

Photometric Variations of 290 Sun-Like Stars 1993-2015

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Strömgren b (472 nm) and y (551 nm) differential observations of 290 Sun-like F, G, and K field stars continue on four 0.8m automatic photometric telescopes (APTs) at Fairborn Observatory. The project began on one APT in 1993 and rapidly expanded to four. The observing list centers on 61 stars with $B-V$ colors and chromospheric activity levels very similar to the Sun. The project is a high-precision successor to previous work at Lowell Observatory 1984-2000. The robotic observations show that low-level variability is ubiquitous at levels as low as the Sun's 0.07% cyclic total irradiance variation. By also including Ca II H&K observations from the Mount Wilson and Lowell Observatories, we have mapped long-term patterns of photometric variability and chromospheric activity. We will describe the limitations of detectability imposed by comparison star variability. As an example of a star close to the detection limit, we will show our photometric and chromospheric evidence for cyclic variability of the solar twin 18 Scorpii.