



Contribution ID: 271

Type: Poster

## Waves in the Lower Atmosphere of Coronal Hole Regions

*Wednesday, 8 September 2021 16:43 (13 minutes)*

We study oscillations in the lower atmosphere of coronal hole regions, where the conditions are favorable for the propagation between the atmosphere layers. We analyse the features of the oscillations that show signs of propagation between the layers of the solar atmosphere. Using the cross-spectrum wavelet algorithm, we found that both chromospheric and photospheric signals under coronal holes share a range of significant oscillations of periods around 5 minutes, while the signals outside of coronal holes show no mutual oscillations in the photosphere and chromosphere. The phase shift between the layers indicates a predominantly upward propagation with partial presence of standing waves. We also tested the assumption that torsional Alfvén waves propagating in the corona originate in the lower atmosphere.

**Primary authors:** CHELPANOV, Andrei (Institute of Solar-Terrestrial Physics); Dr KOBANOV, Nikolai (Institute of Solar-Terrestrial Physics)

**Presenter:** CHELPANOV, Andrei (Institute of Solar-Terrestrial Physics)

**Session Classification:** Poster Session 8.1

**Track Classification:** Session 2 - The Solar Atmosphere: Heating, Dynamics and Coupling