1. Record Nr. UNINA9910300533703321

Autore	Wilson T. L
Titolo	Millimeter Astronomy [[electronic resource]] : Saas-Fee Advanced Course 38. Swiss Society for Astrophysics and Astronomy / / by T. L. Wilson, Stéphane Guilloteau ; edited by Miroslava Dessauges-Zavadsky, Daniel Pfenniger
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2018
ISBN	3-662-57546-9
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (190 pages)
Collana	Saas-Fee Advanced Course, , 1861-7980 ; ; 38
Disciplina	523.01
Soggetti	Observations, Astronomical Astronomy—Observations Astrophysics Planetary science Astronomy, Observations and Techniques Astrophysics and Astroparticles Planetary Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction to Millimeter/Sub-Millimeter Astronomy (T.L. Wilson) -- 1 Introduction -- 2 Some Background -- 3 Theory of Receivers -- 4 Practical Receivers -- 5 Filled Aperture Antennas -- 6 Single Dish Observational Methods -- 7 Interferometers and Aperture Synthesis -- 8 Continuum Emission from mm/sub-mm Sources -- 9 Spectral Line Basics -- 10 Line Radiation from Atoms -- 11 Emission Nebulae, Radio Recombination Lines -- 12 Overview of Molecular Basics -- 13 Astronomical Applications -- References -- Star Formation with ALMA (S. Guilloteau) -- 1 Introduction -- 2 Dust as a Probe of Star Formation -- 3 Using Molecules -- 4 Prestellar Cores -- 5 Class 0 -- 6 Outflows -- 7 Protoplanetary Disks -- 8 High-Mass Stars -- 9 Nonstandard Observations -- 10 Conclusions: The promise of ALMA -- References.
Sommario/riassunto	The millimeter and sub-millimeter wavebands are unique in astronomy in containing several thousands of spectral lines of molecules as well as

	the thermal continuum spectrum of cold dust. They are the only bands in the electromagnetic spectrum in which we can detect the molecular gas reservoir for star formation and cold dust far away in high-redshift galaxies, and nearby in low-temperature cocoons of protostars and protoplanets. This book is based on and extensively updated from the lectures given during the Saas-Fee Advanced Course 38 on millimeter astronomy. It presents both the observing techniques and the scientific perspectives of observations at millimeter wavelengths, here in particular the star and planet formation. The chapters by Thomas L. Wilson and Stéphane Guilloteau have been edited by Miroslava Dessauges-Zavadsky and Daniel Pfenniger. The book is part of the series of Saas-Fee Advanced Courses published since 1971. The targeted audience are graduate PhD and advanced undergraduate students, but the book also serves as reference for post-doctoral researchers or newcomers to the field.

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Record Nr.	UNINA9910455170803321
Autore	Pace Phillip E.
Titolo	Detecting and classifying low probability of intercept radar / / Phillip E. Pace
Pubbl/distr/stampa	Boston : , : Artech House, , ©2009 [Piscataqay, New Jersey] : , : IEEE Xplore, , [2008]
ISBN	1-5231-1707-9 1-59693-235-X
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (892 p.)
Collana	Artech House radar library
Disciplina	623/.7348
Soggetti	Low probability of intercept radar Radar - Military applications Signal detection - Mathematics Electronic books.
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 and index.
Nota di contenuto	To see and not be seen -- LPI technology and applications --

	Ambiguity analysis of LPI waveforms -- FMCW radar -- Phase shift keying techniques -- Frequency shift keying techniques -- Noise techniques -- Over-the-horizon radar -- Case study: Antiship LPI missile seeker -- Network-centric warfare and netted LPI radar systems -- Strategies for intercepting LPI radar signals -- Wigner-Ville distribution analysis of LPI radar waveforms -- Choi-Williams distribution analysis of LPI radar waveforms -- LPI radar analysis using quadrature mirror filtering -- Cyclostationary spectral analysis for detection of LPI radar parameters -- Antiradiation missiles -- Autonomous classification of LPI radar modulations -- Autonomous extraction of modulation parameters -- Appendixes.
Sommario/riassunto	"This comprehensive book presents LPI radar design essentials, including ambiguity analysis of LPI waveforms, FMCW radar, and phase-shift and frequency-shift keying techniques. Moreover, you find details on new OTHR modulation schemes, noise radar, and spatial multiple-input multiple-output (MIMO) systems. The book explores autonomous non-linear classification signal processing algorithms for identifying LPI modulations. It also demonstrates four intercept receiver signal processing techniques for LPI radar detection that helps you determine which time-frequency, bi-frequency technique best suits any LPI modulation of interest."--Publisher.