

**The Role of the Solar Center-to-Limb Variation in Deduced Photometric Trends**

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We examine the sensitivity of previously reported changes in the Sun's continuum photometric contrast to the measured center-to-limb profile using eight years of data collected from the Precision Solar Photometric Telescope at the Mauna Loa Solar Observatory. We compute the solar center-to-limb variation using two commonly employed methods, and show that both the total continuum contrast and the photometric sum, the relative contribution of solar features to the disk integrated intensity, are negatively correlated with the solar cycle, as has been previously reported. However, further analysis shows that for both methods the center-to-limb profile deduced is highly sensitive to the changing number of magnetic elements on the solar disk. This variability introduces systematic variations in the center-to-limb correction, and these dominate the contrast trends reported. We conclude that without absolute photometry it is difficult, if not impossible, to quantify structure contributions to solar irradiance variations