NIRPS Kick-off meeting
Introduction

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Main objectives of this meeting

- Get the NIRPS core team together !
- Agree on top-level science and instrument requirements.
- Establish the instrument baseline.
- Identify the main leaders of all work-packages.
- Review project organization, schedule and cost.
- Establish near-term plan leading to PDR next summer.

Level 1 Science Requirements

S1. Find the nearest habitable worlds to the Sun.

- ✧ Find and characterize the nearest (non-transiting) planetary systems around low-mass stars.
- ✧ Higher priority to characterization of multiple-systems rather than statistics (determination of η_{Earth})

S2. Characterize the best transiting systems suitable for atmospheric characterization with JWST and ELTs.

- ✧ Follow-up observations of transit missions (e.g. TESS, CHEOPS)
- ✧ Focus on Earths and Super-Earths.

S3. Find « close-in » young gas giants and characterize their atmosphere.

- ✧ Pathfinder/prototype for future high-res spectrographs on ELTs

Level I Instrument requirements

I1. Fiber-fed high-resolution infrared spectroscopy

- ✧ RV accuracy requirement: <1 m/s (1 m/s on-sky)
- ✧ Resolving power: ~10^5
- ✧ Wavelength coverage: YJH
- ✧ Modular, flexible design to enable upgrades (K-band & polarimetry)

I2. Stellar activity characterization capabilities

- ✧ Simultaneous operation with HARPS (R'_{HK}) + potential extension to K-band (goal)
- ✧ Polarimetry (goal)

I3. High-contrast, high-resolution spectroscopy capability

- ✧ Adaptive optics feed with target offset capability due to small fibers.

Synergy with other missions

✧The first wave of the late ‘20 data tsunami

- ✓ TESS 2018 -
- ✓ CHEOPS 2017 -
- ✓ JWST 2019 -

➔ I4. NIRPS shall be developed on a fast-track schedule with the goal to be in operation by mid 2019.