

## V127b Update on ALMA Operations and Development Program - Spring 2025

M. Fukagawa, S. Iguchi, B. Hatsukade, S. Ishii, K. Kikuchi, S. Sakamoto, K. Sugimoto (NAOJ), and the ALMA Project team

This presentation provides an update on ALMA operations and development overview since the previous ASJ meeting in September 2024. Regarding the operational status, the Cycle 10 observing period concluded at the end of September 2024. During Cycle 10, ALMA set a new record with a total of 4,250 hours of data passing immediate post-observation quality assurance on the 12-m Array. The total observation hours for the 7-m Array and the Total Power Array also reached their highest levels in ALMA's history. Another highlight of Cycle 10 was the increased execution time for high-frequency programs including Band 10. Cycle 11 successfully commenced immediately after Cycle 10.

Preparations for the Wideband Sensitivity Upgrade (WSU) have also progressed. In the development programs led by East Asia, the Data Transmission System has passed the Preliminary Design Review in October 2024, and activities for the basic design of Band 8 version 2 receivers are continuing. In addition, the Total Power GPU Spectrometer in the WSU era, being developed in collaboration with KASI, has also passed the Conceptual Design and Subsystem Requirements Reviews in November 2024. Alongside the development of individual hardware components, design studies for the WSU observing system are being actively conducted in the areas of science operations and software.