Record Nr. UNINA9910300412303321 Autore Verschuur Gerrit Titolo The invisible universe: the story of radio astronomy / / Gerrit Verschuur Pubbl/distr/stampa Switzerland: ,: Springer International Publishing, , 2015 **ISBN** 9783319134222 3319134221 Edizione [Third edition.] Descrizione fisica 1 online resource (xii, 259 pages): illustrations (some color) Collana Astronomers' Universe, , 1614-659X Disciplina 520 530.01 Soggetti Astronomy Astronomy—Observations **Physics** Popular Science in Astronomy Astronomy, Observations and Techniques History and Philosophical Foundations of Physics 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 Preface -- What is Radio Astronomy? -- A Science is Born -- The Radio Sun and Planets -- The Galactic Radio Nebulae -- Radio Waves from the Milky Way -- Interstellar Neutral Hydrogen -- Interstellar Molecules -- Pulsars -- The Galactic Superstars -- Radio Galaxies -- Quasars --The Grand Unification: Active Galactic Nuclei -- Beyond the Quasars Radio Cosmology -- Radio Telescopes in High Places -- Radio Telescopes: The Future -- China Rising -- On the Radio Astronomical Quest for Extraterrestrial Intelligence -- On Growth and Obsolescence -- What Lies Ahead?- Appendix -- Further Reading -- Index. Hidden from human view, accessible only to sensitive receivers Sommario/riassunto

Hidden from human view, accessible only to sensitive receivers attached to huge radio telescopes, the invisible universe beyond our senses continues to fascinate and intrigue our imaginations. Closer to home, in the Milky Way galaxy, radio astronomers listen patiently to the ticking of pulsars that tell of star death and states of matter of awesome densities. All of this happens out there in the universe hidden from our eyes, even when aided by the Hubble Space Telescope. This is

the story of radio astronomy, of how radio waves are generated by stars, supernova, quasars, colliding galaxies and by the very beginnings of the universe itself. The author discusses what radio astronomers are doing in the New Mexico desert, in a remote valley in Puerto Rico, and in the green Pocahontas Valley in West Virginia, as well as dozens of other remote sites around the world. With each of these observatories, the scientists collect and analyze their data, "listening" to the radio signals from space in order to learn what, or perhaps who, is out there as well. The author specifically highlights enormous changes that have occurred in the field over the past 50 years, including the political reality of radio astronomy and what that could mean for the future.