

Name: Martin Nielsen
Email: nielsenm@mps.mpg.de
Institution: Institute for Astrophysics, Goettingen University
Title: Stellar rotation from starspot variability
Type: Poster
Session: Stellar Activity, Rotation, Ages, Metallicity
Abstract: The long duration data sets provided by the Kepler mission give us an excellent opportunity to study stellar rotation from photometric variability. Using a simple periodogram analysis we search for periodicity in the light curves of $\sim 192,000$ stars in the Kepler field. Out of these we find 12,151 stars with rotation periods that are stable over at least six Kepler quarters. The stars in our sample range from M-type all the way up to late B-type stars. We find good agreement of these periods with archival $v \sin i$ and other rotation period measurements. In the event of a repurposed Kepler mission, we anticipate that this simple and straightforward method may be easily adjusted to search for rotation in a different sample of stars.
Coauthors: Laurent Gizon, Hannah Schunker, Christoffer Karoff