Aug. 2014 version

Activity Report of the NAOJ Visiting Scholar Program

Host Project/Division: TMT Name of Host Scientist: Nobunari Kashikawa

Name of Visiting Scholar: Chris Packham

Title: Visiting Associate Professor

(Choose the appropriate one)

Period: from 16/05/16 to 16/08/16

I. Report from the visiting scholar

[i] Achievement during the period of stay (in comparison with the initial plan)

(Collaborative Research)

MICHI Specific Activities

We held a well attended (35 persons from all TMT partner countries and TIO) to discuss the science and obtain science cases from participants and the science team in general. We are finalizing the collation of those science cases, and flowing them down to a set of instrument requirements. This is almost complete. The science cases will form the basis for a future funding request for 2nd generation instrumentation for the TMT, and the flow-down will be used for a feasibility level optical design for the instrument.

Another major activity was the production of a report about the site properties of TMT candidate locations, and the effects the difference in background temperature, PWV, pressure, etc. would have on 3-25μm observations. This document modeled each of those parameters for a series of sites, focusing on comparison between the ORM and MK. It also included data obtained through running CanariCam on ORM, and PWV vs. sensitivity plots. This document was provided to the TMT SAC, and Chris attended a SAC meeting to address questions from the SAC regarding the document and site in general.

国立天文台 Activities

I discussed common MICHI and MIMIZUKU technology development and testing with the group several times, and helped in their SPIE proceedings. We are planning to share results and make joint funding request for JSPS funding in fall 2016.

The AGN group that I co-lead is evolving to change it's membership in preparation for the JWST and ALMA work. I am hoping that some 国立天文台 and Japanese researchers will account our soon to be sent invitation. We had a couple of meetings at 国立天文台 to discuss this evolution.

(Education)

I attended astro-coffee and several of the weekend SOKENDAI seminar series. I have also discussed with 国立天文台 staff about internationalization activities.

(Others)

I visited the NINS President (Komori-san) to discuss the status of a MoU between University of Texas and 国立天文台. This MoU is now ready to be signed by both parties, and we are hoping for a signing ceremony in Texas in the fall of 2016, hopefully attended by 国立天文台 Director General Hayashi-san, JSPS USA Director Nozaki-san and RUNJ representative and former Subaru Director Karoji-san. Further, it is at least possible that Congressman Castro, co-founder and co-chair of the USA-Japan Congressional Caucus will attend.

[ii] Any comments on this program

Excellent program. I very much appreciate the chance to visit 国立天文台 again, and wish to express my appreciation, especially to Hayashi-san, Usuda-san, and Kashikawa-san. Working on the possible future TMT instrument MICHI is optimally achieved in Japan as many of the team are based there, and when I return to the USA I can continue to work with my USA colleagues here. Thank you again for this chance to visit 国立天文台 in summer 2016.

[iii] List of publications and presentations by the visiting scholar in collaboration with NAOJ staff or graduate students

May 23 Co-organizer of MICHI science workshop at Kyoto University

May 25 Presented MICHI at TMT Science Forum, Kyoto

July 15 Presented MICHI at ABC, Mitaka

July 29 Meetings at 東京大学

July 29 Visit to NINS HQ to meet President Komori-san

August 8 Presented MICHI at JAXA

Published between May – August 2016, with affiliation cross-listed as UTSA and NAOJ:

1. Investigating the dusty torus of Seyfert galaxies using SOFIA/FORCAST photometry. http://arxiv.org/pdf/1607.07918v1.pdf
2. Mid-infrared imaging- and spectro-polarimetric subarcsecond observations of NGC 1068. http://arxiv.org/pdf/1603.01265v1.pdf

II. 以下の項目について、受入教員が記入してください。

Report from the host scientist

[iv] 本制度に対する意見、要望など

Any comments on this program

None