

Dear Minister, dear rectors, vice-rectors, representatives of the departments, dear colleagues and friends,

## **Part 1**

Belgium has a very good tradition in research in the physics of fundamental interactions. This contains as well experimental physics, where Belgian teams are involved in the most successful and advanced collaborations in the world, as theoretical physics. Today, we want to highlight the accomplishments and future of theoretical high-energy physics and cosmology in Belgium. We have been lucky to have had the three icons, Robert Brout, François Englert and Georges Lemaître, who played an important role in these fields. They made major contributions to the understanding of the universe and the fundamental interactions, but they also understood that with 4 major universities close to each other here in the center of the country we can only progress if we collaborate.

Based on their scientific prestige, but even more on their permanent curiosity and eagerness to discuss and extend our physics understanding of the world, they succeeded very early on in promoting scientific contacts between groups operating in different Belgian universities.

(if you want to insert detailed stories about that, this could go here)

We have tried to coordinate research activities in the past. The inter-university attraction poles have been helpful in this respect. Also we have invited each other to all events. Especially after the Nobel prize awarded to François Englert in 2013 we have wanted to maintain, but also develop further a more intense collaboration, in order to use the opportunities that we have here in Belgium. Shortly after François Englert's Nobel prize, and following his desire of sharing its impact with the Belgian scientific community, the Senate voted a motion recommending the creation of the Brout-Englert-Lemaître Center.

## Part 2

The support for establishing such a center was, however, not sufficient to immediately realize the idea that was in the Senate resolution.

The Brussels region, aware of our plans, made the suggestion of using the Tournay-Solvay castle as a 'point of contact and exchange'. We are very thankful that they give us this opportunity, which we want to take in hands to make an important new step in the development of the theoretical research on fundamental interactions in Belgium.

This brought us up to the present project: a centrally located meeting place that will promote interactions between different groups, subfields and a venue to explore interactions with other fields, and for promotion of science and its methods to all of society.

We plan to have weekly 3 joint seminar days on different aspects of fundamental interactions and cosmology. We plan to offer the organization of workshops with distinguished international visitors who can work at the Institute for several weeks. The Center will provide office and working space for them as well as for scientists from Belgian institutes in the same field in these periods.

In particular, multidisciplinary workshops can take place where 'Physics for Sciences' could explore the applications of techniques born in the study of the fundamental interactions to other fields and vice-versa (e.g. machine learning and artificial intelligence).

Outreach will be an essential activity of the Center, which we will call "BEL Dialogues". In this context we intend to organise events in a convivial and informal manner that will involve the general public, specialists from relevant disciplines, artists, science journalists, and high-school teachers.

A special program "Art at BEL" will be developed to materialize the ever-present parallels between Art and Science, with temporary exhibitions, for the benefits of both scientists and the general public.

By its location in close proximity to the four institutions involved in the scientific lives and works of Brout, Englert and Lemaître, the Tournay-Solvay castle constitutes an ideal venue for this initiative. Its easy accessibility and its quiet and convivial surroundings make it unique.

We hope that the start of this center will be remembered in the future as an important step forward. And we hope that you will get today a flavour of the future of theoretical research of fundamental interactions and cosmology in Belgium and elsewhere.