



Contribution ID : 17

Type : **Contributed talk**

GAUCHO: Searching for Planets Around the Coolest Stars in the Galaxy

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Ultra-cool dwarfs are the smallest and coolest stars on the main sequence. While M dwarfs are generally known to harbour a large number of planets, including rocky, Earth-mass exoplanets, the occurrence rate and architectures of planetary systems around ultra-cool dwarfs remain poorly constrained. To date, the only well-characterized planetary system around an ultra-cool dwarf is the TRAPPIST-1 system. This regime is the last to be constrained by radial-velocity studies. The Grasping exoplanet Architectures of Ultra-Cool HOsts (GAUCHO) project is a blind radial velocity survey of about 15 ultra-cool dwarfs with the NIRPS high-resolution spectrograph. In the long term, GAUCHO aims to constrain the occurrence rate of systems like TRAPPIST-1 and super-Earths around ultra-cool dwarfs, map typical long-orbit architectures (>10 days) of ultra-cool dwarf systems, and measure their fraction of brown-dwarf companions. Here, we give an overview of the GAUCHO target sample and present preliminary results focusing on target selection for prolonged observations within the NIRPS GTO program. These results highlight the significant challenges associated with blind radial velocity searches of faint targets.

Did you give a contributed talk at CASCA 2026?

No

If you are selected for a poster, would you be interested in giving a short flash talk on your work?

Yes

What is your career level?

MSc

Which keyword describes the area of focus of this talk?

Exoplanets

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