

PHYSICAL COLLOQUIUM

INVITATION

Monday, 26.11.2018, 4.15 p.m., W2-1-148

speaks

**Dr. Timo Prusti,
ESA, Noordwijk, The Netherlands**

about

"Gaia: Spacecraft, Mission and Scientific Results"

Gaia is a cornerstone mission by the European Space Agency (ESA). It was launched in December 2013 and started executing the science programme in summer 2014. In its nominal 5-year operational period it will fully cover the sky measuring every object on average 70 times. Most of the objects observed are stars, but the autonomous on-board detection system will record any bright enough point like object. This way some 300,000 asteroids and few million extragalactic objects will be observed on top of the more than 1 billion stars. The main scientific objective is to reveal the structure, formation and evolution of our Milky Way Galaxy. This is achieved by providing measurements of the Milky Way stars: distances, motions and physical properties. Gaia data is released for the whole astronomical community. The latest data release took place in April 2018 and the science exploitation has been very intense with some 400 articles based on Gaia data published. More data releases will be made in the coming years. Although the nominal mission comes to its end in summer 2019, Gaia can continue observing till end of 2024 when consumables are expected to be exhausted. The process to fund the extension period has been started. The presentation will introduce some key aspects of the spacecraft, outline the mission concept and give an overview of the scientific results so far.

All interested persons are cordially invited.

Sgd. Prof. Dr. Björn Poppe