

Weld

Welcome to the 28th Symposium for Astroparticle Physics in the Netherlands



Photo: 24th Symposium 2023

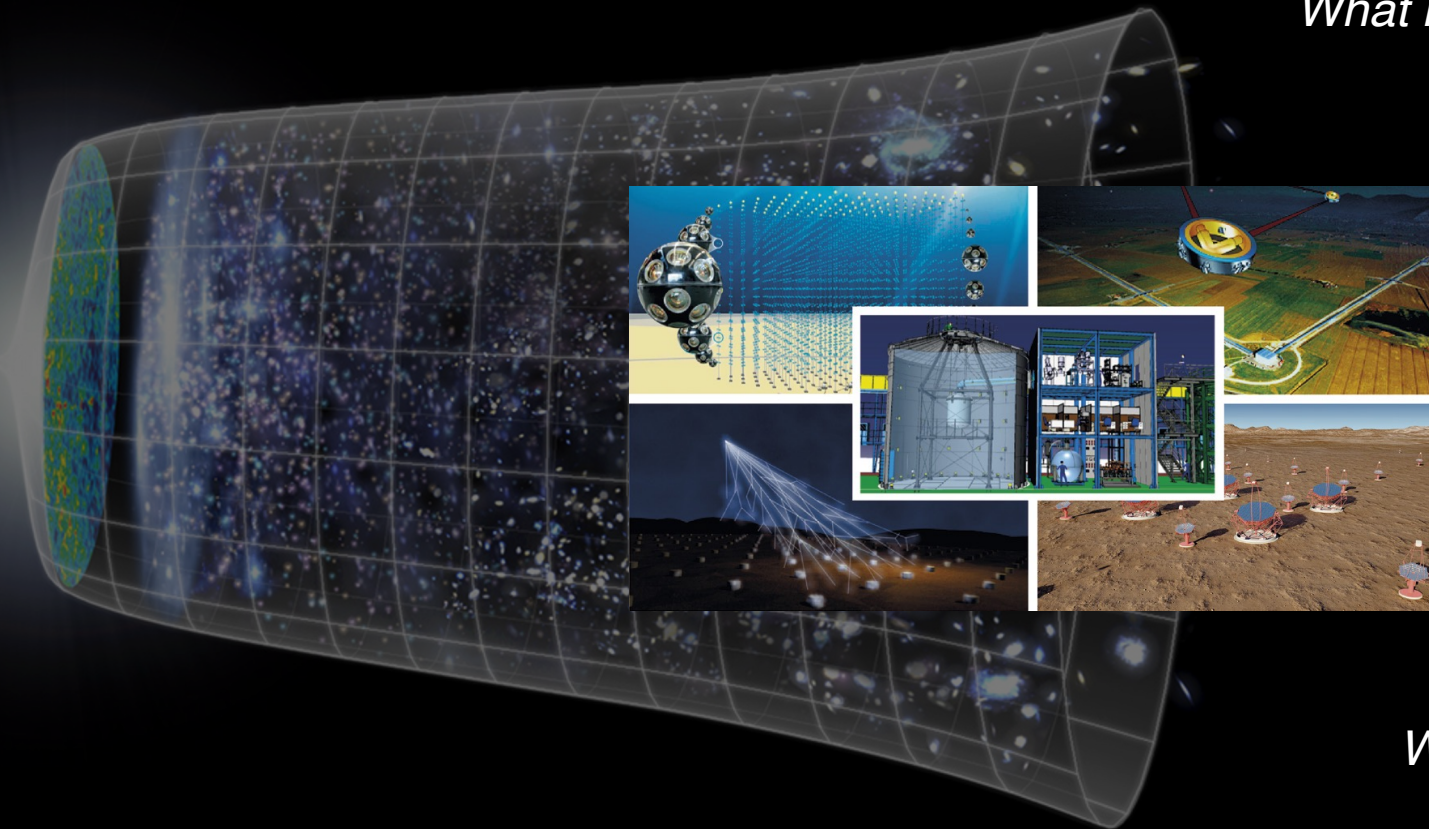
Astroparticle Physics in the Netherlands

What is the nature of Dark Matter?

What is the origin of the highest energy particles in the Universe?

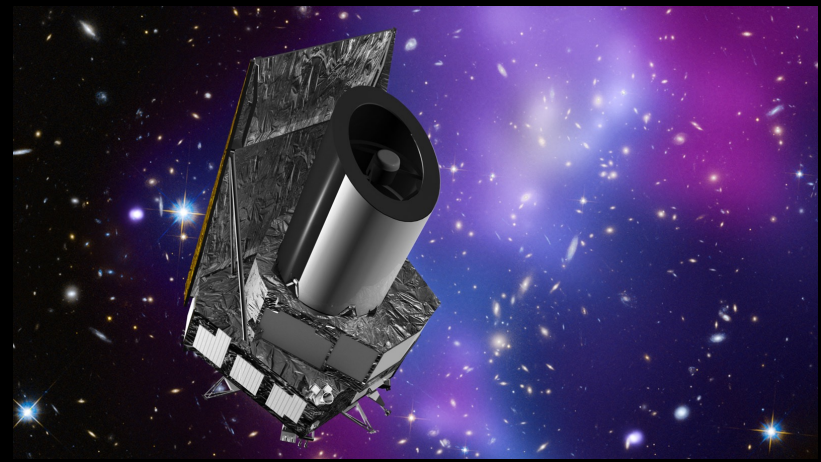
What is the dynamics of spacetime?

What is the structure of Physics beyond the Standard Model?



EUCLID: ESA M-class

launched 1 July 2023
Netherlands heavily involved

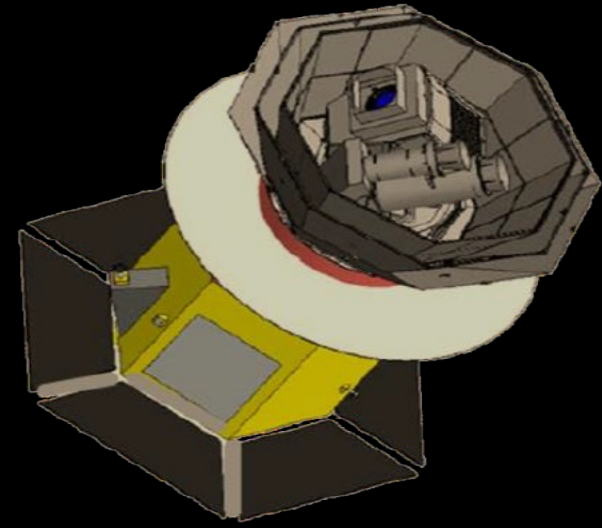


=> target Dark energy, Dark matter
=> neutrino masses

Sum of neutrino masses
 $\sigma \sim 0.042$ eV from LiteBIRD + CMB-S4
 $\sigma \sim 0.012$ eV + Euclid

LiteBird JAXA L-class

launch planned for 2028
-> potential opportunity
for the Netherlands



Complementing ground-based
Cosmic Microwave Background efforts

=> targeting inflation
=> neutrino masses
=> number of relativistic species

APP in the Netherlands – the CAN

(Committee for **A**stroparticle physics in the **N**etherlands)

Established in 2004, the **CAN** represents the Dutch scientific community interested in astroparticle physics. It comprises members, representing the **different sub-fields** and the **institutions** involved in astroparticle physics in the Netherlands.

Objective of the committee is to strengthen and further develop the field of astroparticle physics in the Netherlands in research and teaching.

Members:

Chris Van Den Broeck (U Utrecht)

Andreas Freise (VU Amsterdam)

Jason Hessels (ASTRON)

Stefan Hild (U Maastricht)

Jörg Hörandel (RU Nijmegen)

Elena Rossi (U Leiden)

Dorothea Samtleben (Nikhef & U Leiden)

Charles Timmermans (RU Nijmegen)

Jean in 't Zand (SRON)

Manuela Vecchi (RU Groningen)

Jacco Vink (UvA Amsterdam)

Christoph Weniger (UvA Amsterdam)

APP in the Netherlands - Organisation

The organisation was **formalised in 2020** by creation of the **AppSC** (Astroparticle physics Strategic Committee)

Members: *Nikhef Director, CAN Chair, RvdA Chair, NWO secretary*

Task: *Align particle physics and astronomy strategies with CAN strategy*

AppSC appoints **CAN** members and chair and mandates its mission

Members: one for each APP group at Dutch University or Institute

Tasks:

- *Promote APP in the Netherlands*
- *Provide strategy input to AppSC*
- *Monitor implementation of strategy as agreed with AppSC*

APP in the Netherlands - Strategy

APP through 5 different pillars:

Cosmic Rays

Neutrinos

Gamma Rays

Gravitational Waves

Dark Matter



APP in the Netherlands – Participate!

<http://astroparticlephysics.nl/> -> Subscribe to mailinglist

⇒ Participate in the events

⇒ Provide Input



Weld **Enjoy the Symposium!**



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