ANISOTROPIC DISTRIBUTION FUNCTIONS FOR THE ELLIPTICAL GALAXY NGC 1600

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Three-integral (3I) dynamical models for NGC 1600 were constructed as follows: (i) Lucy-inversion of CCD photometry and gravitational potential as in Binney, Davies, Illingworth (ApJ 361, 78, 1990), assuming axisymmetry. (ii) Third integral by perturbation theory as in Gerhard & Saha (MN 261, 311, 1991). (iii) Two- and three-integral distribution functions as in Dehnen & Gerhard (MN 261, 311, 1993), assuming various anisotropy patterns. The kinematic results from these models are presented in Fig. 1. The best-fitting 3I model (solid line, right panels) has outward-increasing radial anisotropy on the major axis and is nearly isotropic on the minor axis. The M/L of the various 3I-models varies only slightly around M/L=6.2.

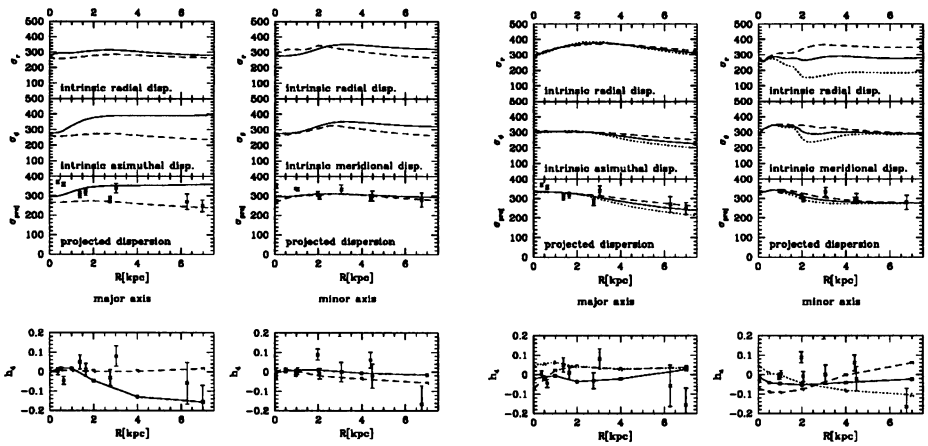

Figure 1. Kinematics of NGC 1600 with models superposed. Observed kinematics $\sigma_{\rm proj}$ and h_4 are taken from Bender, Saglia & Gerhard (MN 269, 785, 1994). Left two panels show two-integral models $f(E, L_z)$ (solid line) and $f(E, S_m)$ (see Dehnen & Gerhard 1993). Right two panels show some three-integral models. Top to bottom: intrinsic velocity disperions σ_r, σ_ϕ (major axis) resp. σ_θ (minor axis), observable quantities $\sigma_{\rm proj}$, h_4.