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Soggetti	Astronomy Infrared astronomy Near infrared reflectance spectroscopy
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction Setting the stage - NIR surveys and their calibration What we have to deal with - the NIR sky What can be built to deal with that - detectors, instrumentation & AO Signal-to-noise considerations Observing & calibration strategies Data reduction recipes Taking data above the atmosphere - changes in observing and data reduction principles Concluding remarks
Sommario/riassunto	Near-infrared astronomy has become one of the most rapidly developing branches in modern astrophysics. Innovative observing techniques, near-infrared detectors with quantum efficiencies in excess of 90%, highly specialised instruments as well as advanced data reduction techniques have allowed major breakthroughs in various areas like exoplanets, star-forming regions, the supermassive black hole in the Galactic center, and the high-redshift Universe. In this book, the reader will be introduced to the basic concepts of how to prepare near-infrared observations with maximized scientific return. Equal weight is given to all aspects of the data reduction for both - imaging and spectroscopy. Information is also provided on the state of the art instrumentation available and planned, on detector technology or the physics of the atmosphere, all of which influence the preparation and

execution of observations and data reduction techniques. The beginner but also the expert will find a lot of information in compact form which is otherwise widely dispersed across the internet or other sources.

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