

Do Dwarf Spheroidal Galaxies Rotate?

Spoiler: Some of them, yes.

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- Using Gaia DR2 data, we found non negligible rotation signals in some dSphs.
- Sagittarius dSph galaxy shows an average rotation of $2.0 \pm 0.3 \text{ km s}^{-1}$ and a significant radial expansion of $2.7 \pm 0.3 \text{ km s}^{-1}$.

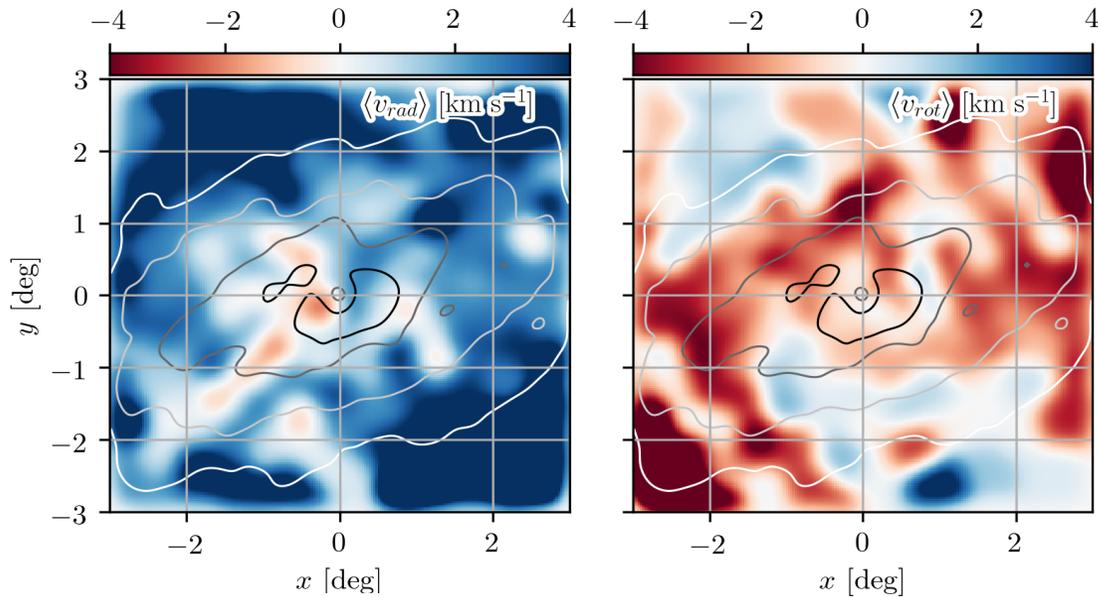


Fig. 1 (top left): Radial and tangential components of the velocity (v_{rad} , v_{rot}) after subtracting the center-of-mass motion.

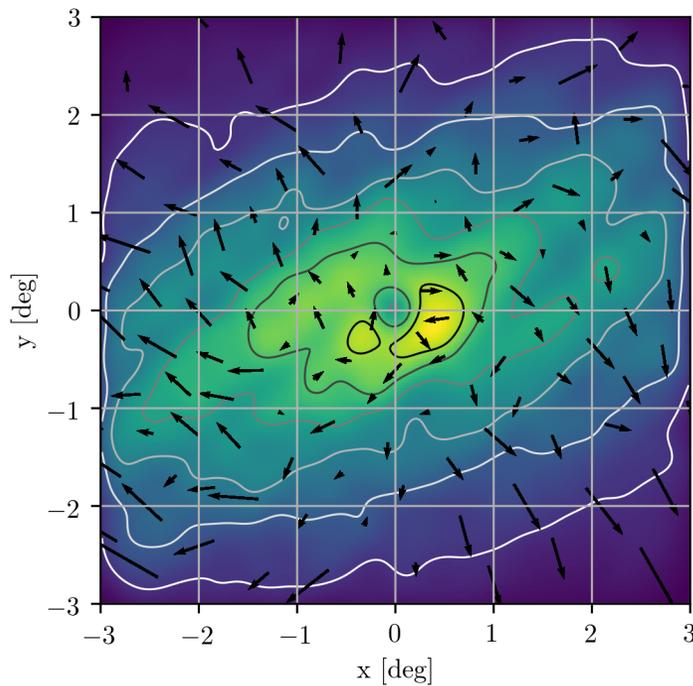
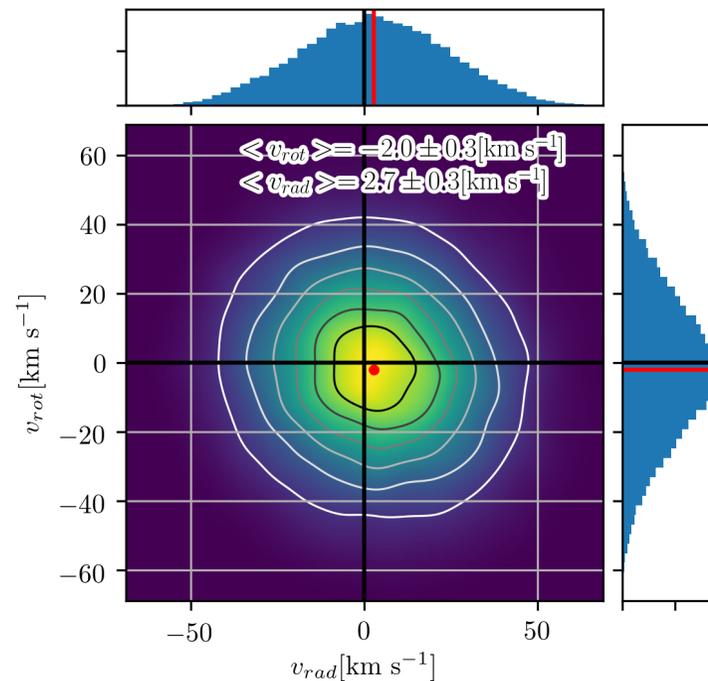


Fig. 2 (bottom left): Stellar density and motion vectors. Each arrow represent the average motion of ~ 500 stars.

Fig. 3 (bottom right): Distribution of stars in the v_{rad} , v_{rot} plane.



Come and talk to me if you want to know more!