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Titolo	Hot Spots in Extragalactic Radio Sources [[electronic resource]] : Proceedings of a Workshop, Held at Ringberg Castle, Tegernsee, FRG, February 8–12, 1988 // edited by Klaus Meisenheimer, Hermann-Josef Röser
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Disciplina	520
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Nota di contenuto	Hot spot radio galaxies — an introduction -- Radio observation of hot spots -- Compact hotspots, double hotspots, and source asymmetry -- Cygnus a and the Williams model -- A tale of two hot spots -- 3C332: A source with an “exceptional” multiple hot spot morphology -- Constraints on the hotspot advance speed in the core-dominated quasar 1510-089 -- The extended structure of the radio galaxy PKS 0521-36: radio polarization and optical emission lines -- New VLA results on M87 -- Digital photometry of the jet in M 87 -- Imaging polarimetry of the jet in m 87 -- Continuum observations of hot spots at wavelengths < 1 cm -- Multifrequency flux determination in the hot spot of 3C33 South -- A blue and polarized source along the radio axis

of PKS 2152-69 -- Extended optical line emission in radio galaxies -- Highly ionized gas in PKS 2152-69 -- Models of hot spots -- The terminal shock in jets -- Giant radio galaxies via inverse Compton weakened jets -- Jet speed, beaming & sidedness, and all that -- How important are currents and fields in radio sources? -- Numerical simulations of hot spots -- Walljets -- Simulations of synchrotron loss in hotspots -- The influence of magnetic fields on the propagation of supersonic jets -- Fermi acceleration -- First-order fermi acceleration at relativistic shock fronts -- Spectral indices from relativistic and non-relativistic shocks -- Shock acceleration theory applied — The spectra of radio hot spots -- Synchrotron-emission - photons and neutrinos - from shockwave regions in active galactic nuclei, jet and hot spots -- Remarks about diffusive shock pave acceleration -- Particle acceleration in hotspots -- Magnetic reconnection and particle acceleration -- Stochastic acceleration of relativistic electrons in synchrotron sources with turbulently reconnecting magnetic fields.

Sommario/riassunto

This collection of papers presents a rather complete review of current knowledge of hot spots in some strong extragalactic radio sources. An overview of known results along with new data on radio observations and optical observations is given in the first and second parts of the book. Recent computational techniques which allow modelling and simulations of hot spots and jet behaviour are presented in the third part. The fourth part discusses particle acceleration and shock front phenomena. The articles will help the reader to appreciate the role hot spots play as laboratories for studying the interaction of jets with the surrounding medium and for testing our understanding of the overall source dynamics. The book is a valuable complement to the existing literature and an excellent introduction to this fairly new field of research.
