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Scientific Evening Talk

Tuesday, Nov. 8, 2011, 18:30 h
Magnus-Haus Berlin
Am Kupfergraben 7, 10117 Berlin

Earth Twins in the Universe?

Prof. Dr. Michel Mayor
Emeritus professor, Geneva University

The discussion will be chaired by
Prof. Dr. Heike Rauer
*Institut für Planetenforschung, DLR Berlin, und
Zentrum für Astronomie u. Astrophysik, TU Berlin*

‘Nachsitzung’ with food and drinks in the ‘Remise’, sponsored by the WE-Heraeus-Foundation
RSVP:

http://www.dpg-physik.de/dpg/magnus/formulare/formular_2011-11-08/anmeldung-2011-11-08.html

Michel Mayor was born in Lausanne in 1942. After a master in physics at Lausanne University, he got a PhD in astrophysics at the University of Geneva. Michel Mayor pioneered in the nineties the search for exoplanets through precise radial velocity measurements. Together with his team, he has a substantial share in the number of exoplanets detected so far. In 1995, he detected in particular the first giant planet orbiting a solar-type star, 51 Pegasi. These discoveries have opened an entirely new exciting research area, both on the observational side and in theoretical studies. Professor at Geneva since 1984, he was Director of the Geneva Observatory from 1998 to 2004. Michel Mayor is foreign member of the French Academy of Sciences and the US National Academy of Sciences.

Abstract: In the last sixteen years, about 600 exo-planets have been detected. These discoveries have revealed an impressive diversity of the orbital properties of exoplanets, which is rich of constraints for the physics of formation and evolution of planetary systems. The past years have witnessed a remarkable progress in the precision of radial velocity measurements, with an improvement by a factor of about 100. Numerous planets with masses as small as a few earth-masses have been detected. The impressive results that are presently acquired by space missions searching for planetary transits will also be discussed.

A central question concerns the possibility to achieve further significant progress in Doppler measurements. This is requested to detect Earth Twins in the habitable zone of stars as close as possible to our solar system. Our closest “neighbors” are probably the most interesting targets for any future experiments designed to search for life signatures.