The ALMA Telescope

ALMA, the Atacama Large Millimeter/submillimeter Array, situated high in the Chilean desert, is the largest ground-based telescope on Earth. This is an insider's account of how this complex mega-project came to fruition from authors with intimate knowledge of its past and present. The separate roots of ALMA in the United States, Europe, and Japan are traced to their merger into an international partnership involving more than 20 countries. The book relates the search for a suitable telescope site, challenges encountered in organization, funding, and construction, and lessons learned along the way. It closes with a review of the most significant results from ALMA, now one of the most productive telescopes in the world. Written for a broad spectrum of readers, including astronomers, engineers, project managers, science historians, government officials, and the general public, the eBook edition is available to download as an Open Access publication on Cambridge Core.

PAUL A. VANDEN BOUT, Ph.D. is a Senior Scientist, Emeritus, at the US National Radio Astronomy Observatory (NRAO), where he served as a director from 1985 to 2002. He was the first director of ALMA and served as the head of the North American ALMA Science Center (NAASC), where he organized the Center in its early years. His career has been almost entirely spent in millimeter astronomy, including pioneering the Millimeter Wave Observatory at the University of Texas' McDonald Observatory. He has participated in the entire US history of events that led to ALMA, and much of that in Europe, Japan, and Chile.

ROBERT L. DICKMAN, Ph.D. is a Scientist, Emeritus, at NRAO. His entire career has been spent in radio and millimeter wavelength astronomy. He was head of the NSF Division of Astronomical Sciences' Radio Astronomy Unit, managing the process of approval for funding the Millimeter Array – ALMA's precursor – and then ALMA itself. As a US Embassy Fellow in Santiago, Chile, he advanced the negotiation to secure the right to build and operate ALMA. After he left NSF, he held senior positions at the NRAO, first in New Mexico and then in Charlottesville, Virginia.

ADELE L. PLUNKETT, Ph.D. is an Associate Scientist at NRAO, working in the NAASC. As a Fulbright Fellow in Chile in 2012, she contributed to the Commissioning and Science Verification Team at ALMA, and in the years that followed, as an European Southern Observatory Fellow, she has spent numerous shifts as Astronomer on Duty at ALMA. She is fluent in Spanish and previously studied Japanese, leading to a serendipitous synergy with the ALMA project.

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The Story of a Science Mega-Project

Paul A. Vanden Bout
National Radio Astronomy Observatory

Robert L. Dickman
National Radio Astronomy Observatory

Adele L. Plunkett
National Radio Astronomy Observatory

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