

In this thesis, we study vortical flows in solar supergranules in a specific dataset of velocity fields. In particular, the relation between heliographic latitude and vorticity near the respective centers of the supergranules is examined. There is a supported hypothesis that supergranular motions are influenced by Coriolis force, so we attempt to verify the hypothesis using aforementioned data.

The thesis further validates our understanding of several aspects of the solar supergranulation. Our results also suggest possible systematic errors of used helioseismological measurements and data analysis.