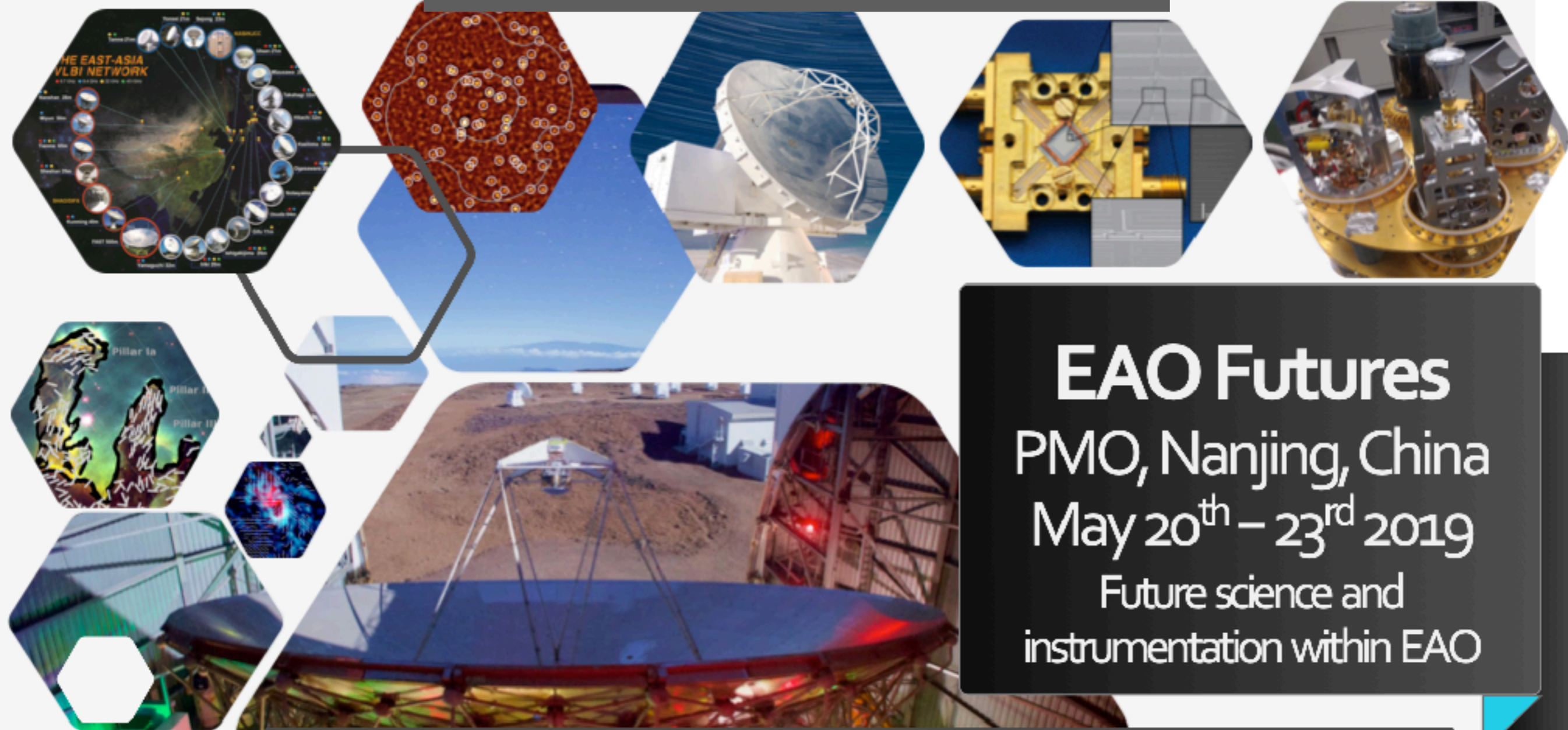


南京欢迎您



EAO Futures

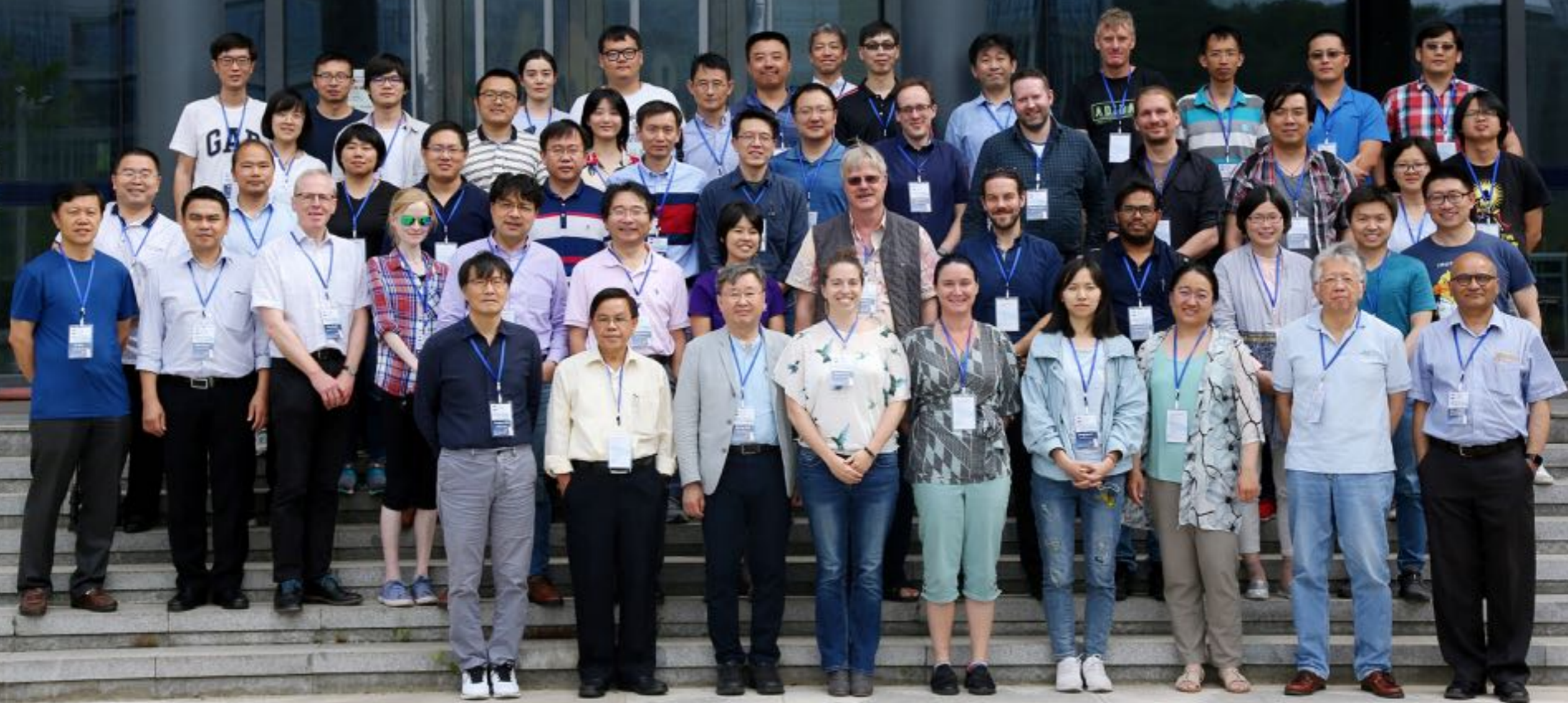
PMO, Nanjing, China

May 20th – 23rd 2019

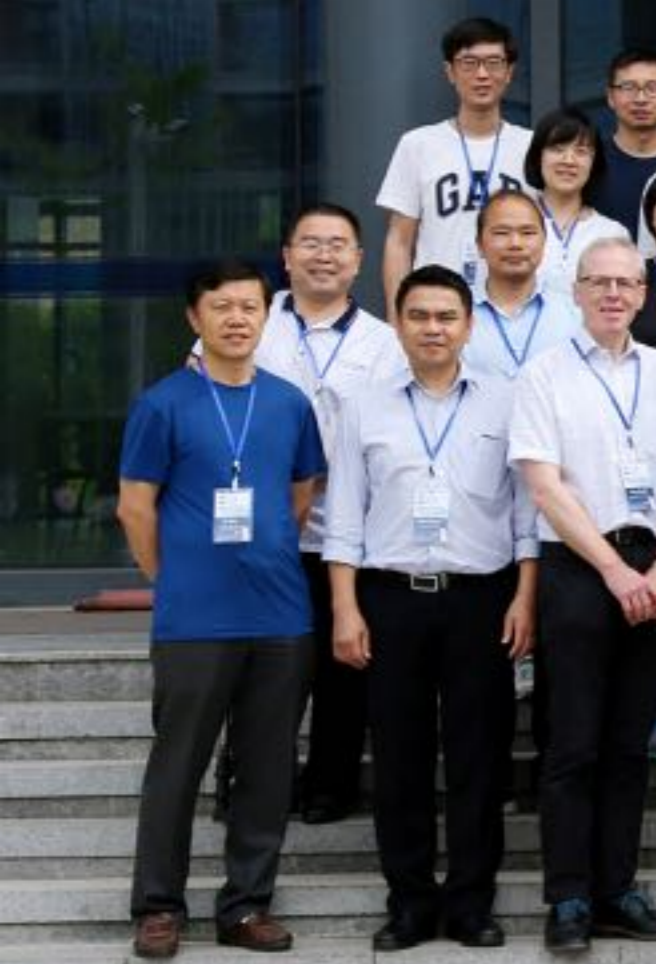
Future science and
instrumentation within EAO

International Workshop on EAO Futures: Future Science and Instrumentation

May 20th-23rd, 2019
Nanjing, China



Internat
Futu



International Workshop on EAO Futures:
Future Science and Instrumentation
东亚天文台未来科学与仪器国际研讨会



May 20th-23rd, 2019
Nanjing, China

The meeting will discuss a range of topics including the Viperical Instrument at JOMT, the design of a new 850 micron camera for use at the JOMT the East Asian VLBI project, and instrumentation in polar climate.



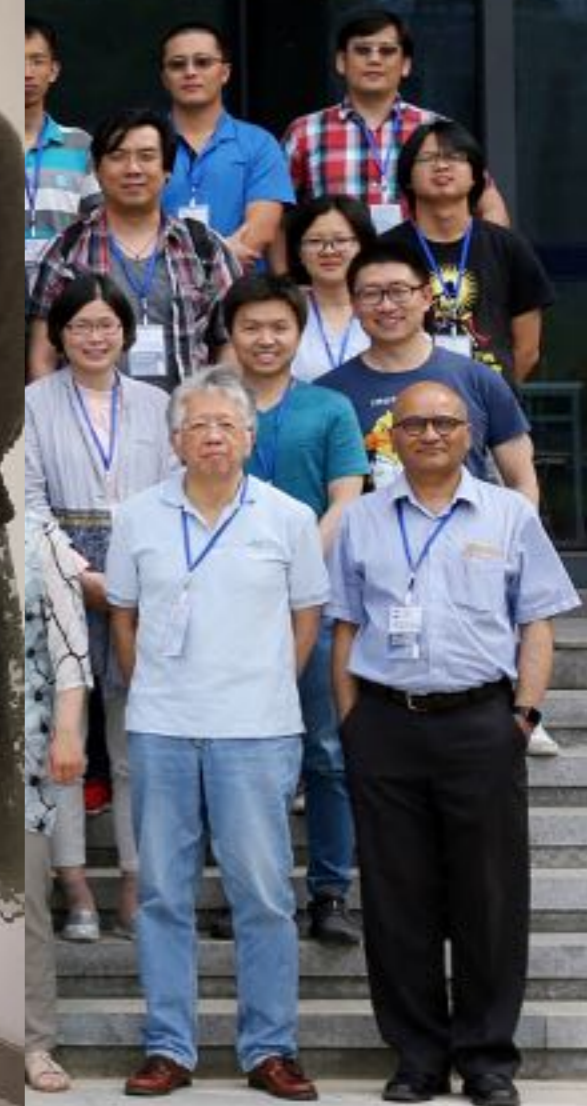
East Asian Observatory
Purple Mountain Observatory

Thank you to Lin
and her team at
PMO!



atures:
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2019
China



EAO Futures: "Beyond the meeting" discussion survey

EAO sub-mm Futures - Community Input

Thank you so much for visiting this survey page. The aim of this survey is to ask participants of the 2019 EAO sub-mm Futures meeting and our wider community to provide input into the community needs in the coming decade. In particular we are keen to hear about your views/interests for the science drivers and instrumentation demand of the future of both single and VLBI facilities.

We would also like to solicit interest for contributions to white papers in support of a new 850 micron camera at the JCMT. Specifically we will be looking for those interested in supporting the science case from the Sub-mm Galaxy community, the Transient Community and Polarization community.


Please feel free to collaborate with colleagues when answering these questions. You might not have the answers to all the questions, no worries! We simply want to begin an open conversation.

Thank you

1. Given Name *

2. Family Name *


3. Email *


 HarrietParsons | [Settings](#) | [Logout](#)

Futures2019: FrontPage

[White Paper Evolved stars](#) » [White Paper... Heterodyne](#) » [White Paper... Heterodyne](#) » [White Paper...netic Field](#) » [FrontPage](#)

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EAO Sub-mm Futures Discussion Wiki

This wiki is designed to aid in the ongoing discussion of the future of sub-mm astronomy within the East Asian Observatory. This wiki has been created on the back of the [2019 EAO Sub-mm Futures Meeting](#) held at PMO, Nanjing, China.

Main discussion topics are:

- [VLBI - Capabilities, Demands, Advancements](#)
- [Continuum - Capabilities, Demands, Advancements](#)
- [Heterodyne - Capabilities, Demands, Advancements](#)
- [Other - questions/suggestions/comments](#)

White Papers will be written to **show community demand for new instrumentation at the JCMT**. Submission deadline: **June 30th, 2019**. Links to the individual White Paper pages can be found here for the **Continuum science case**:

- [Magnetic Fields](#)
- [Transient Events](#)
- [Sub-mm Galaxies](#)
- [Nearby Galaxies](#)
- [Cold cores and filaments](#)
- [Evolved Stars](#)

www.eaobservatory.org/jcmt/proposals/large-programs-iii/
4,800 hours available from semester 20A through to end of 22B

James Clerk Maxwell Telescope
Operated by East Asian Observatory

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[Submissions Checklist](#)

Announcing the JCMT Large Programs (III)

The EAO are pleased to provide an early announcement of the third Call for JCMT Large Programs. This information is being provided ahead of the opening of the Call in order for current and new teams to pursue discussion and planning. Submissions will be accepted from August 15th up until the September 15th deadline. This will coincide with the 20A PI Call.

Up to 4,800 hours of time to be awarded between: **February 2020 and January 2023**

The call will open
Thursday August 15th 2019 (TBC)

JCMT User Meeting 2019

November 6th and 7th
ASIAA, Taipei, Taiwan

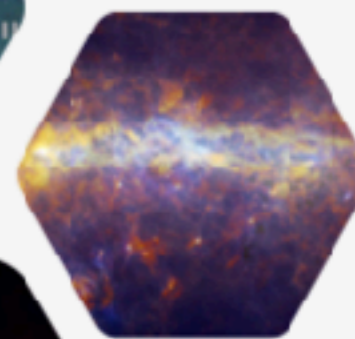
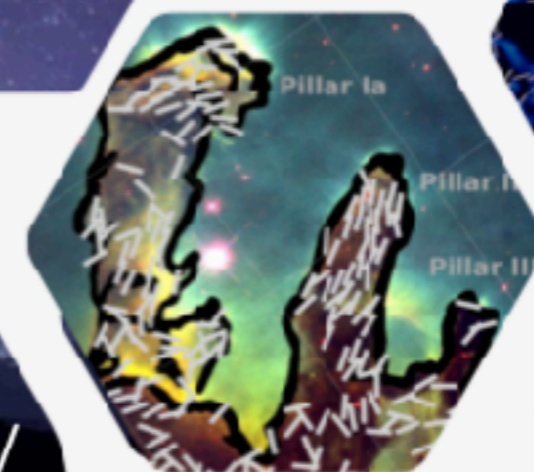
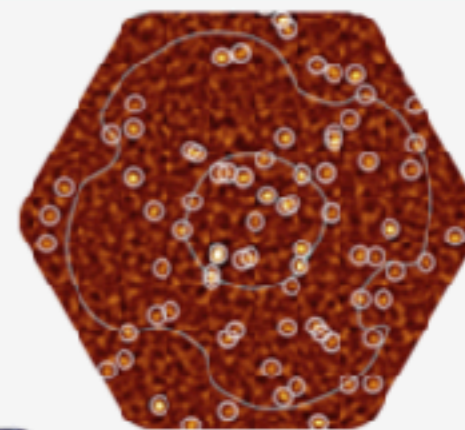


Splinter
meetings for
Large Programs:
November
4th and 8th

JCMT
workshop
November
5th

For details visit:

www.eaobservatory.org/jcmt/science/UM-asiaa-2019/
or email: jcmt_um_2019@eaobservatory.org



- November 4th – SMA meeting
- November 5th – SMA meeting & JCMT Workshop – from proposal to analysis a comprehensive workshop for users
- November 6th – JCMT Users Meeting – Day 1
- November 7th – JCMT Users Meeting – Day 2
- November 8th – splinter meeting for Large Programs and other science groups

SMA details: <https://events.asiaa.sinica.edu.tw/workshop/20191104/>

EAO Futures Summary

- **Meeting Quote: “Really Sincere This Time” (Jiansong Gao)**
- **Science Pressure: “faster”, “wider”, “more sensitive”
— “larger volume for discovery space”**
- **Community wants: “New Instrument ASAP”
— but don’t give up “current abilities”**
- **Consensus: 850 μ Camera
— but don’t give up 450 μ window
— increase speed for heterodyne**
- **Tight Focus: Maunakea Atmospheric Window**

Science Drivers or Targets

- **Transients: greater volume in space and time domains**
- **Magnetic Fields: extended faint structures, cloud structures**
- **Nearby Galaxies: dust imaging on arm/interarm/nuclei**
- **Distant Universe/ Cosmology: larger volume survey**
- **Cold Cloud Cores and Filaments: larger surveys**
- **M31 map: dust continuum and larger heterodyne array**
- **Preparation for next generation large telescopes**
- **Larger Bandwidth or Spectral Window at once**

- **Emphasis: Advantage of 850 μ Window**

Next Steps for 850 μ Camera

- **Seek synergy with Next Generation Telescopes (eg 60m, DATE5, LST, AtLAST, ALMA 2030)**
- **Share and Coordinate with other Developments (eg LMT)**
- **Sharpen Camera Specifications (450 μ potentials)**
- **Sharpen Cost and Timeline of Camera Development**
- **Distribute Camera Work Packages into Regions**
- **Identify Pacing Items in Development (eg detector, cryostat)**
- **Ensure Instrument Design matches Science Drivers**
- **Track Technology Improvements and Cost Analysis**

- **Efforts from the Universities**

Team to Build 850 μ Camera

- **Detector Procurement** PMO/EAO
- **Detector Characterization** NIST/PMO/Cardiff
- **Readout Electronics** PMO/Canada
- **Optical Design** AAO
- **Engineering Design** PMO/ASIAA/NAOJ
- **Cryostat** ASIAA/Cardiff
- **Instrument Integration** PMO/Cardiff/ASIAA
- **Data Acquisition/Calibration** KASI//EAO
- **Data Reduction** Canada/EAO
- **Observing Modes** KASI/EAO

- **Leads in Each Region**

White Paper Assignments

- **Transients** (Steve Mairs)
- **Magnetic Fields** (Keping Qiu, Ray Furuya, Eswaraiah Chakali)
- **Cosmology and Early Universe Surveys** (Ran Wang, Hyunjin Shim,
- **Nearby Galaxies in Dust** (Matt Smith, Qinghua Tan
- **Galactic Star Formation Topics** (Tie Liu, Di Li
- **Synergy with SMA/ALMA** (Keping Qiu, Nimesh Patel
- **Synergy with DATE5** (Sheng-Cai Shi
- **Synergy with 60m, LST** (Ji Yang, Ryohei Kawabe
- **Spectroscopy and Dynamics in Galaxies** (Yu Gao, Xuejian Jiang
- **HARP Upgrade** (Wenlei Shan, Kuan Yu Liu, Mingjye Wang, Phichet Kittara
- **Spectrometer Upgrade** (Jongsoo Kim
- **VLBI** (Kiyooki Wajima

- **Inputs: Projected Specifications, Sensitivity of new Camera**
- **Outputs: Science Goals, Targets, Required Sensitivity, Survey Size, Survey Depth ,
Link to science on next generation telescopes**
- **White Paper Czar: Greg Herczeg**