Young Minds Liège

Activity report: Spring of Science 2019

Each year, the University of Liège organizes in the city of Liège a science fair open to the public called the “Spring of Science”. Since 2019 is the international year of the periodic table of elements, the University of Liège centered this event around this topic.

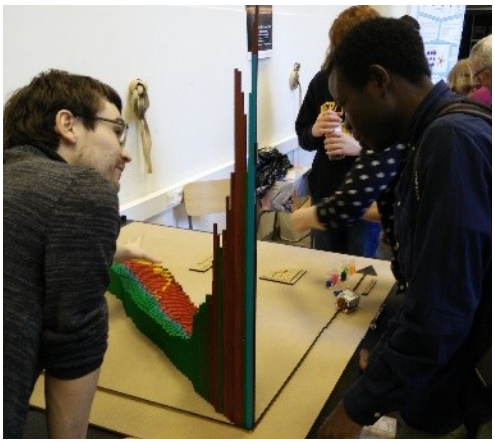
The Young Minds Liège Section took part to this fair by creating a presentation divided in five subtopics, going from elementary particles to phases of matter, via nucleus structure, electronic properties and atoms creation. We were 13 physicists to work on the whole project, each subtopic being designed by two or three PhD students. Each subtopic had its own poster, along with a toy experiment in order to illustrate the various notions and let people manipulate them. We performed this presentation all the days long on 30th and 31st March (from 10 am to 4 pm). The 250€ received from the EPS was used in order to build the various experiments. Here is a brief description of each stand, along with a picture of the live explanations:

The first stand described the existence of molecules. We showed how parameters such as pressure and temperature can change their arrangement to give the various thermodynamic state and crystalline arrangements.

The second stand went one step deeper by describing what atoms are, how they are fabricated in the stars and how they are classified in the periodic table of elements.

The third subtopic explored the outer structure of atoms. It was the occasion to introduce the electrons and the nature of electrostatic interactions and electric currents.

Our fourth stage described the structure of the nuclei. We discussed the difference between the various isotopes and introduced some notions about radioactive decay. We had a homemade 3D valley of stability, colored accordingly to the usual radioactive decay of the nuclei.



The final step of our journey was describing the elementary particles. Through card games and cloud chamber, people could observe and classify the various known particles.

We welcomed approximately 200 people during those two days of exhibition, and the feedback was very positive: children and full-grown both testified learning from our presentation, although their interest was located in various parts of the presentation.

The didactic material we developed for this exhibition will also be useful in the future: we are in contact with the head of the science museum of the university in order to expose there some items of the presentation and we will use some others to create an outreach activity in high schools.