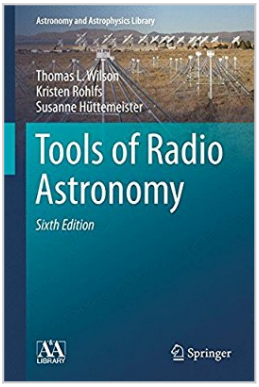

Tools of Radio Astronomy (Astronomy and Astrophysics Library)

By Thomas L. Wilson, Kristen Rohlfs, Susanne Hüttemeister

Tools of Radio Astronomy (Astronomy and Astrophysics Library) By Thomas L. Wilson, Kristen Rohlfs, Susanne Hüttemeister

This 6th edition of “Tools of Radio Astronomy”, the most used introductory text in radio astronomy, has been revised to reflect the current state of this important branch of astronomy. This includes the use of satellites, low radio frequencies, the millimeter/sub-mm universe, the Cosmic Microwave Background and the increased importance of mm/sub-mm dust emission.

Several derivations and presentations of technical aspects of radio astronomy and receivers, such as receiver noise, the Hertz dipole and beam forming have been updated, expanded, re-worked or complemented by alternative derivations. These reflect advances in technology.

The wider bandwidths of the Jansky-VLA and long wave arrays such as LOFAR and mm/sub-mm arrays such as ALMA required an expansion of the discussion of interferometers and aperture synthesis. Developments in data reduction algorithms have been included.

As a result of the large amount of data collected in the past 20 years, the discussion of solar system radio astronomy, dust emission, and radio supernovae has been revisited.

The chapters on spectral line emission have been updated to cover measurements of the neutral hydrogen radiation from the early universe as well as measurements with new facilities. Similarly the discussion of molecules in interstellar space has been expanded to include the molecular and dust emission from protostars and very cold regions.

Several worked examples have been added in the areas of fundamental physics, such as pulsars.

Both students and practicing astronomers will appreciate this new up-to-date edition of Tools of Radio Astronomy.

Tools of Radio Astronomy (Astronomy and Astrophysics Library)

By Thomas L. Wilson, Kristen Rohlfs, Susanne Hüttemeister

Tools of Radio Astronomy (Astronomy and Astrophysics Library) By Thomas L. Wilson, Kristen Rohlfs, Susanne Hüttemeister

This 6th edition of “Tools of Radio Astronomy”, the most used introductory text in radio astronomy, has been revised to reflect the current state of this important branch of astronomy. This includes the use of satellites, low radio frequencies, the millimeter/sub-mm universe, the Cosmic Microwave Background and the increased importance of mm/sub-mm dust emission.

Several derivations and presentations of technical aspects of radio astronomy and receivers, such as receiver noise, the Hertz dipole and beam forming have been updated, expanded, re-worked or complemented by alternative derivations. These reflect advances in technology.

The wider bandwidths of the Jansky-VLA and long wave arrays such as LOFAR and mm/sub-mm arrays such as ALMA required an expansion of the discussion of interferometers and aperture synthesis. Developments in data reduction algorithms have been included.

As a result of the large amount of data collected in the past 20 years, the discussion of solar system radio astronomy, dust emission, and radio supernovae has been revisited.

The chapters on spectral line emission have been updated to cover measurements of the neutral hydrogen radiation from the early universe as well as measurements with new facilities. Similarly the discussion of molecules in interstellar space has been expanded to include the molecular and dust emission from protostars and very cold regions.

Several worked examples have been added in the areas of fundamental physics, such as pulsars.

Both students and practicing astronomers will appreciate this new up-to-date edition of Tools of Radio Astronomy.

Tools of Radio Astronomy (Astronomy and Astrophysics Library) By Thomas L. Wilson, Kristen Rohlfs, Susanne Hüttemeister Bibliography

- Sales Rank: #1461934 in Books
- Published on: 2013-12-06
- Original language: English
- Number of items: 1
- Dimensions: 9.40" h x 1.50" w x 6.30" l, 2.20 pounds
- Binding: Hardcover
- 609 pages

Editorial Review

Review

Aus den Rezensionen zur 6.Auflage:

"... Studenten und Absolventen einschlägiger Fachrichtungen ist das Buch auch fur Quereinsteiger und Amateure geeignet, die ernsthaft in dieses Fachgebiet eindringen wollen." (in: Funkamateur, Heft 5, 2014)

From the Back Cover

This 6th edition of "Tools of Radio Astronomy", the most used introductory text in radio astronomy, has been revised to reflect the current state of this important branch of astronomy. This includes the use of satellites, low radio frequencies, the millimeter/sub-mm universe, the Cosmic Microwave Background and the increased importance of mm/sub-mm dust emission.

Several derivations and presentations of technical aspects of radio astronomy and receivers, such as receiver noise, the Hertz dipole and beam forming have been updated, expanded, re-worked or complemented by alternative derivations. These reflect advances in technology.

The wider bandwidths of the Jansky-VLA and long wave arrays such as LOFAR and mm/sub-mm arrays such as ALMA required an expansion of the discussion of interferometers and aperture synthesis. Developments in data reduction algorithms have been included.

As a result of the large amount of data collected in the past 20 years, the discussion of solar system radio astronomy, dust emission, and radio supernovae has been revisited.

The chapters on spectral line emission have been updated to cover measurements of the neutral hydrogen radiation from the early universe as well as measurements with new facilities. Similarly the discussion of molecules in interstellar space has been expanded to include the molecular and dust emission from protostars and very cold regions.

Several worked examples have been added in the areas of fundamental physics, such as pulsars.

Both students and practicing astronomers will appreciate this new up-to-date edition of Tools of Radio Astronomy.

About the Author
Thomas Wilson graduated with a BS in Physics from St. Joseph's College in Philadelphia and went on to study under B. F. Burke at MIT for his doctoral work in physics, which focused on 'Radio Studies of HII Regions.' After graduating from MIT, Wilson was a post-doctoral fellow at the NRAO in Charlottesville. Afterward Wilson was on staff at Max-Planck-Inst. f. Radioastronomy from 1969-2004, then Project Scientist (2004-6), Associate Director (2006-8) and at European Southern Observatory, Director of the Sub-mm Telescope Observatory (1997-2002), and subsequently Senior Scientist at ALMA (Atacama Large Mm/sub-mm Array) (Feb 2009 to March 2010). As of April 2010, he is the Branch Head at the Naval

Research Laboratory.

Kristen Rohlfs studied Astronomy and Physics and received a PhD in 1961 in Hamburg. After his postdoctoral lecture qualification in 1965 he worked at the Max-Planck-Institute for Radioastronomy in Bonn. Starting in 1974 he taught at the Astronomy Institute Ruhr of University Bochum and is now emeritus professor.

Susanne Hüttemeister received a Ph.D. in Astronomy by the Bonn University. She had a position as Postdoctoral Fellow at the Harvard-Smithsonian Center for Astrophysics, Cambridge (USA) and teaching assignments at RWTH Aachen (Aachen Technical University) and Bonn University. Dr. Hüttemeister is now the Director of Bochum Planetarium and Adjunct Professor at the Astronomy Institute of Ruhr University Bochum.

Users Review

From reader reviews:

Chris Manley:

The book Tools of Radio Astronomy (Astronomy and Astrophysics Library) make you feel enjoy for your spare time. You can utilize to make your capable much more increase. Book can to become your best friend when you getting stress or having big problem with your subject. If you can make reading a book Tools of Radio Astronomy (Astronomy and Astrophysics Library) to become your habit, you can get a lot more advantages, like add your own capable, increase your knowledge about many or all subjects. You can know everything if you like open up and read a e-book Tools of Radio Astronomy (Astronomy and Astrophysics Library). Kinds of book are several. It means that, science book or encyclopedia or other folks. So , how do you think about this book?

Jesse Mansell:

Reading a reserve can be one of a lot of pastime that everyone in the world enjoys. Do you like reading book consequently. There are a lot of reasons why people enjoyed. First reading a guide will give you a lot of new information. When you read a guide you will get new information because book is one of many ways to share the information or maybe their idea. Second, examining a book will make anyone more imaginative. When you studying a book especially fictional book the author will bring someone to imagine the story how the people do it anything. Third, you may share your knowledge to some others. When you read this Tools of Radio Astronomy (Astronomy and Astrophysics Library), it is possible to tells your family, friends in addition to soon about yours book. Your knowledge can inspire the others, make them reading a book.

Marlene Tiggs:

Spent a free time to be fun activity to try and do! A lot of people spent their sparetime with their family, or their particular friends. Usually they carrying out activity like watching television, going to beach, or picnic within the park. They actually doing ditto every week. Do you feel it? Will you something different to fill your own free time/ holiday? Might be reading a book may be option to fill your totally free time/ holiday. The first thing you ask may be what kinds of guide that you should read. If you want to consider look for book, may be the book untitled Tools of Radio Astronomy (Astronomy and Astrophysics Library) can be

fine book to read. May be it can be best activity to you.

Susan Douglas:

This Tools of Radio Astronomy (Astronomy and Astrophysics Library) is fresh way for you who has intense curiosity to look for some information as it relief your hunger details. Getting deeper you into it getting knowledge more you know otherwise you who still having small amount of digest in reading this Tools of Radio Astronomy (Astronomy and Astrophysics Library) can be the light food for yourself because the information inside that book is easy to get simply by anyone. These books develop itself in the form and that is reachable by anyone, sure I mean in the e-book type. People who think that in reserve form make them feel drowsy even dizzy this e-book is the answer. So there isn't any in reading a guide especially this one. You can find what you are looking for. It should be here for an individual. So , don't miss the idea! Just read this e-book style for your better life as well as knowledge.

Read Tools of Radio Astronomy (Astronomy and Astrophysics Library) By Thomas L. Wilson, Kristen Rohlfs, Susanne Hüttemeister for online ebook

Tools of Radio Astronomy (Astronomy and Astrophysics Library) By Thomas L. Wilson, Kristen Rohlfs, Susanne Hüttemeister Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Tools of Radio Astronomy (Astronomy and Astrophysics Library) By Thomas L. Wilson, Kristen Rohlfs, Susanne Hüttemeister books to read online.

Online Tools of Radio Astronomy (Astronomy and Astrophysics Library) By Thomas L. Wilson, Kristen Rohlfs, Susanne Hüttemeister ebook PDF download

Tools of Radio Astronomy (Astronomy and Astrophysics Library) By Thomas L. Wilson, Kristen Rohlfs, Susanne Hüttemeister Doc

Tools of Radio Astronomy (Astronomy and Astrophysics Library) By Thomas L. Wilson, Kristen Rohlfs, Susanne Hüttemeister Mobipocket

Tools of Radio Astronomy (Astronomy and Astrophysics Library) By Thomas L. Wilson, Kristen Rohlfs, Susanne Hüttemeister EPub

8IC47LRDSZX: Tools of Radio Astronomy (Astronomy and Astrophysics Library) By Thomas L. Wilson, Kristen Rohlfs, Susanne Hüttemeister