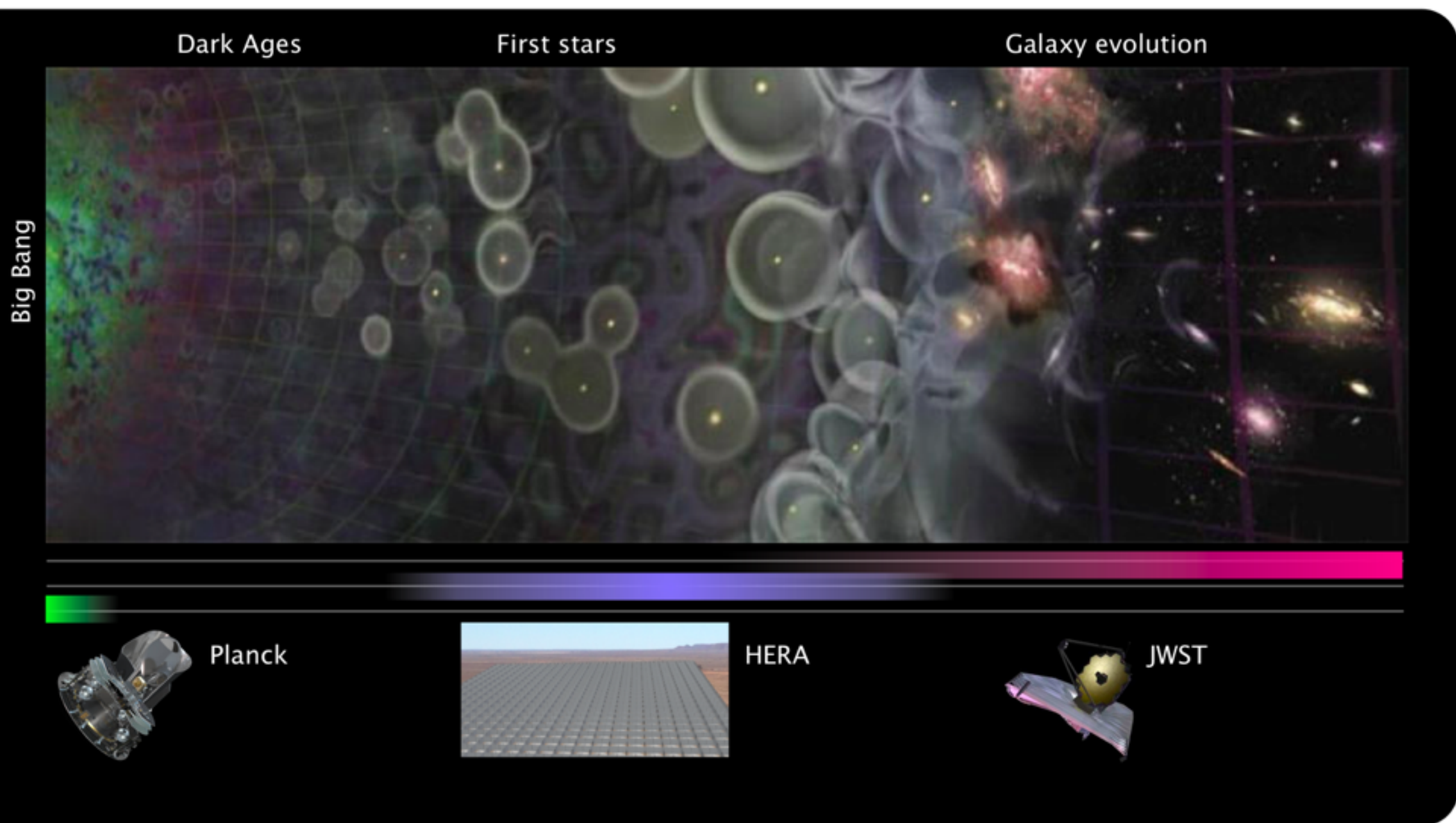


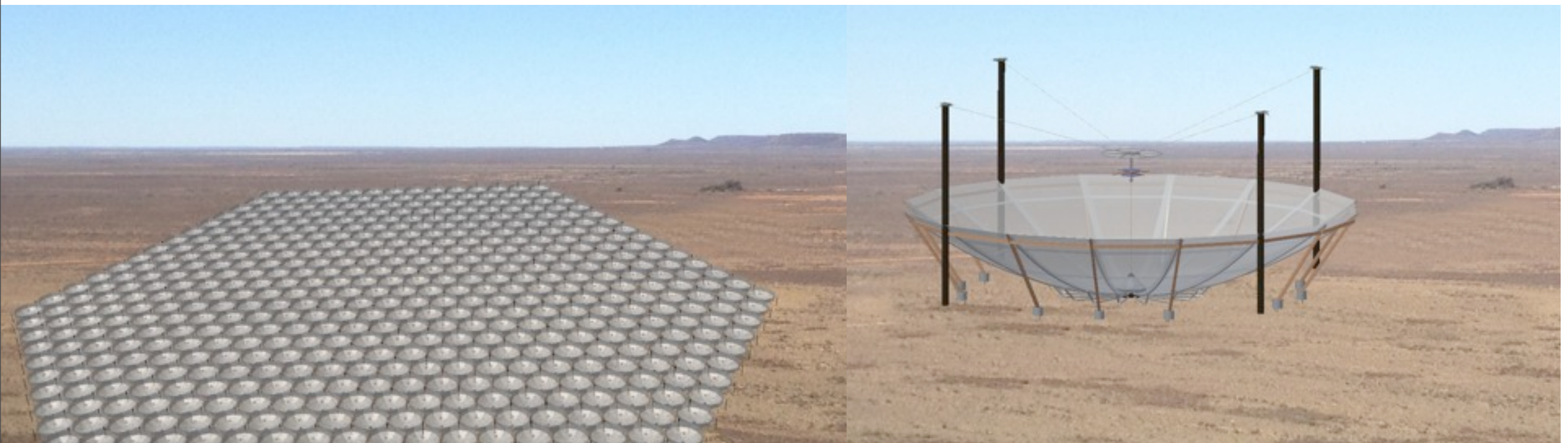
Some HERA Slides

D. Jacobs
June 2014



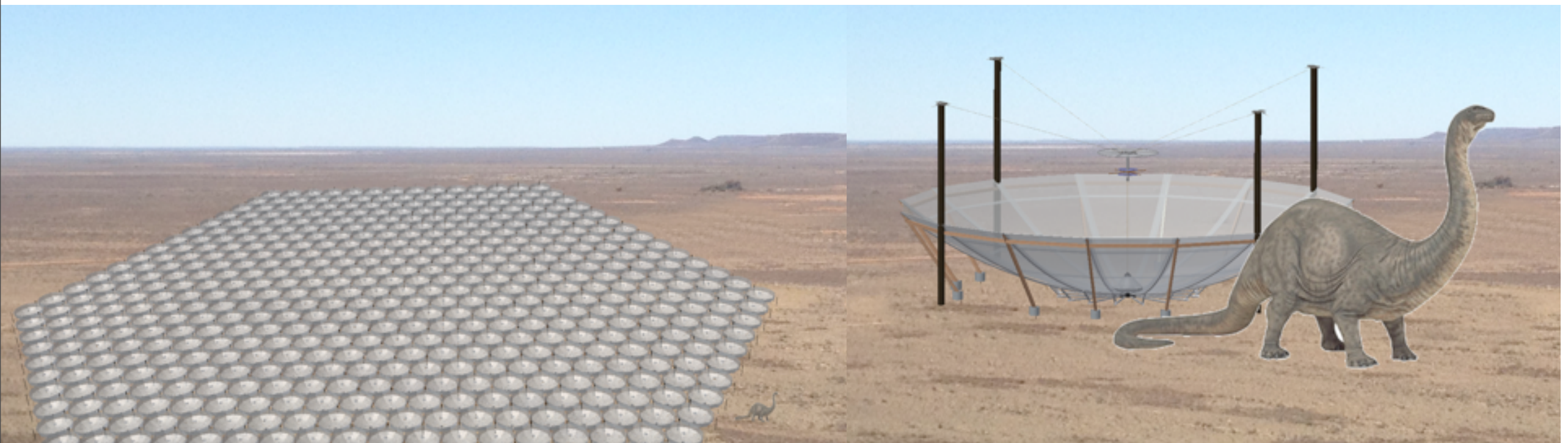
Hydrogen Epoch of Reionization Array

- 14m transit dish, 576 element array
- PAPER feed
- MWA-type node architecture
- Fast focus minimizes chromaticity
- Joint MWA - PAPER enterprise
- 0.1 km² (same collecting area as arecibo, 80x the survey speed)

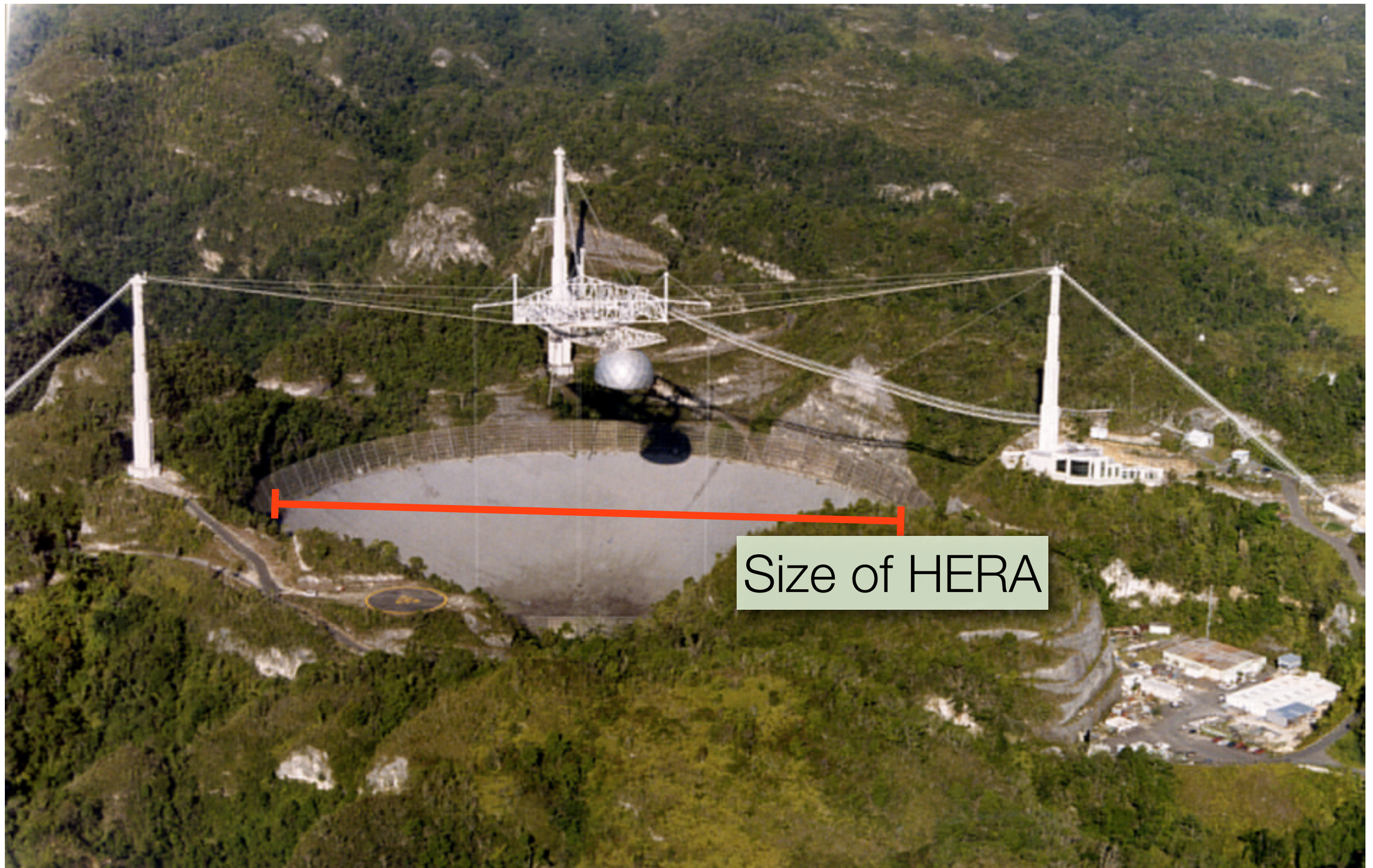


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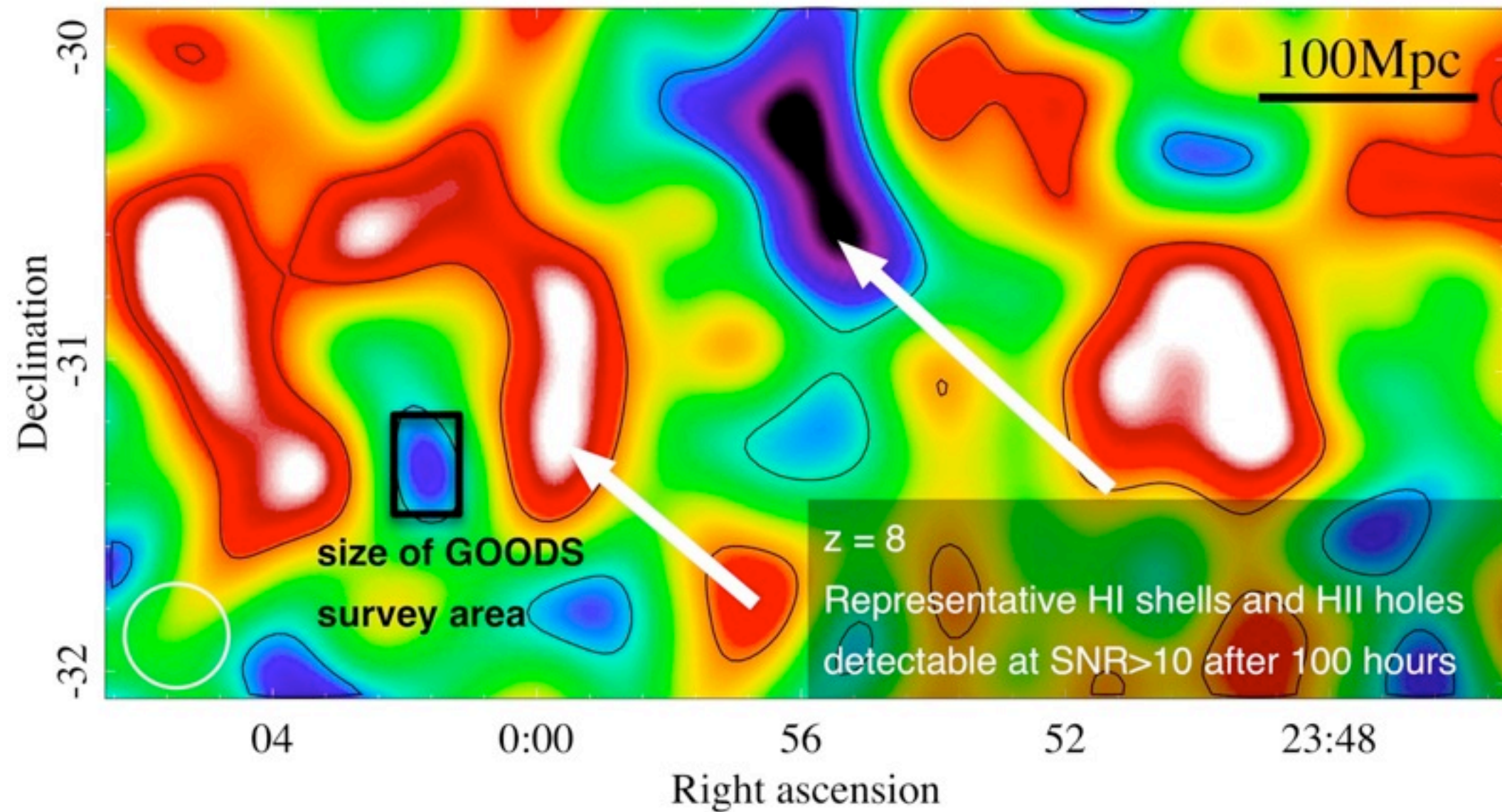


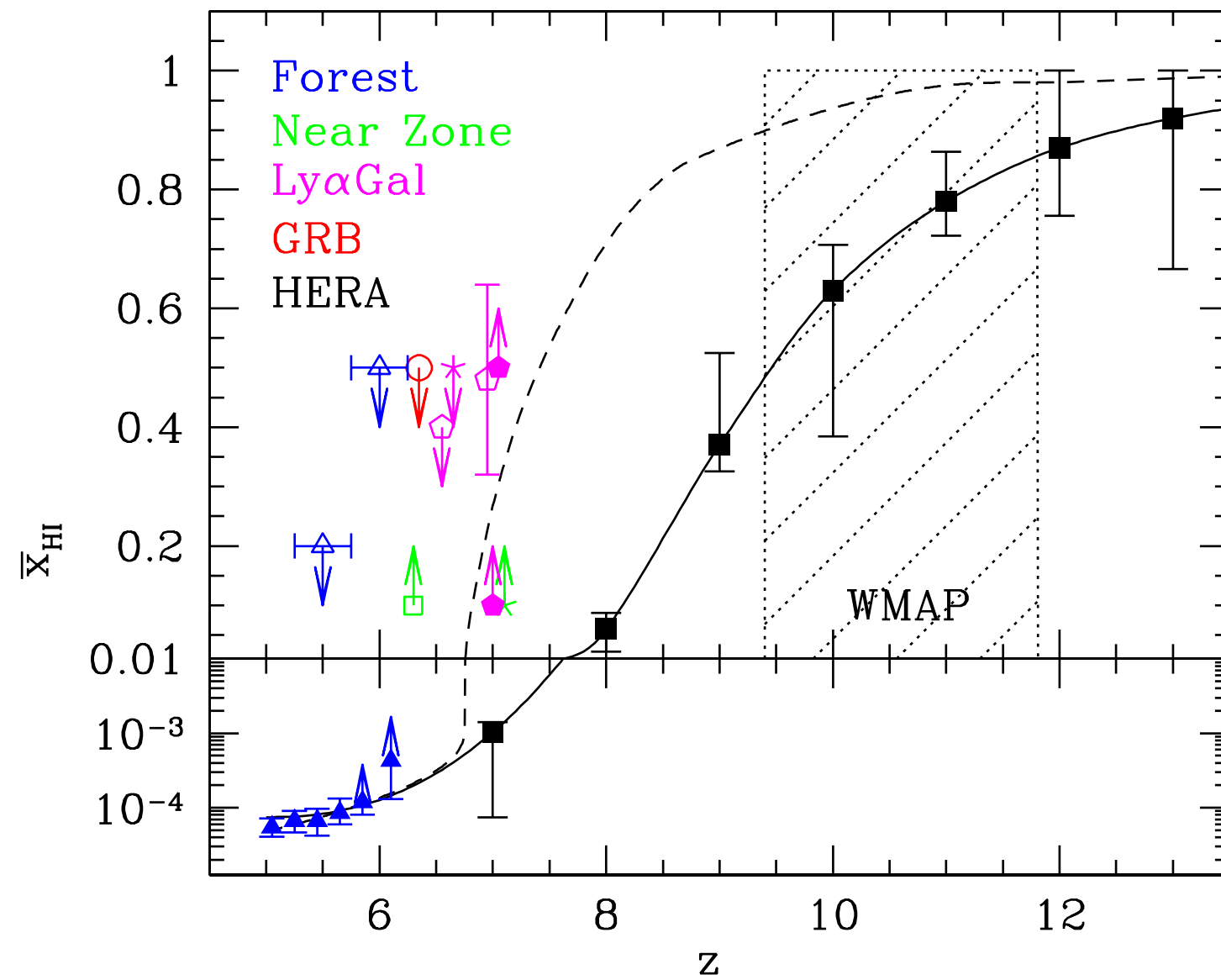




credit: Leung 2014

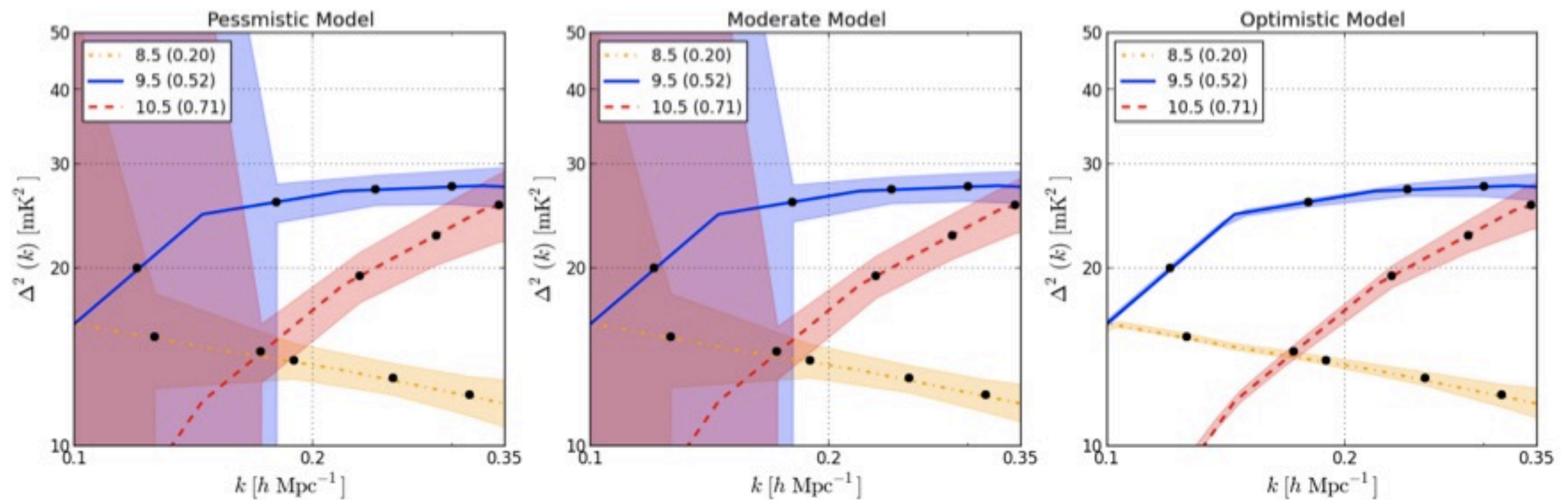
Imaging with HERA



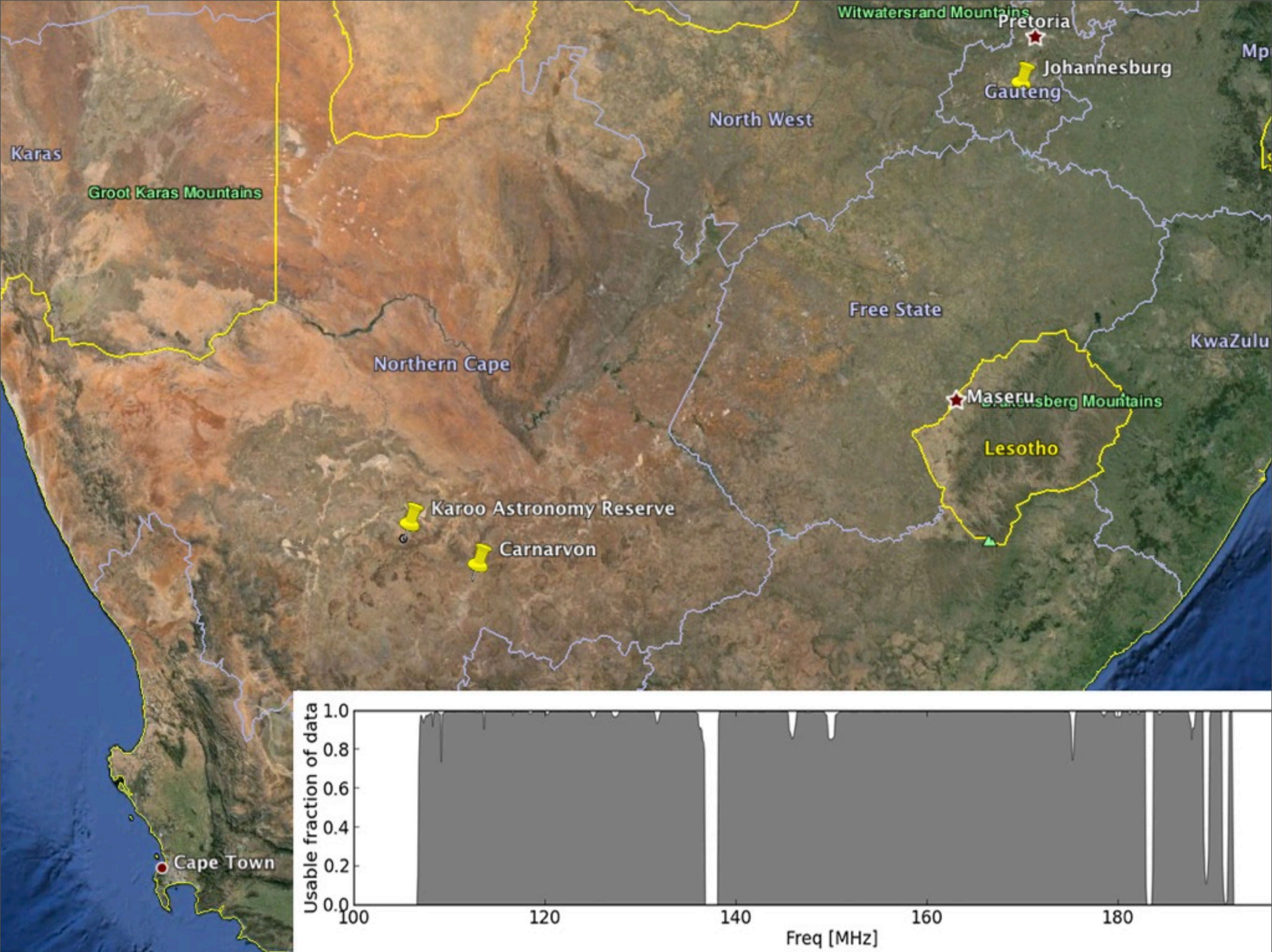


HERA sensitivity to different models

for foregrounds ranging from pessimistic to optimistic

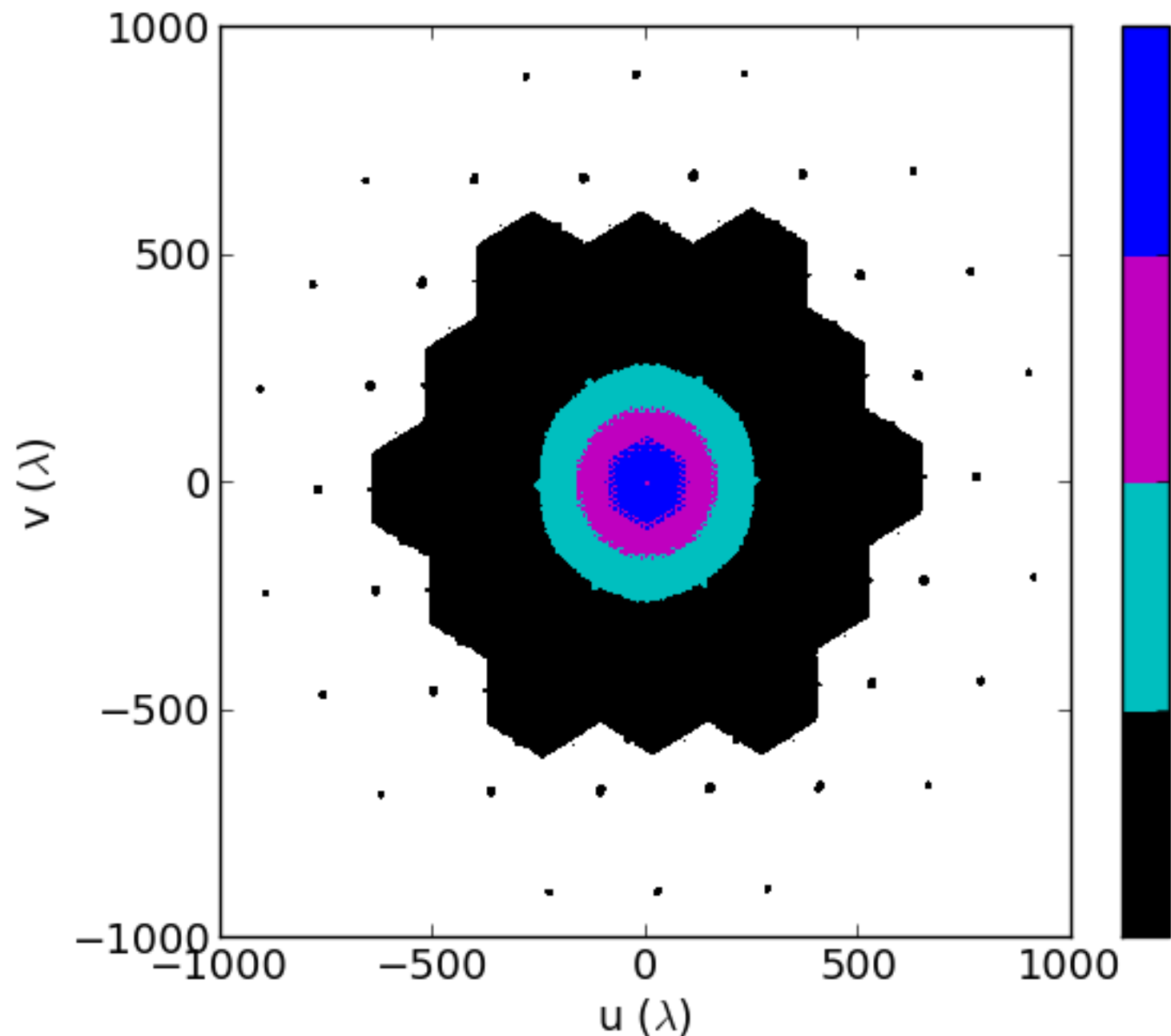


Pober et al 2013b



antenna config: hex grid + outriggers

- complete coverage of uv plane to $\sim 500\lambda$
- deep coverage of centrally condensed core at brightest EoR modes
- redundant spacings for sky independent calibration
- outriggers double resolution at hex locations double radius of complete uv coverage



Dish design criteria:
reflection amplitude lower than 60dB above 60ns

VNA measurements of prototype HERA dish

