

V119a Update on ALMA Development toward the WSU - Fall 2024

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In this presentation, we will offer an update on ALMA Development Program toward the Wideband Sensitivity Upgrade (WSU). As the top priority initiative for the ALMA2030 Development Roadmap, the WSU will initially double, and eventually quadruple, ALMA's system bandwidth and will deliver improved sensitivity by upgrading the receivers, digital electronics and correlator. Internationally, ALMA continues to develop detailed conceptual design and implementation plans for the WSU.

With the start of ALMA2 last year, vigorous development activities for the WSU are underway in East Asia. The existing 385-500 GHz ALMA Band 8 receiver cartridge will be upgraded to a substantially improved second-generation version, referred to as "Band 8v2." The Data Transmission System (DTS) is being developed to handle higher data rates from the antennas to both the correlator and the spectrometer. We will provide an overview and the latest status of these progresses.