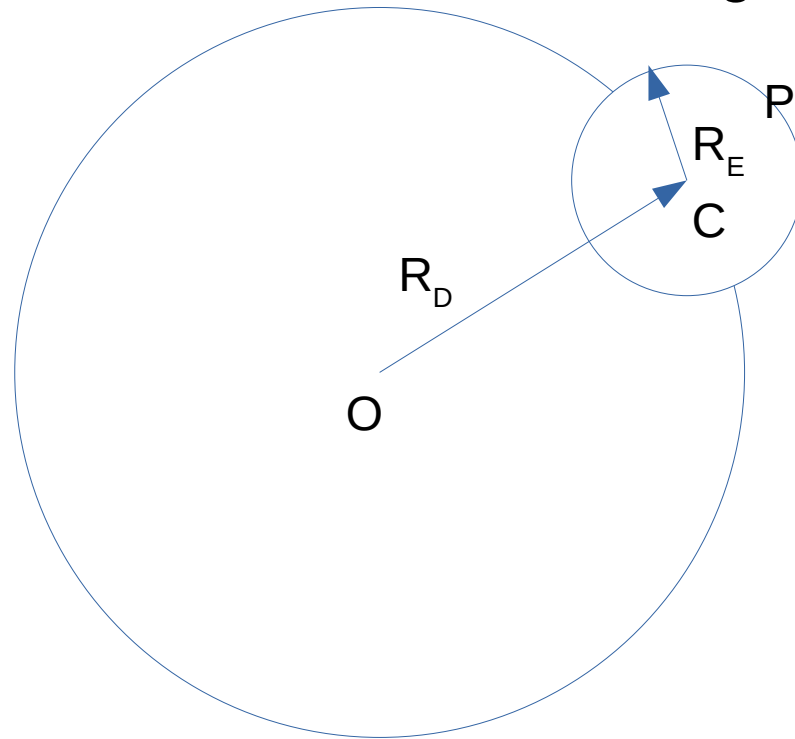


If there are two circles of radius  $R_p$  and radius  $R_e$  in the heliocentric model, there must be two circles in the geocentric model.

The deferent-epicycle uses two circles. Around the observer  $O$  is a circle of radius  $R_D$ , called the deferent. The planet  $P$  orbits around a smaller circle of radius  $R_E$  called the epicycle. The center of the epicycle,  $C$ , is on the deferent circle.



The radii  $R_D$  and  $R_E$  and the rates of rotation of the point  $C$  around  $O$  and  $P$  around  $C$  are determined by giving the best predictions of finding the planet  $P$  against the stars in the celestial sphere.