

Workshop: Future Explorations of Star & Planet Formation Using Subaru

2017 December 7-9, ASIAA, Taipei



Full report: [https://www.naoj.org/Projects/partnership/ws_support2017/
ws_support2017_report.html](https://www.naoj.org/Projects/partnership/ws_support2017/ws_support2017_report.html)

Participants

~45 from 8 countries/regions/institution

Japan (15), Taiwan (~10), Korea (8), China (6), Australia (2), Canada (1), India (1), EAO (2)

SOC

N. Ohashi, P.-S. Pyo (Subaru); M. Fukagawa, M. Tamura (Japan); W.-P. Chen, H. Shang, M. Takami (Taiwan); G. Herczeg (China); J.-J. Lee (Korea); P. Ho (EAO)

Sponsors

Subaru; MoST Taiwan; ASIAA

Program

- **Subaru: Present and Future**
- **Science Sessions**
 - ISM to Stars; Protoplanetary Disks; Winds and Jets; Clusters; Exoplanets
- **Synergy with Other Missions**
 - TMT, GMT, SPICA, ALMA, JWST, JCMT, IGRINS
- **Wrap-Up Discussion**

- **29 talks (20 Invited)**
- **30-min. discussion for each science session**

Overall Conclusions & Summary

- **Subaru would remain exciting for our research field for the next decades**
 - In particular with some improvements
- **International collaboration is powerful and exciting**
for:
 - exploring a variety of science cases
 - exploring new ideas
 - trying to polish them
- **More discussions are necessary for us to launch actual collaboration**
 - Smaller workshops with more focused topics?

Our Requests for Subaru (I)

- **Keep COMICS and IRCS alive!**
 - Useful for a variety of science cases
- **Queue system**
 - For good observing conditions (photometry/PSFs/Water Vapor) for good programs
 - High observing efficiency
- **More useful archive**
 - Good pipelines (mandatory)
 - Providing reduced data (if possible)

**International collaboration
would solve
the resource problems!!**

Our Requests for Subaru (II)

- **Instrument Upgrades**
 - SCExAO
 - *IR Wavefront Sensor; Imaging Polarimetry; IFU @ $R \gg 100$*
 - IRCS, COMICS
 - *$R \sim 10^5$; high-spatial sampling (spectro-astrometry); detectors with larger formats & better sensitivities*
 - HDS
 - *for better accuracy for RV measurements*
- **New Instrumentation?**
 - A wide-field imaging polarimeter

**Please consider those when Subaru & Japan
discuss international partnership!**