

ESO's La Silla Observatory will host new planet hunter

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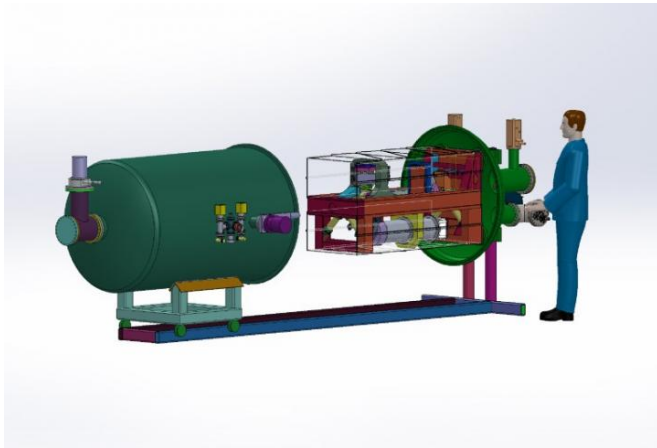


Illustration of NIRPS. Credit: © UNIGE

Developed and built by the University of Geneva (UNIGE), Switzerland, and the University of Montreal, NIRPS (Near Infra Red Planet Searcher) is an infrared spectrograph designed to detect Earth-like rocky planets around the coolest stars. The formal agreement to add NIRPS to the suite of instruments on ESO telescopes was signed on June 7th, 2017 by ESO's Director General Tim de Zeeuw, Michel Oris, Vice-rector at the UNIGE .Marie-Josée Hébert, Vice-rector for Research, Discovery, Creation and Innovation at the University of Montreal and by both co-directors of the project, Professor François Bouchy from UNIGE and Professor René Doyon from the University of Montreal.

Due to be installed on the 3.6 m telescope at ESO's La Silla Observatory in Chile, NIRPS will complement the HARPS (High Accuracy Radial velocity Planet Searcher) instrument currently attached to the same telescope. HARPS is the world's most productive planet-hunting instrument using the radial velocity method, and it has revolutionised our understanding of exoplanetary

systems. NIRPS will become the "red arm" of HARPS, extending the telescope's capability into the infrared and allowing astronomers to characterise planetary systems. ESO will allocate 725 observing nights over a 5-year-period to the NIRPS team.

The main goal of NIRPS is to use the radial velocity method to detect and characterise [planets](#) orbiting cool, red, low-mass M-type [stars](#). In particular, NIRPS aims to find Earth-like rocky planets that could potentially be habitable. M type stars are of particular interest because the radial velocity variations induced by an orbiting planet are larger for a less massive star than a sun-like star, and hence its planets—including those in the habitable zone—are more easily detectable. NIRPS will operate in the infrared as this is the main range of wavelengths emitted by such small, cool stars. For red stars, which are the most common in the solar neighbourhood, NIRPS is expected to produce data that are at least as accurate as currently available with the HARPS instrument.

NIRPS is built by an international collaboration co-led by the Observatoire du Mont-Mégantic team at the University of Montreal and the Astronomy Department team at the UNIGE, which also includes the University of Grenoble in France, the Instituto de Astrofísica de Canarias in Spain, the Herzberg Institute of Astrophysics in Victoria, Canada, the University of Porto in Portugal and the Universidade Federal do Rio Grande do Norte, IMT in Brazil.

Provided by University of Geneva

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