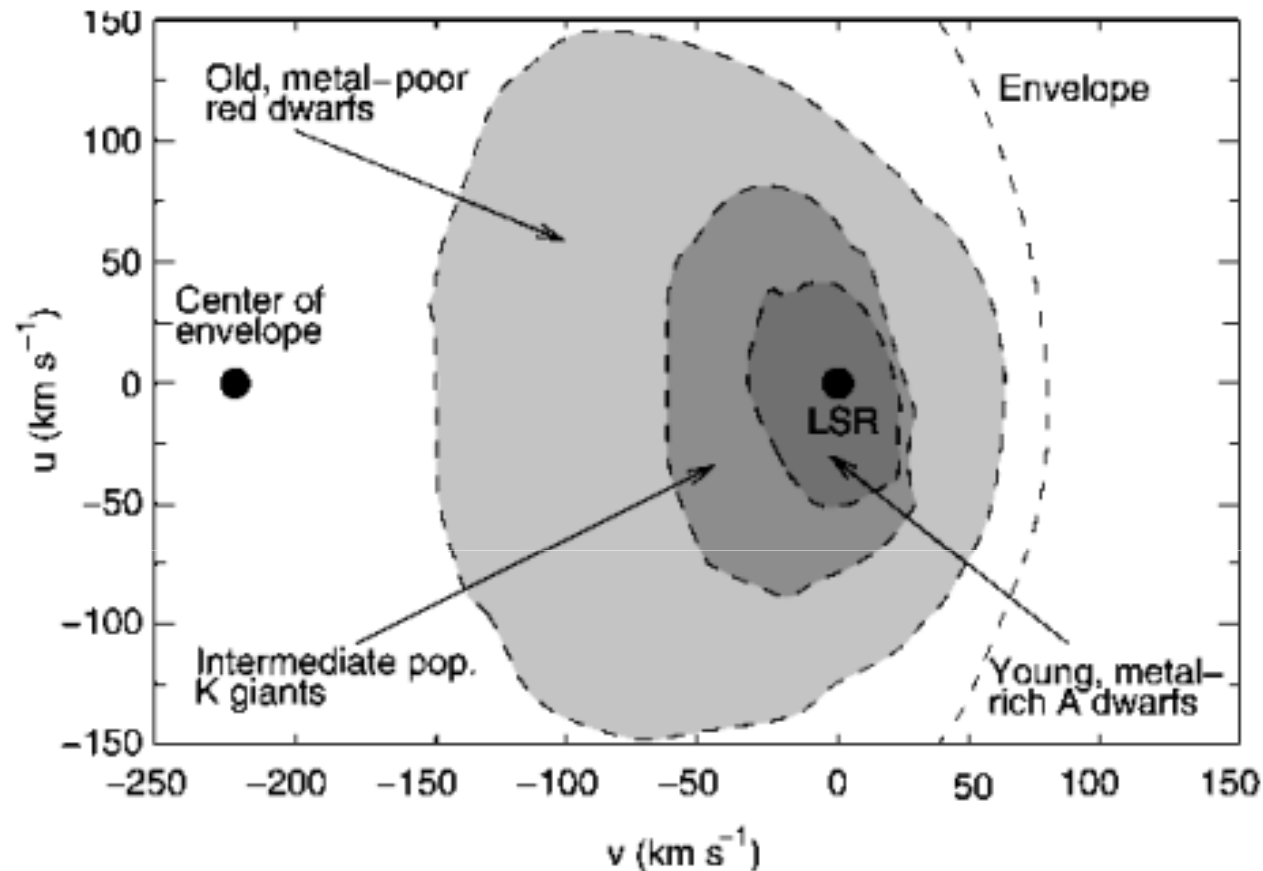


Stars statistically show a diverging pattern in the direction the Sun is travelling (solar apex) and a converging pattern in the opposite direction (solar antapex)

Asymmetric Drift & Velocity of LSR



A schematic diagram of the peculiar velocity components u and v for stars in the solar neighborhood. In this figure, LSR is located at $(u, v) = (0, 0)$. Younger disk stars have their peculiar velocities centered on the LSR. To get the velocity of the LSR itself, one has to look at peculiar velocities of halo population of stars, since halo is not fast rotating. Halo is occupied by old metal-poor stars. Their velocity distribution is not centered on LSR, but is offset. The older the stellar population, higher is the offset from LSR.