

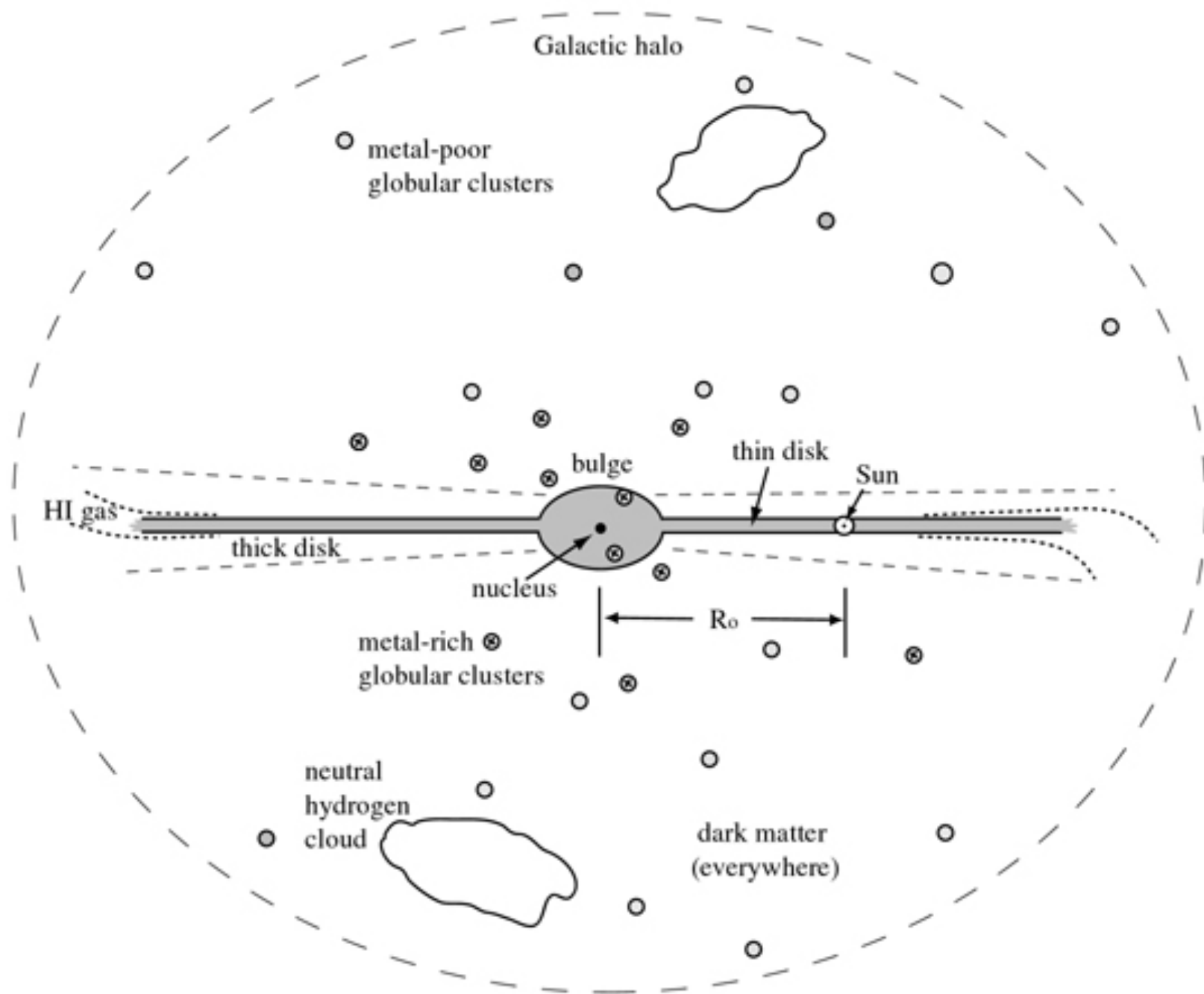
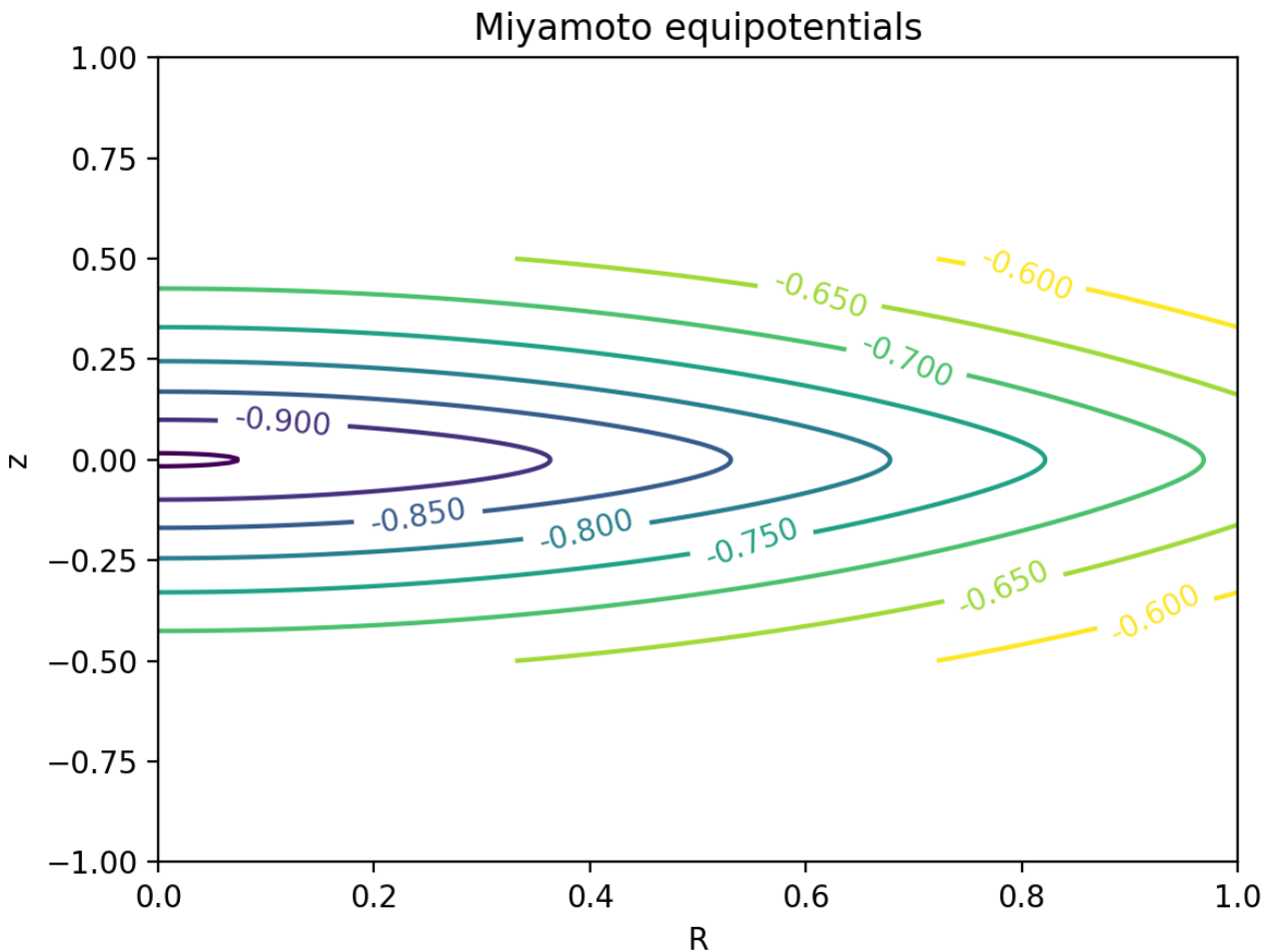


Fig 1.8 'Galaxies in the Universe' Sparke/Gallagher CUP 2007

$$\Phi_M(R, z) = - \frac{GM}{\left[R^2 + \left(a + \sqrt{z^2 + b^2} \right)^2 \right]^{1/2}}$$

$$\rho_M(R, z) = \frac{\nabla^2 \Phi_M}{4\pi G}$$



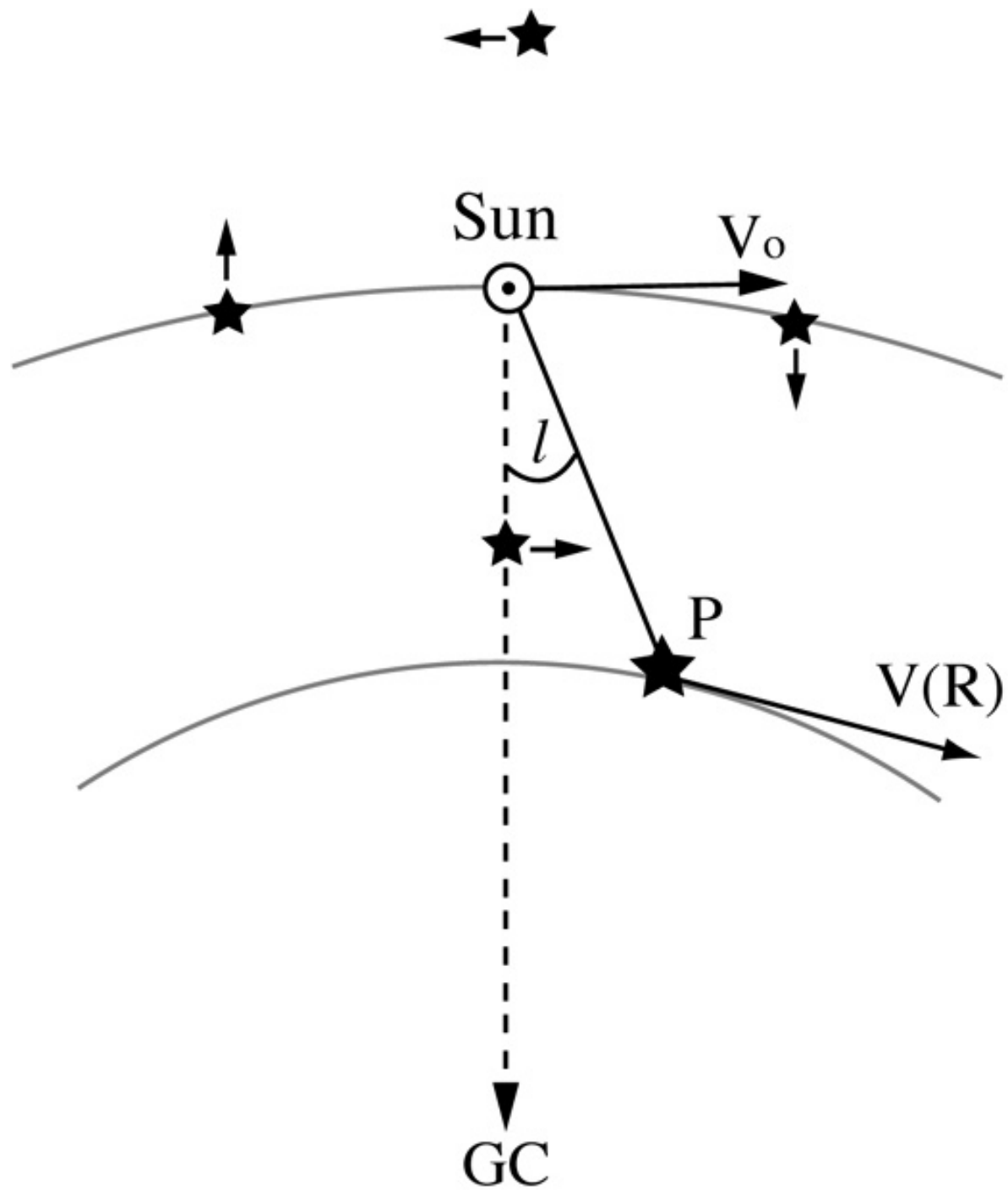
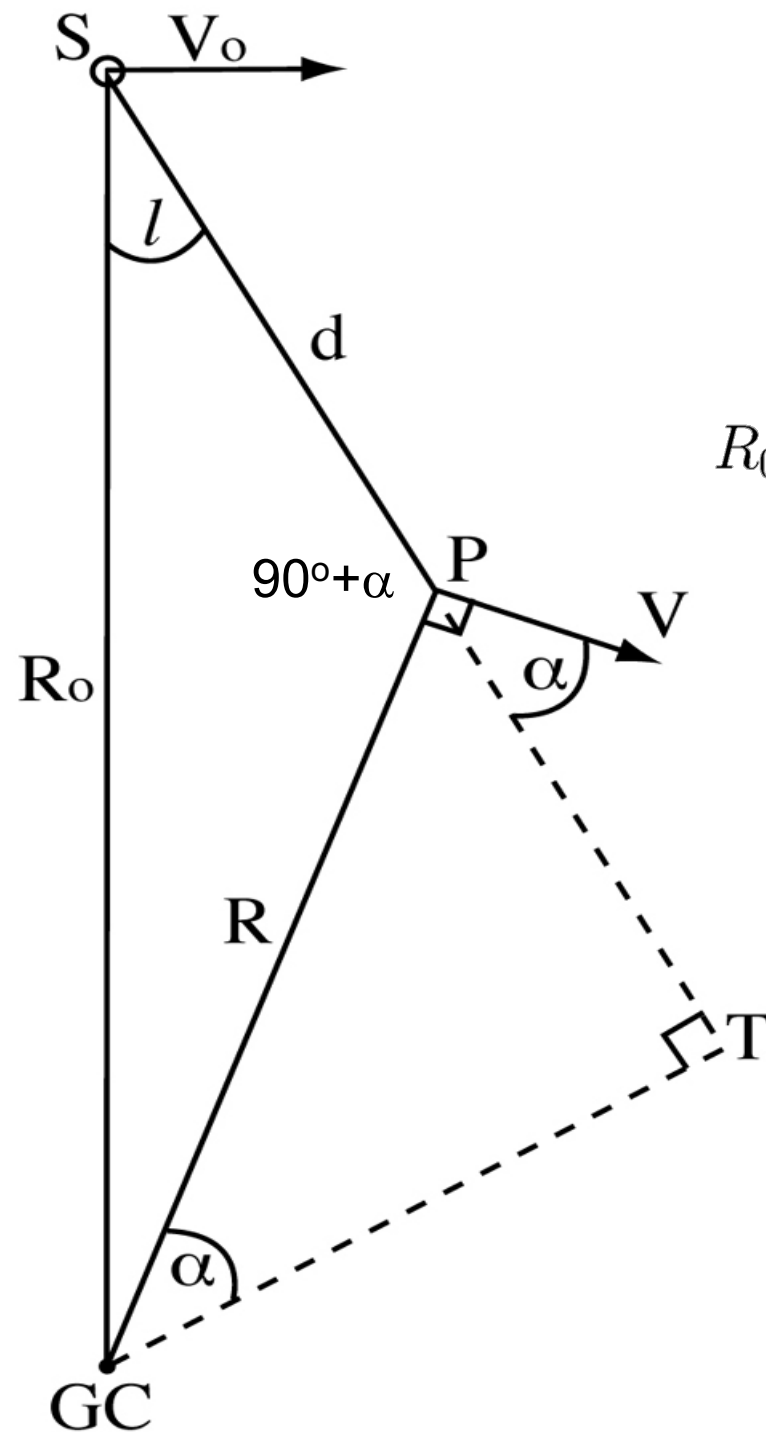


Fig 2.18 'Galaxies in the Universe' Sparke/Gallagher CUP 2007



$$\frac{\sin l}{R} = \frac{\cos \alpha}{R_0}$$

$$R^2 = R_0^2 + d^2 - 2R_0d \cos l$$

$$R_0 \cos l = d + R \sin \alpha$$

Fig2.19 'Galaxies in the Universe' Sparke/Gallagher CUP 2007

Leiden/Dwingeloo & IAR HI Surveys; $b = 0$

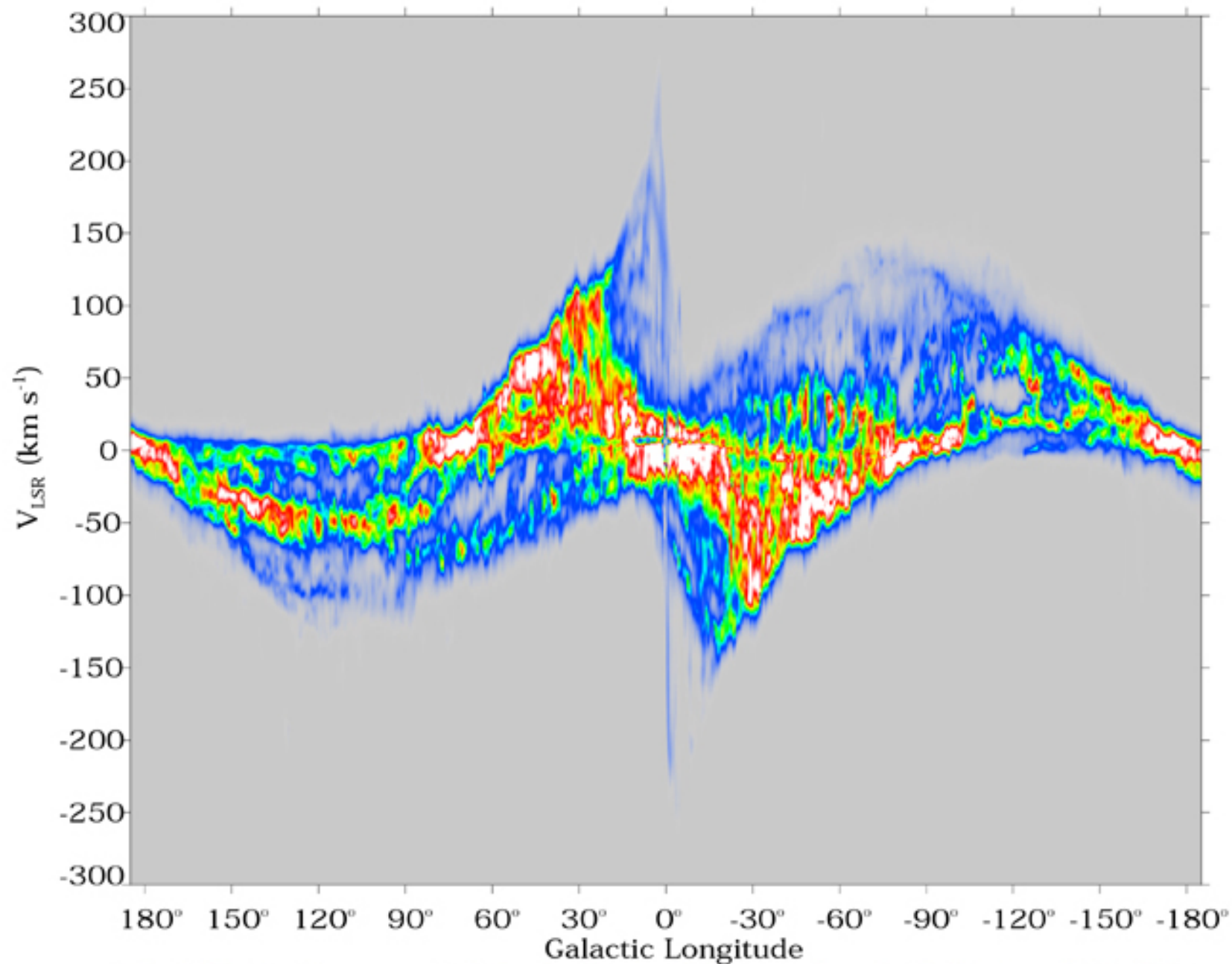
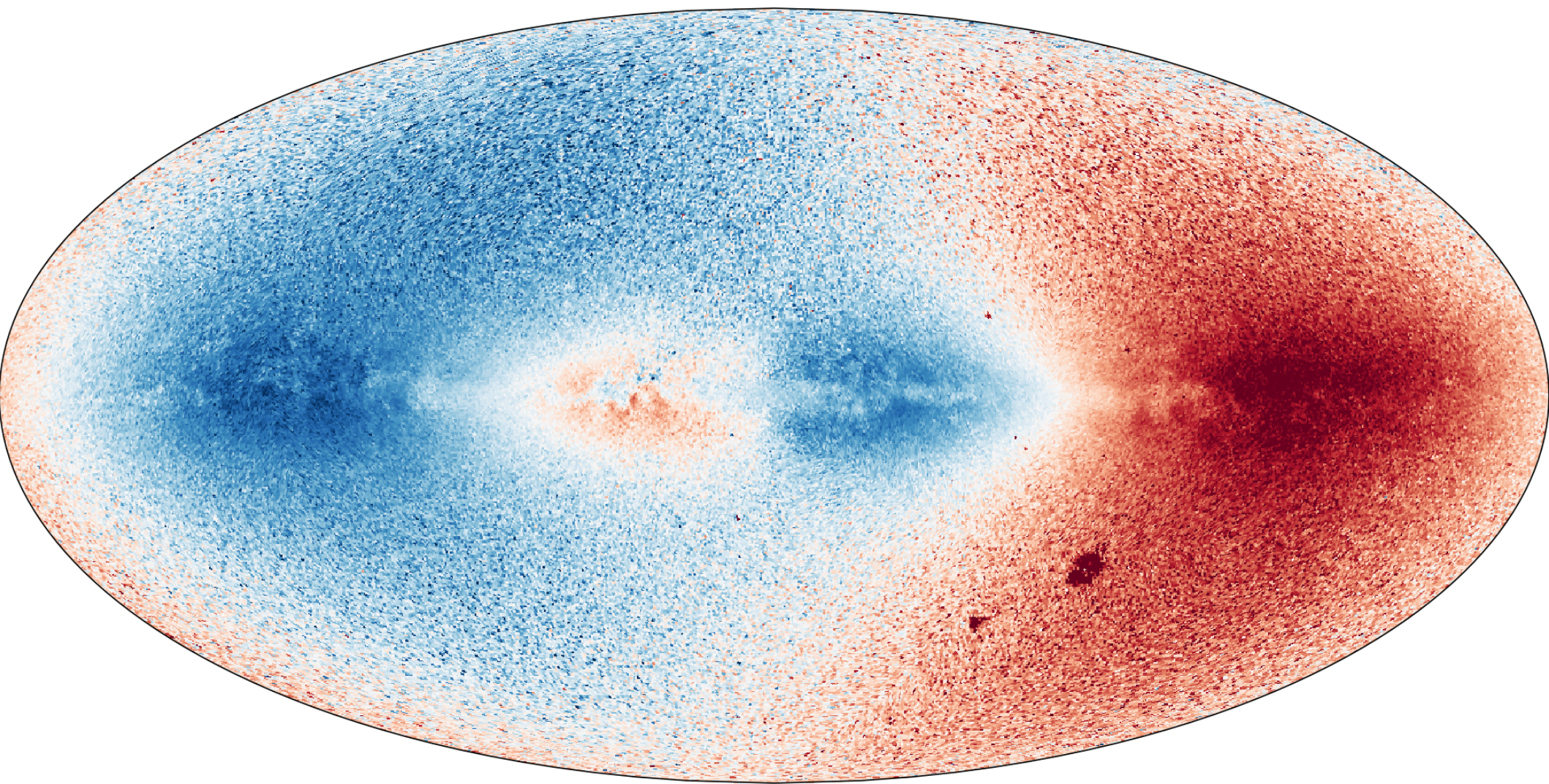


Fig 2.20 (D. Hartmann) 'Galaxies in the Universe' Sparke/Gallagher CUP 2007



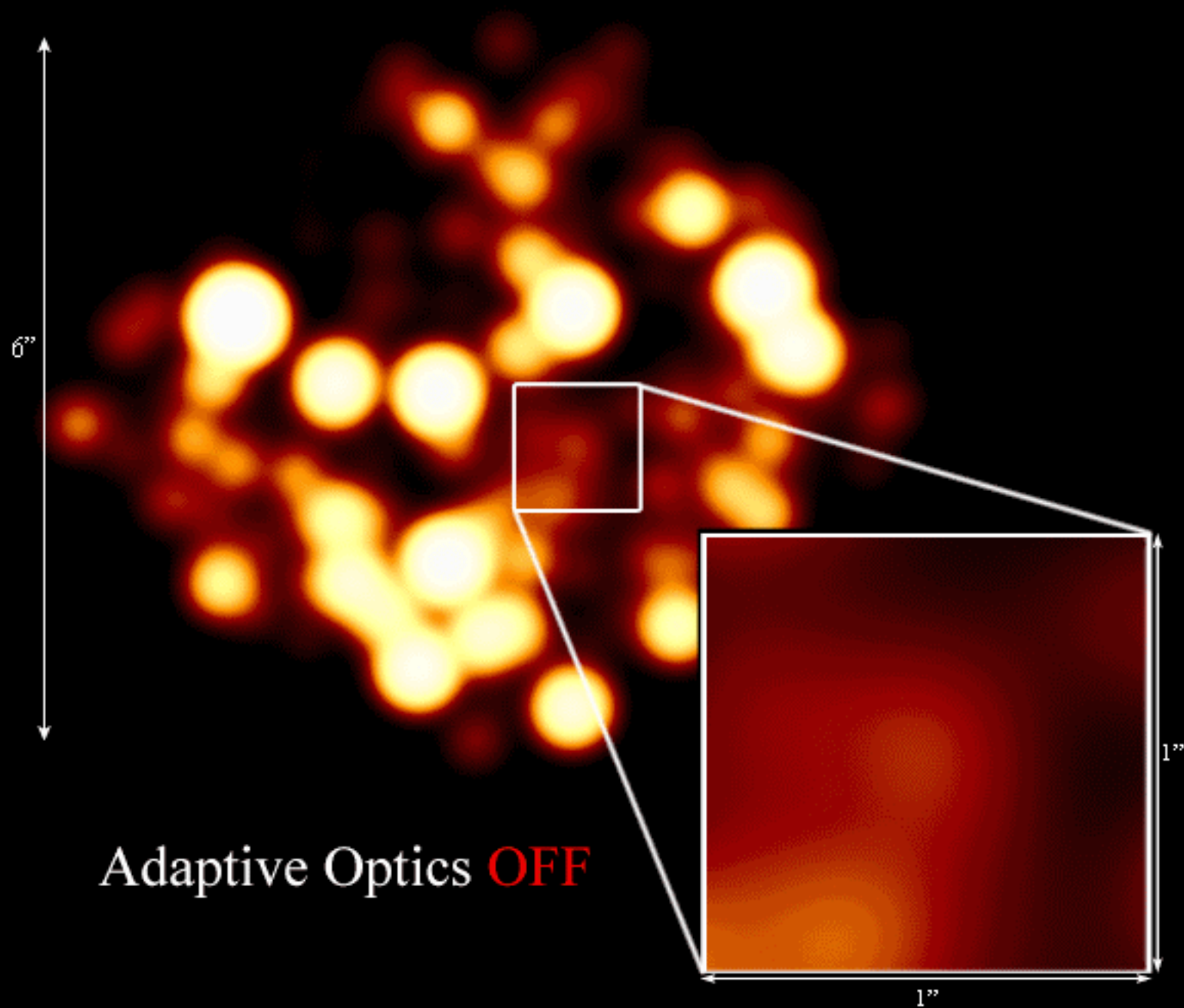




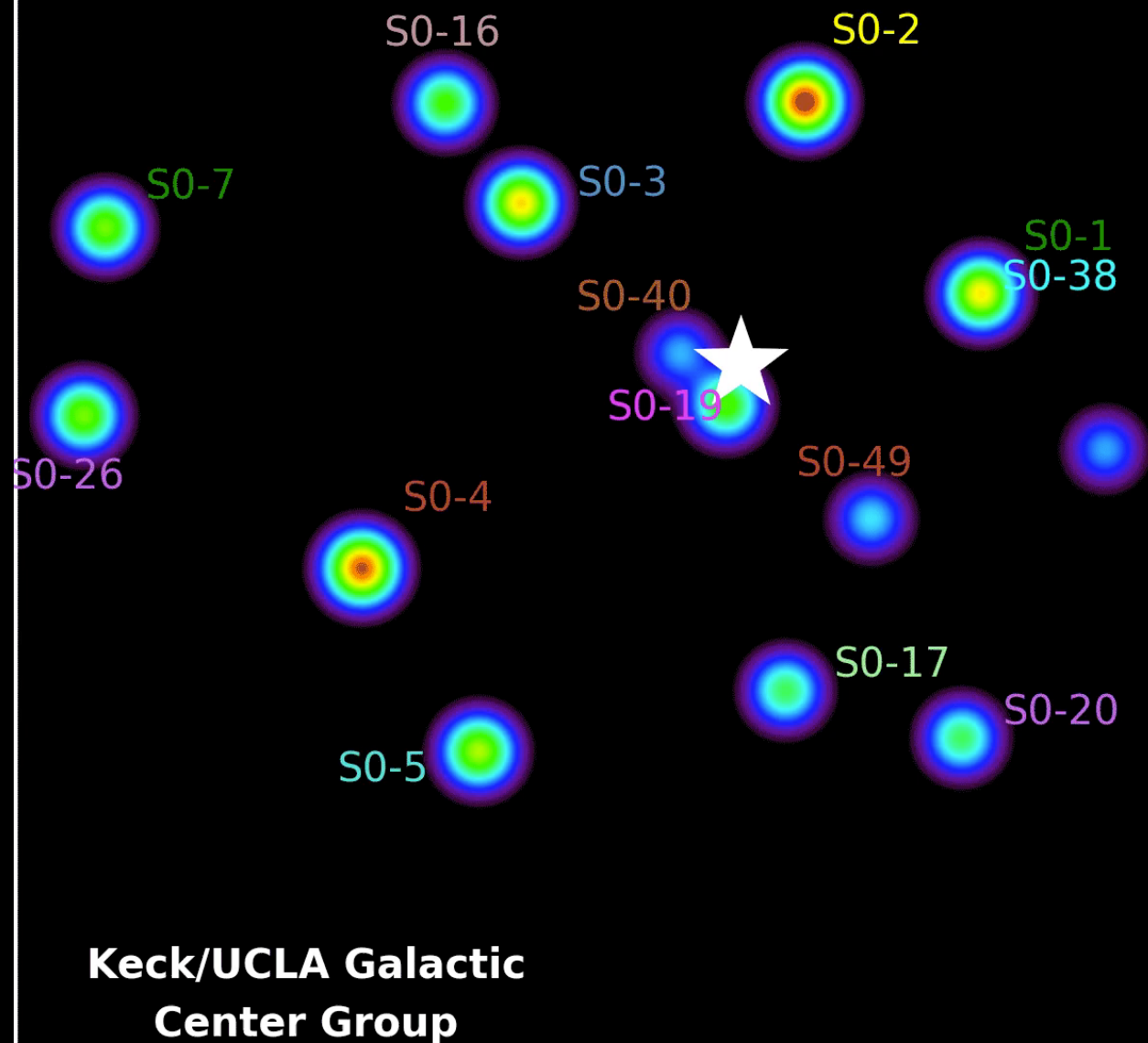


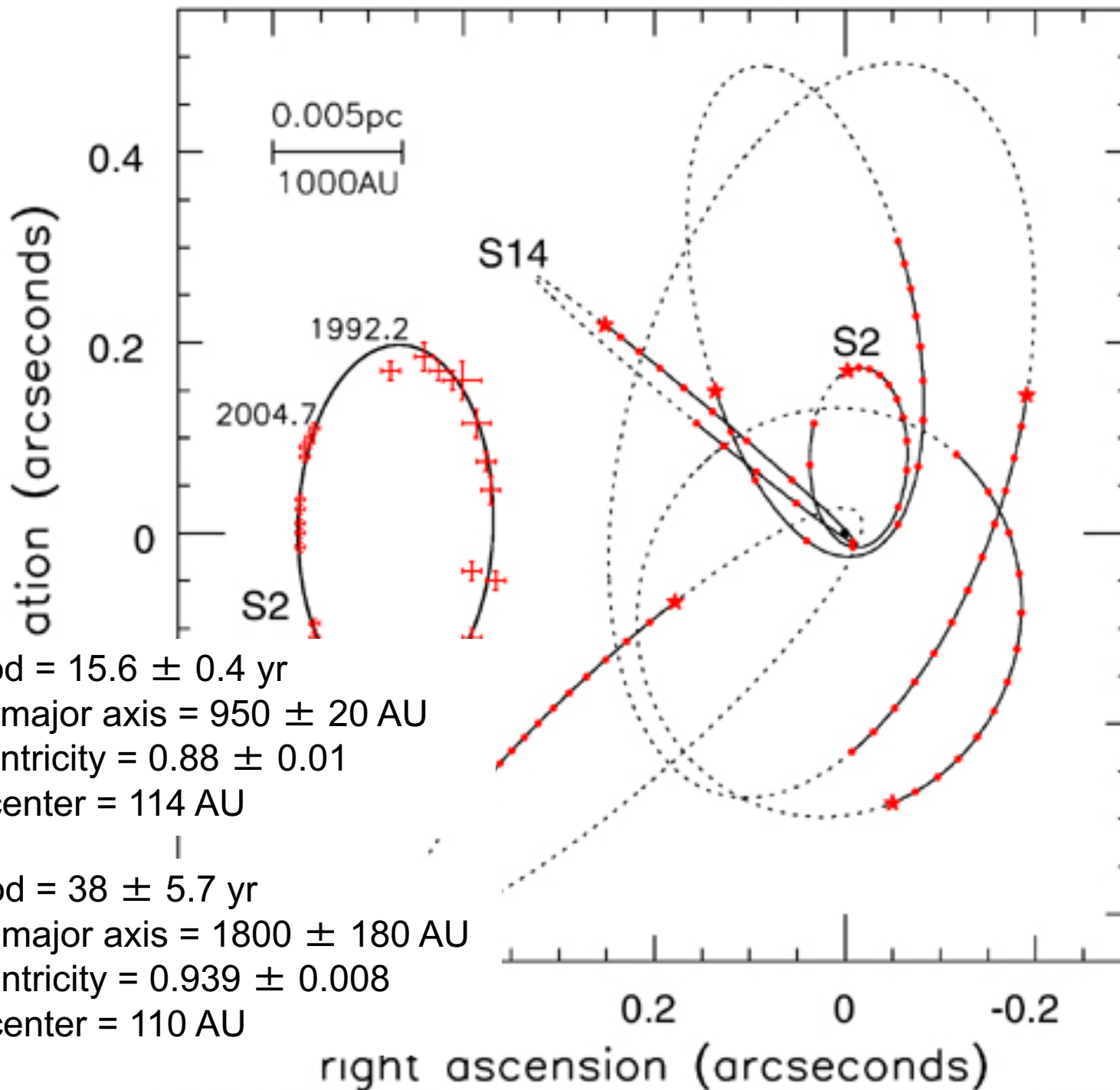


The Galactic Center at 2.2 microns



~~S0-8~~
1995.5





S2: period = 15.6 ± 0.4 yr
 semimajor axis = 950 ± 20 AU
 eccentricity = 0.88 ± 0.01
 pericenter = 114 AU

S14: period = 38 ± 5.7 yr
 semimajor axis = 1800 ± 180 AU
 eccentricity = 0.939 ± 0.008
 pericenter = 110 AU

Fig 2.17 (Eisenhauer/MPE) 'Galaxies in the Universe' Sparke/Gallagher CUP 2007



