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Our Sun's Center-to-Limb Redshift: A Puzzle CHARLES GALLO, Superconix Inc — After the red/blue-shift due to our Sun's rotation is subtracted from the data, there remains a puzzling center-to- limb redshift which incereases by a 3:1 ratio at the limb. This variation contrasts to the expected gravitational redshift that should be independent of center-to-limb position. The observed functional variation is consistent with a photon energy-loss mechanism in the Sun's "plasma atmosphere." Several different energy-loss redshift mechanisms have been proposed including Compton, Plasma, pseudo-Raman, etc redshifts. Where possible, these proposals are quantitatively examined and critiqued. If the Sun's expected theoretical Gravitational redshift is subtracted form the data, there remains a puzzling Blueshift at the center which gradually transforms to a Redshift at the limb. The possible origins(s) of this complex behavior will be discussed including the Solar wind, convection Doppler-shifts, and the Wolf redshift mechanism. This important Solar center-to- limb redshift data can serve as a testing ground for some energy-loss (non-Doppler/Expansion) redshift mechanisms since the electron density vs altitude is known.

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