1. Record Nr. UNINA9910792099003321

Autore	Wall J. V.
Titolo	Practical statistics for astronomers / / J. V. Wall, C. R. Jenkins [[electronic resource]]
Pubbl/distr/stampa	Cambridge : , : Cambridge University Press, , 2012
ISBN	1-107-22447-0 1-107-38544-X 1-139-37652-7 1-139-37938-0 1-139-37509-1 1-139-37795-7 1-139-37110-X 1-280-87895-9 9786613720269 1-139-03199-6
Edizione	[Second edition.]
Descrizione fisica	1 online resource (xix, 353 pages) : digital, PDF file(s)
Collana	Cambridge observing handbooks for research astronomers ; ; 8
Classificazione	SCI004000
Disciplina	519.5024/52
Soggetti	Statistical astronomy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from publisher's bibliographic system (viewed on 05 Oct 2015).
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Machine generated contents note: 1. Decision; 2. Probability; 3. Statistics and expectations; 4. Correlation and association; 5. Hypothesis-testing; 6. Data modelling and parameter-estimation: basics; 7. Data modelling and parameter-estimation: advanced topics; 8. Detection and surveys; 9. Sequential data - 1D statistics; 10. Statistics of large-scale structure; 11. Epilogue: statistics and our Universe; Appendices; References; Index.
Sommario/riassunto	Astronomy needs statistical methods to interpret data, but statistics is a many-faceted subject that is difficult for non-specialists to access. This handbook helps astronomers analyze the complex data and models of modern astronomy. This second edition has been revised to feature many more examples using Monte Carlo simulations, and now also includes Bayesian inference, Bayes factors and Markov chain Monte

Carlo integration. Chapters cover basic probability, correlation analysis, hypothesis testing, Bayesian modelling, time series analysis, luminosity functions and clustering. Exercises at the end of each chapter guide readers through the techniques and tests necessary for most observational investigations. The data tables, solutions to problems, and other resources are available online at www.cambridge.org/9780521732499. Bringing together the most relevant statistical and probabilistic techniques for use in observational astronomy, this handbook is a practical manual for advanced undergraduate and graduate students and professional astronomers.