

AAPPS-DPP2025 Invited Nomination Form

0. **Conference:**

Session Nomination (only for Topical Session): reply to 1, 2, 4, 5, 6

1. **Recommender's / Organizer's name, E-mail, and affiliation**

Name: Abraham Chian

E-mail: abraham.chian@gmail.com

Affiliation: Adelaide University, Australia & INPE, Brazil

2. **Session category: SG:** Space & Geomagnetism

3. **Type:** Invited

4. **Speaker:**

Name: Breno Raphaldini

E-mail: brenorfs@gmail.com

Affiliation: University of Sao Paulo, Brazil

5. **Rationale:** Dr. Raphaldini has published several papers in GRL and ApJ on Rossby waves in the Earth's atmosphere and magnetized Rossby waves in the Sun's interior, and has worked at University of Sao Paulo in Brazil, Durham University in U.K., and National Center for Atmospheric Research in USA.

6. **Short abstract of each talk**

Authors: Breno Raphaldini

Title: MHD Rossby waves and the analogy between solar magnetic activity and the Earth's weather

Short Abstract: Rossby waves are large-scale vortical motions that play a crucial role in the Earth's climate by promoting the spatio-temporal organization of weather systems. Rossby waves have also been detected recently in the Sun, with the difference that in the Sun they are modified by the presence of strong magnetic field. During this talk, we will discuss how linear and nonlinear dynamics of Rossby waves organize solar magnetic activity in the form of active regions, suggesting an interesting analogy between the effects of Rossby waves in the Earth's atmosphere and in the Sun's interior.