

Reddening Effect in the Solar Corona

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The color of solar corona is important parameters to estimate the source boundary of coronal radiation. The K-corona emission is contributed by electronic scattering and F-corona is due to dust scattering. We found the distribution of Color Index(CI) in the solar corona in the range of $r \leq 3R_{\odot}$. We used the slides of relative calibration (wedge) and the eclipse white-light corona of July 11, 1991 are revised. Digitising the colour films by PDS system of KAO with the blue and the red filters which their central wavelength are 450 nm and 660 nm respectively.

The data reduction and calibration was based on the two suggestions. Firstly, colour of the K-corona indicated by the large-scale streamers is similar to the solar disk one. Secondly, the colour index ($CI = I_{660} / I_{450}$) equals 1 within the inner part of the large-scale NE-streamer ($P \approx 37^{\circ}$, $R = 1.15-1.30 R_{\odot}$). Distribution of the CI is presented for the whole corona. CI is noted to be different within different coronal structures. The "reddening" as well as it's increasing with distance are found in the range $r \leq 3R_{\odot}$. Integration along the line of sight and correct absolute calibration seem to be crucial for searching the "reddening" effect deduced from intensity distribution in the picture plane.