

Astroparticle Physics Strategy in the Netherlands

Introduction

Astroparticle physics is the fascinating field of research at the intersection of astronomy and particle physics. It simultaneously addresses challenging questions, relating to the micro-cosmos (the world of elementary particles and their fundamental interactions) and the macro-cosmos (the world of celestial objects and their evolution) and, as a result, is well-placed to advance our understanding of the extremes of the Universe beyond.

On world-wide scale the matters of Astroparticle physics are organized through the C4 Commission on Astroparticle Physics of the International Union of Pure and Applied Physics (IUPAPP) and division D of the International Astronomical Union (IAU). On the European level Astroparticle Physics is coordinated through APPEC, the European Astroparticle Physics European Consortium.

Astroparticle Physics in the Netherlands

Particle physicists and astronomers in the Netherlands have been very active in Astroparticle Physics for about two decades.

Astroparticle Physics often requires working with large and costly international facilities and in large international collaborations. Therefore, it requires a well-focused national strategy that (i) takes a long view of the field, (ii) makes well-founded and focused choices of priorities, and (iii) is well coordinated with the national strategic planning in particle physics and astronomy as well as with international agendas.

In the Netherlands, thus far, Astroparticle physics has been self-organised via the Committee for Astroparticle Physics in the Netherlands (CAN); considerable progress has been made using this model, but for effective long-range planning the need has arisen for a somewhat more formal set-up that takes into account how the planning for Astronomy and Particle Physics has been done thus far, and to ensure that the plans of APP are integrated into those, rather than separate. This underlines the importance of strategic planning in the interdisciplinary field of Astroparticle Physics.

We therefore resolve the following:

1. The Nikhef collaboration (Nikhef) and the Raad voor de Astronomie (RvA) take joint responsibility for strategic planning and progress monitoring of Astroparticle Physics in the Netherlands, and decide on these matters by consensus.
2. Nikhef and the RvdA will each remain responsible for their own strategy.
3. The joint strategy for Astroparticle Physics will be the sum of what is included in the Nikhef and RvdA strategies.
4. A coordinating body will be established, the Astroparticle Physics Strategic Committee (AppSC), to achieve (3) given (1-2).
5. The Committee for Astroparticle physics in the Netherlands (CAN) will be the scientific advisory body of AppSC.

Our aim with the above is to follow as closely as possible the successful strategic planning models of Nikhef and RvdA, in which the scientific priorities are set very much by the scientists in consultation and friendly competition, and the eventual strategic plan is decided at the director and board level, taking these scientific priorities into account together with financial and other strategic constraints (in this case including those of the wider particle physics and astronomy communities).

Astroparticle Physics Strategic Committee (AppSC)

The AppSC shall consist of the director of Nikhef, the chair of the RvdA, the chair of the CAN, and support from NWO.

Its tasks are:

1. to negotiate the embedding of a joint Astroparticle Physics strategy into the Astronomy and Particle Physics national and international strategies as well as in the international strategies for Astroparticle Physics (e.g. APPEC);
2. in so doing, to give due weight to the scientific priorities of Astroparticle Physics relative to other priorities in particle physics and astronomy;
3. to optimise the impact of Dutch Astroparticle Physics by maximising synergies and opportunities, following the advice on prioritisation by the CAN. The AppSC explicitly motivates any deviations from the prioritisation advice of the CAN.

The AppSC will communicate with the APP, Particle Physics, and Astronomy communities regularly (at least once per year), usually through the respective chairs. Alignment of the planning cycles of Particle Physics and Astronomy is helpful for this process.

Committee for Astroparticle physics in the Netherlands (CAN)

The CAN shall consist of one member each from institutes active in Dutch Astroparticle Physics and be supported from NWO. *The chair is appointed by the AppSC for one (non renewable) four-year term, and is proposed by the CAN from their midst.* The other members are nominated by the institutes for a renewable four-year term, and appointed by the AppSC, considering diversity and balance over institutes, APP subfields.

Its tasks are:

1. to organise and promote activity in Astroparticle Physics, including community building via annual meetings, newsletters etc.;
2. to create a scientific prioritisation for Astroparticle Physics in the Netherlands regularly (and well timed for the needs of the Particle Physics, Astronomy and Astroparticle Physics strategic planning cycles);
3. to advocate for the effective execution of those priorities nationally and internationally;
4. to optimise synergies with adjacent fields (especially, of course, with particle physics and astronomy).
5. The CAN will advise the AppSC on its own initiative or at the request of the AppSC, on any matters arising.

Amsterdam, 7 February 2020



Prof. dr. Stan Bentvelsen
Nikhef director



Prof. dr. Ralph Wijers
RvdA chair



Prof. dr. Jörg R. Hörandel
CAN chair