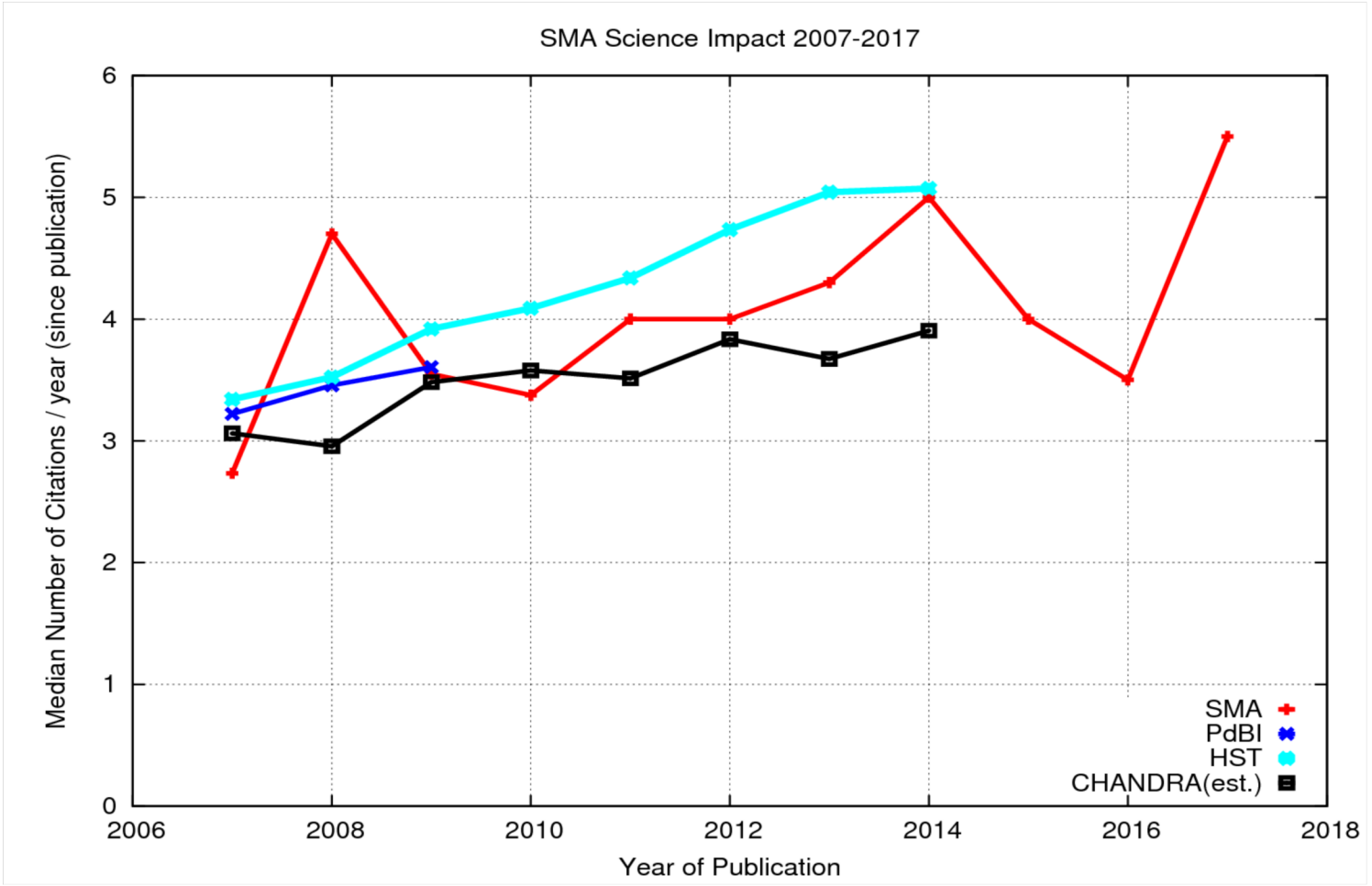
SMA Science and Proposal Metrics

2004 – 2018.5

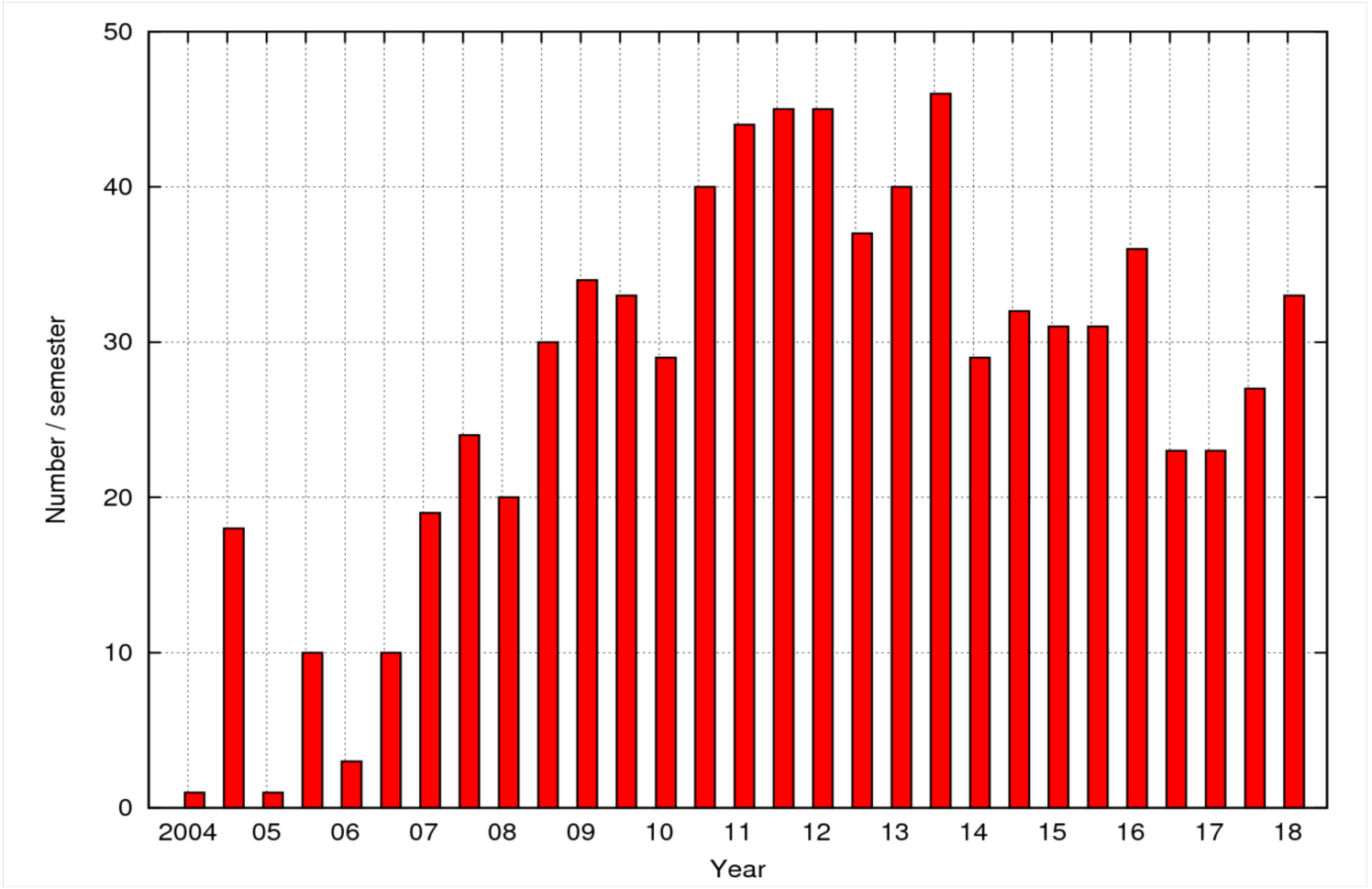
- 801 refereed publications
- 26 in Nature/Science
- 55 publications per year
- Citation rates similar to other facilities
- Broad range of science areas
- Time over-subscription rate of ~ 3 indicates current relevance
- Large Scale Projects program
- Gender Equity

Median Citations Similar to Other Facilities



Median of the number of citations per paper per year, for all papers published in an year

Number of Publications



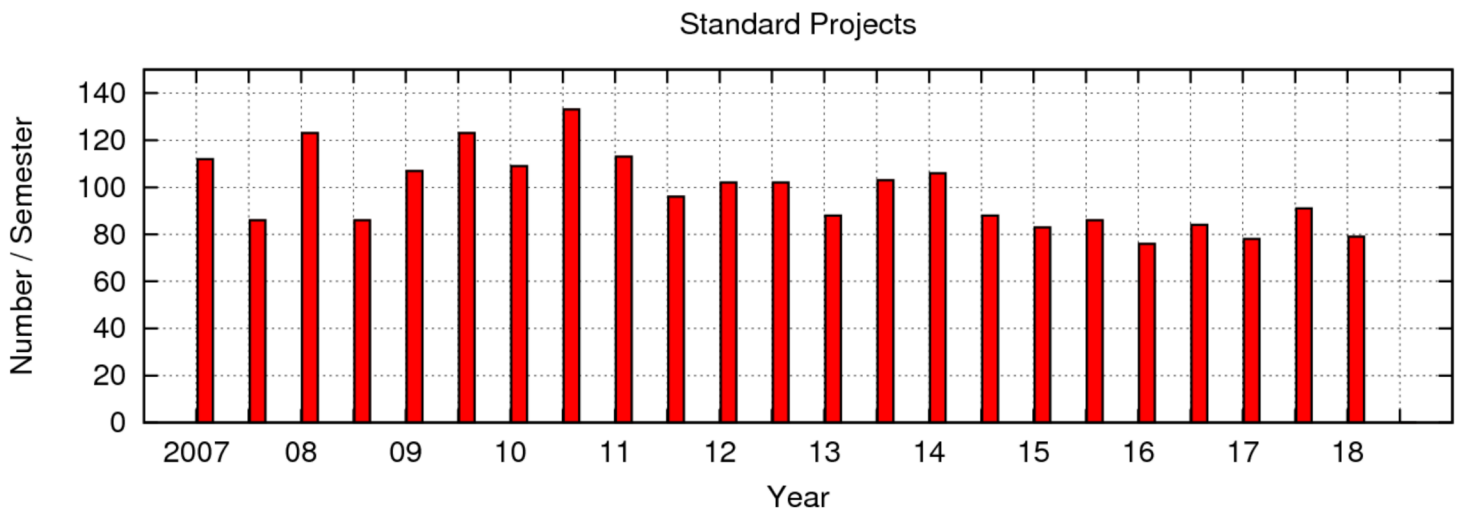
Standard, Large Scale & ToO/DDT Proposals

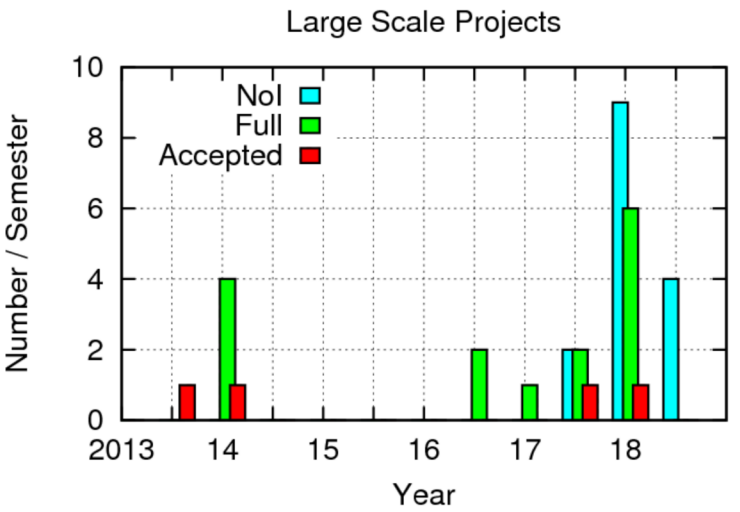
- Standard Projects: < ~ 100 hrs – individual targets and small samples

- Large Scale Projects: 100-1000hrs
  - Address questions of significant broad importance
  - Started ~ 2014, supported by last Advisory Committee
  - A Clearly laid out process, following an initial learning period
  - ~ 20 % of SAO time (capped at 40%), open to world-wide community, targets best science
  - Phased proposal development process
  - Notice of Intent – Discussion/Talks – Full Proposal – Review & Feedback
  - External expert referees, blind science reviews
  - Technical and management review by standard TAC

- ToO/DDT ~ 5%

Number of Proposals





Large Scale Projects

- 16 Large Scale Proposals in 4 years.
- 4 Approved

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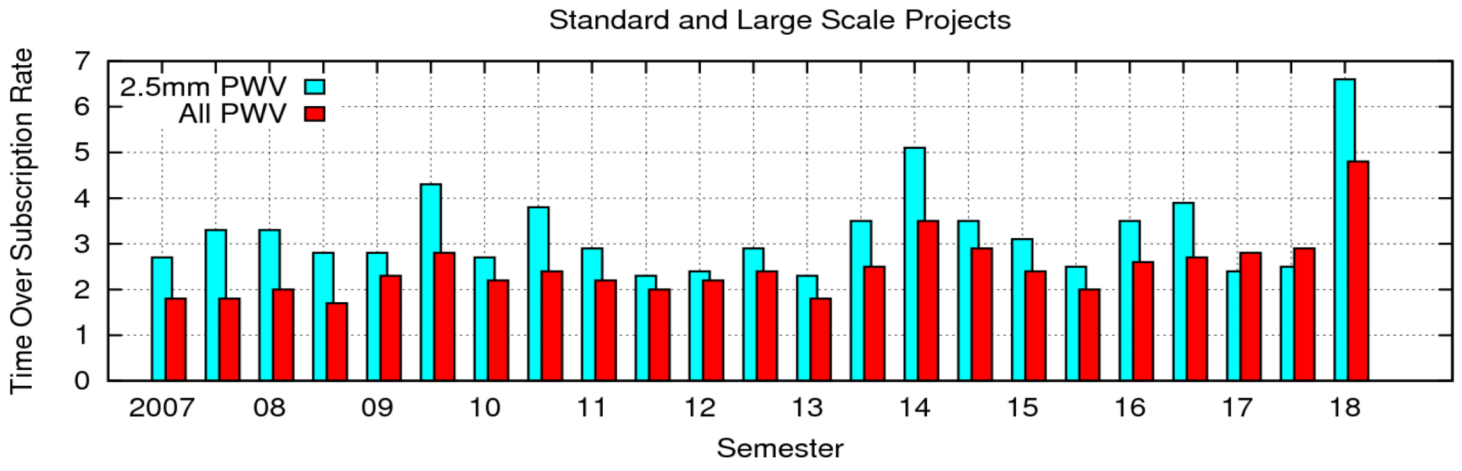
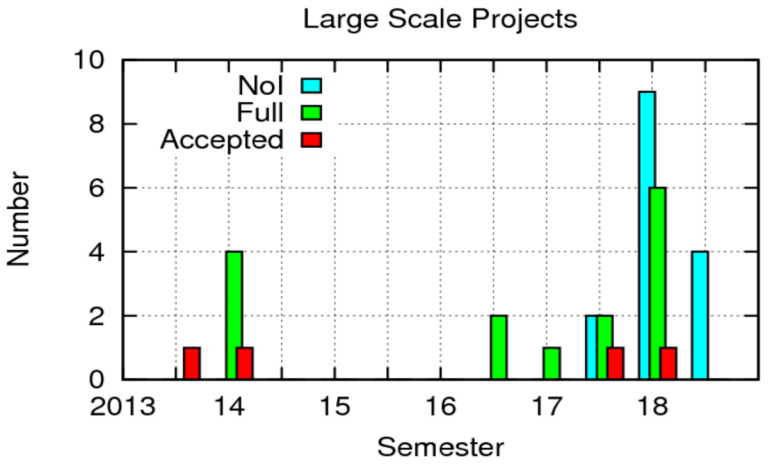
Sustained Over Subscription ~ 3



Large Scale Projects

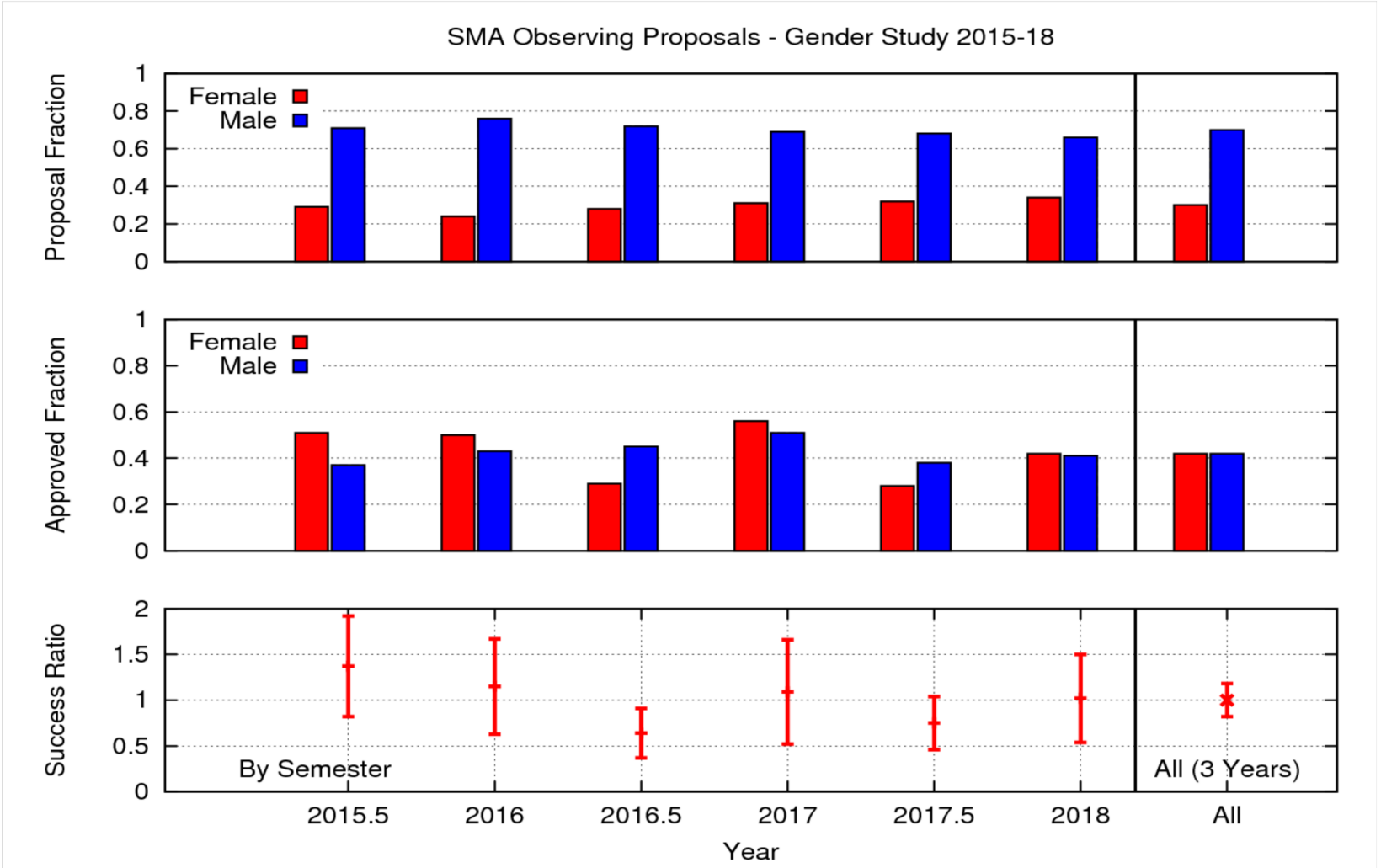
- Available time / semester : ~ 130 (capped at 260 hrs)
- Total requests ~ 5000 hrs
- ~ 650 hrs/semester (All available time)



Trends in proposal and publication numbers:

- ALMA impact
- Large Scale projects gestation periods
- Key: sustained over subscription rates

Equitable Gender Success Rates



High Impact Fields – Wide Range

- High-z sub-mm galaxies: line, continuum & lensing
- Galactic Center, M87 BHs (VLBI- EHT)
- Protoplanetary Disks
- Transient phenomena

- AGNs

- Star-formation studies, nearby galaxies
  large collective impact hard to quantify
- Late type stars, solar system studies
  small community

- Wide Range – Solar system to z ~ 7
- High impact areas lagely unanticipated

Final Words and Summary

- SMA is doing well with sustained oversubscription rates
- Large Scale Program seeing high levels of competition
- Broad range of science
- Metrics compare well with other facilities
- Reasonable understanding of trends
- With growing capabilities, more ambitious projects attempted
- Bodes well for future