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.
Kalitin, N. N., To the question of studying sky radiation intensity around the Sun, Bulletin of Constant Actinometric Commission of Main Geophysical Observatory, (Бюллетень постоянной актинометрической комиссии ГГО), 1, 51-56, 1930 (in Russian).