Atmos. Meas. Tech. Discuss.,
doi:10.5194/amt-2020-72-SC1, 2020

Atmospheric Measurement Techniques Discussions

Interactive comment on "An overview and issues of the sky radiometer technology and SKYNET" *by* Teruyuki Nakajima et al.

Alexander Smirnov

alexander.smirnov-1@nasa.gov

Received and published: 19 March 2020

The statement in the Introduction "Combined analyses of sun and sky radiation data were not attained until the 1980s . . ." is not exact. Aureole measurements combined with the direct sun measurements to study atmospheric optical properties and stability were made by Abbot (I do not have a reference though), Kalitin (1930), Fesenkov (1933), Pyaskovskaya-Fesenkova (1957), Bullrich (1964), Lifshits (1965), and Murai (1967). B.N.Holben et al. (2001, Table 1) provided an exhausted history of the long-term optical depth measurements by various researchers over different parts of the world. A nice chronological essay regarding history of the direct sun measurements was presented by G.E.Shaw (2006).

References. Bullrich, K., Scattered radiation in the atmosphere and the natural aerosol, Advances in Geophysics v.10, 99-260, 1964 (https://doi.org/10.1016/S0065-2687(08)60007-2). Fesenkov, V.G., To the question of solar constant determination, Sov. Astron. J., 10(3), 249– 266, 1933 (in Russian). Holben, B.N., et al., An emerging ground-based aerosol climatology: Aerosol optical depth from AERONET, J. Geophys. Res., 106, 12,067-12,097, 2001. Kalitin, N. N., To the question of studying sky radiation intensity around the Sun, Bulletin of Constant Actinometric Commission of Main Geophysical Observatory, 1, 51-56, 1930 (in Russian). Lifshits, G.Sh., Light scattering in the atmosphere, 177 pp., Nauka, Alma-Ata, 1965 (in Russian). Murai, K., Spectral measurements of direct solar radiation and of Sun's aureole (I), Papers in Meteorology and Geophysics, v.18, N3, 239-291, 1967. Pyaskovskaya-Fesenkova, E. V., Investigation of light scattering in the Earth's atmosphere, USSR Acad. of Sciences Press, 218 pp., Moscow, 1957 (in Russian). Shaw, G.E., Genesis of sun photometry, Remote Sensing of Clouds and the Atmosphere XI, edited by James R. Slusser, Klaus Schäfer, Adolfo Comerón, Proc. of SPIE, Vol. 6362, doi: 10.1117/12.692771, 2006.

Please also note the supplement to this comment:
https://www.atmos-meas-tech-discuss.net/amt-2020-72/amt-2020-72-SC1-supplement.pdf

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2020-72, 2020.