Record Nr. UNINA9910827739903321 Optimizing the U.S. ground-based optical and infrared astronomy **Titolo** system // Committee on a Strategy to Optimize the U.S. Optical and Infrared System in the Era of the Large Synoptic Survey Telescope (LSST) ; Board on Physics and Astronomy; Division on Engineering and Physical Sciences: National Research Council of the National Academies Pubbl/distr/stampa Washington, District of Columbia:,: The National Academies Press,, [2015] ©2015 **ISBN** 0-309-37189-9 0-309-37187-2 Descrizione fisica 1 online resource (107 p.) Disciplina 520.973 Soggetti Astronomy - Research Astrophysics - Research Infrared astronomy - Research Large astronomical telescopes **United States** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references. Nota di contenuto Front Matter; Preface; Acknowledgment of Reviewers; Contents; Executive Summary: 1 Introduction: 2 Science from Major U.S. Ground-Based OIR Investments; 3 The U.S. OIR System; 4 Pursuing the Science in the LSST and GSMT Era; 5 Realizing the Full Science Potential of LSST; 6 Optimizing the U.S. OIR System; 7 Epilogue; Appendixes; Appendix A: Request for White Papers; Appendix B: Observatory Demographics; Appendix C: Acronyms "New astronomical facilities, such as the under-construction Large Sommario/riassunto Synoptic Survey Telescope and planned 30-meter-class telescopes, and new instrumentation on existing optical and infrared (OIR) telescopes, hold the promise of groundbreaking research and discovery. How can we extract the best science from these and other astronomical facilities in an era of potentially flat federal budgets for both the facilities and

the research grants? Optimizing the U.S. Ground-Based Optical and Infrared Astronomy System provides guidance for these new programs that align with the scientific priorities and the conclusions and recommendations of two National Research Council (NRC) decadal surveys, New Worlds, New Horizons for Astronomy and Astrophysics and Vision and Voyages for Planetary Sciences in the Decade 2013-2022, as well as other NRC reports. This report describes a vision for a U.S. OIR System that includes a telescope time exchange designed to enhance science return by broadening access to capabilities for a diverse community, an ongoing planning process to identify and construct next generation capabilities to realize decadal science priorities, and near-term critical coordination, planning, and instrumentation needed to usher in the era of LSST and giant telescopes"--