Subaru Telescope International Partnership Workshop – Summary Report

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To: The Director of the Subaru Telescope

Workshop chair person	Name	Masaomi Tanaka		
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Workshop title	Exploring the Transient Universe			
Date	01 / 22 / 2018 – 01 / 24 / 2018			
Venue (address)	Swinburne University of Technology (John St, Hawthorn VIC 3122, Australia)			
Number of participants	33 (4 from Japan, 1 from China, 28 from Australia) + 35 remote participants (China, Germany, Spain, South Africa, US, Chile, etc.)			
Workshop overview	(Please briefly describe scientific rationales, and what you learned/achieved through the WS.) One of the frontiers of time-domain astronomy is the study of short-timescale phenomena (milliseconds-to-hours duration), such as fast radio bursts (FRBs), kilonovae, soft gamma-ray repeaters, ultra-fast novae, etc. This workshop aims at facilitating collaboration among the Subaru/HSC transient group, the Deeper, Wider, Faster (DWF) program (PI: Jeff Cooke), and other groups involved in DWF including a group in China. In the framework of Subaru-Australia partnership, JC applied for Subaru/HSC time and 4 half nights were awarded in 2018 Feb. In the workshop, we discus sed strategy of simultaneous observations using Subaru/HSC and various radio t elescopes in Australia. We also discussed plans for follow-up observations usin g telescopes in China, Europe, and Chile. In addition, we spent about one day in total for development of a real-time analysis system for the HSC data usin g a supercomputer in Swinburne University of Technology. We also discussed plans for future collaboration. We confirmed that a synergy between HSC and AAOmega is unique for rapid, simultaneous spectroscopy of transient objects, and we decided to keep efforts on the coordinated observatio ns.			
Discussion on Subaru international operation during the workshop	(Please describe what you discussed toward the era of Subaru international operation) I have introduced the Subaru telescope itself, capabilities of available and futu re instruments, and status of discussion toward international operation. Research ers on time-domain astronomy in Australia show strong interests in the HSC as well as PFS. Although Australia joined ESO, continuous discussion for Institut ional Collaborator (rather than full/semi partner) should be fruitful. Although HSC is powerful for time-domain astronomy, the difficulties in data reduction is one of concerns in particular for real-time analysis. To fully utilize the great capability of HSC, rapid data transfer and sufficient computer resour ce are necessary. Subaru would be more appealing if the observatory can provi de such an environment or support such activities.			
Comments on the Subaru WS support program (if any)	We appreciate this support very much. Face-to-face discussion was very helpful to develop data reduction system and discuss details about international operati on.			

Note 1: You can adjust the size of the boxes as you want, but the report must be within 1-page.
Note 2: Please attach the final WS program and participant lists when submitting this report.