

# Keck SSC Meeting Notes

July 7-8, 2020

Meeting held via Zoom

# Introduction and Announcements

- The SSC welcomes Andrew Howard as the new Caltech representative.
- We thank Evan Kirby for his service and many contributions to the SSC during his term.
- The SSC congratulates Leslie Kissner on her retirement, and we thank Leslie for her outstanding work at WMKO over the past 17 years. We will miss you!
- We congratulate the segment repair team for completing their work with exceptional skill, ensuring the scientific future of the Keck telescopes.

# Observatory Report

- Publication metrics (from D. Crabtree) show that Keck remains strong among ground-based telescopes, though now #5 in Crabtree's Total Impact metric.
  - ALMA is #1 overall, with CFHT & UKIRT higher due to their surveys, VLA higher due to many more papers (though with lower average impact)

## Overall Performance

This slide shows a summary of telescope performance. The two axes are MIPP and Total Impact, while the size of the points represent the total papers per telescope for 2013-2017. The color of the circles represents the fraction of papers in the top 10% of cited papers in the complete sample

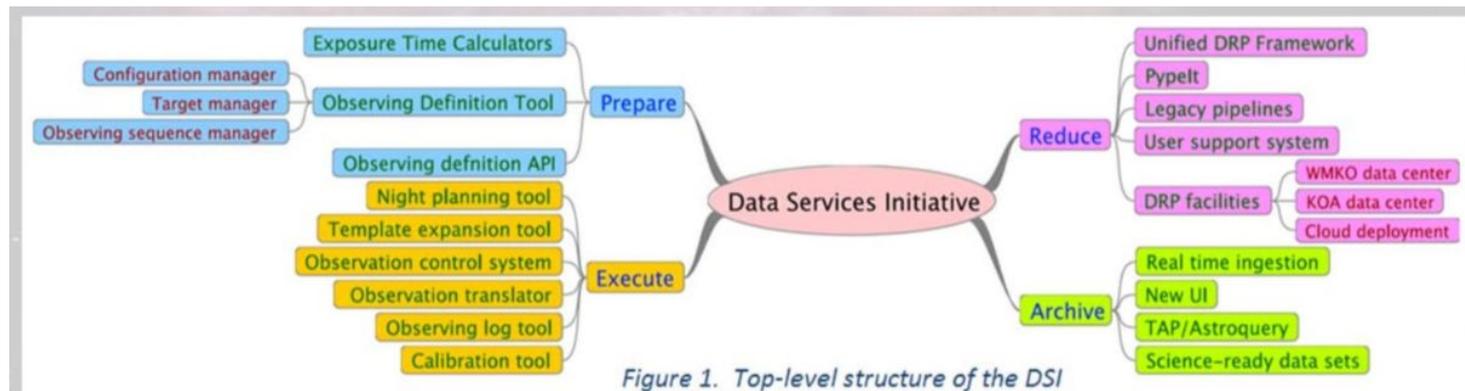


# Observatory Report

- COVID-19: WMKO currently at Risk Level 3 (“Act with Care”).
  - Restricted operations, day crew limited to 12 people, most employees still working from home. Projects proceedings more slowly.
  - WMKO Farms2Families (F2F) program: purchases local produce & delivers to community using Keck staff+vehicles.
- Maunakea situation: no access issues lately
- Restructuring & MK Master Plan ongoing
- Leslie Kissner retiring in September after 17 yrs at WMKO.
- Segment repair completed: all 84 segments over 5 years
  - No degradation seen in first segment repaired
  - Finished under budget & only with small delays (outside of the team’s control)
  - Huge success, thanks esp. due early recognition of the problem & the funding approach
- Tertiary mirror cracks now seen in K2, identical to segment cracks
  - Have to strip coating to inspect K1 tertiary. Since now have deployable tertiary for K1, might just fix K1 then swap into K2, instead of fixing both historical tertiaries.
- K1 pier repair (oil seepage issue): June 2019 installation of oil dams have significantly reduced oil ingestion into grout & foundation.
  - Working with JPL Deep Space Network & external consultants on assessment + repair plan.

# Observatory Report

- KAPA: full system review planned in Sept
- TDA: disabled for first 4 weeks of science operations, restarted in mid-June with limitations
  - no instrument changes for ToOs currently
  - must submit triggers by 4 pm HST
  - all observers must prepare PJ mode in advance
- Pajama mode: new observing mode set up on short notice
  - Need to consider long-term impact on science at November SSC meeting
- Data Services Initiative: NASA CAN overguide proposal accepted
  - Will mean changes for observers' preparations for observing
  - CY 2020-2023: development & deployment, with significant DRP contributions from partners
  - WMKO will maintain beyond CY2023
  - PI is J. O'Meara, with WMKO+NExSci work. Will include 2 new WMKO hires + 1 at NExSci



# Observatory Report

- COVID impact on projects: KPF & KCRM holding schedule for now, but anticipate schedule slip due to vendor delays & campus shutdowns.
- LRIS: ongoing amplifier issues, red upgrade work underway.
- DEIMOS: continuing detector issues - CCD5 is dead, also bias+gain issues with 2 other CCDs. Impacts to both spectroscopy & imaging.
- Keck Science Meeting (Sept 2020) will be entirely online.
- NASA Keck User Group continues to be very satisfied with WMKO.
- FY21 budget planning approach: foregoing the usual detailed planning process due to COVID-19 uncertainties. Maintaining a “hold steady” budget for now, with more detailed planning+budgeting to come in the fall.

# White Paper review process

- Most of the meeting time was devoted to review and evaluation of white papers, including concept studies, Phase A proposals, and requests for support for proposal preparation.
- 12 white papers were evaluated, including 5 concept studies and 7 projects requesting Phase A support and/or support for proposal preparation.
- One additional white paper requested visitor instrument status, but WMKO policy does not currently allow visitor instruments.
- Grand total funding requested was \$800k, compared with \$400k available in this year's proposal call.
- Projects supported in last year's call were invited to present progress reports.
- Reports on AO initiatives were also presented.

# Summary of reports presented to the SSC

The following projects/groups presented progress reports and updates to the SSC prior to the proposal discussion and evaluation:

- Keck AO Future Study Group (Peter Wizinowich, WMKO)
- FOBOS (Kevin Bundy, UCSC)
- DEIMOS upgrade (Evan Kirby, CIT)
- HISPEC (Dimitri Mawet, CIT)
- LIGER (Shelley Wright, UCSD)
- IGNIS (Gregory Mace, UT Austin, and Emily Martin, UCSC)
- ASM technical development for GLAO (Phil Hinz, UCSC)
- KWFI (Jeff Cooke, Swinburne)