STRUCTURE AND DYNAMICS OF ELLIPTICAL GALAXIES

TIM DE ZEEUW (ED.)

The last decade has seen a period of exceptionally rapid progress in the understanding of elliptical galaxies: theoretical advances have been due to the abandonment of the classical model of ellipticals as rotationally flattened oblate bodies in favor of a model which regards them as slowly rotating triaxial systems. Observationally, a wealth of new photometric and spectroscopic data have been recorded. The thirty invited reviews in this work cover all aspects of this recent progress, its consequences, and the major outstanding problems. Topics covered include an historical introduction, isophote shapes, central brightness profiles, colors, shells, mean and random velocities, orientation and distribution of dust lanes, optical emission lines, radio morphology, central source, X-ray observations, stellar populations, observational constraints on triaiality and rotation, orbits in axisymmetric and triaxial systems, dynamics near a central black hole, separable potentials, dynamical models and their stability, N-body simulations, origin and evolution, and a summary. Eighty poster contributions describe many of the most recent developments. The symposium forming the basis for this book was the first IAU Symposium devoted exclusively to elliptical galaxies.

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The cover picture shows isophote twisting in NGC 1549, as described by Jedrzejewski (page 39).