中央研究院
天文及天文物理研究所
ACADEMIA SINICA
Institute of Astronomy and Astrophysics

Deadline: August 31, 2016

SMITHSONIAN ASTROPHYSICAL OBSERVATORY
SMA
ACADEMIA SINICA IAA

SMA Science in the Next Decade

image credit: Wei-Hao Wang

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SMA science in the Next Decade

October 27-28, 2016

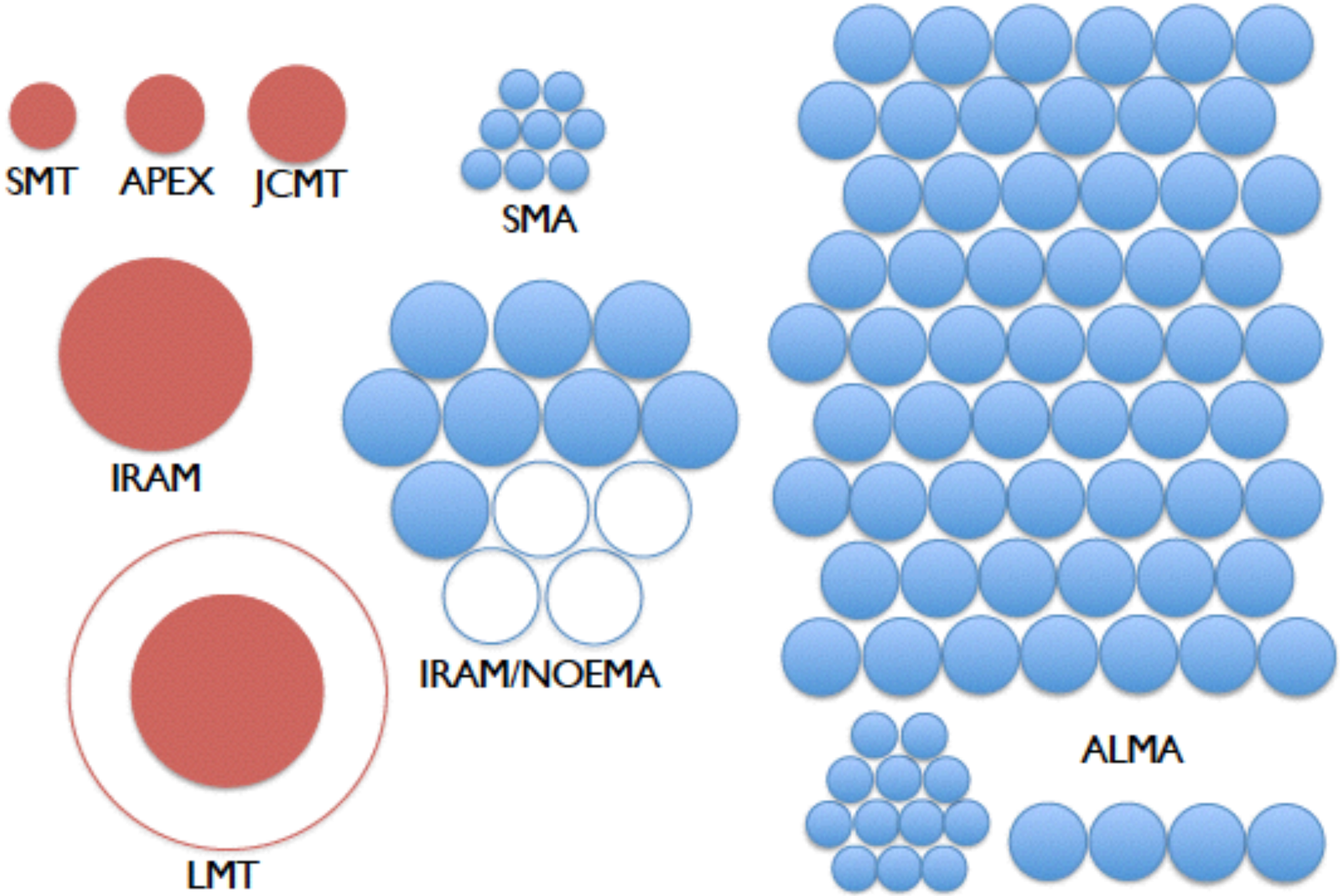
ASIAA Auditorium, Taipei, Taiwan

86 registered participants (53 from Taiwan, 33 from overseas)
46 presentations (36 talks, 10 posters)

http://events.asiaa.sinica.edu.tw/workshop/20161027/

@ *1 mm*

Landscape of mm/submm Telescopes



Workshop Summary by David Wilner

wSMA Science in the ALMA Era

1. cutting edge science that doesn't require full ALMA 12 meter array sensitivity and/or angular resolution
   - spectral surveys and time domain
   - flexibility and rapid response
2. focused large scale programs
   - build samples, probe correlations, evolution, etc.
3. seed studies designed for ALMA follow-up
   - select targets, refine methods, optimize return, take risks
4. access to northern sky
   - known (and unknown) important sources for detailed study
5. key station in global Event Horizon Telescope
   - correlating directly with ALMA
6. testbed for technologies and techniques
7. expert education and training

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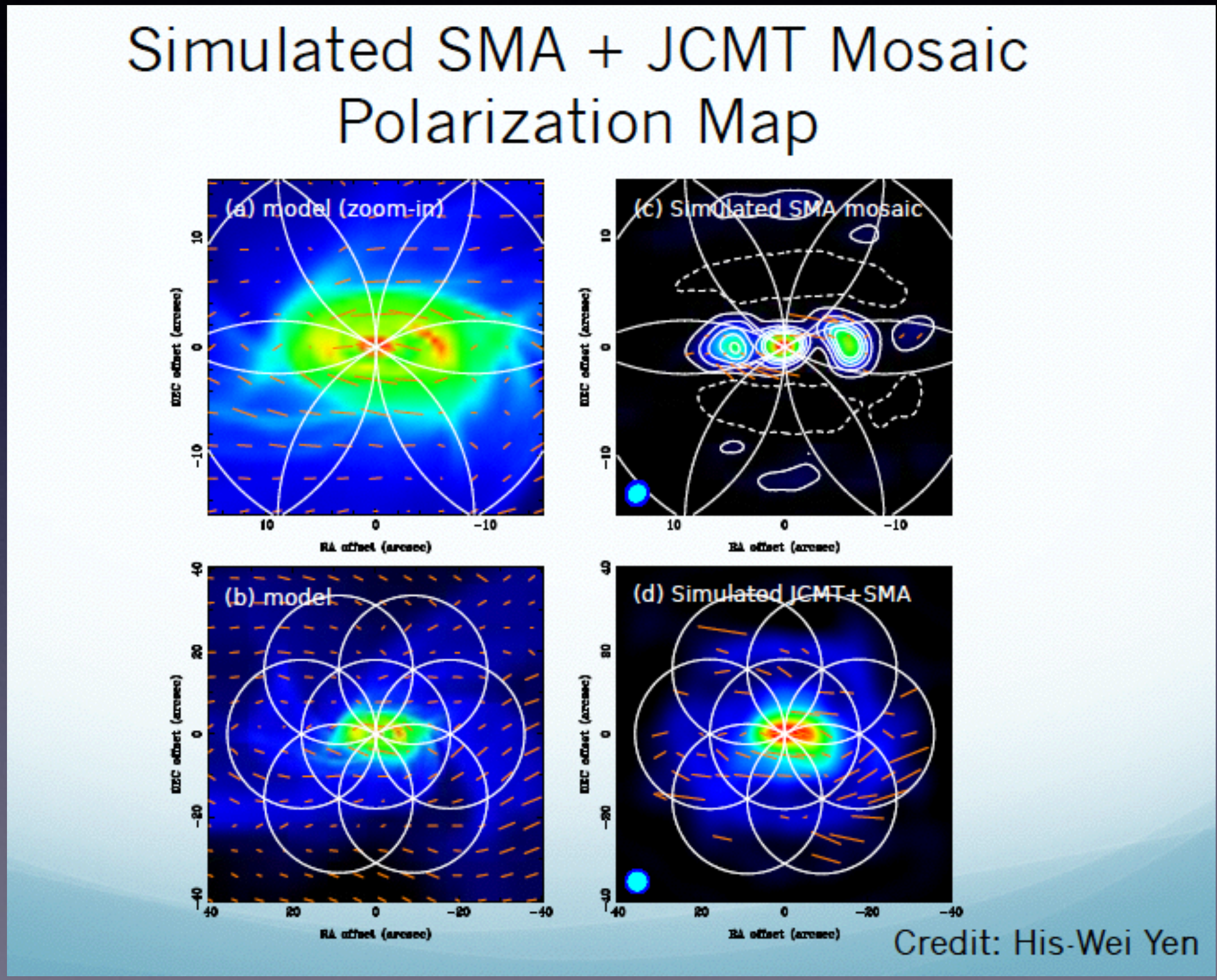
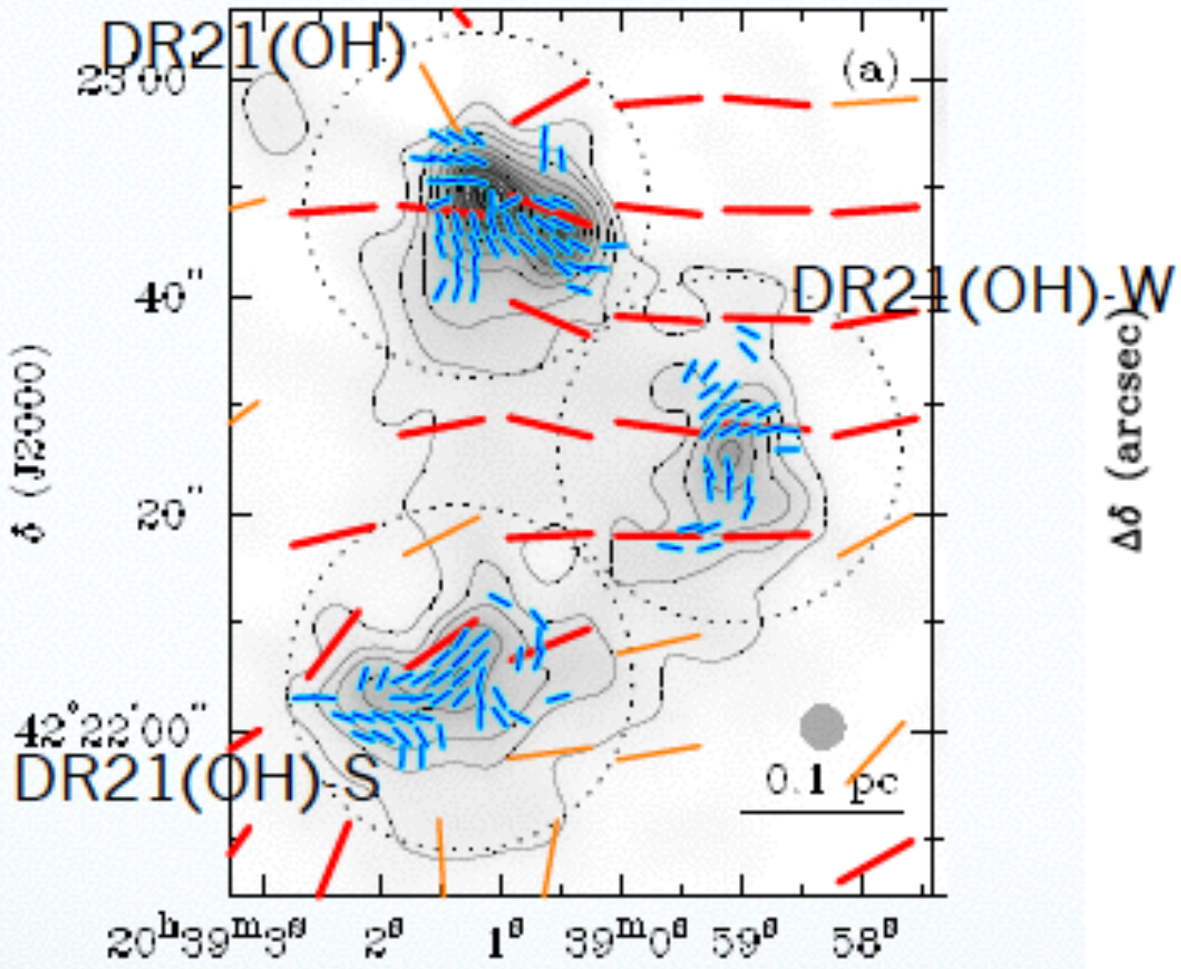
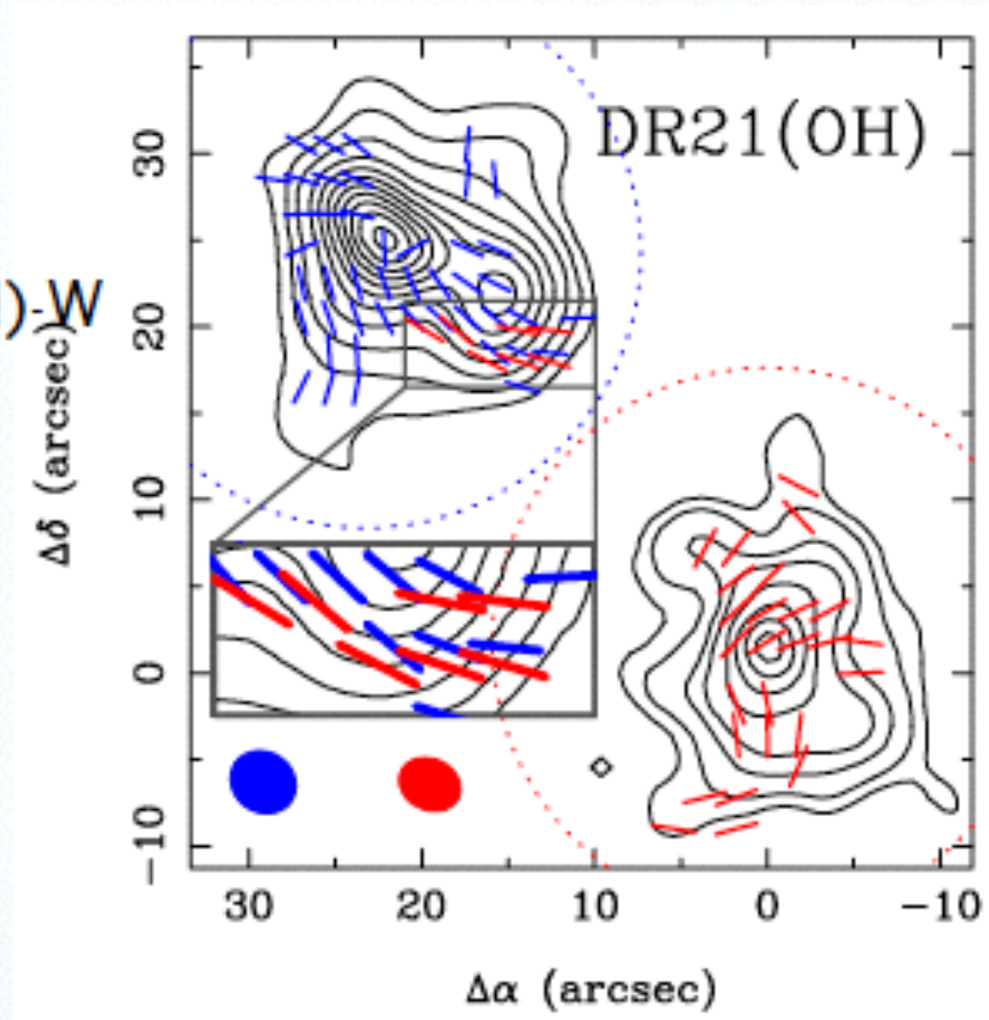
Workshop Summary by David Wilner

Wide-field polarization imaging with the SMA + single-dish

presented by T.-C.Ching







Girart et al. 2013
Ching et al. in prep.

- At a distance of 25", ΔPA = 9°

Presentation by T.-C. Ching

SMA Mosaic Polarization observations

- Science topics
  - B-field structures from clouds to cores
  - The relative importance between B-field and turbulence
  - Dust property in ISM
  - Outflow and B-field interaction
  - Galaxy, CMZ ?
- The advantage of SMA
  - The off-axis instrumental polarization of SMA is comparable to ALMA
  - FOV is 30x ALMA FOV
  - wSMA 4x bandwidth
  - JCMT polarization data is ready
  - ALMA full polarization in Cycle 6

Presentation by T.-C. Ching