Canadian Association of Physicists

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Contribution ID: **338** Type: **Poster Competition (Graduate Student) / Compétition affiches (Étudiant(e) 2e ou 3e cycle)**

(G*) POS-E36 – On the origin of the coherence of sunlight on the earth

Wednesday 9 June 2021 14:01 (2 minutes)

We show that the observed far-field behavior of sunlight on the earth's surface, located in the near-field region, is due to the small angular width it subtends at the center of the sun. The sun is modelled as an incoherent spherical source. The cross spectral density at the surface of the source is described by a Dirac delta function. The asymptotic far zone behavior of the cross spectral density function for small angle is then inferred from a Schrodinger like differential equation with an inverse square potential.

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