

# PUMA 2021

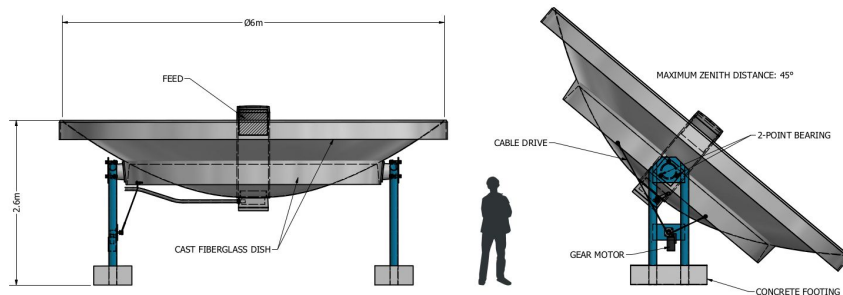
Anže Slosar

# Where we stand?

- 16 Jun 2016 we invite Parsons to help with Cosmic Visions Meeting
  - He doesn't have time but suggest Adrian
- Sept 21-23, 2016 Future Cosmic Surveys in Chicago
- Nov 14-15, 2017 Cosmic Visions Meeting at LBL
- First message to doe21 list on 27 Nov 2017
- Oct 2018: Stage 2 Whitepaper posted on arXiv
- Jul 2019: Decadal project submission posted on arXiv
- Feb 2020: Decadal RFI submission posted on arXiv

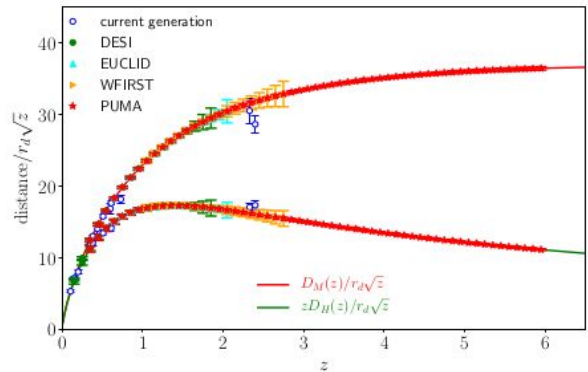
**We have a 5+ years of work behind us!**

# What did we achieve?

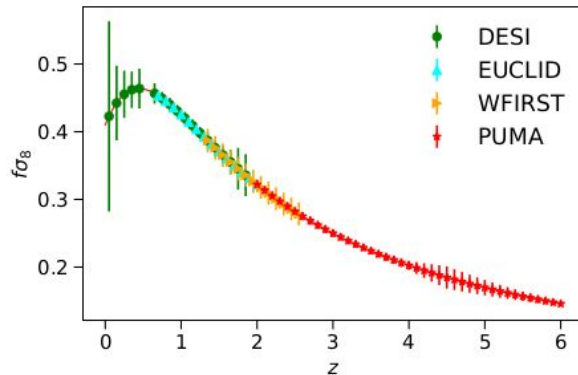


- A solid concept
- Forecasts
- Many pages of text
- Decadal and Snowmass hooks
- Recognition inside DOE management that 21cm is a potential future technique

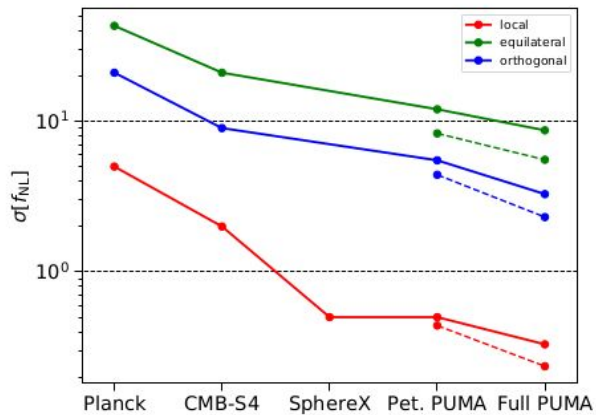
### A. EXPANSION HISTORY



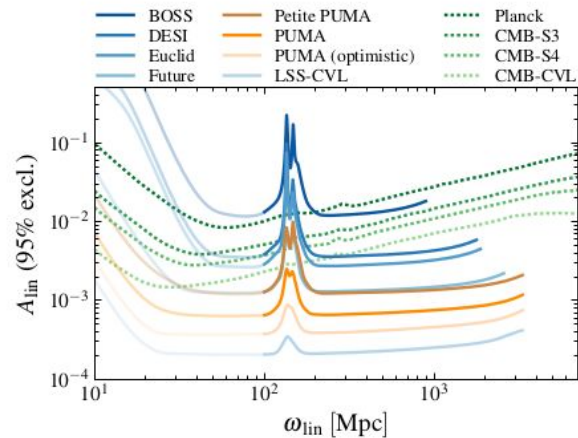
### B. GROWTH



### C. NON-GAUSSIANITY



### D. INFLATIONARY FEATURES

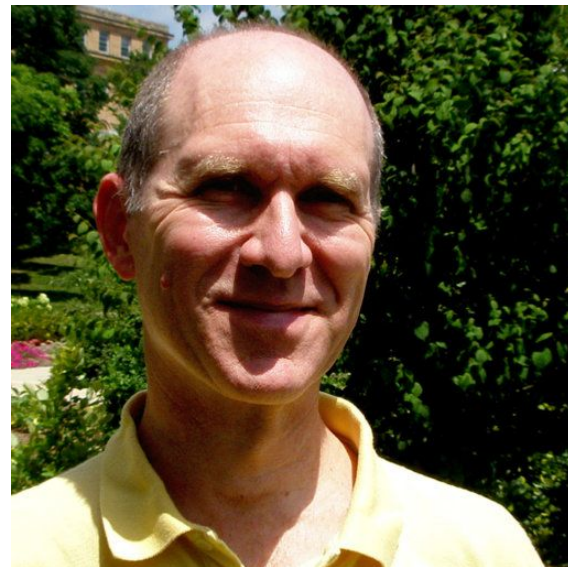


# What we failed to achieve?

- Failed to convince the broader HEP community that this is something they want to do
- Failed to convince the traditional radio astronomy community that this is something they want to do
- Consequently failed to convince the Decadal Survey that this is something they should endorse strongly

# Next Steps

- Peter Timbie, UW Madison will become the new PUMA capo
- Peter is a non-DOE person and we should see this as good
- The effort will continue at least at the quiescent “seminar-per-month” level
- We want to see if as community we can help HIRAX and CHORD achieve their goals
- There might still be time for PUMA:
  - LSST was first in 2000 Decadal and 2010 Decadal and has yet to see the first light



# Plan for today

- 11.15 Shaw and Friends on CHIME first results
- 12.15 break
- 12.30 Peter Sims: Calibration Update
- 13.00 James Aguirre: Simulations Update
- 13.30 Discussion