

Carignan

MeerKAT+FAST

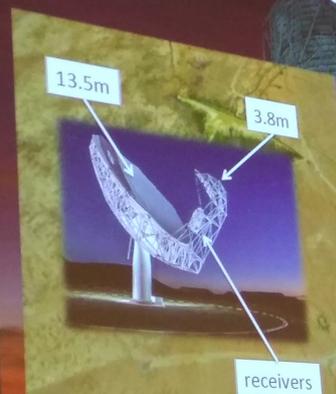
FAST: 500м, уже в строю

MeerKAT: 64*13.5м, введен в строй в июле 2018. В 2018 — начнется прием заявок.

Чувствительность FAST + пространственное разрешение MeerKAT

→ $<5 \cdot 10^{17}$ см

The SKA precursor MeerKAT



- 64 antennas
- 48 antennas in the core (< 1 km)
- Maximum baseline: 8 km

- Infrastructure of MeerKAT
- Completed in March 2014

M83 galaxy

MeerKAT in the Northern Cape provides a magnificent view of the hydrogen gas in M83, a famous galaxy discovered in Cape Town in 1752.

Blue and green colours show star light.

Red represents radio waves from hydrogen atoms detected by MeerKAT in April 2017.

Pink indicates the presence of both star light and hydrogen atoms.

Image done with MeerKAT configuration shown below using seven 50-minute exposures – achieving this detail and sensitivity much faster than any previous observations.



Credit: optical data from Palomar Observatory Sky Survey (POSS II), radio data from SKA South Africa's MeerKAT

LSST

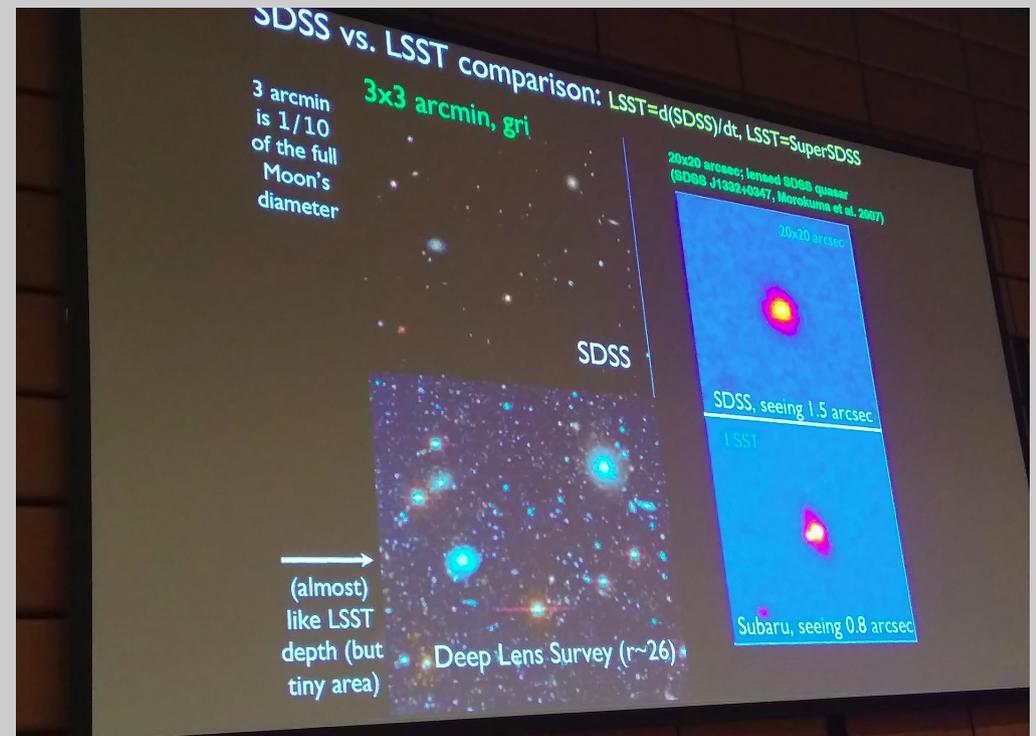
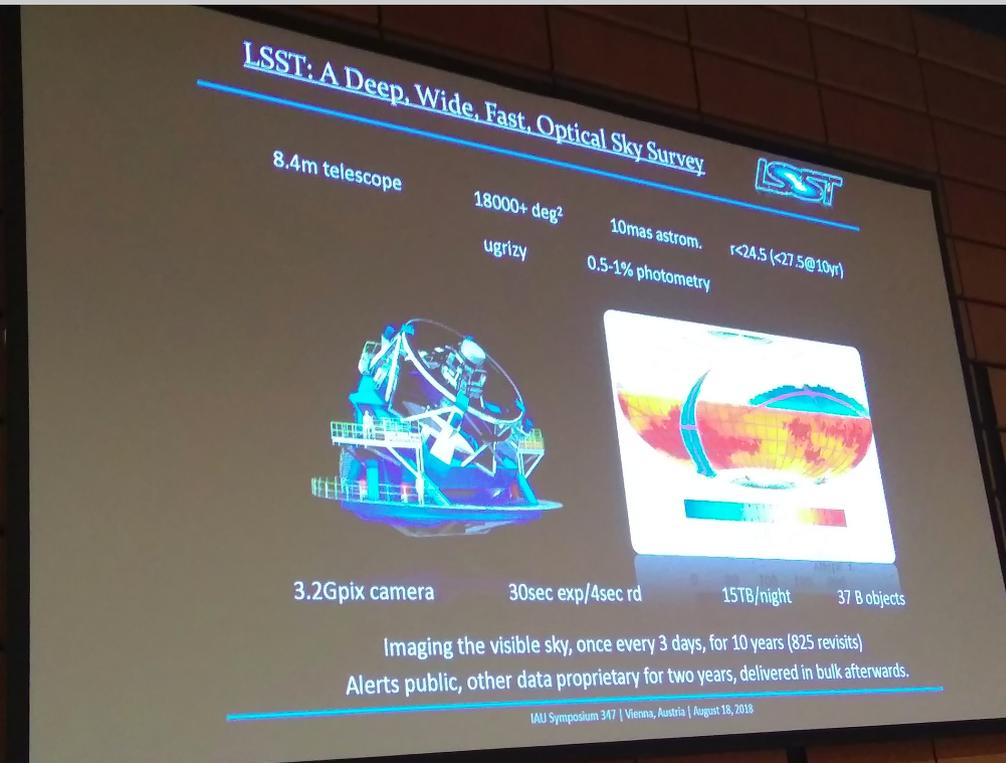
8.4m, ugrizy

Каждые 3 дня обзорекает все видимое небо

Через 2 года данные поступают в открытый доступ. Обещают новый релиз каждый год

Первый свет — в начале 2020х

→ ELT самые интересные объекты



TMT

В 2019 году планируется начать работы по установке
Вопрос — где?



Sites: Decision expected soon (i.e. by end 2018 - hopefully)

- MKO:
 - 2009: Maunakea selected for TMT
 - 2016-2017: 1.5 years long contested case
 - Sep. 2017: BLNR approves the Construction District Use Permit
 - Today: Stronger and more "open" local support than in 2015
 - Appeal #1 (Feb. 2017): Ruling made this month. No need for another contested case about the sublease between UH and TMT
 - Appeal #2 (Oct. 2017): No ruling yet. The appeal was filed by opponents about CDUP
 - Opponent actions at start of construction?
- ORM:
 - 2016: La Palma becomes TMT's alternate site
 - 2017: Hosting Agreement MOU signed between TIO and IAC
 - 2017: Collaboration agreement signed between TIO, IAC, La Palma government & local municipality
 - 2018: Environmental Impact Assessment has completed its public consultation period and is submitted to authorities
 - Expectation is to obtain "administrative license" this fall

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Current timeline

- Late 2018: Realistic expectation to have safe & legal mountain access granted in Hawaii and/or Spain
- 2019: Start of Construction in Hawaii or Spain
- 2020 -2022: Enclosure assembly
 - End 2023: End construction of all summit buildings
- 2022-2024: Telescope structure integration
- 2024 -2027: AIV, commissioning
- 2028: "First-light"

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