112 \ 113$	1639 1640		381 382 383	2556  2557		731 732 733	3763  3764
	$114 \ 115 \ 116$	1641 1642		384 $385$ $386$	2558 2559		734 735 736	3765  3766
	$117 \ 118 \ 119$	1643  1644		$387 \ 388 \ 389$	2560  2561		737 738 739	3767  3768
	$120 \ 121 \ 122$	1645  1646		$561 \ 566 \ 571$	2562 2563		740 741 742	3769 3770
	$123 \ 124 \ 125$	1647  1648		576 $581$ $586$	2564  2565		743 744 745	3771 3772
	$126 \ 127 \ 128$	1649  1650		587 $588$ $589$	2566  2567		746 747 748	3773  3774
	$129 \ 130 \ 131$	1651  1652		590 $591$ $592$	2568 2569		749 750 751	3775  3776
	$132 \ 133 \ 134$	1653  1654		$593 \ 594 \ 595$	2570 $2571$		752 $753$ $754$	3777  3778
	$135 \ 136 \ 137$	1655  1656		596 $597$ $598$	2572 2573		755 756 757	3779  3780
	$138 \ 139 \ 140$	1657  1658		$599 \ 600 \ 601$	2574 $2575$		758 759 760	3781  3782
	$141 \ 142 \ 143$	1659  1660		602 $603$ $604$	2576 $2577$		761 1038	3783  3784
	$144 \ 145 \ 146$	1661  1662		605 $606$ $607$	2578  2579		1039 1051	3785  3786
	$147 \ 148 \ 149$	1663  1664		608 609 610	2580 2581		1055 1056	3787  3788
	$150 \ 151 \ 152$	1665  1666		$611 \ 612 \ 613$	2582 2583		1057 1061	3789  3790
	$153 \ 154 \ 155$	1667  1668		614 $615$ $616$	2584 $2585$		1062 1063	3791 3792
	$156 \ 157 \ 158$	1669  1670		617 $618$ $619$	2586  2587		1067 1068	3793  3794
	$159 \ 160 \ 161$	1671  1672		620 $621$ $622$	2588 2589		1069 1070	3795  3796
	$162 \ 163 \ 164$	1673  1674		$623 \ 624 \ 625$	2590 $2591$		1071 1072	3797  3798
	$165 \ 166 \ 167$	1675  1676		626 $627$ $628$	2592 2593		1081 1082	3799  3800
	279 280 281	1677 1678		629 630 631	2594 2595		1083 1084	3801 3802
	282 283 284	1679 1680		632 633 634	2596 2597		1085 1086	3803 3804
	285 286 287	1681 1682		635 636 637	2598 2599		1087 1088	3805 3806
	288 289 290	1683 1684		638 639 640	2600 2601		1089 1090	3807 3808
	291 292 293	1685 1686		641 642 643	2602 2603		1091 1092	3809 3810
	294 295 296	1687 1688		644 645 646	2604 2605		1093 1094	3811 3812
	297 298 299	1689 1690		647 648 649	2606 2607		1095 1096	3813 3815
	300 301 302	1091  1092  1604		050 051 052 652 654 655	2008 2009		1097 1098	3810 3817
	303 304 303	1093 1094 1605 1606		053 054 055	2010 2011 2612 2614		1099 $11001101$ $1111$	3818 3819
	200 210 211	1695 1690		030 037 038	2015 2014 2615 2616		1101 $11111110$ $1112$	0021 0022 2022 2024
	009 010 011 010 010 014	1600 1701			2010 2010		1112 $11131114$ $1115$	0020 0024 2025 2027
	012 010 014 915 916 917	1099 1701		665 666 667	2017 2019		1114 $11131116$ $1117$	2020 2021
	313 310 317	1702  1703  1705		668 660 670	2020 2021		1110 $11171118$ $1110$	3820 3821
	310 319 320	1704 1705 1707 1708		671 672 673	2022 2023 2625 2626		1110 1119 1120 1191	3833 3834
	321 322 323	1700 1710		674 675 676	2620 2620		1120 $11211199 1199$	3835 3836
	$324 \ 320 \ 320$ $327 \ 328 \ 320$	1711 1719		677 678 670	2620 2620		1122 1123 1194 1195	3837 3830
	330 331 332	1714 1715		680 681 682	2632 2633		1126 1127	3840 3841
	$333 \ 334 \ 335$	1716 1717		683 684 685	2634 2635		1128 1129	3842 3843
	$336 \ 337 \ 338$	1719 1720		686 687 688	2637 $2638$		1130 1141	5270 $5271$
	339 340 341	1721 1722		689 690 691	2639 2640		1142 1143	5272 5273
	342 343 344	1723 1725		692 693 694	2641 3738		1144 1145	5274 $5275$
	$345 \ 346 \ 347$	$1726\ 1727$		$695 \ 696 \ 697$	3739 3740		1146 1147	5276 5277

Table 42:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
753	1148 1149	5278 5279	753		7186 7187	741		1217 / 3
	1150 1151	5280 $5281$			7188 7189	740	/ 0	1062 / 1
	1152 1153	5282 $5283$			7190 7191	739	/ 0	686 / 1
	1154 1155	5284 $5285$			7192 7193	738	/ 0	696 / 1
	1156 1157	5286 $5287$			7194 7195	737	686 696 / 2	1171 1172
	1158 1159	5288 5289			7196 7197		,	1202 / 3
	1171 1172	5290 $5291$			7198 7199	736	/ 0	696 / 1
	1173 1174	5292 $5293$			7200 7201	735	/ 0	686 / 1
	1175 1176	5294 $5295$			7202 7203	734	/ 0	1214 / 1
	1177 1178	5296 $5297$			7204 7205	733	696 / 1	1215 1216 /
	1179 1180	5298 5299			7206 7207			2
	1181 1182	5300 $5301$			7208 7209	732	1214 1215	696 1072
	1183 1184	5302 $5303$			7210 7211		1216 / 3	1101 1130 /
	1185 1186	5304 $5305$			7212 7213			4
	1187 1202	5306 $5307$			7214 7215	731	1072 1101	1184 1214
	1203 1204	5308   5309			7216 7217		1130 / 3	$1215 \ 1216 \ /$
	1205 1208	5310 $5311$			7218 7219			4
	1209 1210	5312 $5313$			7220 7221	730	1184 1214	566 1042
	1211 1212	5314 $5315$			7222 7224		1215 $1216$ /	1072 1101
	1213 1214	5316 $5317$			7225 7226		4	1130 / 5
	1215 1216	5318 $5319$			7227 7229	729	1101 1130 /	997 1017
	1217 / 491	5320 $5321$			7230 7231		2	1019 / 3
		5322 $5323$			7232 7234	728	$566\ 997\ 1017$	1182 1183
		5324 $5325$			7235 7236		1019 1042	1184 1211
		5326 $5327$			7237 7239		1072 / 6	1214  1215
		5328 $5329$			7240 7241			1216 / 7
		5330 $5331$			7242 7244	727	1182 1183	$566\ 997\ 1017$
		5332 $5333$			7245 7246		1184 1211	1019  1042
		5334 $5335$			7247 7250		1214 1215	1072 1101
		5336 $5337$			7251 7252		1216 / 7	1130 / 8
		5338 $5339$			7256 $7257$	726	566 $686$ $696$	1068 1097
		5340 $5341$			7258 7262		$962\ 997\ 1017$	1098 1126
		5342 $5343$			7263 7264		1019 1042	1127 1128
		5344 $5345$			7268 7269		1062  1072	1155 1156
		5347 $5348$			7270 $7274$		1101 1130	1157  1184
		5349 $5350$			7275 $7276$ $/$		1171 1172	1185 1186
		5351 $5353$			492		1202 / 15	1187  1214
		5354 $5355$	752	$1 \ 1206 \ 1207$	1023 1051			$1215\ 1216\ /$
		5356 $5357$		/ 3	$1212\ 1213\ /$			16
		5359 $5360$			4	725	/ 0	1062 / 1
		5361  5362	751	$1023 \ 1051$ /	$1 \ 1206 \ 1207$	724	1097  1126	962 1039
		5363 5365		2	/ 3		1127 $1155$	1040 1041
		5366 5367	750	1 / 1	$1023 \ 1051 \ /$		1156 1157	1042  1069
		5368 5369			2		1184 1185	1070  1071
		5371 5372	749	/ 0	1/1		1186 1187	1072 1099
		5373 5374	748	/ 0	761 / 1		1214 1215	1100 1101
		5375 7173	747	/ 0	691 / 1		1216 / 13	1129 1130 /
		7174 7175	746	/ 0	1056 / 1		1000 1010	14
		(1/0 /1//	(45	/ 0	1038 / 1	(23	1039 1040	080 1097
		(1/8 7179	(44	/ 0	902 / 1		1041 1042	1120 1127
		(180 7181	743	/ 0	$\frac{1002 / 1}{696 / 1}$		1059 1070	1155 1156
		(182 7183	(42	/ U	080 / 1		10/1 10/2	1157 1184
		(184 (185	(41	080 1062 / 2	1158 1159		1033 1100	1185 1186

Table 43:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

$\mathbf{n}$	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
723	1101 1129	1187 1214	699		566 / 1	691	1690 169	1 318 319 320
	1130 / 13	1215 1216 /	698	566 706 / 2	997 1017		1692 169	3  321  322  323
	7	14		1	1019 / 3		1694 169	5  324  325  326
722	686 962 / 2	1013 1039	697	/ 0	706 / 1		1696 169	7  327  328  329
	7	1067 / 3	696	/ 0	566 / 1		1698 169	9  330  331  332
721	1126 1127	962 1040	695	/ 0	1205 / 1		1701 170	$2  333 \ 334 \ 335$
	1155 1156	1041 1042	694	566 1205 / 2	1208 1209		1703 170	$4  336 \ 337 \ 338$
	1157 1184	1069 1070		,	1210 / 3		1705 170	7  339  340  341
	1185 1186	1071 1072	693	1208 1209	566 1096		1708 170	9  342  343  344
	1187 1214	1099 1100		1210 / 3	1125 1154 /		1710 171	1  345  346  347
	$1215 \ 1216 \ /$	1101 1129			4		1713 171	4  348  349  350
	12	1130 / 13	692	/ 0	1066 / 1		1715 171	$6  351 \ 352 \ 353$
720	1238 1239	686 1126	691	$566 \ 962 \ 997$	8 9 10 11 12		1717 171	$9  354 \ 355 \ 356$
	1240 1264	1127  1155		1013 1017	$13 \ 30 \ 31 \ 32$		1720 172	1  357  358  359
	1265  1266	1156 1157		1018 1019	$33 \ 34 \ 35 \ 36$		1722 172	3  360  361  362
	1267 1286	1184 1185		1023 1040	$37 \ 38 \ 39 \ 40$		1725 172	6  363  364  365
	1287 1288	1186 1187		1041  1042	$41 \ 42 \ 43 \ 44$		1727 172	8  366  367  368
	$1303 \ 1304 \ /$	1214  1215		1043  1045	45 $46$ $47$ $48$		1729 175	3  369  370  371
	12	1216 / 13		1046  1047	$49\ 50\ 51\ 52$		1754 175	5  372  373  374
719	761 / 1	1303 1304 /		1048 1066	$53 \ 54 \ 55 \ 107$		1756 253	6  375  376  377
		2		1624  1625	$108 \ 109 \ 110$		2537 253	8  378  379  380
718	1046 1047	761 1238		1626  1627	$111 \ 112 \ 113$		2539 $254$	$0  381 \ 382 \ 383$
	1048  1075	1239  1240		1628  1629	$114 \ 115 \ 116$		2541 254	2  384  385  386
	1076  1077	1264  1265		1630  1631	$117 \ 118 \ 119$		2543 $254$	4  387  388  389
	1078  1105	1266  1267		1632  1633	$120 \ 121 \ 122$		2545 $254$	$6  561 \ 571 \ 586$
	$1106 \ 1107 \ /$	1286  1287		1634  1635	$123 \ 124 \ 125$		2547 $254$	8  587  588  589
	10	1288 / 11		1636  1637	$126 \ 127 \ 128$		2549 $255$	$0  590 \ 591 \ 592$
717	$1 \ 686 \ 691$	1046  1047		1638  1639	$129 \ 130 \ 131$		2551 $255$	2  593  594  595
	$761\ 962\ 1056$	1048  1075		1640  1641	$132 \ 133 \ 134$		2553 $255$	4  596  597  598
	1062 1206	1076  1077		1642  1643	$135 \ 136 \ 137$		2555 $255$	$6  599 \ 600 \ 601$
	1207 / 9	1078 1105		1644  1645	$138 \ 139 \ 140$		2557 $255$	8 602 603 604
		1106 1107 /		1646 1647	$141 \ 142 \ 143$		2559 $256$	0 605 606 607
-10		10		1648 1649	144 145 146		2561 256	2 608 609 610
716	/ 0	1/1		1650 1651	147 148 149		2563 256	4 611 612 613
715	1 / 1	1206 1207 /		1652 1653	150 151 152		2565 256	6 614 615 616
<b>714</b>	1.0	2		1654 1655	153 154 155		2567 256	8 617 618 619
714	/ 0	$\frac{1 / 1}{0.01701 / 0}$		1656 1657	156 157 158		2569 257	0  620  621  622
710		$\frac{091}{001}$		1008 1009	$109 \ 100 \ 101$		2371 237	2 023 024 023
711	/ 0	$\frac{080 / 1}{1050 / 1}$		1000 1001 1000 1001	$102 \ 103 \ 104$		2013 201	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
710	/ 0	$\frac{1000 / 1}{060 / 1}$		1002 1003 1664 1665	100 100 107		2010 201	0 029 030 031
710	/ 0	$\frac{902 / 1}{1062 / 1}$		1004 1000 1666 1667	219 200 201		2011 201	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
709	/ 0	$\frac{1002 / 1}{1 / 1}$		1668 1660	202 203 204		2579 250	0 $035$ $030$ $0372$ $628$ $620$ $640$
708	/ 0	$\frac{1}{606}$ / 1		$1008 1009 \\1670 1671$	200 200 201		2582 258	2 038 039 040 4 641 642 643
706	/ 0	$\frac{090 / 1}{1199 - 1199}$		1070  1071  1672  1672	200 209 290		2000 200	4 041 042 043 6 644 645 646
100	1 090 / 2	1102 1103 1211 / 2		1072  1073  1675	291 292 293		2505 250 2587 258	8 647 648 640
705	/ 0	1 / 1		1676 1677	294 293 290 207 208 200		2501 250	0 650 651 659
704	/ 0	$\frac{1}{706}$ / 1		1678  1679	300 301 302		2503 253	2 653 654 655
703	/ 0	696 / 1		1680 1681	303 304 305		2591 259	4 656 657 658
702	696 706 / 2	$\frac{000 / 1}{1171 \ 1179}$		1689 1689	306 307 308		2595 259	- 650 660 661
102	000 100 / 2	1202 / 3		1684 1685	309 310 311		2597 259	8 662 663 664
701	/ 0	706 / 1		1686 1687	$312 \ 313 \ 314$		2599 260	0 665 666 667
700	/ 0	696 / 1		1688 1689	315 316 317		2601 2602	668 669 670
	/ ~	/ -						

Table 44:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	$\mathbf{n}$	On / T	Off / T	n	On / T	Off / T
691	2603 2604	$671 \ 672 \ 673$	691	3806 3807	1180 1181	691	5341 5342	
	2605 2606	674 $675$ $676$		3808 3809	1203 1204		5343 5344	
	2607 2608	677 $678$ $679$		3810 3811	1205 1208		5345 5347	
	2609 2610	680 $681$ $682$		3812 3813	1209 1210 /		5348 5349	
	2611 2613	683 $684$ $685$		3815 $3816$	434		5350 5354	
	2614 2615	687 $688$ $689$		3817 3818			5355 $5356$	
	2616 2617	690 $692$ $693$		3819 3821			5357 5359	
	2619 2620	694 $695$ $697$		3822 3823			5360 5361	
	2621 2622	698 $699$ $700$		3824 3825			5362 5363	
	2623 2625	701 702 703		3827 3828			5365 5366	
	2626 2627	704 705 707		3829 3830			5367 5368	
	2628 2629	708 709 710		3831 3833			5369 5371	
	2631 2632	711 712 713		3834 3835			5372 5373	
	2633 2634	714 715 716		3836 3837			5374 5375	
	2635 2637	717 718 719		3839 3840			5399 5400	
	2638 2639	720 $721$ $722$		3841 3842			5401 5402 /	
	2640 2641	723 $724$ $725$		3843  3867			433	
	2665 2666	726 $727$ $728$		3868  3869		690	8 9 10 11 12	962 1013
	2667 2668	729 $730$ $731$		3870  5271			$13 \ 30 \ 31 \ 32$	1018 1023
	3738 3739	732 $733$ $734$		5272 5273			$33 \ 34 \ 35 \ 36$	1040 1041
	3740 3741	735 $736$ $737$		5274 $5275$			$37 \ 38 \ 39 \ 40$	1042  1043
	3742 3743	738 $739$ $740$		5276 $5277$			$41 \ 42 \ 43 \ 44$	1045  1046
	3744 3745	741 $742$ $743$		5278 $5279$			45 $46$ $47$ $48$	1047  1048
	3746 3747	744 $745$ $746$		5280 $5281$			$49\ 50\ 51\ 52$	1624  1625
	3748 3749	747 $748$ $749$		5282 $5283$			$53 \ 54 \ 55 \ 107$	1626  1627
	3750 3751	750 $751$ $752$		5284 $5285$			$108 \ 109 \ 110$	1628  1629
	3752 3753	753 $754$ $755$		5286 $5287$			$111 \ 112 \ 113$	1630  1631
	3754  3755	756 $757$ $758$		5288 5289			$114 \ 115 \ 116$	1632  1633
	3756  3757	$759\ 760\ 1081$		5290 $5291$			$117 \ 118 \ 119$	1634  1635
	3758  3759	1082 1083		5292 $5293$			$120 \ 121 \ 122$	1636  1637
	3760 3761	1084 1085		5294 5295			$123 \ 124 \ 125$	1638 1639
	3762  3763	1086  1087		5296 $5297$			$126 \ 127 \ 128$	1640  1641
	3764 3765	1088 1089		5298 5299			$129 \ 130 \ 131$	1642  1643
	3766 3767	1090 1091		5300 5301			$132 \ 133 \ 134$	1644 1645
	3768 3769	1092 1093		5302 5303			135 136 137	1646 1647
	3770 3771	1094 1095		5304 5305			138 139 140	1648 1649
	3772 3773	1111 1112		5306 5307			141 142 143	1650 1651
	3774 3775	1113 1114		5308 5309			144 145 146	1652 1653
	3776 3777	1115 1116		5310 5311			147 148 149	1654 1655
	3778 3779	1117 1118		5312 5313			150 151 152	1656 1657
	3780 3781	1119 1120		5314 5315			153 154 155	1658 1659
	3782 3783	1121 1122		5316 5317			$156 \ 157 \ 158$ $150 \ 160 \ 161$	1660 1661
	3/84 3/85	1123 1124		5318 5319			$159 \ 160 \ 161$	1002 1003
	3180 3181	1141 1142		0020 0021 E200 E202			$102 \ 103 \ 104$ $165 \ 166 \ 167$	1004 1005 1666 1667
	3100 3109	1145 1144 1145 1146		0022 0020 E204 E20E			100 100 107 070 000 001	1669 1660
	3709 3791	1140 1140 1147 1140		5397 5390			219 200 201 282 282 284	1000 1009 1670 1671
	3794 3795	1140 1150		5320 5320			202 203 204 285 286 287	1679 1679
	3796 3797	1151 1159		5331 5339			288 280 201	1674 $1675$
	3798 3799	1153 1173		5333 5334			291 292 293	1676 1677
	3800 3801	1174 1175		5335 5336			294 295 296	1678 1679
	3802 3803	1176 1177		5337 5338			297 298 299	1680 1681
	3804 3805	1178 1179		5339 5340			300 301 302	1682 1683

Table 45:  $i_p$  of the particles in MIF1739, to build  ${\cal C}_n$  from  ${\cal C}_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
690	303 304 305	1684 1685	690	656 657 658	2597 2598	690	1149 1150	3800 3801
	306 307 308	1686 1687		659 $660$ $661$	2599 2600		1151 1152	3802 3803
	309 310 311	1688 1689		662 $663$ $664$	2601 2602		1153 1154	3804 3805
	312 313 314	1690 1691		665 $666$ $667$	2603 2604		1173 1174	3806 3807
	$315 \ 316 \ 317$	1692 1693		668 $669$ $670$	2605 2606		1175 1179	3808 3809
	318 319 320	1694  1695		671 672 673	2607 2608		1180 1181 /	3810 3811
	$321 \ 322 \ 323$	1696  1697		674 $675$ $676$	2609 2610		427	3812 3813
	324 $325$ $326$	1698  1699		677 $678$ $679$	2611 2613			3815 3816
	$327 \ 328 \ 329$	1701 1702		680 $681$ $682$	2614 2615			3817 3818
	$330 \ 331 \ 332$	1703 1704		683 $684$ $685$	2616 2617			3819 $3821$
	$333 \ 334 \ 335$	1705 1707		687 $688$ $689$	2619 2620			3822 3823
	$336 \ 337 \ 338$	1708 1709		690 $692$ $693$	2621 2622			3824 $3825$
	$339 \ 340 \ 341$	1710 1711		694 $695$ $697$	2623 2625			3827 3828
	$342 \ 343 \ 344$	1713  1714		$698 \ 699 \ 700$	2626 2627			3829 3830
	$345 \ 346 \ 347$	1715  1716		702 703 704	2628 2629			3831 3833
	$348 \ 349 \ 350$	1717  1719		705 $707$ $708$	2631 2632			3834 $3835$
	$351 \ 352 \ 353$	1720 1721		709 $710$ $711$	2633 2634			3836 $3837$
	354 $355$ $356$	1722  1723		712 $713$ $714$	2635  2637			3839 3840
	$357 \ 358 \ 359$	1725  1726		715 $716$ $717$	2638 2639			3841 3842
	$360 \ 361 \ 362$	1727  1728		718 719 720	2640 2641			3843  3867
	$363 \ 364 \ 365$	1729  1753		721 $722$ $723$	2665 2666			3868  3869
	$366 \ 367 \ 368$	1754  1755		724 $725$ $726$	2667 2668			3870  cdot 5271
	$369 \ 370 \ 371$	1756  2536		727 $728$ $729$	3738 3739			5272 $5273$
	372 $373$ $374$	2537 $2538$		730 731 732	3740 3741			5274 $5275$
	375 $376$ $377$	2539 $2540$		733 $734$ $735$	3742 3743			5276 $5277$
	$378 \ 379 \ 380$	2541  2542		736 $737$ $738$	3744 3745			5278 $5279$
	381 382 383	2543 2544		739 740 741	3746 3747			5280 5281
	384 385 386	2545 2546		742 743 744	3748 3749			5282 5283
	387 388 389	2547 2548		745 746 747	3750 3751			5284 5285
	561 571 586	2549 2550		748 749 750	3752 3753			5286 5287
	587 588 589	2551 2552		751 752 753 754 755 750	3/54 3/55			5288 5289
	590 591 592	2003 2004		104 100 100	3750 3757			5290 5291
	595 594 595 FOG FOT FOS	2000 2000 0557 0550		760 1081	3738 3739			5292 5293 5204 5205
	590 597 598	2007 2008		100 1081	3700 3701 2762 2762			5294 5295 5206 5207
	602 603 604	2559 2500		1082 $10851084$ $1085$	3764 3765			5290 5297 5208 5200
	$602 \ 605 \ 607$	2563 2564		1084 1085 1086 1087	3766 3767			5298 5299 5300 5301
	608 600 610	2565 2566		1080 1087	3768 3760			5302 5303
	$611 \ 612 \ 613$	2505 - 2568		1000 1000	3770 3771			5304 5305
	614 $615$ $616$	2569 2570		1090  1091  1091  1093	3772 3773			5304 $53075306$ $5307$
	617 $618$ $619$	2503 2570 2571 2572		1092 1095	3774 3775			5308 5309
	620 621 622	2573 2574		1094 1000	3776 3777			5310 5311
	623 624 625	2575 2576		1000 1111 1112 1113	3778 3779			5312 5313
	$626 \ 627 \ 628$	2577 2578		1112 1115	3780 3781			5314 5315
	629 630 631	2579 2580		1116 1117	3782 3783			5316 5317
	632 633 634	2581 2582		1118 1119	3784 3785			5318 5319
	635 636 637	2583 2584		1120 1121	3786 3787			5320 5321
	638 639 640	2585 2586		1122 1123	3788 3789			5322 5323
	641 642 643	2587 2588		1124 1125	3790 3791			5324 5325
	644 $645$ $646$	2589 2590		1141 1142	3792 3793			5327 5328
	647 $648$ $649$	2591 2592		1143 1144	3794 3795			5329 5330
	650 $651$ $652$	2593 2594		1145 1146	3796 3797			5331 5332
	$653 \ 654 \ 655$	2595 $2596$		1147 1148	$3798 \ 3799$			5333 $5334$

Table 46:  $i_p$  of the particles in MIF1739, to build  ${\cal C}_n$  from  ${\cal C}_{n+1}$  (cont.)

n	On / T	Off / T n	On / T	Off / T n	On / T	Off / T
690		5335 5336 689	1676 1677	294 295 296 689	2589 2590	647 $648$ $649$
		5337 5338	1678 1679	297 298 299	2591 2592	650 $651$ $652$
		5339 5340	1680 1681	300 301 302	2593 2594	653 $654$ $655$
		5341 5342	1682 1683	303 304 305	2595 $2596$	656 $657$ $658$
		5343 5344	1684 1685	306 307 308	2597 2598	659 $660$ $661$
		5345 $5347$	1686 1687	309 310 311	2599 2600	662 $663$ $664$
		5348 5349	1688 1689	312 313 314	2601 2602	665 666 667
		5350 5354	1690 1691	315 316 317	2603 2604	668 669 670
		5355 5356	1692 1693	318 319 320	2605 2606	671 672 673
		5357 5359	1694 1695	321 322 323	2607 2608	674 $675$ $676$
		5360 5361	1696 1697	324 325 326	2609 2610	677 678 679
		5362 5363	1698 1699	327 328 329	2611 2613	680 681 682
		5365 5366	1701 1702	330 331 332	2614 $2615$	683 684 685
		5367 5368	1703 1704	333 334 335	2616 2617	687 688 689
		5369 5371	1705 1707	336 337 338	2619 2620	690 692 693
		5372 5373	1708 1709	339 340 341	2621 2622	694 695 697
		5374 5375	1710 1711	342 343 344	2623 2625	698 699 700
		5399 5400	1713 1714	345 346 347	2626 $2627$	702 703 704
		5401 5402 /	1715 1716	348 349 350	2628 2629	705 707 708
		428	1717 1719	351 352 353	2631 2632	709 710 711
689	1 962 1013	8 9 10 11 12	1720 1721	354 355 356	2633 2634	712 713 714
000	1018 1023	13 30 31 32	1722 1723	357 358 359	2635 $2637$	715 716 717
	1040 1041	33 34 35 36	1725 1726	360 361 362	2638 2639	718 719 720
	1042  1043	37 38 39 40	1727 1728	363 364 365	2640 $2641$	721 722 723
	1045 1046	41 42 43 44	1729 1746	366 367 368	2658 2659	724 725 726
	1047 1048	45 46 47 48	1747 1748	369 370 371	2660 2661	727 728 729
	1049 1051	49 50 51 52	1749 2536	372 373 374	3738 3739	730 731 732
	1624  1625	53 54 55 107	2537 2538	375 376 377	3740 3741	733 734 735
	1626   1627	108 109 110	2539 2540	378 379 380	3742 3743	736 737 738
	1628 1629	111 112 113	2541 2542	381 382 383	3744 3745	739 740 741
	1630 1631	114 115 116	2543 2544	384 385 386	3746 3747	742 743 744
	1632 1633	117 118 119	2545 2546	387 388 389	3748 3749	745 746 747
	1634 1635	120 121 122	2547 2548	561 581 586	3750 3751	748 749 750
	1636 1637	123 124 125	2549 2550	587 588 589	3752 3753	751 $752$ $753$
	1638 1639	$126 \ 127 \ 128$	2551 2552	590 591 592	3754 3755	754 755 756
	1640 1641	129 130 131	2553 2554	593 594 595	3756 3757	757 758 759
	1642 1643	$132 \ 133 \ 134$	2555 2556	596 $597$ $598$	3758 3759	760 1061
	1644 1645	$135 \ 136 \ 137$	2557 2558	599 600 601	3760 3761	1063 1081
	1646 1647	$138 \ 139 \ 140$	2559 2560	602 603 604	3762 3763	1082 1083
	1648 1649	141 142 143	2561 2562	605 606 607	3764 3765	1084 1085
	1650  1651	$144 \ 145 \ 146$	2563 2564	608 609 610	3766 3767	1086 1087
	1652  1653	$147 \ 148 \ 149$	2565 2566	611 612 613	3768 3769	1088 1089
	1654  1655	$150 \ 151 \ 152$	2567 2568	614 615 616	3770 3771	1090 1091
	1656  1657	$153 \ 154 \ 155$	2569 2570	617 618 619	3772 3773	1092 1093
	1658  1659	$156 \ 157 \ 158$	2571 2572	620 621 622	3774 3775	1094 1095
	1660 1661	159 160 161	2573 2574	623 $624$ $625$	3776 3777	1096 1111
	1662 1663	$162 \ 163 \ 164$	2575 2576	626 627 628	3778 3779	1112 1113
	1664  1665	165 166 167	2577 2578	629 630 631	3780 3781	1114 1115
	1666 1667	279 280 281	2579 2580	632 633 634	3782 3783	1116 1117
	1668 1669	282 283 284	2581 2582	635 636 637	3784 3785	1118 1119
	1670 1671	285 286 287	2583 2584	638 639 640	3786 3787	1120 1121
	1672  1673	288 289 290	2585 2586	641 642 643	3788 3789	1122 1123
	1674 1675	291 292 293	2587 2588	644 $645$ $646$	3790 3791	1124 1125

Table 47:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
689	3792 3793	1141 1142	689	5327 5328		681	128 129 130	1641 1642
	3794  3795	1143 1144		5329 5330			131 132 133	1643  1644
	3796  3797	1145 1146		5331 5332			$134 \ 135 \ 136$	1645  1646
	3798  3799	1147 1148		5333 5334			137 138 139	1647 1648
	3800 3801	1149 1150		5335 5336			140 141 142	1649 1650
	3802 3803	1151 1152		5337 5338			143 144 145	1651  1652
	3804 3805	1153 1154		5339 5340			146 147 148	1653  1654
	3806 3807	1173 1174		5342 5343			149 150 151	1655   1656
	3808 3809	1175 1179		5344 5345			$152 \ 153 \ 154$	1657  1658
	3810 3811	1180 1181 /		5347 5348			155 156 157	1659 1660
	3812 3813	429		5349 5350			158 159 160	1661 1662
	3815 3816			5354 $5355$			161 162 163	1663 1664
	3817 3818			5356 $5357$			164 165 166	1665  1666
	3819 3821			5359 5360			167 279 280	1667 1668
	3822 3823			5361 5362			281 282 283	1669 1670
	3824 3825			5363 5365			284 285 286	1671 1672
	3827 3828			5366 5367			287 288 289	1673 1674
	3829 3830			5368 5372			290 291 292	1675 1676
	3831 3833			5373 5374			293 294 295	1677 1678
	3834 3835			5375 5392			296 297 298	1679 1680
	3836 3837			5393 5394			299 300 301	1681 1682
	3839 3840			5395 / 428			302 303 304	1683 1684
	3841 3842		688	/ 0	1 / 1		305 306 307	1685 1686
	3843 3860		687	581 1061	566 1043		308 309 310	1687 1688
	3861 3862			1063 / 3	$1045 \ 1746 \ /$		311 312 313	1689 1690
	3863 5271			,	4		314 315 316	1691 1692
	5272 $5273$		686	1 1746 5341	581 1061		317 318 319	1693 1694
	5274 5275			5369 5371 /	1063 5321		320 321 322	1695   1696
	5276 $5277$			5	5347 $5375$ /		$323 \ 324 \ 325$	1697  1698
	5278 $5279$				6		$326 \ 327 \ 328$	1699   1701
	5280 $5281$		685	581 1061	$1 \ 5341 \ 5369$		329 330 331	1702 1703
	5282 $5283$			1063 / 3	5371 / 4		332 $333$ $334$	1704 1705
	5284 $5285$		684	5326 5351	581 1061		$335 \ 336 \ 337$	1707 1708
	5286 $5287$			5353 / 3	$1063\ 5395\ /$		338 339 340	1709 1710
	5288 5289				4		$341 \ 342 \ 343$	1711  1713
	5290 $5291$		683	5270 $5395$ /	5326 5351		344 $345$ $346$	1714  1715
	5292 $5293$			2	5353 / 3		$347 \ 348 \ 349$	1716  1717
	5294 $5295$		682	/ 0	5270 / 1		350 $351$ $352$	1719  1720
	5296 $5297$		681	1 8 9 10 11	1013 1018		353 $354$ $355$	1721  1722
	5298   5299			$12 \ 13 \ 30 \ 31$	1033 1040		356 $357$ $358$	1723  1725
	5300 $5301$			32 $33$ $34$ $35$	1041 1042		$359 \ 360 \ 361$	1726  1727
	5302 $5303$			$36 \ 37 \ 38 \ 39$	1057  1058		$362 \ 363 \ 364$	1728  1729
	5304 $5305$			40 $41$ $42$ $43$	1059  1060		$365 \ 366 \ 367$	1746  1747
	5306 $5307$			44 $45$ $46$ $47$	1064  1065		368 369 370	1748  1749
	5308 5309			48 $49$ $50$ $51$	1066  1624		371 372 373	2536 $2537$
	5310 $5311$			52 $53$ $54$ $55$	1625  1626		374 $375$ $376$	2538 2539
	5312 5313			$107 \ 108 \ 109$	1627  1628		377 378 379	2540 $2541$
	5314 $5315$			$110 \ 111 \ 112$	1629  1630		380 381 382	2542  2543
	5316 $5317$			$113 \ 114 \ 115$	1631  1632		383 384 385	2544 $2545$
	5318 $5319$			116 117 118	1633  1634		386 387 388	2546 $2547$
	5320 5321			$119 \ 120 \ 121$	1635  1636		389 561 566	2548 2549
	5322 5323			$122 \ 123 \ 124$	1637  1638		581 586 587	2550 $2551$
	5324 $5325$			$125 \ 126 \ 127$	$1639 \ 1640$		$588 \ 589 \ 590$	2552 $2553$

Table 48:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off /	Т	n	On / T	Off / T
681	591 $592$ $593$	2554 2555	681	750 751 752	3757	3758	681		5291 5292
	594 $595$ $596$	2556 2557		753 $754$ $755$	3759	3760			5293 5294
	597 $598$ $599$	2558  2559		756 $757$ $758$	3761	3762			5295 $5296$
	600 $601$ $602$	2560 2561		759 760 1050	3763	3764			5297 5298
	603 $604$ $605$	2562  2563		1075 1076	3765	3766			5299 5300
	606 $607$ $608$	2564 $2565$		1077 1078	3767	3768			5301 5302
	609 $610$ $611$	2566 2567		1079 1080	3769	3770			5303 5304
	612 $613$ $614$	2568  2569		1081 1082	3771	3772			5305 5306
	615 $616$ $617$	2570 2571		1083 1084	3773	3774			5307 5308
	618 $619$ $620$	2572 2573		1105 1106	3775	3776			5309 5310
	621 $622$ $623$	2574 $2575$		1107 1108	3777	3778			5311  5312
	624 $625$ $626$	2576 $2577$		1109 1110	3779	3780			5313 $5314$
	627 $628$ $629$	2578  2579		1111 1112	3781	3782			5315 $5316$
	630 $631$ $632$	2580 $2581$		1113 1135	3783	3784			5317 $5318$
	633 $634$ $635$	2582  2583		1136 1137	3785	3786			5319 $5320$
	636 $637$ $638$	2584 $2585$		1138 1139	3787	3788			5322 $5323$
	639 $640$ $641$	2586  2587		1140 1141	3789	3790			5324 $5325$
	642 $643$ $644$	2588  2589		1142 1165	3791	3792			5327 $5328$
	645 $646$ $647$	2590 $2591$		1166 1167	3793	3794			5329 $5330$
	648 $649$ $650$	2592 $2593$		1168 1169	3795	3796			5331 $5332$
	651 $652$ $653$	2594 $2595$		1170 1171	3797	3798			5333 5334
	654 $655$ $656$	2596 $2597$		1196  1197	3799	3800			5335 $5336$
	657 $658$ $659$	2598  2599		$1198 \ 1199 \ /$	3801	3802			5337 $5338$
	660 $661$ $662$	2600 2601		422	3803	3804			5339 $5340$
	663 $664$ $665$	2602 2603			3805	3806			5342 $5343$
	666 $667$ $668$	2604  2605			3807	3808			5344 $5345$
	669 $670$ $671$	2606  2607			3809	3810			5348 $5349$
	672 $673$ $674$	2608 2609			3811	3812			5350 $5354$
	675 $676$ $677$	2610 2611			3813	3815			5355 $5356$
	678 $679$ $680$	2613  2614			3816	3817			5357 $5359$
	681 $682$ $683$	2615  2616			3818	3819			5360 $5361$
	684 $685$ $686$	2617  2619			3821	3822			5362 $5363$
	687 $688$ $689$	2620 2621			3823	3824			5365 5366
	690 $691$ $692$	2622  2623			3825	3827			5367 5368
	693 $694$ $695$	2625  2626			3828	3829			5372 $5373$
	696 $697$ $698$	2627  2628			3830	3831			5374 $5392$
	699 700 701	2629 2631			3833	3834			5393 5394
	702 703 704	2632 2633			3835	3836			5395 / 423
	705 706 707	2634  2635			3837	3839	680	761 / 1	1028 1055 /
	708 709 710	2637 2638			3840	3841		1.0	2
	711 712 713	2639 2640			3842	3843	679	/ 0	706 / 1
	714 715 716	2641 2658			3860	3861	678	/ 0	761 / 1
	717 718 719	2659 2660			3862	3863	677	/ 0	1050 / 1
	720 721 722	2661 3738			5271	5272	676	/ 0	962 / 1
	723 724 725	3739 3740			5273	5274	675	/ 0	701 / 1
	726 727 728	3741 3742			5275	5276	674	/ 0	686 / 1
	729 730 731	3743 3744			5277	5278	673	/ 0	
	132 133 734	3745 3746			5279	5280	672	/ U	<u> </u>
	735 736 737	3747 3748			5281	5282	671	1 581 / 2	1009 1032
	138 139 740	3749 3750 2751 2750			5283	5284	670	1000 1022	$\frac{1034}{606}$ $\frac{1170}{1170}$
	(41 (42 (43 744 745 746	3/31 3/32 2752 2754			0280 5007	0280 5000	670	1009 1032	090 II/U
	144 149 140	3755 3756			0201 5000 -	9288 5200		1094 / 9	1171 1199 /
	141 140 149	9199 9190			02093	5290	660		4
							009		

Table 49:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	<b>On</b> / 7	Г	Off / '	Г	n	On /	Т	Off /	Т
669	696 1170	1 581 1009	664	1695	1696	330 33	1 332	664	2613	2614	683 6	684 685
	$1171 \ 1199 \ /$	$1032 \ 1034 \ /$		1697	1698	$333 \ 33$	$4 \ 335$		2615	2616	687 6	689 689
	4	5		1699	1701	$336 \ 33$	$7 \ 338$		2617	2619	690 6	$591 \ 692$
668	/ 0	561 / 1		1702	1703	$339 \ 34$	$0 \ 341$		2620	2621	693 6	694 695
667	1 561 / 2	993 1014		1704	1705	$342 \ 34$	$3 \ 344$		2622	2623	696 6	697 698
		1037 / 3		1707	1708	$345 \ 34$	$6 \ 347$		2625	2626	$699 \ 7$	700 702
666	/ 0	561 / 1		1709	1710	$348 \ 34$	$9 \ 350$		2627	2628	703 7	$04 \ 705$
665	/ 0	1 / 1		1711	1713	$351 \ 35$	$2 \ 353$		2629	2631	707 7	$08 \ 709$
664	1  962  993	8 9 10 11 12		1714	1715	$354 \ 35$	$5 \ 356$		2632	2633	710 7	711 712
	1009  1013	$13 \ 30 \ 31 \ 32$		1716	1717	$357 \ 35$	$8 \ 359$		2634	2635	713 7	714 715
	1014 1018	$33 \ 34 \ 35 \ 36$		1719	1720	360 36	1 362		2637	2638	716 7	17 718
	1028 1032	$37 \ 38 \ 39 \ 40$		1721	1722	$363 \ 36$	4 365		2639	2640	719 7	20 721
	1033 1034	41 42 43 44		1723	1725	366 36	7 368		2641	3738	722 7	23 724
	1037 1040	45 46 47 48		1726	1727	369 37			3739	3740	725 7	26 727
	1041 1042	49 50 51 52		1728	1729	372 37	3 374		3741	3742	728 7	29 730
	1058 1059	53 54 55 107		2536	2537	375 37	6 377		3743	3744	731 7	32 733
	1060 1064	108 109 110		2538	2539	378 37	9 380		3745	3746	734 7	35 736
	1065 1066	111 112 113		2540	2541	381 38	2 383		3747	3748	737 7	38 739
	1624  1625  1697	114 115 110 117 110 110		2542	2543	384 38	5 380		3749	3750	(40 (	41 (42
	1620 1027	117 110 119		2044	2040	- 301 - 30 EEE E7	0 309 6 EQG		3731	3732 2754	743 1	44 740
	1020  1029  1621	$120 \ 121 \ 122$ $122 \ 124 \ 125$		2540	2547	500 57	0 300 9 590		2755	9756	740 7	41 140
	1630 1031	123 124 123 126 127 128		2550	2049 2551	500 50	0 009		3755	3758	7597	50 751 752 754
	1032  1033  1635  1635	$120 \ 127 \ 120$ $120 \ 130 \ 131$		2552	2551	503 50	1 592		3750	3760	755 7	56 757
	1634 1055 1637	$129 \ 130 \ 131$ $132 \ 133 \ 134$		2554	2555	596 59	4 555 7 508		3761	3762	758 7	50 757 759 760
	1638  1639	132 135 134 135 136 137		2556	2550 2557	599 60	0 601		3763	3764	1075	1076
	1640  1641	138 139 140		2558	2559	602 60	3 604		3765	3766	1077	1078
	1642  1643	$141 \ 142 \ 143$		2560	2561	605 60	6 607		3767	3768	1079	1080
	1644 1645	144 145 146		2562	2563	608 60	9 610		3769	3770	1081	1082
	1646 1647	$147 \ 148 \ 149$		2564	2565	611 61	2 613		3771	3772	1083	1084
	1648 1649	$150 \ 151 \ 152$		2566	2567	614 61	$5 \ 616$		3773	3774	1105	1106
	1650  1651	$153 \ 154 \ 155$		2568	2569	617 $61$	8 619		3775	3776	1107	1108
	1652  1653	$156 \ 157 \ 158$		2570	2571	620 $62$	1 622		3777	3778	1109	1110
	1654  1655	$159\ 160\ 161$		2572	2573	623 $62$	4 625		3779	3780	1111	1112
	1656  1657	$162\ 163\ 164$		2574	2575	626 $62$	7 628		3781	3782	1113	1135
	1658  1659	$165\ 166\ 167$		2576	2577	629 $63$	$0 \ 631$		3783	3784	1136	1137
	1660  1661	$279\ 280\ 281$		2578	2579	632 $63$	$3 \ 634$		3785	3786	1138	1139
	1662  1663	282 $283$ $284$		2580	2581	635 $63$	$6 \ 637$		3787	3788	1140	1141
	1664  1665	285 $286$ $287$		2582	2583	638 $63$	9 640		3789	3790	1142	1165
	1666  1667	288 $289$ $290$		2584	2585	$641 \ 64$	2 643		3791	3792	1166	1167
	1668  1669	291 $292$ $293$		2586	2587	644 64	5 646		3793	3794	1168	1169
	1670  1671	$294 \ 295 \ 296$		2588	2589	$647 \ 64$	8 649		3795	3796	1170	1171
	1672  1673	297 $298$ $299$		2590	2591	$650 \ 65$	1 652		3797	3798	1196	1197
	1674 1675	300 301 302		2592	2593	$653 \ 65$	4 655		3799	3800	1198	1199 /
	1676 1677	303 304 305		2594	2595	656 65	7 658		3801	3802	416	
	1678 1679	306 307 308		2596	2597	659 66	0 661		3803	3804		
	1680 1681	309 310 311		2598	2599	002 66	3 664 6 667		3805	3806		
	1082 1083	012 010 014 015 016 017		2000	2001		0 007		3807	3808		
	1084 1085	315 316 317 219 210 200		2602	2603	671 67	9 670		3809	3810		
	1689 1687	318 319 320 201 200 202		2004	2005 2607	0/1 0/ 674 67	2 013 5 676		3811	3812 2015		
	1600 1601	041 044 040 204 205 206		2000	2007 2600	677 67	5 070 8 670		3816	3010 3817		
	1692 1692	324 323 320 327 328 320		2610.26	2009 311	680.68	682		3818 3	819		
	1694	521 520 525		2010 20		000 00.	. 002		0010 0			

Table 50:  $i_p$  of the particles in MIF1739, to build  ${\cal C}_n$  from  ${\cal C}_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
664	3821 3822		664	5367 5368		649	$164 \ 165 \ 166$	1666 1667
	3823 3824			5372 $5373$			167 279 280	1668 1669
	3825 3827			5374 / 415			281 282 283	1670 1671
	3828 3829		663	581 1061	$1 \ 5326 \ 5351$	•	284 285 286	1672 1673
	3830 3831			1063 / 3	5353 / 4		287 288 289	1674  1675
	3833 3834		662	/ 0	1061 / 1		290 291 292	1676 1677
	3835 3836		661	1 1061 / 2	571 1049		$293 \ 294 \ 295$	1678 1679
	3837 3839				1051 / 3		$296 \ 297 \ 298$	1680 1681
	3840 3841		660	5321 5347	1 5336 5363		299 300 301	1682 1683
	3842 3843			5375 / 3	5365 / 4		302 303 304	1684  1685
	5271  5272		659	566 1045 / 2	581 1061		305 306 307	1686  1687
	5273 $5274$				1063 / 3		308 309 310	1688  1689
	5275 $5276$		658	1 / 1	566 1045 / 2		311 312 313	1690  1691
	5277 5278		657	561  1039	$1 \ 5321 \ 5347$		314 $315$ $316$	1692  1693
	5279 $5280$			1067 / 3	5375 / 4		317 318 319	1694  1695
	5281 $5282$		656	5336 $5365$ /	561 1039		320 321 322	1696  1697
	5283 $5284$			2	1067 / 3		$323 \ 324 \ 325$	1698  1699
	5285 $5286$		655	1 / 1	5336 5365 /		326 327 328	1702 1703
	5287 $5288$				2		329 330 331	1704 1705
	5289 5290		654	/ 0	1 / 1		332 333 334	1707 1708
	5291 5292		653	/ 0	5356 / 1		335 336 337	1709 1710
	5293 5294		652	/ 0	3825 / 1		338 339 340	1711 1713
	5295 5296		651	3825 5356 /	1040 1041		341 342 343	1714 1715
	5297 5298		0 <b>5</b> 0	2	1042 / 3		344 345 346	1716 1717
	5299 5300		650 C40	/ 0	$\frac{1701 / 1}{0.000}$		347 348 349	1719 1720
	5301 5302		649	1 8 9 10 11	962 1013		350 351 352	1721 1722
	5303 5304				1018 1023		353 354 355	1723 1725
	5305 5300 5207 5208			32 $33$ $34$ $35$	1028  1033  1046  1047		300 307 308	1/20 $1/2/1728$ $1720$
	5307 5308 5200 5210			30 37 38 39	1040  1047  1067		309 300 301	1/28 1/29
	5211 5212			40 41 42 45	1046 1004		265 266 267	2000 2007
	5311 5312 5312 5314			44 45 40 47	1600 1600		368 360 370	2538 2539
	5315 5316			40 49 50 51 52 53 54 55	1624  1625  1627		371 372 373	2540 2541 2542 2543
	5317 5318			$107 \ 108 \ 109$	1620  1627  1629		374 375 376	2542 $25452544$ $2545$
	5319 5320			107 100 100 110 111 112	1630 1631		377 378 379	2544 2545 2546 2547
	5322 5323			110 111 112 113 114 115	1632  1633		380 381 382	2548 2549
	5324 5325			116 117 118	1634 1635		383 384 385	2550 2551
	5326 $5327$			110 111 110 119 120 121	1636  1637		386 387 388	2552 $2553$
	5328 $5329$			122 123 124	1638 1639		389 561 566	2554 $2555$
	5330 5332			$125 \ 126 \ 127$	1640  1641		571 576 581	2556 $2557$
	5333 5334			$128 \ 129 \ 130$	1642  1643		586 587 588	2558 2559
	5335 $5336$			131 132 133	1644 1645		589 590 591	2560 2561
	5337 5338			$134 \ 135 \ 136$	1646 1647		592 593 594	2562 2563
	5339 5340			$137 \ 138 \ 139$	1648 1649		595 596 597	2564 2565
	5342 5343			$140 \ 141 \ 142$	1650 1651		598 599 600	2566 2567
	5344 5345			$143 \ 144 \ 145$	1652 1653		601 602 603	2568 2569
	5348 5349			$146 \ 147 \ 148$	1654  1655		604 605 606	2570 2571
	5350 $5351$			$149\ 150\ 151$	1656   1657		607 608 609	2572 2573
	5353 $5354$			$152 \ 153 \ 154$	1658  1659		610 611 612	2574 $2575$
	5355 $5356$			$155 \ 156 \ 157$	1660 1661		613 $614$ $615$	2576 $2577$
	5360 $5361$			$158\ 159\ 160$	1662 1663		616 617 618	2578 2579
	5362 $5363$			$161 \ 162 \ 163$	$1664 \ 1665$		619 $620$ $621$	2580 2581
	5365  5366						$622 \ 623 \ 624$	2582 $2583$

Table 51:  $i_p$  of the particles in MIF1739, to build  ${\cal C}_n$  from  ${\cal C}_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off /	Т	n	On / T	Off / T
649	625 $626$ $627$	2584 2585	649		3791	3792	649		5332 5333
	628 $629$ $630$	2586  2587			3793	3794			5334 $5335$
	631 $632$ $633$	2588  2589			3795	3796			5337 5338
	634 $635$ $636$	2590 2591			3797	3798			5339 5340
	637 $638$ $639$	2592 2593			3799	3800			5342 5343
	640 $641$ $642$	2594 2595			3801	3802			5344 5345
	643 $644$ $645$	2596 2597			3803	3804			5348 5349
	646 647 648	2598 2599			3805	3806			5350 5354
	649 650 651	2600 2601			3807	3808			5355 5356
	652 $653$ $654$	2602 2603			3809	3810			5360 5361
	655 $656$ $657$	2604 2605			3811	3812			5362 5366
	658 $659$ $660$	2606 2607			3813	3815			5367 5368
	661 662 663	2608 2609			3816	3817			5372 5373
	664 $665$ $666$	2610 2611			3818	3819			5374 / 399
	667 $668$ $669$	2613 2614			3821	3822	648	/ 0	1/1
	670 $671$ $672$	2615 2616			3823	3824	647	1/1	$\frac{1}{1147}$ 1148 /
	673 674 675	2613 2610 2617 2619			3825	3827	011	1/1	2
	676 677 678	2620 2621			3828	3829	646	686 691 696	1058 1059
	679 680 681	2620 2621			3830	3831	010	701 706 761	1060 1087
	682 683 684	2622 2626			3833	3834		962 1028	1088 1089
	685 $687$ $688$	2626 - 2626 2627 - 2628			3835	3836		1055 / 9	1000 1003
	689 690 692	2620 2631			3837	3830		1000 / 5	1118 1110 /
	693 694 695	2632 2633			3840	3841			10
	697 $698$ $699$	2632 2635			3842	3843	645	/ 0	962 / 1
	700 $702$ $703$	2637 2638			5271	5272	644	962 / 1	$\frac{1028}{1028}$
	704 705 707	2639 2640			5273	5274	011	502 / 1	2
	708 709 710	2600 2010 2641 3738			5275	5276	643	/ 0	962 / 1
	$700 \ 700 \ 710$ $711 \ 712 \ 713$	3739 3740			5277	5278	642	/ 0	$\frac{562}{761}$
	714 $712$ $716714$ $715$ $716$	3741  3742			5279	5280	641	/ 0	$\frac{101}{686}$ / 1
	717 $718$ $719$	3743 3744			5281	5282	640	/ 0	$\frac{1000 / 1}{706 / 1}$
	720 $721$ $722$	3745 3746			5283	5284	639	/ 0	$\frac{691}{1}$
	723 $724$ $725$	3747 3748			5285	5286	638	/ 0	$\frac{001}{701}$ / 1
	726 $727$ $728726$ $727$ $728$	3749 3750			5287	5288	637	/ 0	$\frac{101}{696}$ / 1
	729 $730$ $731$	3751 3752			5289	5290	636	/ 0	1/1
	732 $733$ $734$	3753 3754			5291	5292	635	1/1	$\frac{1}{1141}$ 1142 /
	735 736 737	3755 3756			5293	5294		- / -	2
	738 $739$ $740$	3757 3758			5295	5296	634	/ 0	1/1
	741 $742$ $743$	3759 3760			5297	5298	633	1 686 691	$\frac{1052}{1053}$
	744 745 746	3761 3762			5299	5300		696 701 706	1054 1081
	747 748 749	3763 3764			5301	5302		761 962 1013	1082 1083
	750 $751$ $752$	3765 3766			5303	5304		/ 9	1084 1111
	753 $754$ $755$	3767 3768			5305	5306		, .	1112 1113 /
	756 757 758	3769 3770			5307	5308			10
	759 760 1081	3771 3772			5309	5310	632	/ 0	1013 / 1
	1082 1083	3773 3774			5311	5312	631	/ 0	962 / 1
	1084 1087	3775 3776			5313	5314	630	/ 0	761 / 1
	1088 1089	3777 3778			5315	5316	629	/ 0	701 / 1
	1090 1111	3779 3780			5317	5318	628	/ 0	706 / 1
	1112 1113	3781 3782			5319	5320	627	/ 0	696 / 1
	1117 1118	3783 3784			5322	5323	626	/ 0	691 / 1
	1119 1141	3785 3786			5324	5325	625	/ 0	686 / 1
	1142  1147	3787 3788			5327	5328	624	/ 0	1/1
	1148 / 398	3789 3790			$5329 \ 5$	5330	623	/ 0	561 / 1
	,			L			622	· ·	1005 1027

Table 52:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off / T	n	On / T
622	1 561 / 2	1029 / 3	594		701 / 1	564	
621	/ 0	576 / 1	593	/ 0	706 / 1	563	/ 0
620	/ 0	1/1	592	/ 0	761 / 1	562	995 / 1
619	/ 0	571 / 1	591	/ 0	696 / 1		
618	1 576 / 2	1001 1022	590	/ 0	581 / 1	561	/ 0
		1024 / 3	589	/ 0	576 / 1	560	/ 0
617	/ 0	576 / 1	588	/ 0	686 / 1	559	/ 0
616	/ 0	1 / 1	587	/ 0	691 / 1	558	/ 0
615	1/1	1025 1026 /	586	/ 0	561 / 1	557	/ 0
		2	585	/ 0	1 / 1	556	/ 0
614	/ 0	1 / 1	584	$1 \ 561 \ 576$	$969 \ 970 \ 979$	555	/ 0
613	$1 \ 1025 \ 1026$	581 1009		$581 \ 686 \ 691$	980 $981$ $994$	554	/ 0
	/ 3	$1032\ 1034\ /$		696 701 706	$995 \ 996 \ 997$	553	/ 0
		4		761 1165 /	1015  1016	552	/ 0
612	/ 0	1 / 1		11	1017 / 12	551	/ 0
611	1 / 1	1025 1026 /	583	/ 0	1165 / 1	550	/ 0
		2	582	/ 0	971 / 1	549	/ 0
610	1025 1026 /	1 1030 1031	581	/ 0	706 / 1	548	/ 0
	2	/ 3	580	/ 0	701 / 1	547	/ 0
609	1 / 1	$1025 \ 1026 \ /$	579	/ 0	581 / 1	546	/ 0
		2	578	/ 0	761 / 1	545	1 510 / 2
608	/ 0	1 / 1	577	/ 0	561 / 1		
607	$1 \ 1025 \ 1026$	$561 \ 993 \ 1014$	576	/ 0	686 / 1	544	/ 0
	/ 3	1037 / 4	575	/ 0	696 / 1	543	/ 0
606	/ 0	1 / 1	574	/ 0	576 / 1	542	/ 0
605	1 / 1	$1035\ 1036\ /$	573	/ 0	691 / 1	541	1 754 / 2
		2	572	/ 0	510 / 1		
604	561 $571$ $576$	963 $964$ $965$	571	576 581 686	982 $983$ $998$	540	510 / 1
	$581 \ 686 \ 691$	$966 \ 967 \ 968$		691 696 701	999 1000	539	/ 0
	696 1001	974 $975$ $976$		706 761 1492	1019  1020	538	/ 0
	1022 1024	977 $978$ $987$		1493 1494	1021  1022	537	/ 0
	1046 1047	988 989 990		1495 1496	1046 1047	536	743 754 / 2
	1048 1075	991 992 1006		1497 1498	1048 1075		
	1076 1077	1007 1008		1499 1500	1076 1077	535	571 / 1
	1078 1105	1010 1011		1501 1502	1078 1105	534	/ 0
	1106 1107	1012 / 23		1503 / 20	1106 1107	533	510 571 66
	1135 1136 /				1135 1136 /		662 681 68
600	22	000 / 1		F10 F01 10FF	21		
603	/ 0	$\frac{686 / 1}{606 / 1}$	570	510 561 1255	1492 1493		(58 (59 / 1.
602 co1	/ 0	$\frac{696 / 1}{591 / 1}$		1256 1257	1494 1495	500	
601 COO	/ 0	$\frac{581 / 1}{601 / 1}$		1278 1279	1496 1497	532	/ 0
500	/ 0	$\frac{691 / 1}{576 / 1}$		1280 1297	1498 1499	531	$\frac{70}{510571}$
599	/ 0	$\frac{5/6}{1}$		1298 1311 /	1500 1501	530	510 571 / 2
598	/ 0			11	1502 1503 /	500	
597	/0	$\frac{1/1}{070,072,084}$	500		$\frac{12}{1911/1}$	529	/ 0
590	1 001 070 591 696 601	912 913 964	569	/ 0	$\frac{1311 / 1}{1257 / 1}$	520	$\frac{70}{510.571.72}$
	606 706 761	909 900 1001 1009 - 1009	000 567	/ 0	1207 / 1 581 / 1	027	010 071 / 2
		1004 1003	507	/ 0	510 / 1	506	/ 0
	1010 1040 /	1004 1024	500	/ 0	561 / 1	525	/ 0
	11	1020 1020 /	564	510 561 581	1955 1956	520	571 576 / 2
505	701 / 1	$\frac{12}{1018}$ 1045 /	004	1586 1587	1200 1200	024	011 010 / 2
090	101 / 1	2		1590 / 6	1210 1219	599	/ 0
504	/ 0			1000 / 0	1200 1231	525 522	/ 0
0.94	1 / 0					044	_ / •

Off / T 1298 / 7 1587 / 1

1586 1590 /

756 757 758

705 707 727

681 682 / 2 510 / 1 743 / 1 754 / 1

687 710 711

661 662 / 2 571 / 1 708 709 728

729 730 731

743 744 745746 754 755

757 758 759

681 682 705

661 662 687

/ 3 571 / 1

/ 3

/ 3

/ 12 571 / 1 510 / 1

/ 3 571 / 1 510 / 1

571 661  $681 \ 682$ 

 $705 \ 757$ 

759 / 11

Table 53:  $i_p$  of the particles in MIF1739, to build  ${\cal C}_n$  from  ${\cal C}_{n+1}$  (cont.)

$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	n	On / T	Off / T	n	On / T	Off / T
521 $\sqrt{0}$ 683 (1)       482 $\sqrt{0}$ 339 / 1       758 759 / 2         519 $\sqrt{0}$ 636 / 1       481       339 / 1       758 759 / 2         518 $\sqrt{0}$ 636 / 1       479       339 / 1       545 667 / 2         517       516 57 758       634 635 658       477       339 / 1       681 705 / 2         759 / 7       659 660 / 8       476 $\sqrt{0}$ 339 / 1       681 705 / 2         759 / 7       659 660 / 8       476 $\sqrt{0}$ 339 / 1       667 692 / 2         516 $\sqrt{0}$ 510 / 1       473       339 / 1       667 692 / 2         515 $\sqrt{0}$ 567 / 1       474 $\sqrt{0}$ 339 / 1         511 $\sqrt{0}$ 576 / 1       473 $\sqrt{0}$ 510 / 1         512       571 576 / 2       757 758 759       471 $\sqrt{0}$ 511 / 1         511 $\sqrt{0}$ 576 / 1       468 $\sqrt{0}$ 576 / 1         507 $\sqrt{0}$ 576 / 1       468 $\sqrt{0}$ 576 / 1         503 $\sqrt{0}$ 576 / 1       463 $\sqrt{0}$ 576 / 1         504	522		576 / 1	483	339 / 1	541 585 / 2
520 $\overline{576}/1$ 684         685/2         481 $\overline{339}/1$ $\overline{758}$ $759/2$ 518 $/0$ $\overline{636}/1$ 479 $\overline{339}/1$ $545$ $567/2$ 517 $\overline{510}$ $\overline{571}$ $\overline{636}$ $635$ $\overline{637}$ $\overline{339}/1$ $\overline{645}$ $\overline{650}$ $\overline{759}/7$ $\overline{659}$ $\overline{600}/8$ $\overline{476}$ $\overline{339}/1$ $\overline{667}$ $\overline{692}/2$ $\overline{515}/0$ $\overline{696}/1$ $474$ $\overline{70}$ $\overline{339}/1$ $\overline{670}/2$ $514$ $/0$ $\overline{576}/1$ $473$ $\overline{300}/1$ $\overline{339}/1$ $512$ $\overline{71}$ $\overline{757}$ $\overline{758}$ $\overline{79}/7$ $\overline{71}/7$ $\overline{750}/7$ $510$ $/0$ $\overline{576}/1$ $468$ $\sqrt{0}$ $\overline{576}/1$ $505$ $\overline{576}/1$ $463$ $\overline{76}/7$ $\overline{71}/1$ $\overline{63}/7$ $502$ $\overline{510}$ $\overline{576}/7$ $\overline{73}/72$ $\overline{62}/7$ $\overline{73}/72$ $\overline{70}$ $\overline{576}/7$ $\overline{71}/72$ $\overline{63}/72$	521	/ 0	683 / 1	482	/ 0	339 / 1
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	520	576 / 1	684 685 / 2	481	339 / 1	758 759 / 2
518         / 0         630 571 576         586 610 611 510 571 576 634 635 658 759 / 7         479 339 / 1         339 / 1         545 567 / 2 339 / 1         681 705 / 2 339 / 1         681 705 / 2 691 7         339 / 1         681 705 / 2         7339 / 1         681 705 / 2         7339 / 1         681 705 / 2         7339 / 1         681 705 / 2         7339 / 1         681 705 / 2         7339 / 1         681 705 / 2         7339 / 1         667 692 / 2         7 <th7< th=""> <th7< th="">         7</th7<></th7<>	519	/ 0	576 / 1	480	/ 0	339 / 1
517       510       571       576       634       635       477       339       /1       681       705       /2         759       7       659       660       /8       477       339       /1       681       705       /2         516       /0       510       /1       475       339       /1       667       692       /2         514       /0       576       1       473       /0       510       /1         513       /0       571       576       1       473       /0       510       /1         514       /0       571       77       78       759       471       /0       581       /1       1         510       /0       571       76       73       470       /0       696       /1         509       71       73       466       576       /1       609       633       /2         507       /0       576       /1       465       /0       576       /1       505       576       /1       463       /0       576       /1       505       576       /1       463       /0       571       576	518	/ 0	636 / 1	479	339 / 1	545 567 / 2
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	517	510 $571$ $576$	$586 \ 610 \ 611$	478	/ 0	339 / 1
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		696 $757$ $758$	634 $635$ $658$	477	339 / 1	681 705 / 2
516 $/ 0$ 510 / 1       475       339 / 1       667 692 / 2         515 $/ 0$ 576 / 1       474 $/ 0$ 339 / 1         514 $/ 0$ 576 / 1       473 $/ 0$ 510 / 1         512       571 576 / 2       757 758 759       471 $/ 0$ 666 692 / 2 $/ 0$ 571 / 1       473 $/ 0$ 581 / 1 $/ 0$ 581 / 1 $/ 0$ 576 / 1       475 $/ 0$ 576 / 1 $/ 0$ 666 / 1 $/ 0$ 576 / 1       468 $/ 0$ 576 / 1 $/ 0$ 667 / 1 $508$ $/ 0$ 576 / 1       468 $/ 0$ 576 / 1 $/ 0$ $504$ $/ 0$ 576 / 1       463 $/ 0$ 576 / 1 $/ 0$ $501$ $/ 0$ 576 / 1       463 $/ 0$ 571 / 1 $/ 6$ $632 / 7$ $502$ $510$ $510$ $73$ $460$ $/ 0$ $70$ $70$ $70$ $70$ $70$ $70$ $70$ $70$ $70$ $70$ $70$ $70$ $70$		759 / 7	659660/8	476	/ 0	339 / 1
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	516	/ 0	510 / 1	475	339 / 1	667 692 / 2
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	515	/ 0	696 / 1	474	/ 0	339 / 1
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	514	/ 0	576 / 1	473	/ 0	510 / 1
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	513	/ 0	571 / 1	472	/ 0	581 / 1
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	512	$571\ 576\ /\ 2$	757 $758$ $759$	471	/ 0	701 / 1
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			/ 3	470	/ 0	696 / 1
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	511	/ 0	571 / 1	469	/ 0	571 / 1
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	510	/ 0	576 / 1	468	/ 0	576 / 1
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	509	$571\ 576\ /\ 2$	541 $562$ $585$	467	/ 0	657 / 1
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			/ 3	466	576 / 1	609 633 / 2
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	508	/ 0	571 / 1	465	/ 0	576 / 1
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	507	/ 0	576 / 1	464	/ 0	656 / 1
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	506	/ 0	747 / 1	463	/ 0	584 / 1
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	505	576 / 1	712 732 / 2	462	339 510 571	582 $583$ $606$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	504	/ 0	576 / 1		576 696 701	607 608 631
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	503	/ 0	688 / 1	101	/ 6	632 / 7
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	502	510 541 562	689 690 713	461	/ 0	339 / 1
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		571 576 581	714 715 733	460	/ 0	701 / 1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	501	585 / 7	734 748 / 8	459	/ 0	510 / 1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	501	/ 0	581 / 1	458	/ 0	$\frac{5(1/1)}{600}$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	500 400	/ 0	$\frac{510 / 1}{571 / 1}$	457	/ 0	$\frac{090 / 1}{576 / 1}$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	499	/ 0	576 / 1	450	/ U 571 576 / 2	557 580 605
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	490 407	571 576 / 2	541 562 585	400	571 570 / 2	/ 3
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	491	5/1 5/0 / 2	/ 3	454	/ 0	<u>/ 3</u> 571 / 1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	496	/ 0	571 / 1	453	/ 0	$\frac{571}{576}$ / 1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	495	/ 0	$\frac{571}{576}$ / 1	452	/ 0	$\frac{370 / 1}{355 / 1}$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	494	571 576 / 2	666 667 692	451	355 576 / 2	526 542 560
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	101	011 010 / 2	/ 3	101		/ 3
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	493	/ 0	571 / 1	450	/ 0	576 / 1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	492	/ 0	576 / 1	449	/ 0	259 / 1
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	491	/ 0	339 / 1	448	259 / 1	543 544 / 2
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	490	339 576 / 2	637 638 663	447	526 542 543	355 680 704
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		1	/ 3		544 560 / 5	726 $742$ $753$
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	489	/ 0	576 / 1		,	/ 6
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	488	/ 0	339 / 1	446	355 $510$ $557$	702 703 723
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	487	339 / 1	587 612 / 2		571 $576$ $580$	724 $725$ $740$
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	486	/ 0	339 / 1		605 / 7	741 752 / 8
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	485	$339 \ 510 \ 541$	$563 \ 564 \ 565$	445	/ 0	510 / 1
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		571 $576$ $581$	588 $589$ $590$	444	/ 0	571 / 1
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		$585\ 667\ 681$	$591\ 613\ 614$	443	$339 \ 510 \ 545$	605 629 630
484         705         758         759         640         641         664         692         696         / 8         677         678         679           484         70         339         1         442         70         355         71           483         441         441         441         441         441         441		692 $696$ $701$	615 $616$ $639$		567 $571$ $667$	653 $654$ $655$
484     / 15     665 / 16     / 9       484     / 0     339 / 1     442     / 0     355 / 1       483     441     441     441		705 $758$ $759$	640 $641$ $664$		692 696 / 8	677 $678$ $679$
484     / 0     339 / 1     442     / 0     355 / 1       483     441		/ 15	665 / 16			/ 9
483 441	484	/ 0	339 / 1	442	/ 0	355 / 1
	483			441		

n	On / T	Off / T
441	355 / 1	667 692 / 2
440	/ 0	339 / 1
439	339 / 1	557 580 / 2
438	557 580 / 2	339 $545$ $567$
		/ 3
437	339 / 1	557580/2
436	/ 0	339 / 1
435	339 / 1	676 700 / 2
434	/ 0	339 / 1
433	/ 0	355 / 1
432	/ 0	510 / 1
431	/ 0	696 / 1
430	/ 0	576 / 1
429	/ 0	571 / 1
428	/ 0	259 / 1
427	259 571 / 2	749 750 751
10.0		/ 3
426	/ 0	571 / 1
425	/ 0	389 / 1
424	389 / 1	$\frac{722}{200}$ / 1
423	/ U	$\frac{389 / 1}{716 725 / 9}$
422	$\frac{389}{220}$ 255 510	$\frac{(10\ (33\ )\ 2}{607\ 608\ 600}$
421	539 533 510	097 098 099 710 720 721
	071 070 710 725 / 7	119 120 121 797 799 / 9
420		<u> </u>
420	/ 0	$\frac{330 / 1}{330 / 1}$
413	339 355 541	693 694 695
410	545 $557$ $567$	716 $717$ $718$
	580 / 7	735 736 / 8
417	/ 0	541 / 1
416	/ 0	$\frac{339}{1}$
415	339 / 1	545 567 / 2
414	/ 0	339 / 1
413	339 / 1	671 672 / 2
412	/ 0	389 / 1
411	389 / 1	557 580 / 2
410	/ 0	389 / 1
409	/ 0	355 / 1
408	/ 0	339 / 1
407	/ 0	510 / 1
406	/ 0	576 / 1
405	/ 0	571 / 1
404	/ 0	343 / 1
403	343 510 / 2	642 643 668
400		$\frac{3}{510/1}$
402 401	/ 0	$\frac{010 / 1}{242 / 1}$
401 700	2/2 / 1	<u>343 / 1</u> 502 617 / 2
400 300	592 617 / 2	343 660 670
099	092 017 / 2	/ 3
398	343 / 1	$\frac{70}{592.617}$
397	/ 0	343 / 1
396		
	I	

Table 54:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off / T
396	$339 \ 343 \ 355$	595 596 619	356	/ 0	557 / 1
	510 $576$ $592$	620 $621$ $644$	355	/ 0	541 / 1
	617 / 7	645 646 / 8	354	/ 0	389 / 1
395	/ 0	339 / 1	353	/ 0	343 / 1
394	596 620 621	355 568 569	352	/ 0	347 / 1
	644 $645$ $646$	570 $592$ $593$	351	/ 0	351 / 1
	$669\ 670\ /\ 8$	$594 \ 617 \ 618$	350	/ 0	355 / 1
		/ 9	349	/ 0	339 / 1
393	/ 0	510 / 1	348	/ 0	510 / 1
392	$339 \ 355 \ 389$	$596 \ 620 \ 621$	347	/ 0	259 / 1
	510 $545$ $557$	644 $645$ $646$	346	$259 \ 339 \ / \ 2$	535 $552$ $554$
	580 / 7	669 670 / 8			/ 3
391	/ 0	545 / 1	345	/ 0	339 / 1
390	/ 0	389 / 1	344	/ 0	271 / 1
389	389 / 1	549 572 / 2	343	271 / 1	555 556 / 2
388	/ 0	389 / 1	342	/ 0	271 / 1
387	389 / 1	557 580 / 2	341	271 / 1	538 558 / 2
386	/ 0	339 / 1	340	$339 \ 343 \ 347$	514 $515$ $522$
385	/ 0	389 / 1		$351 \ 355 \ 389$	523 $524$ $536$
384	/ 0	355 / 1		/ 6	537 / 7
383	/ 0	343 / 1	339	/ 0	389 / 1
382	/ 0	510 / 1	338	/ 0	351 / 1
381	/ 0	576 / 1	337	351 389 892	511 512 513
380	$\frac{1}{2}$ 0	$\frac{259 / 1}{651 659 675}$		894 895 896	516 517 518
379	259 510 / 2	051 052 075		897 898 899	519 520 521
270	/ 0	/ J F10 / 1		$900 \ 901 \ 952$	525 520 527 528 520 520
310 277	/ 0	$\frac{310 / 1}{251 / 1}$		933 933 930	526 529 550 521 529 522
376	251 / 1	$\frac{331 / 1}{673 674 / 2}$		937 938 939	531 532 535
375	351 / 1	$\frac{013\ 014\ /\ 2}{351\ /\ 1}$		940 941 942 943 944 945	542 543 544
374	351 / 1	647 648 / 2		945 944 945 946 947 948	546 547 548
373	/ 0	351 / 1		949 950 951	550 551 559
372	339 343 351	$\frac{600}{600}$ 601 624		/ 30	560 / 31
012	355 389 510	625 $626$ $649$	336	/ 0	$\frac{263}{263}$ / 1
	/ 6	650 / 7	335	263 / 1	932 942 / 2
371	/ 0	389 / 1	334	932 942 / 2	263 892 944
370	/ 0	339 / 1		/	/ 3
369	/ 0	355 / 1	333	263 / 1	932 942 / 2
368	339 355 389	577 578 579	332	523 524 525	894 895 896
	545 $549$ $572$	602 $603$ $604$		536 $537$ $538$	897 $898$ $899$
	647 / 7	627 628 / 8		539 $540$ $554$	$900 \ 901 \ 933$
367	/ 0	545 / 1		555 $556$ $557$	935 $936$ $937$
366	/ 0	647 / 1		558 $559$ $560$	$938 \ 939 \ 940$
365	/ 0	389 / 1		582 $583$ $584$	941 $943$ $945$
364	389 / 1	549 572 / 2		607 $608$ $609$	946 $947$ $948$
363	/ 0	389 / 1		632633 / $23$	949 $950$ $951$
362	389 / 1	553 575 / 2			/ 24
361	/ 0	389 / 1	331	/ 0	554 / 1
360	/ 0	355 / 1	330	/ 0	343 / 1
359	/ 0	339 / 1	329	343 / 1	557 582 / 2
358	339 355 389	597 599 622	328	882 884 885	523 524 525
	/ 3	623 / 4		886 887 888	536 537 538
357	541 557 / 2	573 574 598		889 890 891	539 540 555
		/ 3			

n	On / T	Off / T
328	922 $923$ $924$	556 $558$ $559$
	925 $926$ $927$	560 $583$ $584$
	$928 \ 929 \ 930$	607 $608$ $609$
	931 / 19	632633 / $20$
327	/ 0	924 / 1
326	/ 0	347 / 1
325	347 / 1	884 923 / 2
324	/ 0	389 / 1
323	389 $523$ $524$	882 $885$ $886$
	525 $536$ $537$	887 $888$ $889$
	538 $539$ $540$	890 $891$ $922$
	554 $555$ $556$	925 $926$ $927$
	558 $559$ $560$	$928 \ 929 \ 930$
	/ 15	931 / 16
322	/ 0	560 / 1
321	/ 0	554 / 1
320	/ 0	389 / 1
319	/ 0	343 / 1
318	343 389 922	523 $524$ $525$
	923 $925$ $926$	536 $537$ $538$
	927 928 929	539 $540$ $555$
	930 931 / 11	556 $558$ $559$
		/ 12
317	/ 0	922 / 1
316	/ 0	923 / 1
315	525 539 540	925 926 927
	558 559 560	928 929 930
914	/ 6	$\frac{931}{525}$ / 1
014 919	/ 0	$\frac{323 / 1}{560 / 1}$
010 910	/ 0	559 / 1
312 311	/ 0	550 / 1
311	768 / 1	$\frac{539 / 1}{530 540 / 2}$
300		768 / 1
308	/ 0	$\frac{100 / 1}{389 / 1}$
307	/ 0	$\frac{363 / 1}{343 / 1}$
306	/ 0	$\frac{340 / 1}{347 / 1}$
305	/ 0	$\frac{317 / 1}{267 / 1}$
304	/ 0	$\frac{263}{263}$ / 1
303	/ 0	339 / 1
302	/ 0	271 / 1
301	/ 0	228 / 1
300	/ 0	351 / 1
299	/ 0	275 / 1
298	/ 0	355 / 1
297	/ 0	259 / 1
296	/ 0	320 / 1
295	/ 0	319 / 1
294	/ 0	358 / 1
293	271 / 1	340 359 / 2
292	/ 0	271 / 1
291	/ 0	299 / 1
290	/ 0	279 / 1
289		

Table 55:  $i_p$  of the particles in MIF1739, to build  ${\cal C}_n$  from  ${\cal C}_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
289	$267 \ 271 \ 320$	298 317 318	255		137 / 1	238	1007 1008	309 310 311
	$340 \ 347 \ 351$	$336 \ 337 \ 338$	254	137 / 1	335 354 / 2	-	1010 1011	$312 \ 313 \ 314$
	359 / 7	$356 \ 357 \ / \ 8$	253	/ 0	137 / 1	-	1012 1624	$315 \ 316 \ 325$
288	/ 0	351 / 1	252	137 / 1	386 387 / 2	-	1625 1626	$326 \ 327 \ 328$
287	/ 0	267 / 1	251	/ 0	137 / 1	-	1627 1628	$329 \ 330 \ 331$
286	/ 0	271 / 1	250	137 / 1	247 264 / 2	-	1629 1630	332 $333$ $334$
285	/ 0	347 / 1	249	/ 0	137 / 1	-	1631 1632	$345 \ 346 \ 347$
284	271 347 / 2	$320 \ 340 \ 359$	248	137 / 1	244 278 / 2	-	1633 1634	$348 \ 349 \ 350$
		/ 3	247	/ 0	137 / 1	-	1635 1636	$351 \ 352 \ 353$
283	/ 0	347 / 1	246	/ 0	267 / 1	-	1637 1638	$363 \ 364 \ 365$
282	228 $267$ $275$	$260\ 261\ 262$	245	/ 0	347 / 1	-	1639 1640	$366 \ 367 \ 368$
	$343 \ 347 \ 351$	$280\ 281\ 282$	244	$137 \ 244 \ 278$	265 $266$ $284$	-	1641 1642	$369 \ 370 \ 377$
	389 / 7	300 301 / 8		$335 \ 347 \ 354$	$285\ 286\ 304$		1643 1644	$378 \ 379 \ 380$
281	/ 0	343 / 1		/ 6	305 / 7		1645 1646	381 / 148
280	343 / 1	244 278 / 2	243	/ 0	137 / 1	-	1647 1648	
279	/ 0	343 / 1	242	$137 \ 386 \ 387$	244 $278$ $335$	-	1649 1650	
278	/ 0	389 / 1		/ 3	354 / 4		1651 1652	
277	/ 0	275 / 1	241	/ 0	137 / 1		1653  1654	
276	/ 0	228 / 1	240	137 / 1	$386\ 387\ /\ 2$		1656 1657	
275	/ 0	351 / 1	239	/ 0	137 / 1		1658 1660	
274	/ 0	267 / 1	238	244 $247$ $260$	8 9 10 11 12	-	1661 1662	
273	/ 0	347 / 1		$261 \ 262 \ 264$	$13 \ 30 \ 31 \ 32$		1664 1665	
272	/ 0	271 / 1		$265 \ 266 \ 278$	$33 \ 34 \ 35 \ 36$		1666 1668	
271	228 $267$ $271$	$283 \ 302 \ 303$		510 $511$ $512$	$37 \ 38 \ 39 \ 40$		1669 1670	
	275 $347$ $351$	$321 \ 322 \ 323$		513 $514$ $515$	$41 \ 42 \ 43 \ 44$		1672 1673	
	389 / 7	341 342 / 8		516 $517$ $518$	45 $46$ $47$ $48$		1674 / 147	
270	244 278 / 2	$247 \ 264 \ 389$		519 $520$ $521$	$49 \ 50 \ 51 \ 52$	237	/ 0	1624 / 1
		/ 3		522 $523$ $524$	$53 \ 54 \ 55 \ 107$	236	/ 0	1 / 1
269	389 / 1	244 278 / 2		525 $526$ $527$	$108 \ 109 \ 110$	235	1 8 9 10 11	510 $511$ $512$
268	/ 0	228 / 1		528 $529$ $530$	$111 \ 112 \ 113$		$12 \ 13 \ 30 \ 31$	513 $514$ $515$
267	/ 0	389 / 1		531 $532$ $533$	$114 \ 115 \ 116$		$32 \ 33 \ 34 \ 35$	516 $517$ $518$
266	/ 0	275 / 1		534 $535$ $536$	$117 \ 118 \ 119$		36 37 38 39	519 $520$ $521$
265	/ 0	267 / 1		537 $538$ $539$	$120 \ 121 \ 122$		40 41 42 43	522 $523$ $524$
264	/ 0	351 / 1		540 $542$ $543$	$123 \ 124 \ 125$		44 45 46 47	525 $526$ $527$
263	228 $244$ $247$	$360 \ 361 \ 362$		544 $546$ $547$	$126 \ 127 \ 128$		48 49 50 51	$528 \ 529 \ 530$
	264 $267$ $275$	$373 \ 374 \ 375$		548 $550$ $551$	$129 \ 130 \ 131$		52 53 54 55	531 $532$ $533$
	278 351 / 8	$376 \ 384 \ 385$		552 $554$ $555$	$132 \ 133 \ 134$		107 108 109	534 $535$ $536$
		/ 9		556 $558$ $559$	$135 \ 136 \ 138$		110 111 112	$537 \ 538 \ 539$
262	/ 0	137 / 1		560 962 963	$139 \ 140 \ 141$		113 114 115	540 $542$ $543$
261	$137 \ 360 \ 361$	$228 \ 229 \ 230$		964 965 966	142 143 144		116 117 118	544 $546$ $547$
	362 373 374	234 $235$ $236$		967 968 969	$145 \ 146 \ 147$		119 120 121	548 550 551
	375 376 384	244 $245$ $246$		970 971 972	148 149 150		122 123 124	552 $554$ $555$
	385 389 / 11	247 264 278		973 974 975	$151 \ 152 \ 153$		125 126 127	556 $558$ $559$
		/ 12		976 977 978	$154 \ 155 \ 156$		128 129 130	560 962 963
260	/ 0	389 / 1		979 980 981	$157 \ 158 \ 159$		131 132 133	964 $965$ $966$
259	228 229 230	360 361 362		982 983 984	160 161 162		134 135 136	967 968 969
	234 235 236	371 372 373		985 986 987	163 164 165		137 138 139	970 971 972
	244 245 246	374 375 376		988 989 990	166 167 271		140 141 142	973 974 975
	247 264 278	383 384 385		991 992 994	275 287 288		143 144 145	976 977 978
<b>~</b> ~~	/ 12	388 / 13		995 996 998	289 290 291		146 147 148	979 980 981
258	/ 0	382 / 1		999 1000	292 293 294		149 150 151	982 983 984
257	/ 0	137 / 1		1002 1003	295 296 297		152 153 154	985 986 987
256	137 / 1	324 344 / 2		1004 1006	306 307 308		155 156 157	988 989 990
255	/ 0							

Table 56:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
235	158 159 160	991 992 994	216	244 324 331	276 277 296	192	978 979 980	160 161 162
	$161 \ 162 \ 163$	$995 \ 996 \ 998$		/ 3	297 / 4		981 982 983	$163 \ 164 \ 165$
	$164 \ 165 \ 166$	999 1000	215	/ 0	331 / 1		984 $985$ $986$	$166 \ 167 \ 267$
	$167 \ 267 \ 271$	1002 1003	214	/ 0	324 / 1		987 988 989	284 $285$ $286$
	275 $280$ $281$	1004 1006	213	/ 0	244 / 1		990 991 992	287 $288$ $289$
	284 $285$ $286$	1007 1008	212	/ 0	137 / 1		994 $995$ $996$	$304 \ 305 \ 306$
	287 $288$ $289$	1010 1011	211	137 / 1	327 328 / 2		998 999 1000	$307 \ 308 \ 325$
	290 $291$ $292$	1012 1625	210	/ 0	167 / 1		1002 1003	326 / 106
	$293 \ 294 \ 295$	1626  1627	209	167 / 1	256 274 / 2		1004 1006	
	$296 \ 297 \ 304$	1628  1629	208	/ 0	149 / 1		1007 1008	
	$305 \ 306 \ 307$	1630  1631	207	149 / 1	247 264 / 2		1010 1011	
	$308 \ 309 \ 310$	1632  1633	206	/ 0	149 / 1		1012 / 105	
	$311 \ 312 \ 313$	1634  1635	205	/ 0	167 / 1	191	/ 0	962 / 1
	314 $315$ $316$	1636  1637	204	/ 0	137 / 1	190	/ 0	1 / 1
	$325 \ 326 \ 327$	1638  1639	203	/ 0	271 / 1	189	1 962 / 2	$101 \ 270 \ 272$
	$328 \ 329 \ 330$	1640  1641	202	$137 \ 149 \ 167$	272 $273$ $291$			/ 3
	$331 \ 332 \ 333$	1642  1643		247 264 327	292 293 311	188	/ 0	1 / 1
	334 / 136	1644  1645		328 / 7	312 330 / 8	187	1 8 9 10 11	253 $256$ $268$
		1646  1647	201	/ 0	149 / 1		$12 \ 13 \ 30 \ 31$	$269 \ 273 \ 274$
		1648 1649	200	149 / 1	327 328 / 2		32 33 34 35	276 277 278
		1650 1651	199	244 324 327	290 309 310		36 37 38 39	510 511 512
		1652 1653	100	/ 3	329 / 4		40 41 42 43	513 514 515
		1654 1656	198	/ 0	$\frac{244 / 1}{2244 / 1}$		44 45 46 47	516 517 518
		1657 1658	197	/ 0	$\frac{324 / 1}{207 / 1}$		48 49 50 51	519 520 521
		1000  1001  1664	190	/ 0	$\frac{327}{167}$		$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	522 $525$ $526$ $527$
		1665 1666	195	167 / 1	$\frac{107 / 1}{247 264 / 2}$		101 107 108 100 110 111	528 520 530
		1668 1669	103		$\frac{247\ 204\ /\ 2}{149\ /\ 1}$		103 110 111 112 113 114	531 532 533
		1670  1672	192	244 247 256	8 9 10 11 12		112 116 111 115 116 117	534 $535$ $536$
		1673 1674 /	10-	260 261 262	13 30 31 32		118 119 120	537 $538$ $539$
		137		264 272 273	$33 \ 34 \ 35 \ 36$		121 122 123	540 $542$ $543$
234	/ 0	167 / 1		274 276 277	37 38 39 40		$124 \ 125 \ 126$	544 $546$ $547$
233	167 / 1	327 328 / 2		278 510 511	$41 \ 42 \ 43 \ 44$		$127 \ 128 \ 129$	548 $550$ $551$
232	324 327 328	260 261 262		512 $513$ $514$	45 $46$ $47$ $48$		$130 \ 131 \ 132$	552 $554$ $555$
	335 / 4	280 281 / 5		515 $516$ $517$	$49 \ 50 \ 51 \ 52$		$133 \ 134 \ 135$	556 $558$ $559$
231	/ 0	335 / 1		518 $519$ $520$	$53 \ 54 \ 55 \ 107$		$136 \ 137 \ 138$	$560 \ 962 \ 963$
230	/ 0	324 / 1		521 $522$ $523$	$108 \ 109 \ 110$		$139 \ 140 \ 141$	964 $965$ $966$
229	/ 0	167 / 1		524 $525$ $526$	$111 \ 112 \ 113$		$142 \ 143 \ 144$	967 $968$ $969$
228	167 / 1	327 328 / 2		527 $528$ $529$	$114 \ 115 \ 116$		$145 \ 146 \ 147$	970 $971$ $972$
227	/ 0	167 / 1		530 $531$ $532$	$117 \ 118 \ 119$		$148 \ 149 \ 150$	$973 \ 974 \ 975$
226	167 / 1	331 332 / 2		533 534 535	$120 \ 121 \ 122$		151 152 153	976 977 978
225	/ 0	$\frac{167 / 1}{244 272 / 2}$		536 537 538	123 124 125		$154 \ 155 \ 156$	979 980 981
224		$\frac{244}{167}$		539 540 542	$120 \ 127 \ 128$ $120 \ 120 \ 121$		157 158 159 160 161 169	982 983 984 085 086 087
220 000	/ 0	$\frac{107 / 1}{247 264 / 2}$		545 544 540	$129 \ 130 \ 131$ $129 \ 129 \ 124$		$100 \ 101 \ 102$ $162 \ 164 \ 165$	965 960 967
222 991		$\frac{247\ 204\ /\ 2}{137\ /\ 1}$		551 552 554	132 133 134 135 136 137		103 104 103 166 167 280	988 989 990
$\frac{221}{220}$	/ 0	$\frac{107 / 1}{167 / 1}$		555 556 558	138 130 137		281 284 285	991 994 994 995 996 998
219	137 167 244	$\frac{101}{275}$ 294 295		559 560 962	141 142 143		300 / 100	999 1000 990
210	247 264 278	313 314 315		963 964 965	144 145 146		500 / 100	1002 1003
	327 328 / 8	316 333 334		966 967 968	147 148 150			1004 1006
		/ 9		969 970 971	$151 \ 152 \ 153$			1007 1008
218	/ 0	167 / 1		972 973 974	$154 \ 155 \ 156$			1010 1011
217	167 / 1	244 278 / 2		975 976 977	$157 \ 158 \ 159$			1012 / 101
216		,		1		186	/ 0	<u> </u>

Table 57:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
186		300 / 1	163		439 / 1	119	/ 0	110 / 1
185	/ 0	167 / 1	162	/ 0	140 / 1	118	/ 0	85 / 1
184	$167 \ 253 \ 256$	$260\ 261\ 262$	161	140 / 1	464 470 / 2	117	/ 0	84 / 1
	304 / 4	$280\ 281\ /\ 5$	160	464 / 1	472 473 / 2	116	/ 0	78 / 1
183	/ 0	256 / 1	159	439 / 1	469 471 / 2	115	/ 0	24 / 1
182	/ 0	244 / 1	158	/ 0	464 / 1	114	24 / 1	102 116 / 2
181	/ 0	253 / 1	157	/ 0	439 / 1	113	/ 0	24 / 1
180	/ 0	304 / 1	156	/ 0	167 / 1	112	24 / 1	$144 \ 156 \ / \ 2$
179	/ 0	167 / 1	155	167 / 1	$440\ 463\ /\ 2$	111	/ 0	130 / 1
178	$167 \ 390 \ 391$	$229 \ 230 \ 231$	154	241 $242$ $243$	438 $441$ $442$	110	102 156 / 2	$131 \ 145 \ 146$
	$392 \ 393 \ 394$	232 $233$ $234$		254 $255$ $257$	443 $462$ $465$			/ 3
	$395 \ 414 \ 415$	235 $236$ $237$		258 / 7	466 467 / 8	109	/ 0	102 / 1
	416 $417$ $418$	238 $239$ $240$	153	486 $487$ $488$	241 $242$ $243$	108	/ 0	156 / 1
	419 $438$ $439$	241 $242$ $243$		489 $490$ $491$	254 $255$ $257$	107	/ 0	24 / 1
	440 $441$ $442$	245 $246$ $247$		/ 6	258 / 7	106	24 / 1	77 81 / 2
	443 $462$ $463$	248 $249$ $250$	152	/ 0	486 / 1	105	/ 0	89 / 1
	464 $465$ $466$	251 $252$ $254$	151	/ 0	487 / 1	104	76 77 78 79	8 9 10 11 12
	467 $486$ $487$	255 $257$ $258$	150	241 $254$ $255$	488 $489$ $490$		80 81 84 85	$13 \ 30 \ 31 \ 32$
	488 489 490	264 $265$ $266$		/ 3	491 / 4		86 87 88 89	$33 \ 34 \ 35 \ 36$
	491 / 31	284 285 / 32	149	/ 0	255 / 1		96 97 99 100	$37 \ 38 \ 39 \ 40$
177	/ 0	228 / 1	148	/ 0	241 / 1		$102 \ 228 \ 229$	$41 \ 42 \ 43 \ 44$
176	228 $229$ $230$	$390 \ 391 \ 392$	147	/ 0	254 / 1		230 231 232	45 $46$ $47$ $48$
	231 $232$ $233$	$393 \ 394 \ 395$	146	/ 0	167 / 1		233 $234$ $235$	$49 \ 50 \ 51 \ 52$
	234 $235$ $236$	414 $415$ $416$	145	/ 0	137 / 1		236 $237$ $238$	$53 \ 54 \ 55 \ 104$
	237 $238$ $239$	$417 \ 418 \ 419$	144	/ 0	149 / 1		239 240 241	$107 \ 108 \ 109$
	240 $241$ $242$	$438 \ 439 \ 440$	143	/ 0	146 / 1		242 $243$ $244$	$117 \ 118 \ 119$
	243 244 245	441 442 443	142	/ 0	104 / 1		245 246 248	$120 \ 121 \ 122$
	246 248 249	462 463 464	141	/ 0	92 / 1		249 251 252	123 124 132
	251 252 253	465 466 467	140	/ 0	140 / 1		254 255 257	133 134 135
	254 255 256	486 487 488	139	/ 0	143 / 1		258 510 511	136 137 138
	257 258 / 29	489 490 491	138	/ 0	95 / 1		512 513 514	139 147 148
1.75		/ 30	137	/ 0	76 / 1		515 516 517	149 150 151
175	/ 0	$\frac{253 / 1}{244 / 1}$	130	/ 0	98 / 1		518 519 520	152 153 154
172	/ 0	$\frac{244 / 1}{256 / 1}$	130	/ 0	$\frac{101 / 1}{00 \ 100 \ 112}$		021 022 023	150 160 161
170	/ 0	$\frac{230 / 1}{167 / 1}$	104	92 95 104 127 140 167	99 100 113 114 115 199		524 525 520	$109 \ 100 \ 101$ $169 \ 162 \ 164$
171	/ 0	$\frac{107 / 1}{140 / 1}$		137 149 107	114 110 120 120 / 7		521 520 530	$102 \ 103 \ 104$ $165 \ 166 \ 167$
171	/ 0	$\frac{149 / 1}{146 / 1}$	199	/ 0	$\frac{129 / 1}{167 / 1}$		536 537 530	/ 79
169	/ 0	$\frac{140 / 1}{1/3 / 1}$	130	140 146 167	80.86.87.88 /		540 / 71	/ 12
168	143 146 140	228 220 230	102	/ 3	4	103	8 12 30 31 38	5 6 17 18 23
100	143 140 149 167 438 440	231 232 233	131	/ 0	79 / 1	. 105	39 40 48 49	24 25 26 27
	441 $442$ $443$	$231 \ 232 \ 235 \ 236$	130	/ 0	140 / 1		107 108 109	76 79 80 85
	462 463 464	$237 \ 238 \ 239$	129	140 / 1	$\frac{110}{102}$ 116 / 2		101 100 100 119 120 121	86 87 88 89
	465 $466$ $467$	240 $241$ $242$	128	/ 0	104 / 1		120 120 121 122 123 134	96 97 99 100
	$469 \ 470 \ 471$	$243 \ 245 \ 246$	120	104 / 1	97.112/2		135 136 149	$102 \ 103 \ 228$
	472 473 486	248 249 251	126	/ 0	140 / 1		$150 \ 151 \ 259$	229 230 231
	487 489 490	252 $254$ $255$	125	97 102 116 /	126 127 141		$260\ 261\ 277$	232 $233$ $236$
	491 / 25	257 258 / 26		3	142 / 4		278 279 280	237 $238$ $239$
167	/ 0	137 / 1	124	/ 0	97 / 1		281 296 297	240 241 242
166	137 / 1	487 489 / 2	123	/ 0	95 / 1		298 299 300	248 249 251
165	439 468 / 2	486 490 491	122	95 / 1	102 116 / 2		316 317 318	$252 \ 254 \ 255$
		/ 3	121	/ 0	95 / 1		336 337 338	$510 \ 511 \ 512$
164	/ 0	468 / 1	120	102 116 / 2	96 111 125 /	-	541 542 543	513 514 515
163	/ 0	,		/	3		1	

Table 58:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)
n	On / T	Off / T	n	On / T	Off / T	n	On / T	Off / T
103	559 560 561	516 $517$ $518$	95	153 / 4	152 161 / 5	77	88 89 90 91	37 38 39 40
	562 $563$ $584$	519 $520$ $521$	94	/ 0	88 / 1		$93 \ 94 \ 95 \ 96$	41 $43$ $44$ $45$
	585 $586$ $587$	522 $523$ $524$	93	112 126 127	135 138 139		$97 \ 99 \ 100$	46 $47$ $48$ $49$
	$588 \ 608 \ 609$	525 $528$ $530$		/ 3	153 / 4		$102 \ 103 \ 105$	$50 \ 51 \ 52 \ 53$
	610 $611$ $612$	531 $533$ $534$	92	88 135 / 2	112 126 127		$106 \ 228 \ 229$	54 $55$ $174$
	633 $634$ $635$	536 $537$ $539$		,	/ 3		230 $231$ $232$	$175 \ 176 \ 177$
	659660/65	/ 66	91	/ 0	125 / 1		233 $234$ $235$	$178 \ 179 \ 204$
102	/ 0	149 / 1	90	/ 0	135 / 1		236 $237$ $238$	$205\ 206\ 207$
101	$5 \ 6 \ 9 \ 10$	119 134 234	89	/ 0	88 / 1		$239\ 240\ 241$	$208\ 209\ 216$
	$11 \ 13 \ 17 \ 18$	$235\ 243\ 244$	88	/ 0	55 / 1		$242\ 243\ 245$	$217 \ 218 \ 219$
	$23\ 24\ 25\ 26$	$245\ 246\ 257$	87	55 / 1	90 105 / 2		$246\ 247\ 248$	$220\ 221\ 222$
	$27 \ 32 \ 33 \ 34$	$258\ 259\ 260$	86	$105 \ 125 \ 135$	76 80 81 89 /		$249\ 251\ 252$	223 $224$ $225$
	$35 \ 36 \ 37 \ 41$	$261\ 277\ 278$		/ 3	4		$254\ \ 255\ \ 257$	$226 \ 227 \ / \ 55$
	42 $43$ $44$ $45$	$279\ 280\ 281$	85	$168 \ 169 \ 170$	77 $78$ $79$ $82$		258 / 54	
	$46\ 47\ 50\ 51$	$296 \ 297 \ 298$		$171 \ 172 \ 173$	83 $84$ $85$ $86$	76	/ 0	247 / 1
	$52 \ 53 \ 54 \ 55$	$299 \ 300 \ 316$		$174 \ 175 \ 176$	$87 \ 91 \ 92 \ 93$	75	/ 0	95 / 1
	76 $79$ $80$ $85$	$317 \ 318 \ 336$		$177 \ 178 \ 179$	$94 \ 95 \ 96 \ 97$	74	8 9 10 11 12	77 78 79 80
	86 $87$ $88$ $89$	$337 \ 338 \ 526$		$180\ 181\ 182$	$105 \ 106 \ 107$		$13 \ 30 \ 31 \ 32$	$81 \ 82 \ 83 \ 84$
	$95 \ 96 \ 97 \ 110$	527 $540$ $541$		$183 \ 184 \ 185$	$108 \ 109 \ 110$		$33 \ 34 \ 35 \ 36$	85 $86$ $87$ $88$
	$111 \ 124 \ 125$	542 $543$ $559$		$186 \ 187 \ 188$	$111 \ 120 \ 121$		$37 \ 38 \ 39 \ 40$	$89 \ 90 \ 91 \ 93$
	$137 \ 138 \ 139$	560 $561$ $562$		$189 \ 190 \ 191$	$122 \ 123 \ 124$		$41 \ 42 \ 43 \ 44$	$94 \ 96 \ 97 \ 99$
	$152\ 153\ 161$	563 $584$ $585$		$216\ 217\ 218$	$125 \ 135 \ 136$		45 $46$ $47$ $48$	$100\ 102\ 103$
	162 / 54	586 $587$ $588$		219 $220$ $221$	/ 31		$49 \ 50 \ 51 \ 52$	$105 \ 106 \ 228$
		608 $609$ $610$		/ 30			$53 \ 54 \ 55 \ 168$	$229 \ 230 \ 231$
		611 $612$ $633$	84	89 90 91 103	$168 \ 169 \ 170$		$169 \ 170 \ 180$	232 $233$ $234$
		634 $635$ $659$		$104 \ 105 \ 106$	$171 \ 172 \ 173$		$181 \ 182 \ 192$	235 $236$ $237$
		660 / 55		$107 \ 108 \ 117$	$174 \ 175 \ 176$		$193 \ 194 \ 195$	$238 \ 239 \ 240$
100	/ 0	162 / 1		118 119 120	177 178 179		$196 \ 197 \ 204$	$241 \ 242 \ 243$
99	/ 0	88 / 1		121 122 132	180 181 182		205 206 216	245 246 248
98	390 391 392	10 11 13 26		133 134 135	183 184 185		217 218 / 50	249 251 252
	393 394 395	34 35 36 37		136 147 148	186 187 188			254 255 257
	397 398 399	42 43 44 45		149 150 151	189 190 191	70		258 / 51
	400 401 414	46 47 48 50		159 160 161	216 217 218	73	/ 0	195 / 1
	415 417 418	51 52 53 54 FF 19F 19F		166 / 29	219 220 221	(2 71	240 / 1	$\frac{196}{940}$ $\frac{197}{2}$
	419 400 400	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	0.9	01 100 / 0	/ 30	71	/ 0	$\frac{240 / 1}{76 / 1}$
	409 490 491 516 526 527	157 150 159 150 151 159	00	81 102 / 2	107 108 122	70 60	/ 0	$\frac{70 / 1}{55 / 1}$
	542 543 563	$150 \ 151 \ 152$ $152 \ 161 \ / \ 21$	80	/ 0	/ J 151 / 1	09 68	55 76 / 2	$\frac{33 / 1}{182 103 104}$
	542 $543$ $503564$ $767$ $770$	100 101 / 01	81	70 174 175 176	81 80 00 01	00	55 10 / 2	/ 3
	/ 30		01	174 170 170 177 178 170	$102 \ 103 \ 105$	67	182 / 1	76 192 / 2
97	$\frac{700}{10,11,13,26}$	390 391 392		204 205 206	102 103 103 106 117 118	66	/ 0	$\frac{10132}{205}$ / 1
51	$34 \ 35 \ 36 \ 37$	$393 \ 394 \ 395$		$207 \ 208 \ 209$	119 120 121	65	184 185 / 2	$\frac{20071}{204206217}$
	42 $43$ $44$ $45$	$397 \ 398 \ 399$		216 $217$ $218$	132 133 134	00	101 100 / 2	/ 3
	46 47 48 50	400 401 414		219 220 221	135 136 147	64	217 / 1	184 185 / 2
	51 52 53 54	415 417 418		222 223 224	148 150 159	63	/ 0	182 / 1
	55 135 137	419 486 488		225 $226$ $227$	160 161 166	62	/ 0	217 / 1
	138 150 151	489 490 491		/ 24	/ 25	61	217 / 1	180 181 / 2
	$152 \ 153 \ 161$	516 $526$ $527$	80	/ 0	104 / 1	60	/ 0	170 / 1
	/ 29	542 $543$ $563$	79	/ 0	149 / 1	59	/ 0	217 / 1
	,	564 767 770	78	/ 0	42 / 1	58	170 / 1	216 218 / 2
		/ 30	77	76 77 78 79	8 9 10 11 12	57	/ 0	170 / 1
96	/ 0	153 / 1		80 $81$ $82$ $83$	$13 \ 30 \ 31 \ 32$	56	83 / 1	168 169 / 2
95	88 125 139	$137 \ 150 \ 151$		$84 \ 85 \ 86 \ 87$	$33 \ 34 \ 35 \ 36$	55	/ 0	83 / 1
						54	/ 0	

Table 59:  $i_p$  of the particles in MIF1739, to build  $C_n$  from  $C_{n+1}$  (cont.)

n	On / T	Off / T
54		55 / 1
53	/ 0	44 / 1
52	/ 0	46 / 1
51	/ 0	26 / 1
50	55 / 1	35 45 / 2
49	/ 0	36 / 1
48	/ 0	28 / 1
47	/ 0	37 / 1
46	/ 0	27 / 1
45	/ 0	24 / 1
44	/ 0	25 / 1
43	/ 0	34 / 1
42	/ 0	18 / 1
41	/ 0	14 / 1
40	/ 0	17 / 1
39	/ 0	19 / 1
38	77 78 82 83	$1\ 2\ 3\ 4\ 5\ 6\ 7$
	84 93 94 229	8 9 10 11 12
	230 $234$ $235$	$13 \ 15 \ 16 \ 20$
	236 244 245	21 22 23 29
	246 247 260	30 31 32 33
	261 262 516	38 39 40 41
	517 518 526	42 43 47 48
	527 528 529	49 50 51 52
	542 543 544	53 54 55 / 39
	563 564 979	
	980 994 995	
	990 1015	
37	1010 / 50 1 2 3 4 5 6 7	77 78 82 83
51	8 9 10 11 12	84 93 94 229
	13 16 21 22	230 $234$ $235$
	$23 \ 30 \ 31 \ 32$	236 244 245
	33 34 38 39	246 247 260
	40 41 42 43	$261 \ 262 \ 516$
	47 48 49 50	517 $518$ $526$
	51 52 53 54	527 $528$ $529$
	55 / 37	542 543 544
	/	563 $564$ $979$
		$980 \ 994 \ 995$
		996 1015
		1016 / 38
36	/ 0	34 / 1
35	/ 0	16 / 1
34	45 / 1	22 23 / 2
33	/ 0	21 / 1
32	/ 0	45 / 1
31	/ 0	33 / 1
30	$20 \ 56 \ 57 \ 58$	$30 \hspace{0.2cm} 31 \hspace{0.2cm} \overline{32 \hspace{0.2cm} 38}$
	$59 \ 61 \ 62 \ 63$	$39 \ 41 \ 43 \ 47$
	66 67 72 73	49 50 51 52
	74 75 / 14	53 54 55 / 15
29	22 60 / 2	42 66 67 / 3
28	/ 0	

n	On / T	Off / T
28		72 / 1
27	/ 0	20 / 1
26	20 72 / 2	48 74 75 / 3
25	/ 0	60 / 1
24	/ 0	22 / 1
23	/ 0	61 / 1
22	/ 0	40 / 1
21	/ 0	63 / 1
20	/ 0	62 / 1
19	/ 0	59 / 1
18	/ 0	20 / 1
17	60 / 1	57 58 / 2
16	/ 0	60 / 1
15	/ 0	56 / 1
14	/ 0	72 / 1
13	/ 0	73 / 1
12	/ 0	13 / 1
11	/ 0	9 / 1
10	/ 0	8 / 1
9	/ 0	10 / 1
8	/ 0	12 / 1
7	/ 0	11 / 1
6	11 68 / 2	346/3
5	6 / 1	11 68 / 2
4	/ 0	5 / 1
3	/ 0	1 / 1
2	/ 0	6 / 1

Table 60:  $i_p$  of the particles in MIF1739, to build  ${\cal C}_n$  from  ${\cal C}_{n+1}$  (cont.)

## 7 Conclusions and future work

All the details of the construction of the IF9483 and MIF1739 are not given here but in a later article. Our first option was to build only  $\Omega^{o}$  from Propositions1 and 3 but it was not as regular and symmetrical as IF. IF was the lattice that close the gap of Northby's statement [17] in a regular, elegant and symmetrical lattice but hot. It seems that Proposition 1 is focus in build arbitrary sets from arbitrary points, that can be obtained from the separable points of  $\mathbb{R}^3$  under BU or LJ. However, IF came naturally from using the  $C_{13}^*$  as the seed. Of course, there could be other sets or lattices without such motifs but IF joints in one framework the well know IC and FC and all the putative optimal LJ clusters. Also, in the sets  $\Omega^l$  and  $\Omega^o$  of the Propositions 2 and 3 are not necessary a minimization procedure for any cluster. This gives a witness property for the optimality verification in the neighborhood of a cluster in polynomial time. Depicting the components of the gradient of the potential on each particle helps to understand the deformation of the PES for small clusters, but it need further study. Propositions 1, 2, and 3 permit see SOCDXX as the Traveling Salesman Problem in  $\Omega^l$  or  $\Omega^o$  and let to have a framework to analyze the complexity of SOCDXX where XX is BU or LJ. An open question is: Are there similar results for Kihara or Morse Potentials? Here the obstacle is that there is not strong rejection when  $r \to 0$  and this does not allow to have separate points. Moreover: Is  $C_{13}^*$  the global minimum? In my opinion it will be possible to answer this by a combination of an exhaustive search and by the symmetrical properties of IF and such proposition could be proved by using a computer to explore in wise fashion the local optimal clusters of 13 particles in IF. Maybe in similar way to the proof of the Four-Color Theorem. Other conjecture open by this work is: Are all the optimal cluster under LJ or for equivalent potentials in IF? The answer of this conjecture does not change the results of my propositions, it is clear that if there are new cases, these can be added without problem but IF will possibly lose the beautiful minimum combination of IC and FC. In the case, of huge clusters it is possible that other lattices could be added to IF with other geometrical motifs.

Finally, this novel formulation brings new perspectives for NP's complexity and will be extended in the future to other potential functions.

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