

Title:

Numerical simulations of the solar tachocline

Abstract:

The tachocline --- a thin layer of shear between the Sun's differentially rotating envelope and uniformly rotating interior --- has long been recognized as a vital component of the solar dynamo.

Recent work suggests that it is also central to the Sun's rotational and compositional evolution. In this talk, we will present results from localized numerical simulations of the tachocline, comparing the contributions of small-scale turbulence and large-scale flows to the overall transport of magnetic fields, angular momentum, and chemical species.