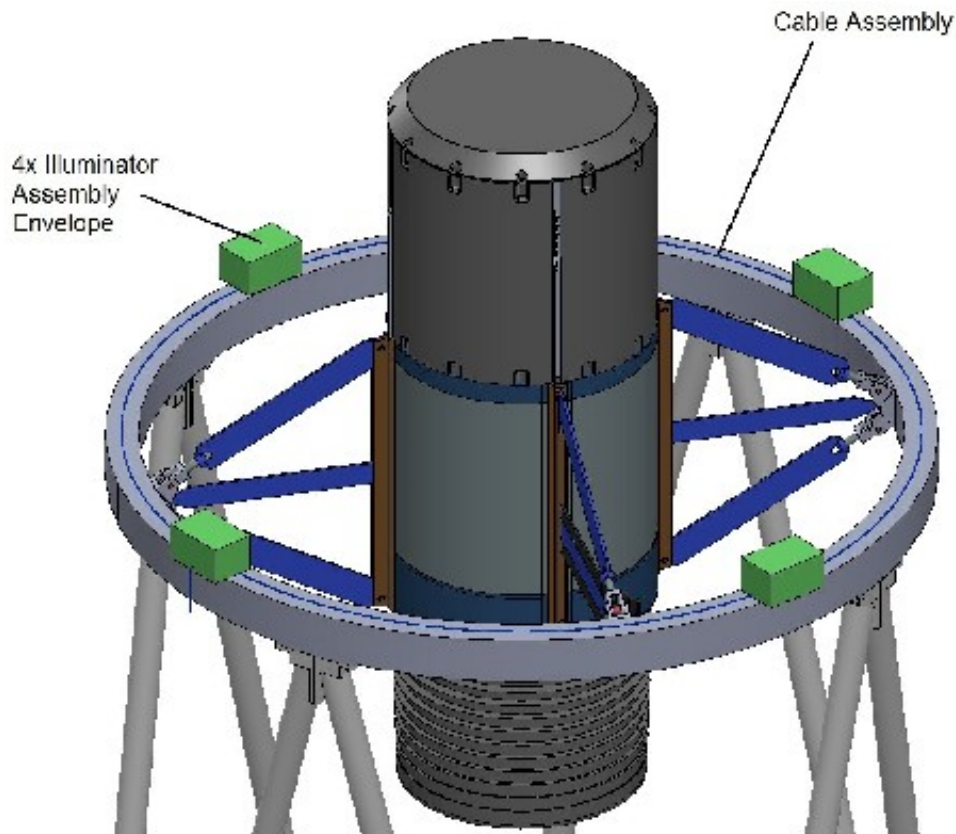


DESI

Installation du Système de Calibration

Laurent Le Guillou
(Sorbonne Univ. / LPNHE)

*LPNHE, Réunion du Vendredi
2019-10-04*

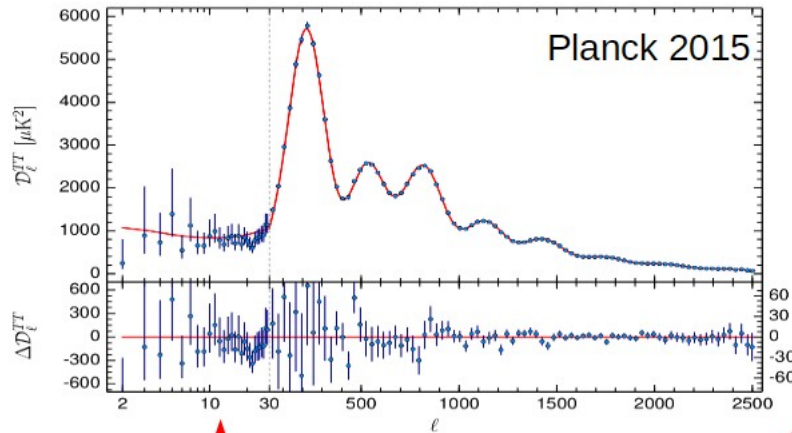


LPNHE : Christophe Balland, S. Bongard, Julien Coridian, Brigitte Delamour, Marc Dhellot, Patrick Ghislain, Jean-François Goulian, Julien Guy, Sonia Karkar, Laurent Le Guillou, Eric Pierre, Philippe Repain, Michael Roynel, Eduardo Sepulveda
+ Aide précieuse du service mécanique du LKB ; l'UFR de Physique ; de Maude Le Jeune (APC).

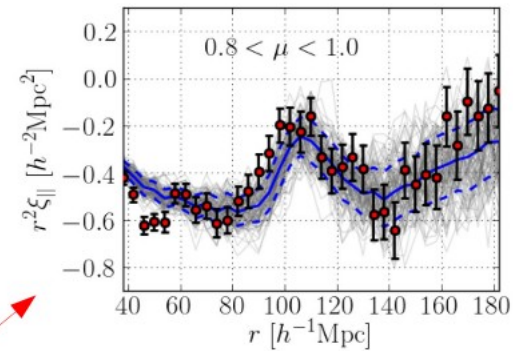


BAO : Oscillations Acoustiques de Baryons

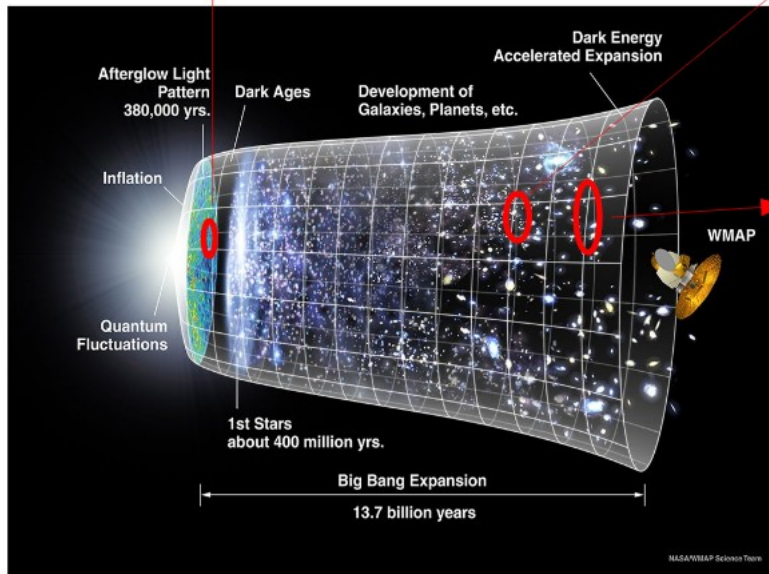
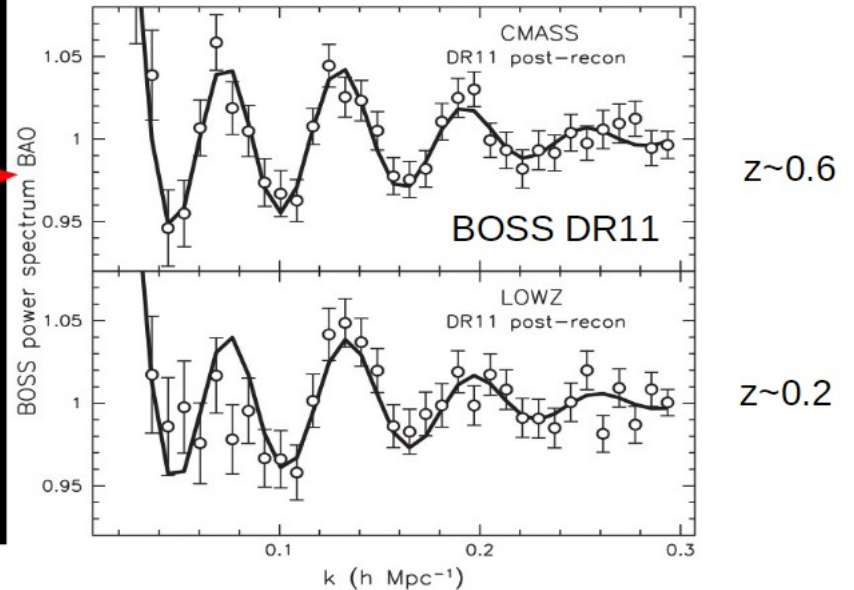
dans le CMB à $z \sim 1000$



dans la forêt Lyman-alpha à $z \sim 2.3$



dans le champ de densité des galaxies

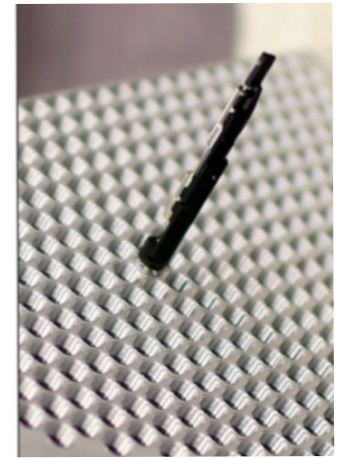
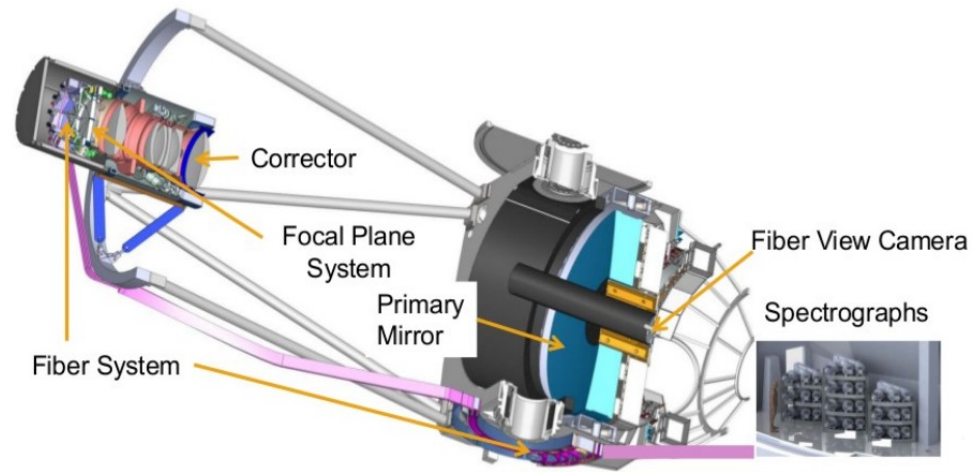
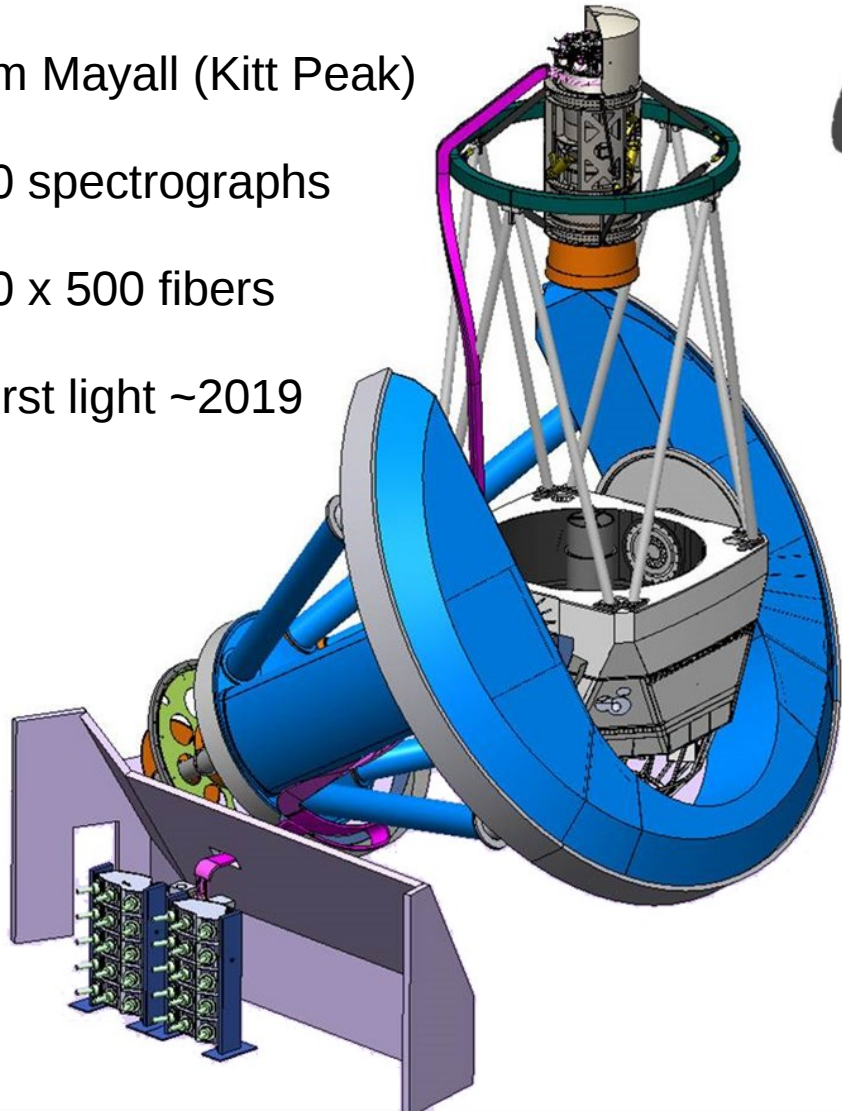


Dark Energy Spectroscopic Instrument

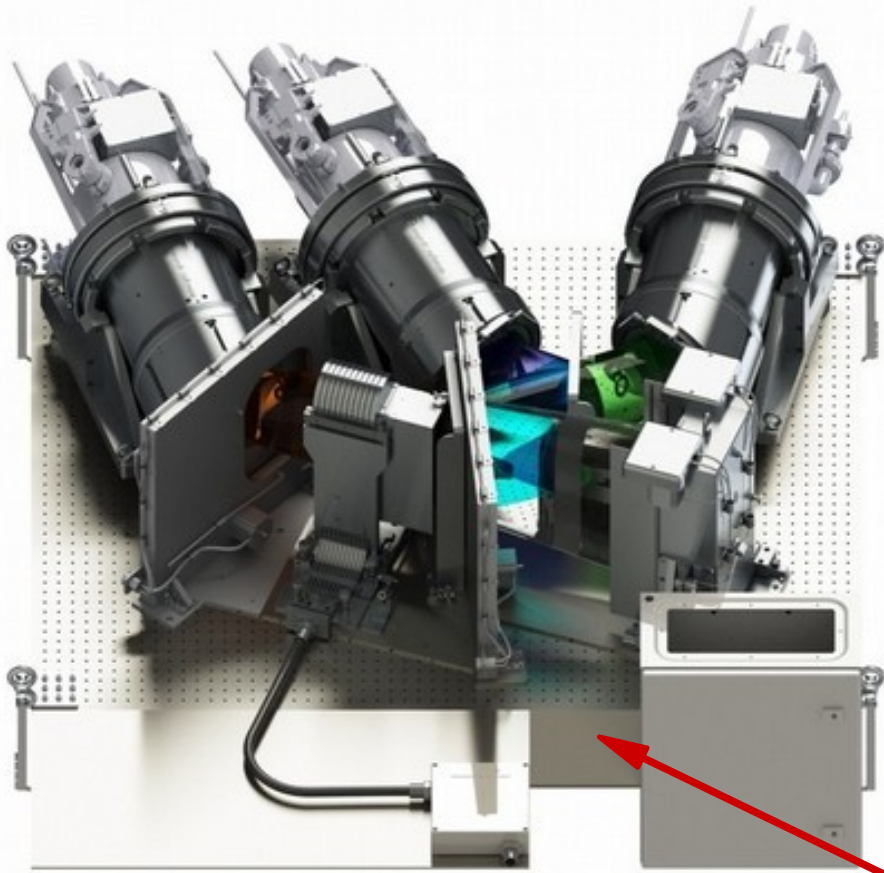
Laurent Le Guillou (Sorbonne Univ./LPNHE)
LPNHE, Réunion du Vendredi, Paris, 2019-10-04

DESI: Dark Energy Spectroscopic Instrument

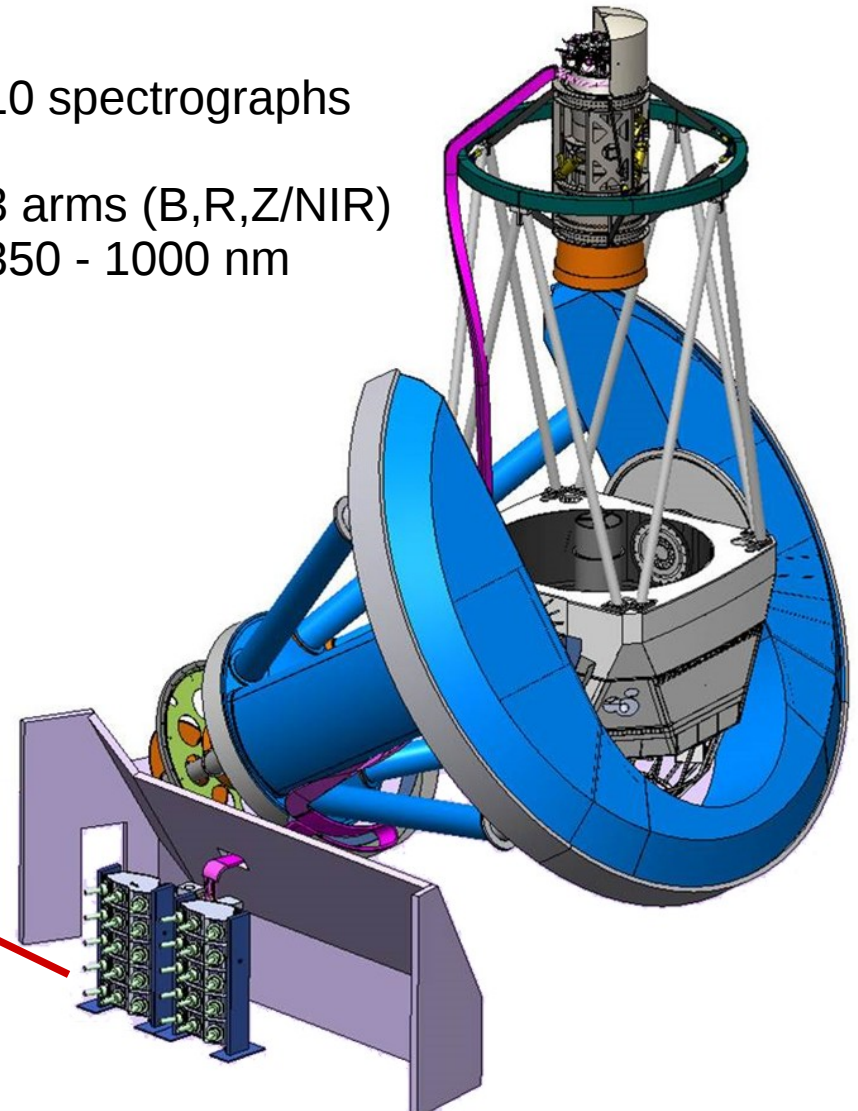
- 4m Mayall (Kitt Peak)
- 10 spectrographs
- 10 x 500 fibers
- First light ~2019



DESI: Dark Energy Spectroscopic Instrument



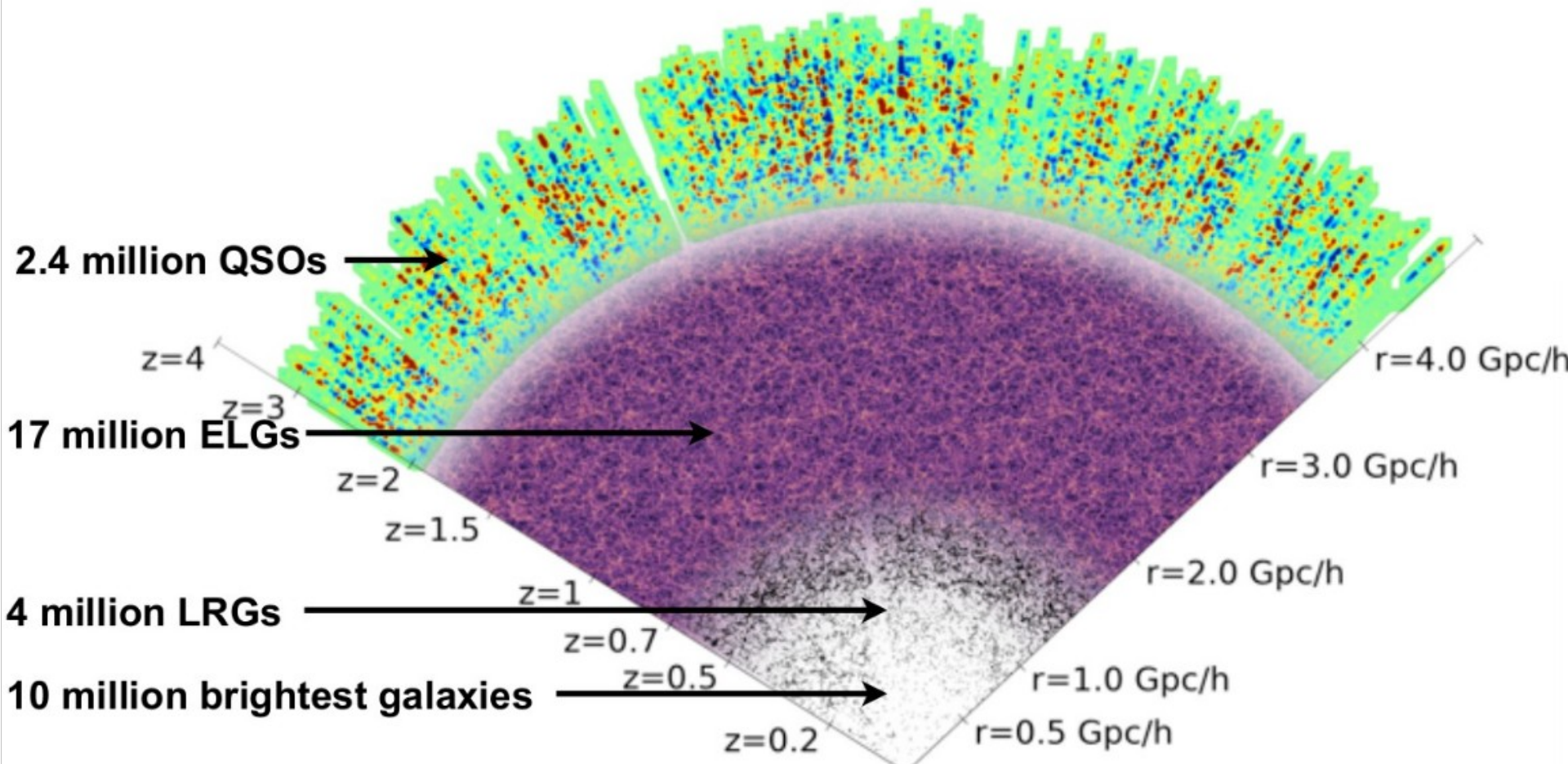
- 10 spectrographs
- 3 arms (B,R,Z/NIR)
350 - 1000 nm



DESI spectroscopic survey 14000 deg²

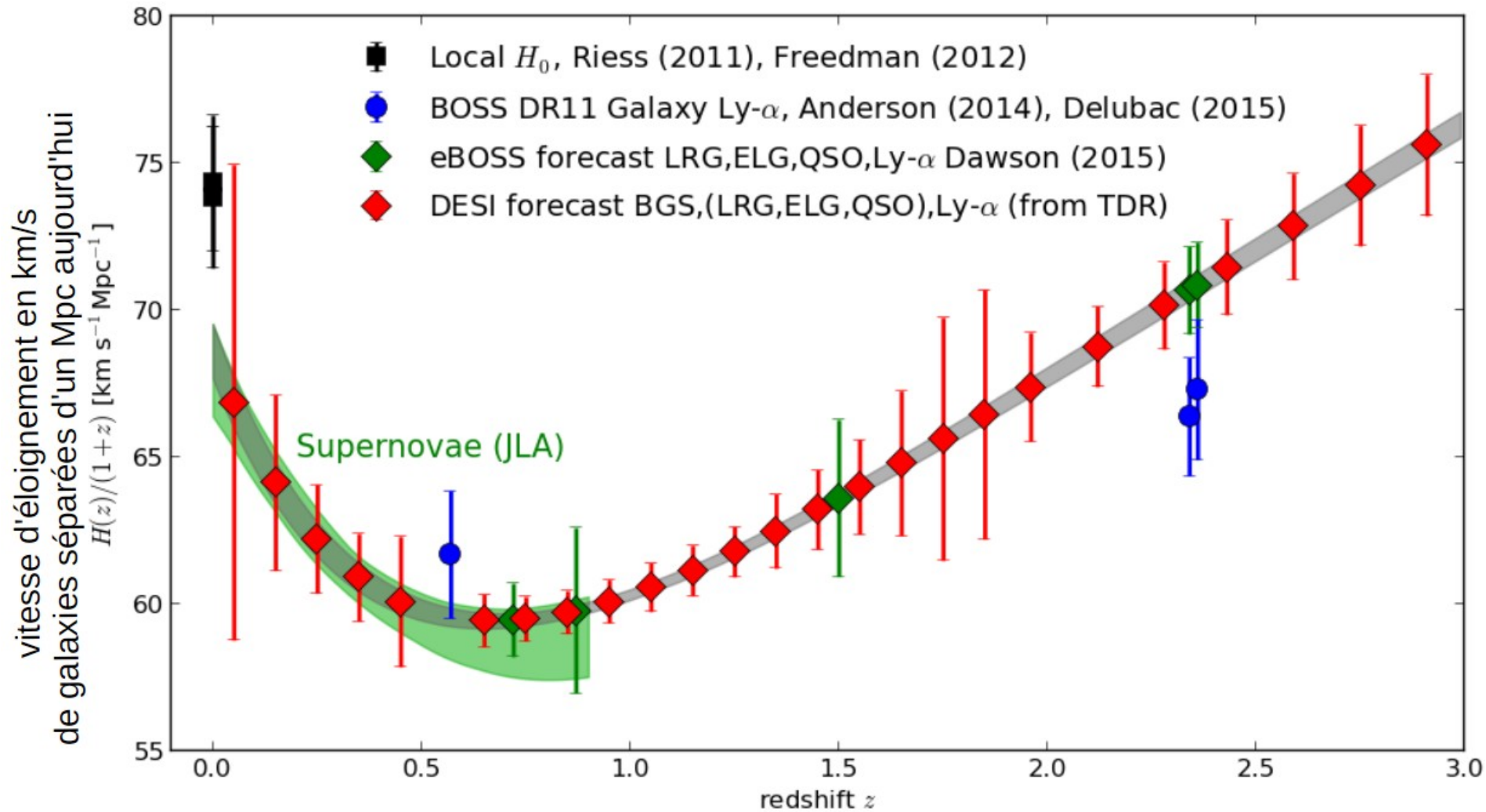
The largest spectroscopic survey for dark energy

SDSS $\sim 2h^{-3}\text{Gpc}^3$ \rightarrow BOSS $\sim 6h^{-3}\text{Gpc}^3$ \rightarrow DESI $50h^{-3}\text{Gpc}^3$



Contraintes sur $H(z)$

BOSS+eBOSS+DESI



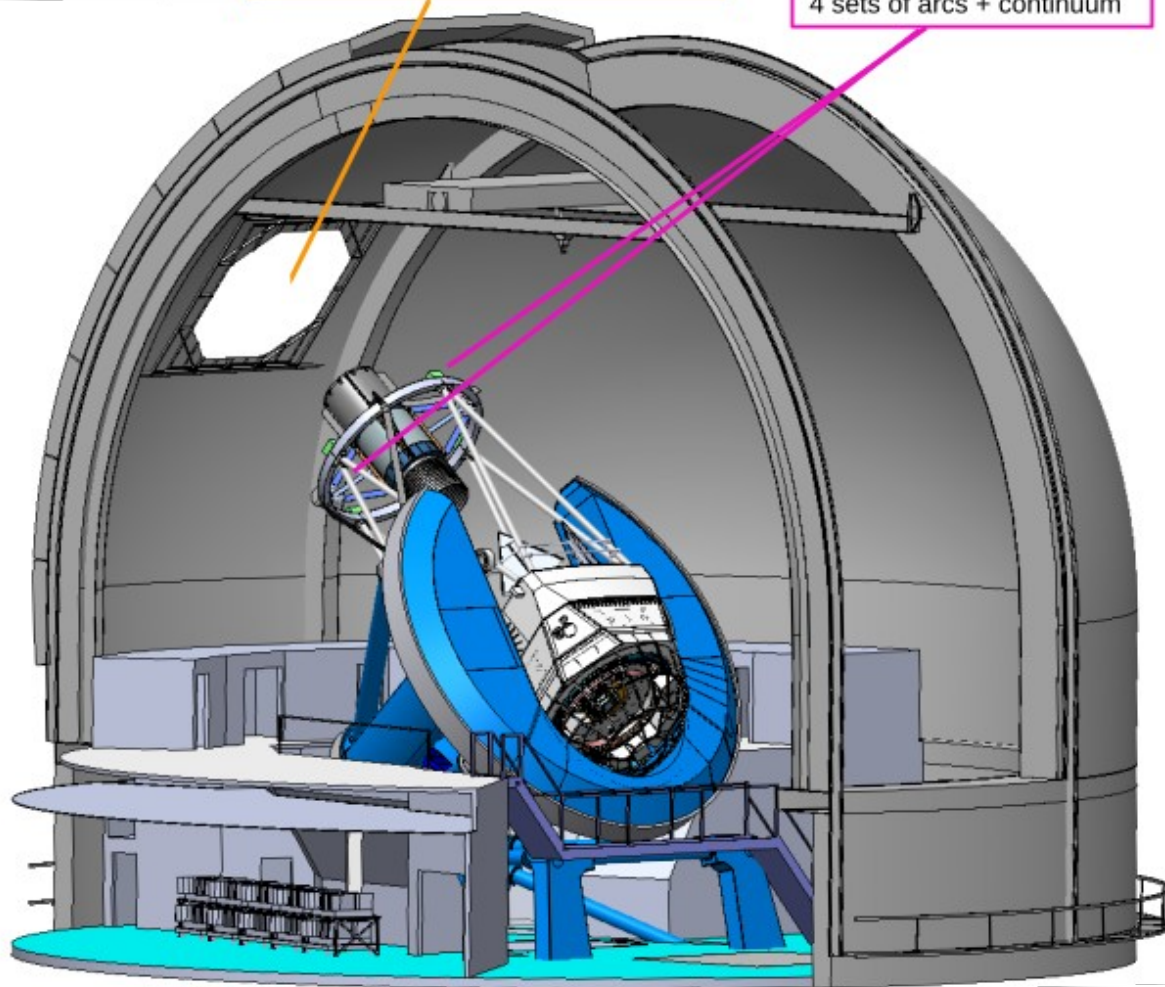
DESI Calibration System

Dome Flat Screen

Screen used to project light onto
Slight modification of current screen

Calibration Lamps

4 sets of arcs + continuum

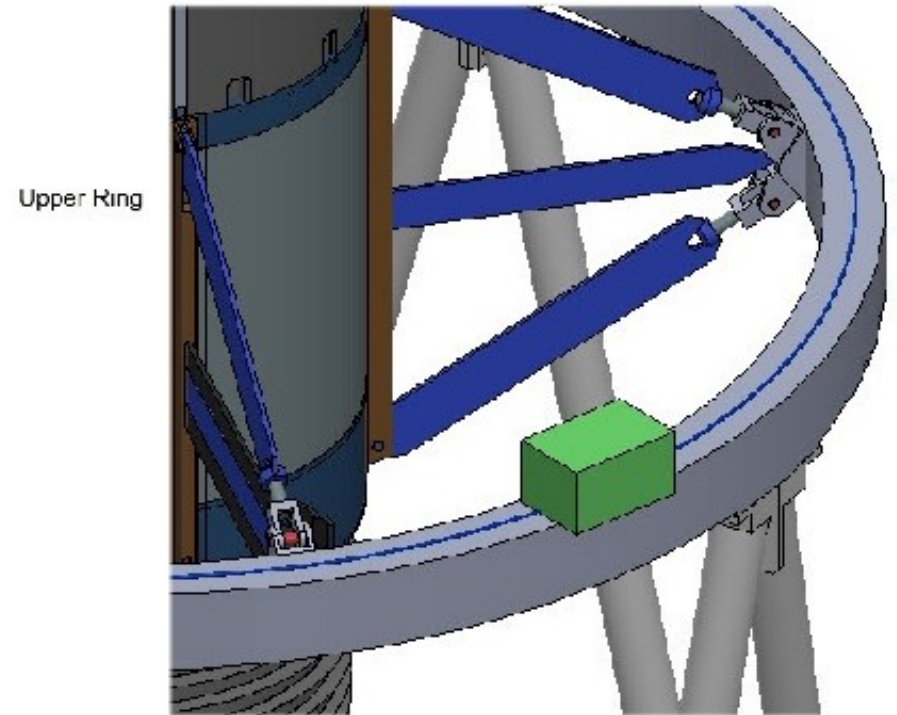
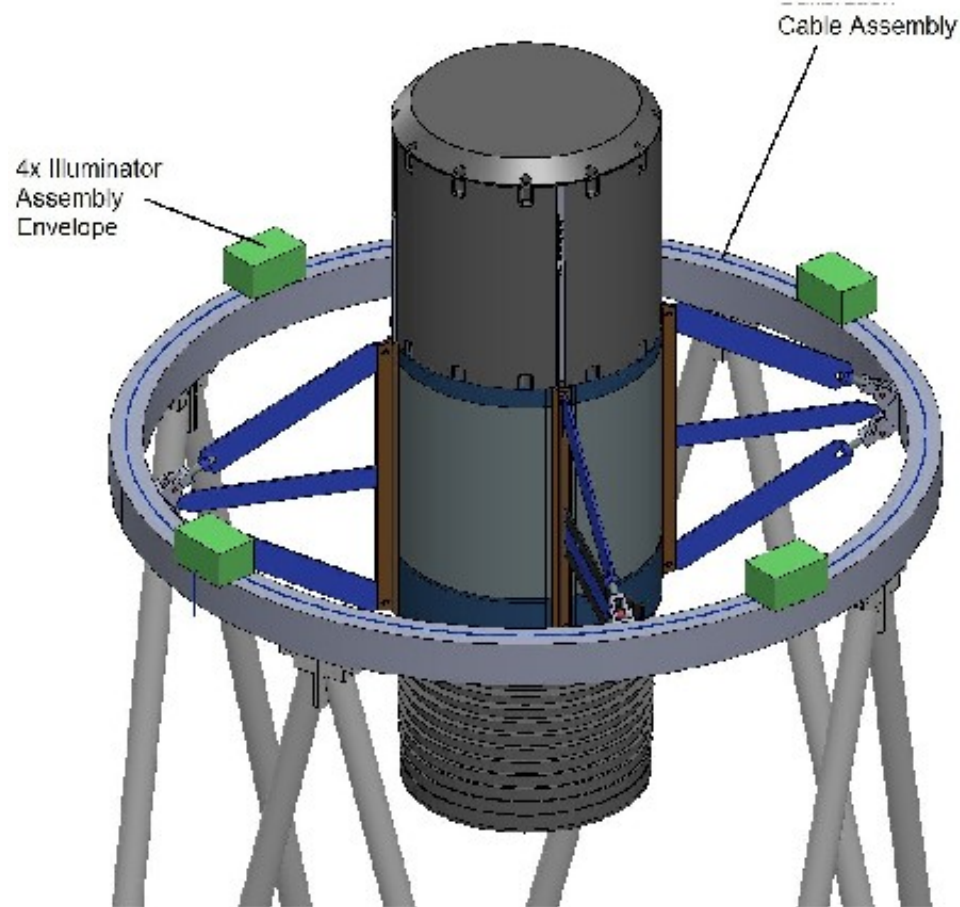


Calibration System: 5-meter Lambertian Screen

Delivered &
Installed in
2017



Calibration System: Lamps (upper ring)



Calibration System: Lamps (Arcs & Continuum)

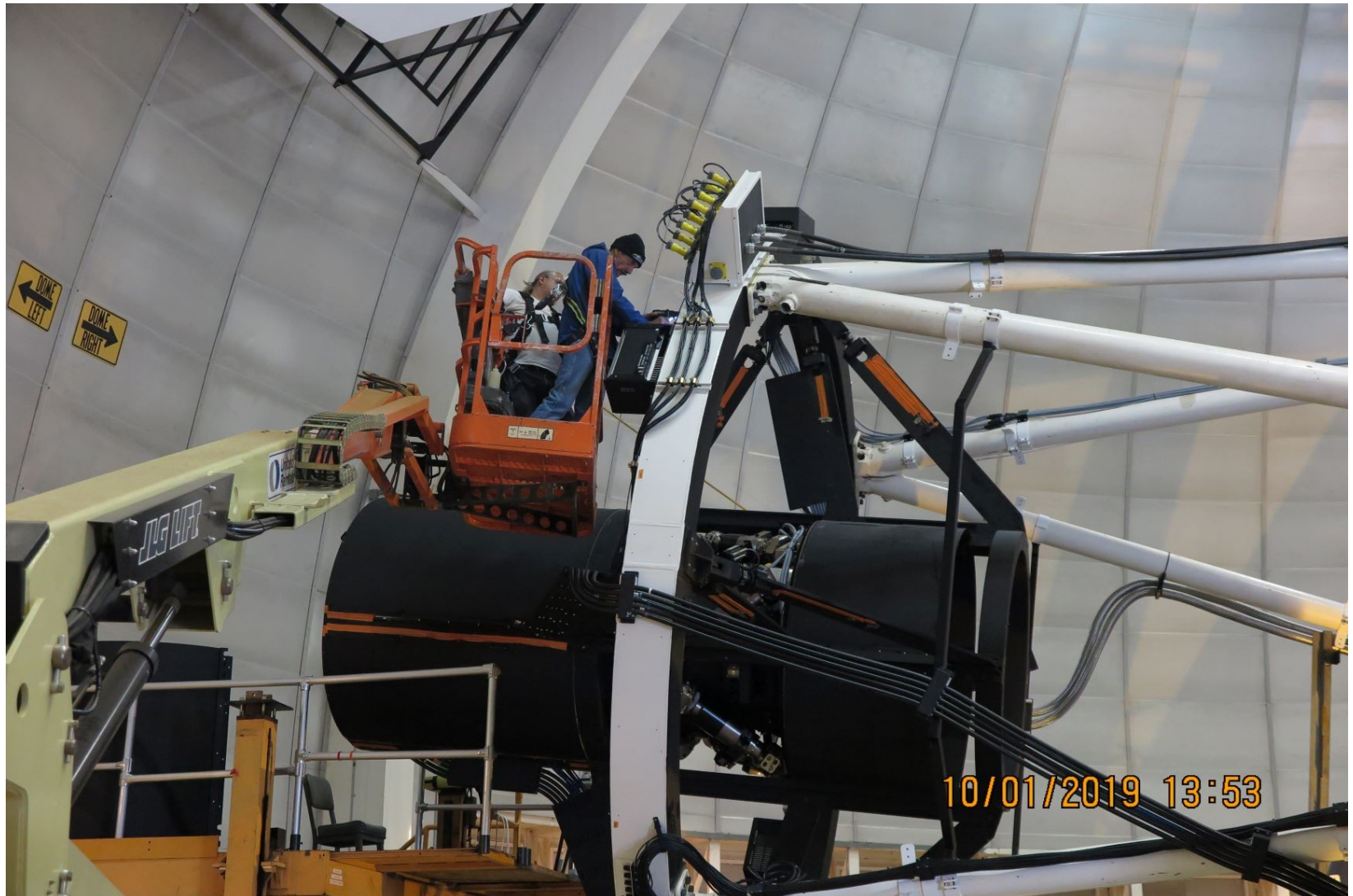


Arcs : HgAr, Kr, Ne, Xe, Cd for wavelength calibration

Continuum : Halogens + LEDs (still to be delivered, soon!) for fiber relative throughput



DESI Calibration System: Lamps Installation



Dark Energy Spectroscopic Instrument

Laurent Le Guillou (Sorbonne Univ./LPNHE)
LPNHE, Réunion du Vendredi, Paris, 2019-10-04

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DESI Calibration System: Installation



Dark Energy Spectroscopic Instrument

Laurent Le Guillou (Sorbonne Univ./LPNHE)
LPNHE, Réunion du Vendredi, Paris, 2019-10-04

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DESI Calibration System: Installation

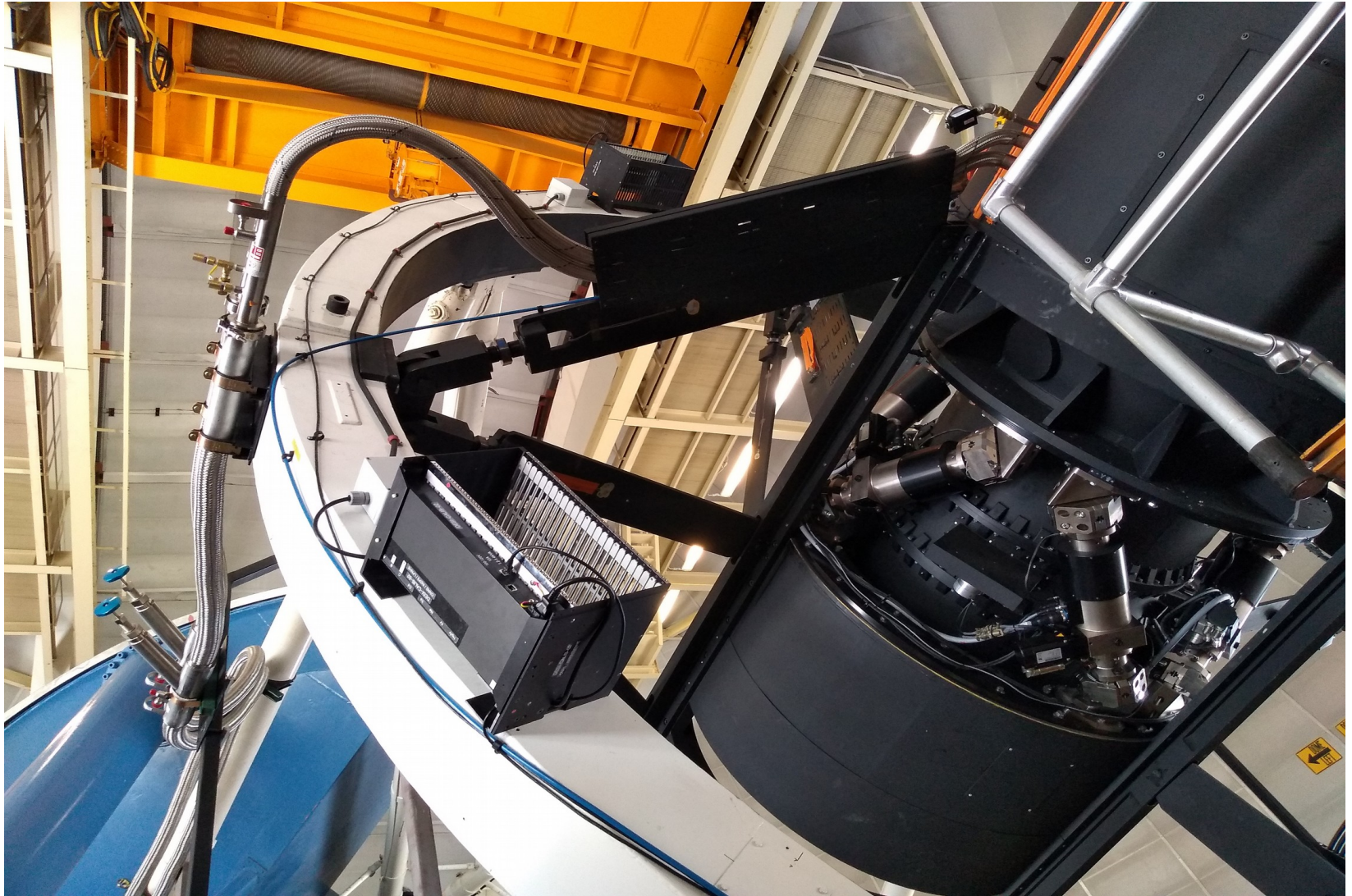


Dark Energy Spectroscopic Instrument

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LPNHE, Réunion du Vendredi, Paris, 2019-10-04

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DESI Calibration System: Installation

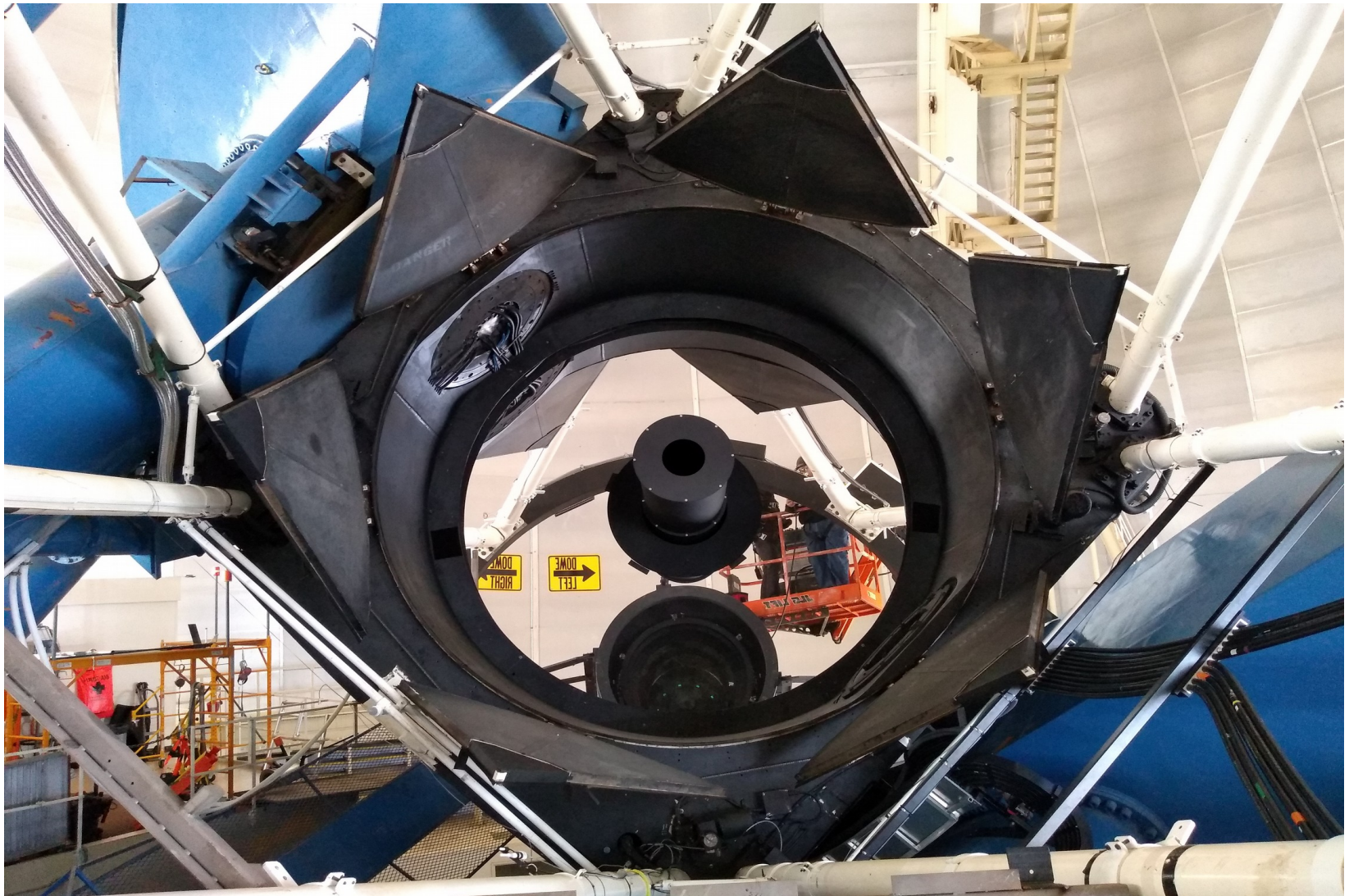


Dark Energy Spectroscopic Instrument

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LPNHE, Réunion du Vendredi, Paris, 2019-10-04

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DESI Calibration System: Installation

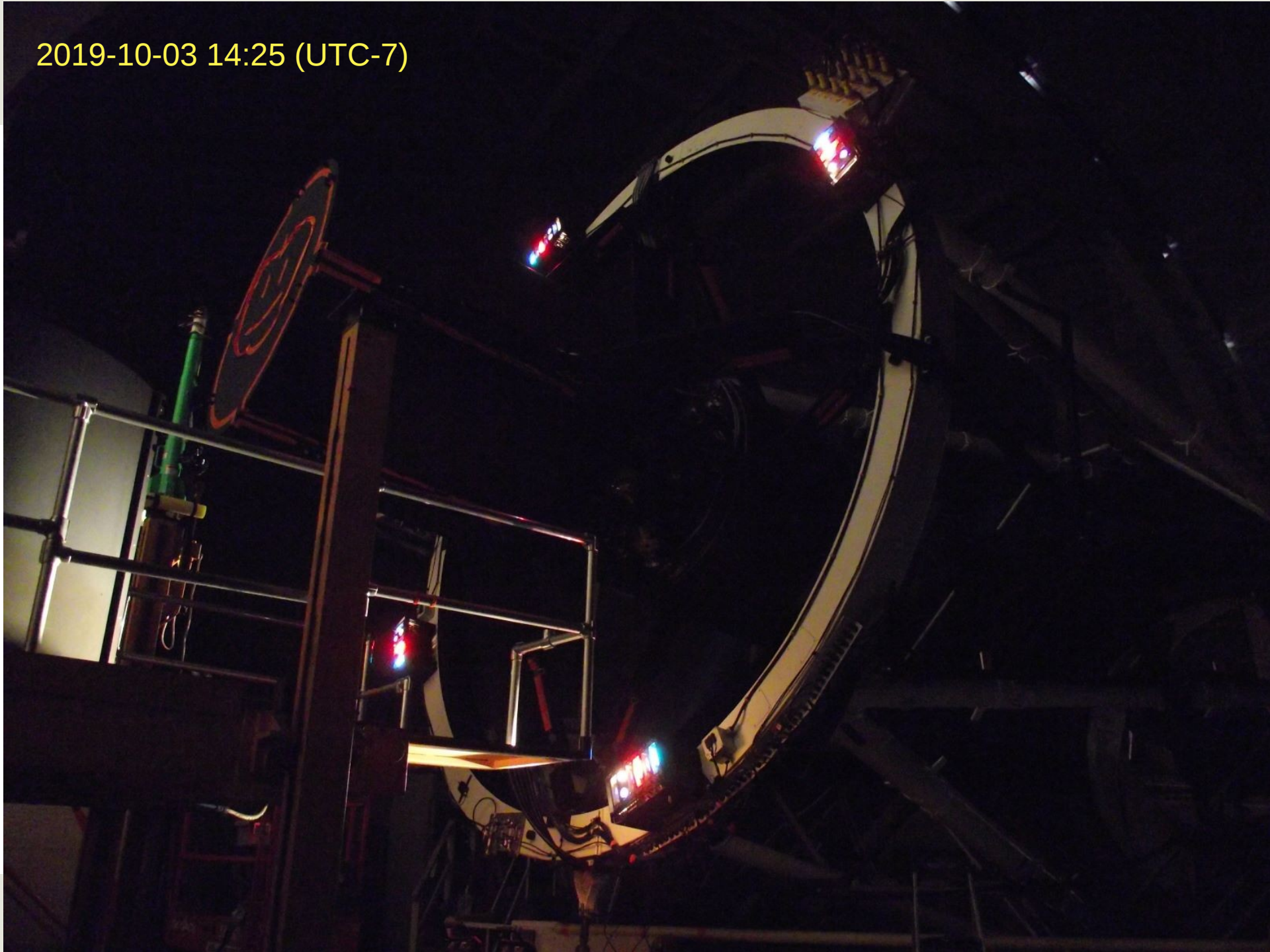


Dark Energy Spectroscopic Instrument

Laurent Le Guillou (Sorbonne Univ./LPNHE)
LPNHE, Réunion du Vendredi, Paris, 2019-10-04

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2019-10-03 14:25 (UTC-7)





10/01/2019 13:52