



Contribution ID: 389

Type: **Poster**

## Flares on solar-type stars

*Wednesday, 8 September 2021 11:39 (13 minutes)*

In my talk I will present a statistical study of flares on solar-type stars based on TESS (Transiting Exoplanet Survey Satellite) observations. We used a two-minute cadence data obtained from sectors 1 - 36. Our software allows us to identify flares and determine its parameters such as: amplitude, duration, growth and decay times. Furthermore, we estimate the maximum luminosity and total energy of flares in two different methods. In the first two years of TESS observations, we already identified about 14000 flares from more than 4000 solar-type flaring stars. Based on bolometric flare energy distribution, we conclude that its energies range from  $10^{32}$  to  $10^{37}$  erg, with an average energy of  $10^{34}$  erg. Our study suggests that there are two types of flare events, described by different profiles.

**Primary author:** PIETRAS, Małgorzata (Institute of Astronomy, University of Wrocław)

**Co-authors:** BICZ, Kamil (Astronomical Institute of the University of Wrocław); Dr FALEWICZ, Robert (Astronomical Institute, University of Wrocław); Dr SIARKOWSKI, Marek (Space Research Centre, Polish Academy of Sciences Solar Physics Division)

**Presenter:** PIETRAS, Małgorzata (Institute of Astronomy, University of Wrocław)

**Session Classification:** Poster Session 6.5

**Track Classification:** Session 4 - From Radio to Gamma Rays: Near-Sun Manifestations and Triggering of Solar Flares and Coronal Mass Ejections