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The Simons Observatory: Status and Early Data

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The Simons Observatory (SO) is a cosmic microwave background survey experiment located in the Atacama Desert in Chile. SO consists of multiple small-aperture telescopes (SATs) carrying out a focused small-area survey, as well as a large-aperture telescope (LAT) conducting a wide-field, high-resolution survey.

The SATs are searching specifically for primordial B-mode polarization sourced by tensor perturbations in the early Universe. LAT science goals include constraining primordial non-Gaussianity and the effective number of relativistic species in the early Universe; measuring the integrated mass, electron pressure and electron momentum distributions in the late-time Universe; constraining neutrino mass and the growth of cosmic structure; producing a galaxy cluster catalogue and measuring the environments around clusters; and other transient, Galactic, and Solar System science goals.

The SO mid-frequency SATs saw first light in late 2023, as did the LAT in early 2025; both have since been conducting commissioning and initial science observations. I will present the current status and early results from both surveys.

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