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Title: The starspots-transit depth relation of KIC 12557548 b
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Abstract: We report on a new time-series analysis of KIC 12557548 b, known as the evaporating planet candidate. We found that a ~ 30% periodic variation of the transit depth with P = 22.83 ¥pm 0.21 days, which is within the error of the rotation period of the host star estimated using the light curve modulation, Prot = 22.91 ¥pm 0.24 days. We interpret the results as an evidence that the atmospheric escape of KIC
12557548b correlates with the stellar activity. We consider possible scenarios that account for both the mass loss rate and the correlation with the stellar activity. The XUV-driven evaporation is possible if one accepts relatively high XUV flux and high efficiency for converting the input energy to the kinetic energy of the atmosphere.