E. A. Makarova and A. V. Kharitonov: ‘Mean Data on the Absolute Energy Distribution in the Solar Spectrum in the Region from 1800 Å to 4 mm. The solar constant’, 
Astron. Z. (USSR) 45 (1968), 752.

The energy distribution and some parameters of the solar radiation were obtained on the basis of 30 independent series of measurements available at present. The values of some parameters are the following:

- Solar constant: $2.03 \pm 0.05$ c-cm$^{-2}$-min$^{-1}$
- Mean radiation intensity of the disk, F: $(2.085 \pm 0.052) \times 10^{10}$ erg-cm$^{-2}$-s$^{-1}$-sterad$^{-1}$
- Radiation emittance of the surface, $\pi F$: $(6.55 \pm 0.16) \times 10^{20}$ erg-cm$^{-2}$-s$^{-1}$-sterad$^{-1}$
- Effective temperature, $T_{\text{eff}}$: $(5829 \pm 35)$ K
- Radiation from the whole sun, L: $(3.99 \pm 0.10) \times 10^{30}$ erg-s$^{-1}$
- Bolometric magnitude (apparent): $-26^{m}.87 \pm 0^{m}.03$
- Bolometric magnitude (absolute): $4^{m}.70 \pm 0^{m}.03$
- Fraction of continuous radiation absorbed in Fraunhofer lines, $\eta$: 0.108

N. Stepanyan


Observational and theoretical limb darkening and intensity-wavelength distributions are compared for various solar models with different choices of opacity. An additional source of opacity, a factor of 10–100 larger than metal absorption in the 2500–3500 Å range, is invoked to improve the agreement. Evidence is presented that this additional opacity is not from line blanketing, but rather from a still unknown source.

Jay M. Pasachoff


It is attempted to remove the vagueness in the dissipation time of sunspot magnetic field expressed so far, by either Cowling’s or Chandrasekhar’s formula. The writer determines the dissipation time as a time needed by the magnetic field in the centre of the spot to shrink to a certain minimum value. On a number of functions modelling the variation in the magnetic field it is shown that, for the greater part of spots, the dissipation time comes close to the time determined according to Chandrasekhar’s formula. (Author's abstract.)

P. Ambrož

M. Kopeczky: ‘Decrease in the Number of Solar Flares and Sunspots near the Central Meridian’, 

It is shown that the decrease in the number of observed flares near the central meridian goes parallel with the same decrease in the number of observed spot groups. Thus we have a general law governing the manifestations of solar activity whose interpretation calls for a more general approach. (Author’s abstract.)

P. Ambrož