

Near-UV Excesses and Variability of 660,000 Sources in the Kepler Field

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The Kepler field has been entirely observed with the GALEX satellite, as part of the Complete All-Sky UV Survey Extension (CAUSE), in the NUV band (PI James Lloyd). For about 40 days in 2012, GALEX conducted a total of 17 visits, on average, of the whole field. In 2015, we published the GALEX CAUSE Kepler Catalog (GCK) of more than 660,000 NUV point-like sources with $\text{NUV} \leq 22.6$. We present the comparison of NUV observed fluxes with predictions from classical model atmospheres aimed at identifying objects that display NUV excesses over the expected photospheric flux. The excess, as an activity proxy, will eventually be used to elaborate on the stellar ages and on the impact of the UV flux on exoplanetary atmospheres. Additionally, we computed the NUV light curves of GCK objects. We detected strong NUV variability in several thousand objects and we present selected examples of light-curves of these variable sources.

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