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Other methods of denoting very large or very small numbers; 2.6 IAU recommendations regarding SI units; 2.6.1 Angle; 2.6.2 Time; 2.6.3 Distance and mass; 2.6.4 Wavenumber; 2.6.5 Magnitude; 2.7 Summary and recommendations; 2.7.1 Summary; 2.7.2 Recommendations; 3 Dimensional analysis
3.1 Definition of dimensional analysis3.1.1 The dimensions of the SI base units; 3.1.2 Dimensions of some of the SI derived units; 3.2 Dimensional equations; 3.3 Summary and recommendations; 3.3.1 Summary; 3.3.2 Recommendations; 4 Unit of angular measure (radian); 4.1 SI definition of the radian; 4.2 Commonly used non-SI units of angular measure; 4.2.1 Converting from (° ' "") and (h m s) to radians; 4.3 Spherical astronomy; 4.3.1 Spherical triangles; 4.3.2 Coordinate systems in astronomy; 4.3.3 Relationships between astronomical coordinate systems; 4.4 Angular distances and diameters
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6.2 Linear astronomical distances and diameters

Sommario/riassunto

A multitude of measurement units exist within astronomy, some of which are unique to the subject, causing discrepancies that are particularly apparent when astronomers collaborate with researchers from other disciplines in science and engineering. The International System of Units (SI) is based on seven fundamental units from which other units may be derived, but many astronomers are reluctant to drop their old and familiar systems. This handbook demonstrates the ease with which transformations from old units to SI units may be made. Using worked examples, the author argues that astronomers would benefit greatly if the reporting of astronomical research and the sharing of data were standardized to SI units. Each chapter reviews a different SI base unit, clarifying the connection between these units and those currently favoured by astronomers. This is an essential reference for all researchers in astronomy and astrophysics, and will also appeal to advanced students.