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The asymmetric solar rotation

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Today's picture of the internal solar rotation rate profile results essentially from helioseismic analyses of frequency splittings of resonant acoustic waves. This has the limitation that the rotation profile is an average over the northern and southern hemispheres.
Here we present another, complementary estimation of the internal solar rotation rate using the perturbation of the shape of the acoustic waves. For this purpose, we extend the global helioseismic approach developed previously for the investigation of the meridional flow to work on the
components of the differential rotation. We find that the
rotation rate profiles from the two different approaches are qualitatively in good agreement, while the new measurements provide the asymmetric rotation components in addition.

Student poster?

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