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Modeling star spots on low mass stars observed by TESS

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Since the release of the first TESS sector the possibility of examining stellar flares and stellar dynamo compared to the solar dynamo and solar flares has increased. Thanks to these observations we tried to estimate the staining of low mass stars with visible variability of their luminosity. We managed to do this using newly created software called BASSMAN (Best rAndom StarSpots Model calculAtioN) that allows to estimate amount of spots on star and parameters of the estimated spots. Trying to recreate spots on star can help examine more deeply how inner structure of the star can be connected to staining of star, how the spots evolve or appear on the star or how spots are related to flares. Here I will present results of modelling of star spots for 2 stars with our new tool and compare the results with the previous reconstructions of the spatial distribution of spots.

Primary author: Mr BICZ, Kamil (Astronomical Institute of the University of Wrocław)

Co-authors: Mr FALEWICZ, Robert (Astronomical Institute of the University of Wrocław); Ms PIETRAS, Małgorzata (Astronomical Institute of the University of Wrocław); Mr SIARKOWSKI, Marek (Space Research Centre Polish Academy of Sciences Solar Physics Division)

Presenter: Mr BICZ, Kamil (Astronomical Institute of the University of Wrocław)

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