CRIRES+

A high resolution near-infrared spectro(polari)meter at the VLT

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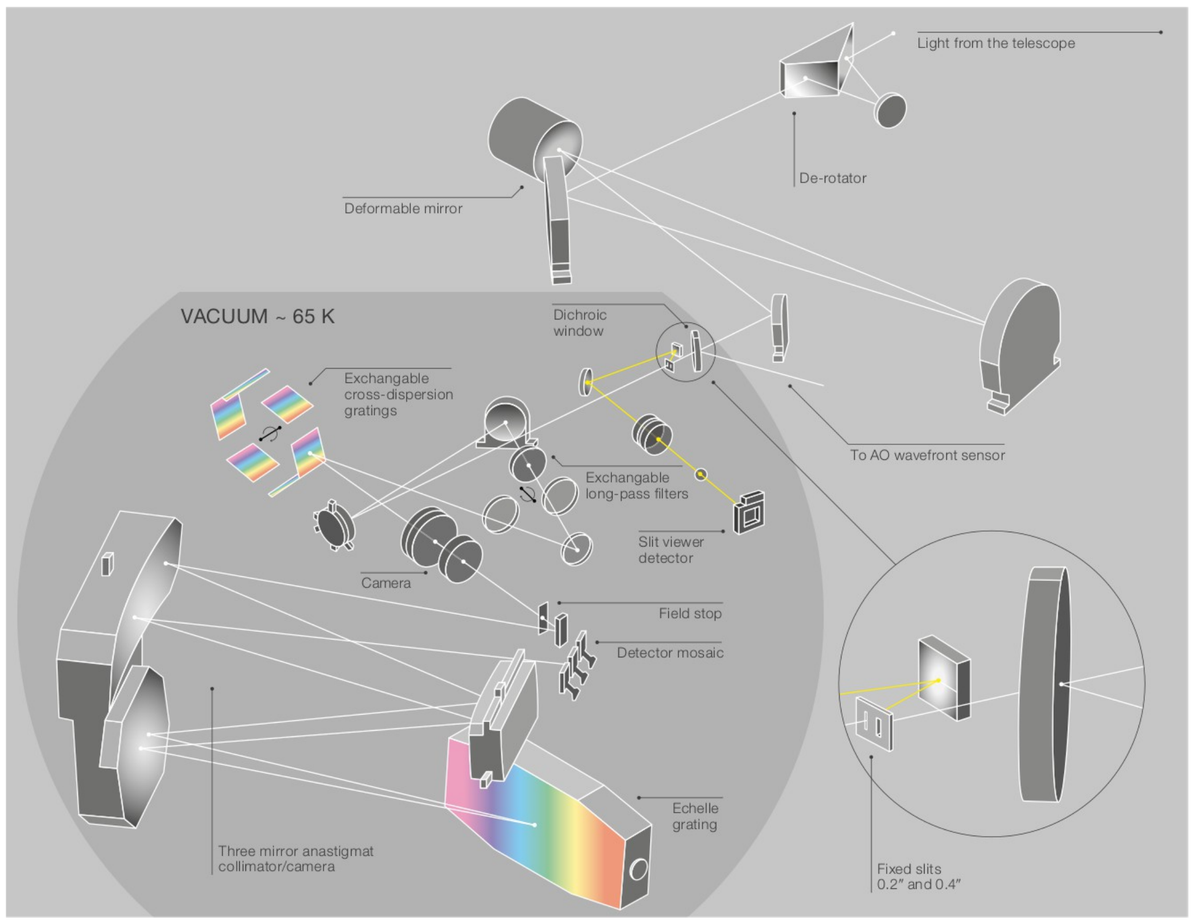
OPTICAL DESIGN



SCIENTIFIC OBJECTIVES

CRIRES$^+$ has been designed to investigate the following science cases:

- **searching super-Earths in the habitable zone of low-mass stars**
- **characterizing the atmospheres of transiting exoplanets**
- **addressing the origin and evolution of stellar magnetic fields**

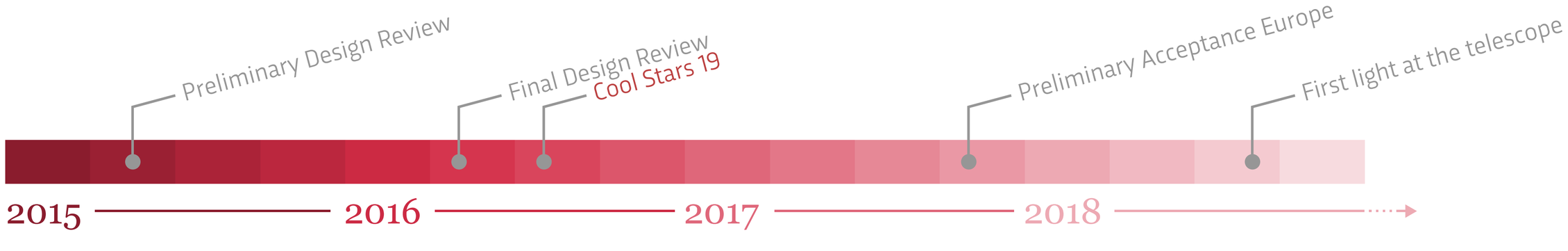
CONTEXT

CRIRES - the CRyogenic high-resolution InfraRed Echelle Spectrograph has been removed from the Very Large Telescope in 2014, and shipped back to ESO headquarters in Garching for a massive upgrade.

The instrument will be converted into a cross-dispersed spectrograph and gain a tenfold increase in simultaneous wavelength coverage. The current detectors will be replaced with state-of-the-art infrared detectors developed for the James Webb Space Telescope. In addition, we will add new gas cells to improve wavelength calibration, and a polarimeter to enable spectropolarimetric capabilities.

INSTRUMENT PERFORMANCES

spectral resolution	50,000 and 100,000
wavelength coverage	0.95 - 5.3 µm | YJHKLM bands
RV precision	2-3 m/s
slit length	10 arcseconds
slit width	0.2 and 0.4 arcseconds
polarimetry	linear + circular (YJHK bands)
adaptive optics	60 actuator curvature sensing
cross-disperser	6 exchangeable gratings



THE TEAM

FOR MORE INFORMATION

- **Come talk with us, we are around.**


Alexis Lavail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Thomas Marquart


Eric Stempels

- **Visit our webpage**

https://crir.es