Contribution ID: **5** Type: **Oral + Poster**

# Characterizing leptonic long-term variability in blazars

*Thursday, September 20, 2018 11:50 AM (20 minutes)*

Most research in blazar variability focuses on individual flares to explain acceleration and radiation mechanisms and improve on current models. These short-time events (minutes, hours or days) might not be representative of the underlying mechanisms causing small-amplitude variability and/or continuous emission present most of the time. We therefore investigate long-term (month to years) variability of blazar emission in the framework of current leptonic blazar models. For this purpose, we introduce generated time-dependent parameter variations which are based on typical Power Spectral Densities (PSDs) associated with the variability of accreation flows. The PSDs from the resulting light curves are analyzed and compared to one another as well as the PSD of the variation PSD. Correlations between light curves are also investigated to aid identification of charactersitic variation patterns associated with leptonic models.

**Authors:** THIERSEN, Hannes (North-West University); BOETTCHER, Markus (North-West University); Dr ZACHARIAS, Michael (North-West University)

**Presenter:** THIERSEN, Hannes (North-West University)

**Session Classification:** Theory