1. Record Nr. UNINA9910956063803321

Titolo	The atacama large millimeter array (ALMA) : implications of a potential descope / / Committee to Review the Science Requirements for the Atacama Large Millimeter Array
Pubbl/distr/stampa	Washington, D.C., : National Academies Press, c2005
ISBN	9786610262786 9780309182058 0309182050 9781280262784 1280262788 9780309551755 0309551757
Edizione	[1st ed.]
Descrizione fisica	1 online resource (48 p.)
Disciplina	522.682
Soggetti	Radar Detectors
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	""Front Matter""; ""Preface""; ""Acknowledgment of Reviewers""; ""Contents""; ""Summary""; ""1 Introduction""; ""2 Technical Performance Specifications""; ""3 Performance Degradation""; ""4 The Threshold for Transformational Science""; ""5 Minimum Number of Antennas""; ""Appendixes""; ""Appendix A Letter of Request""; ""Appendix B ALMA Level-1 Science Requirements""
Sommario/riassunto	The 1991 NRC decadal survey for astronomy and astrophysics included a project called the Millimeter Array (MMA). This instrument would be an array of millimeter-wavelength telescopes intended to capture images of star-forming regions and distant star-burst galaxies. With the addition of contributions form Europe, the MMA evolved into the Atacama Large Millimeter Array (ALMA), a proposed array of 64, 12-meter antennas. The project is now part of the NSF Major Research Equipment and Facilities budget request. Increased costs, however, have forced the NSF to reconsider the number of antennas. To help

with that review, NSF asked the NRC to assess the scientific consequences of reducing the number of active antennas from 60 to either 50 or 40. This report presents an assessment of the effect of downsizing on technical performance specifications, performance degradation, and the ability to perform transformational science, and of the minimum number of antennas needed.