Abstract Submitted for the MAS16 Meeting of The American Physical Society

The Solar Plasma Limb is found to deflect Microwaves from Extra Galactic Radio Sources precisely at Minimum Impact Parameter ξ = **R** EDWARD DOWDYE, Pure Classical Physics Research (independent researcher) — Findings show that the gravitational deflection of electromagnetic waves in the microwave frequency spectrum are severely impact parameter dependent at the plasma limb of the sun. By definition the impact parameter ξ is the nearest point of approach of a given ray of light or a ray of microwaves to the center of the gravitating mass M that is inclosed in an analytical Gaussian sphere of radius R. The light bending rule of General Relativity predicts that impact parameters of ξ \approx R for gravitationally bent rays of light and microwaves should occur in empty vacuum space as well as in the plasma limb of the sun, where R is the radius of the analytical Gaussian sphere that encloses the gravitating mass M of the sun. With current technical means in Astrophysics, the gravitational light bending effect should be an easily observable effect for impact parameters corresponding to several solar radii above the plasma limb of the sun, namely, at $\xi = 2R$, $\xi = 3R$, $\xi = 4R$, etc., etc., at $\xi = nR$, for Gaussian spheres of several radii R. The corresponding gravitational deflection of should be 1/2, 1/3, 1/4, ..., 1/n times 1.752 arcsec observed at the solar plasma limb. This result is confirmed by nearly a century of observations.

> Edward Dowdye Pure Classical Physics Research (independent researcher)

Date submitted: 27 Aug 2016

Electronic form version 1.4