

HORus

higher
resolution
for GTC

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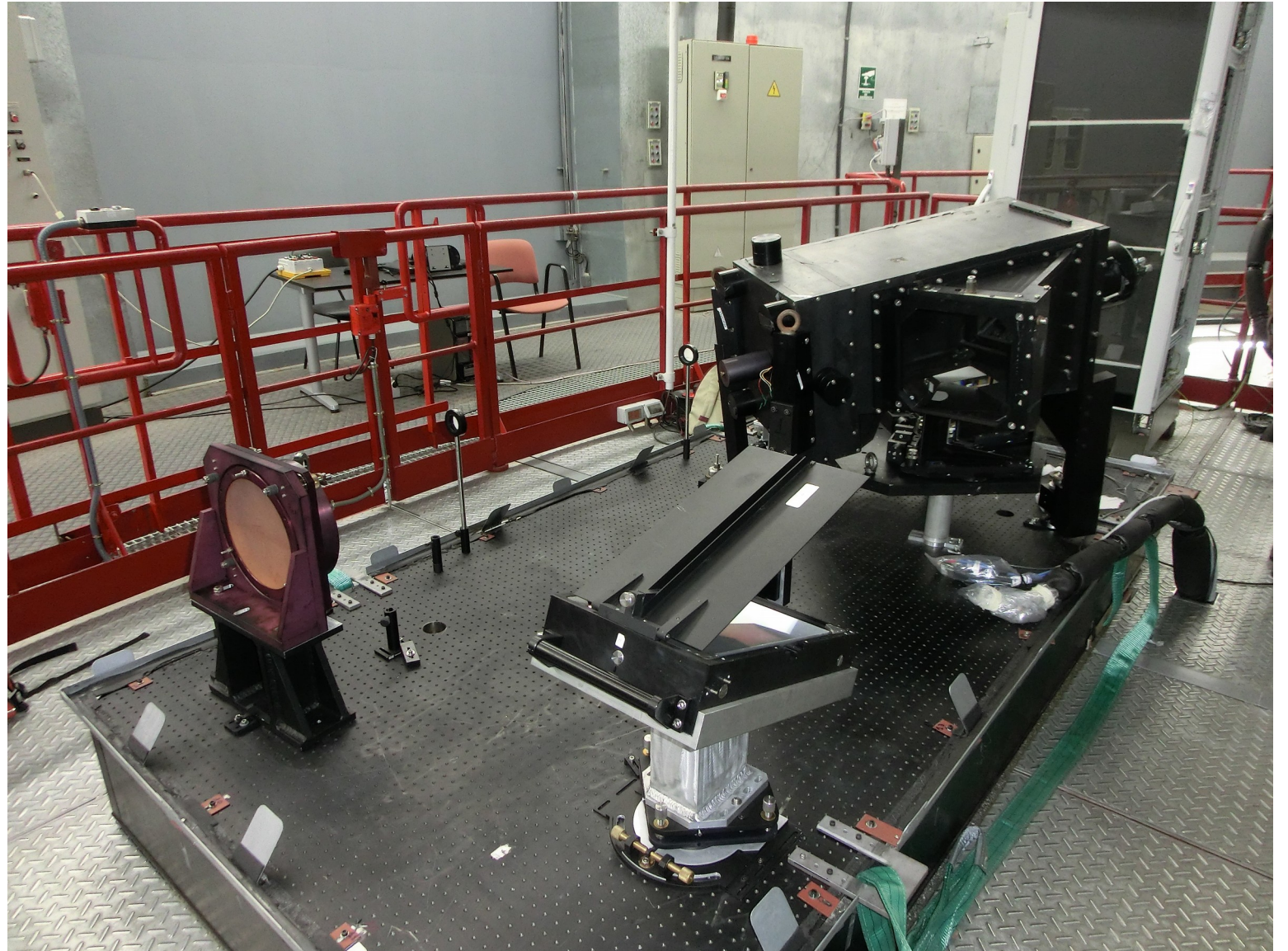


The High Optical Resolution Spectrograph (HORus) has been available on the 10-m GTC telescope since early 2019. Based largely on optical elements reused from UES, in operation on the 4-m WHT in the 90s, HORus provides a resolving power of 25,000 with nearly complete coverage in the range 380-700 nm. This instrument gives a signal-to-noise ratio at 550 nm of 75 for a V=15 solar-like star in 1 hour, and is particularly well-suited for stellar spectroscopy and exoplanet transits. This seminar will describe the status of the instrument, offer tips to prepare observations and analyze them with its dedicated data reduction package, and touch on future plans.

Resolving power
25,000

Spectral coverage
377-691 nm

1 hour exposure
S/N **50,30,20**
V 14, 15,16



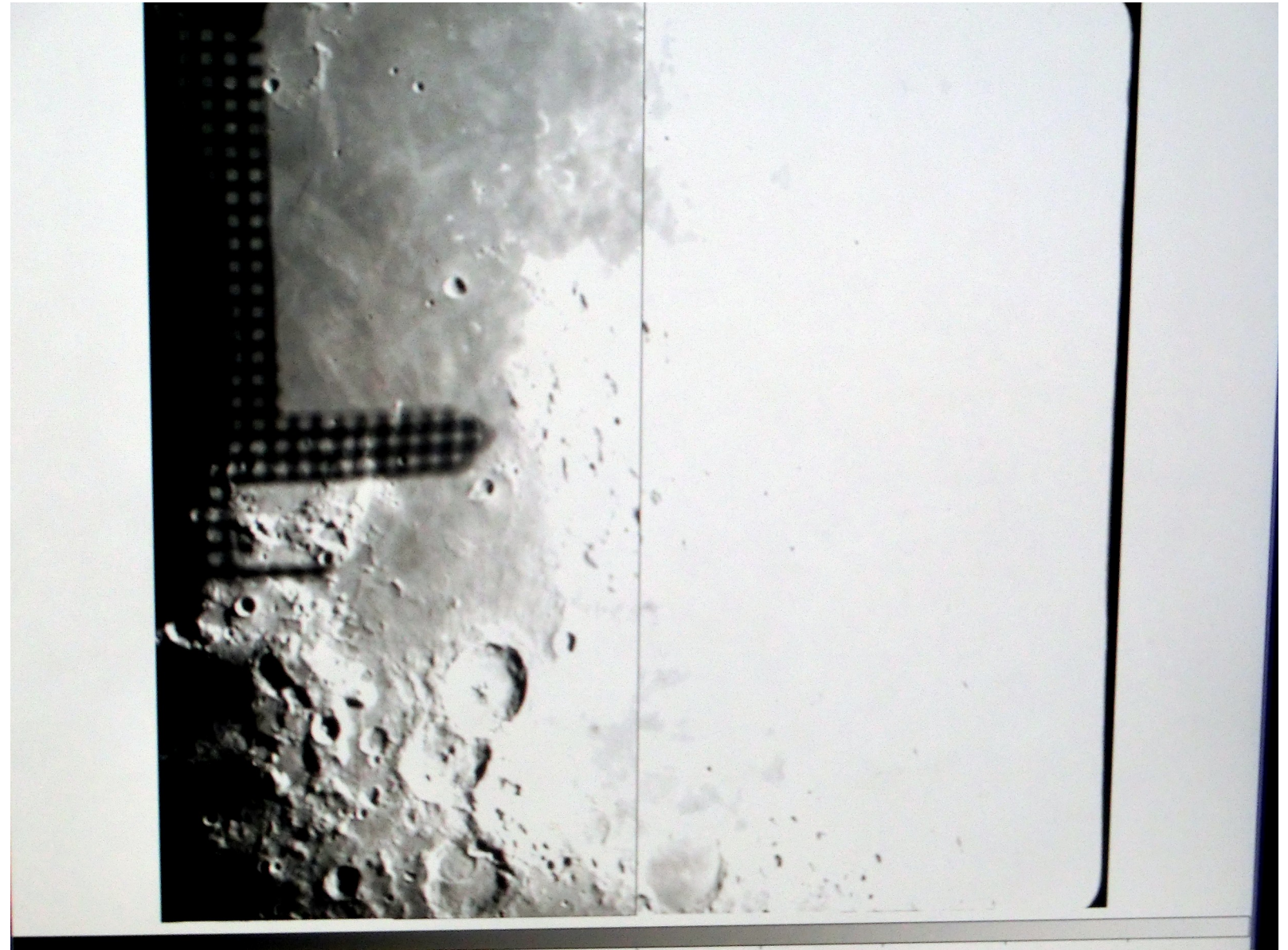
IFU
3x3 (0.7 arcsec²
spaxels)

Fiber fed

FoV
shared with OSIRIS

Commissioning
March 2019

Access
CAT
(2019b,2020a,2020b)



Science

Stellar abundances

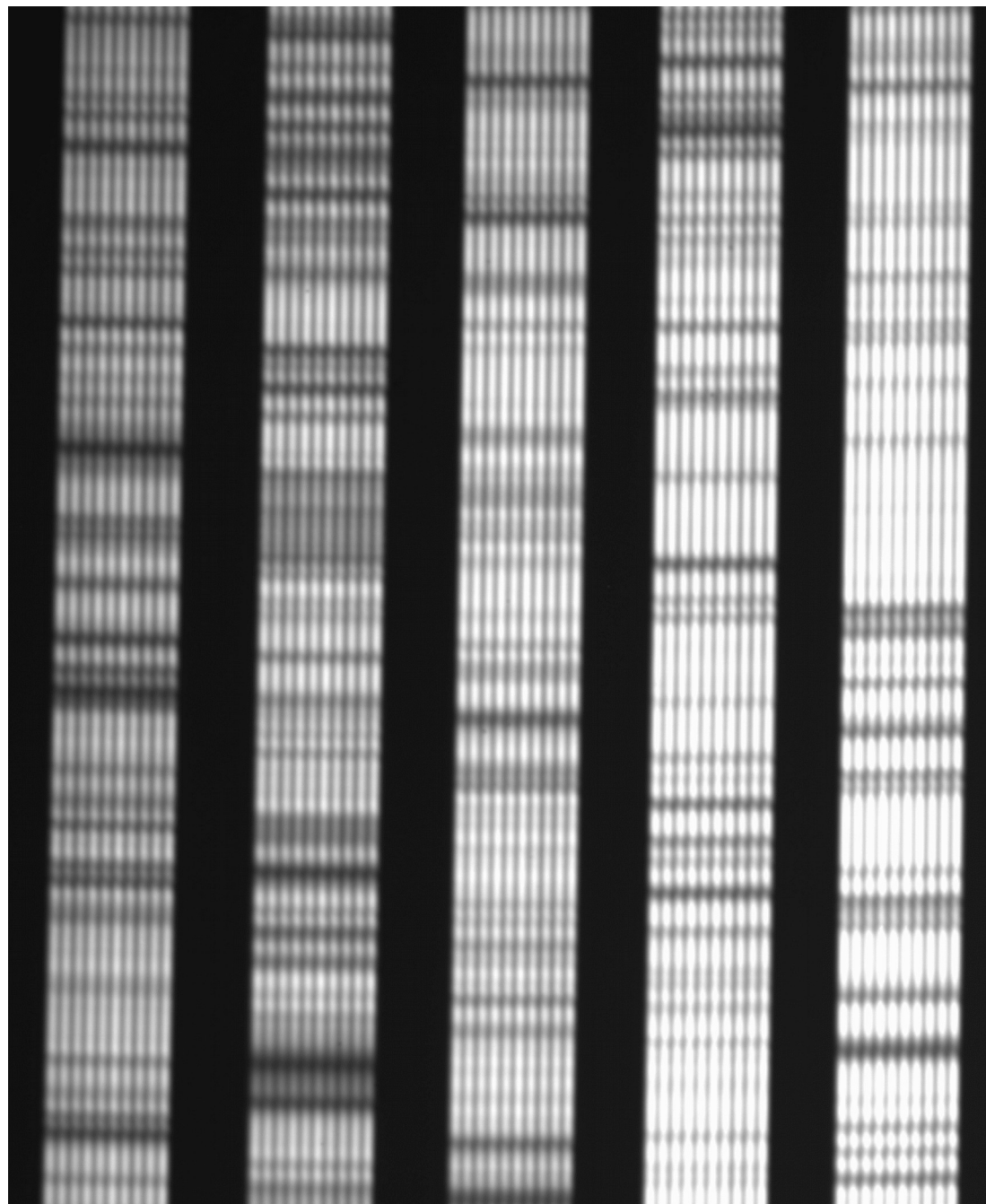
Radial velocities

**Integrated light
spectroscopy**

H II regions

**Exoplanet transmission
spectroscopy**

...



Future

HORuS **A** is for axis

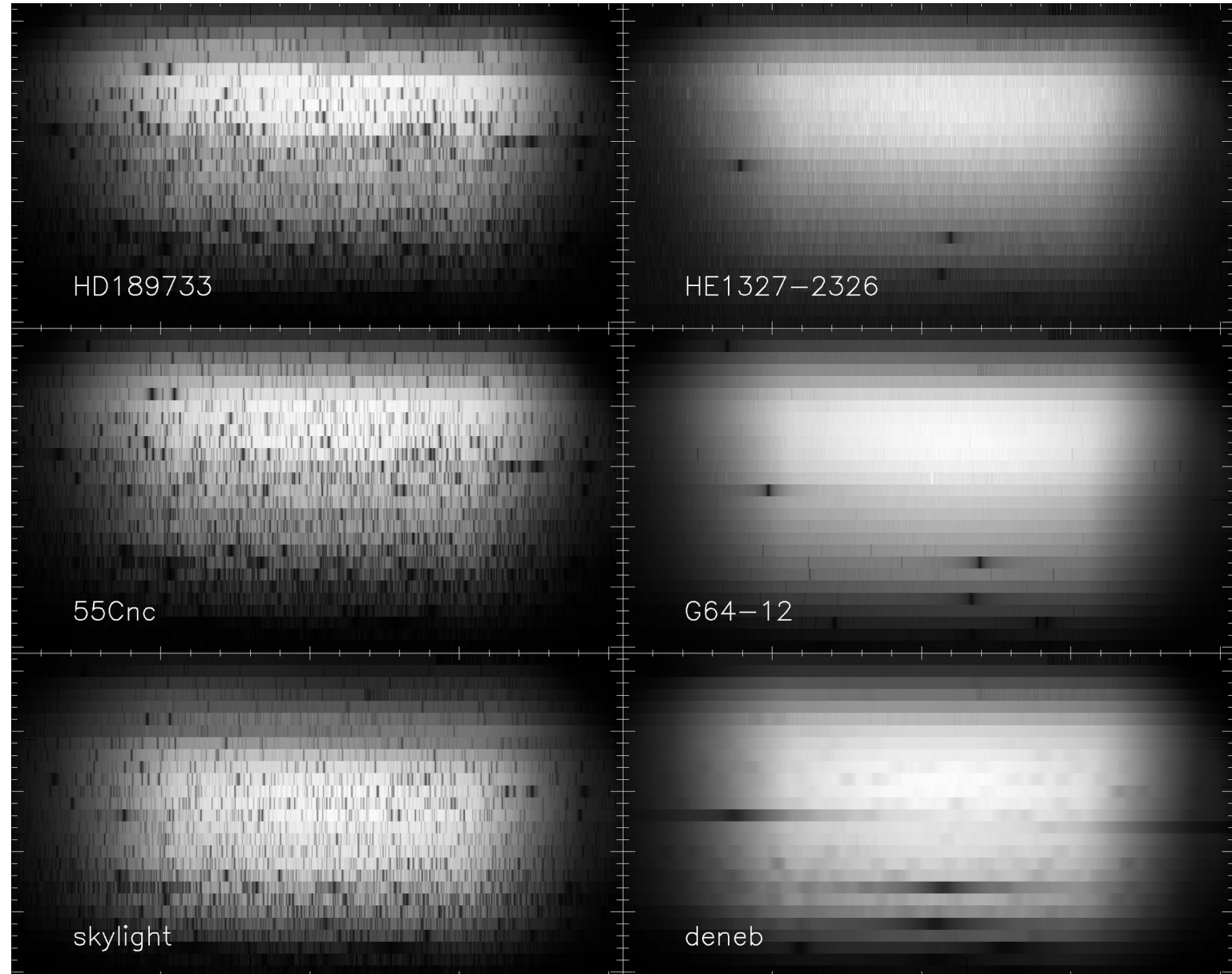
Could continue operations at the Nasmyth (before GTC-AO starts)

B is for bench

Simultaneous operation with GTC-AO is possible (until FRIDA arrives at GTC)

U is for under

Under the Nasmyth may be a location for the future



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Management: Juan Calvo

Optics: Félix Gracia, José Luis Rasilla

Software: Panchi Gómez, Juan José Fernández, Noemí González

Electronics: Enrique Joven

Mechanics: José Peñate, Patricia Fernández, Samuel Santana

Electronics workshop: Roberto Barreto, Ángel Morales, José Olives

Mechanical workshop: Juan José Dionis, Carlos Flores, Pablo González,
Esteban González, Cristóbal Morell, Ricardo Negrín, Felipe García

Technical drawing: Abelardo Díaz, Juan José Perdigón, Juan Carlos Díaz

Consulting: Fred Hearty, Chuck Henderson

GTC support: Manuela Abril, Himar Viera, David García, Héctor de Paz