

Supplementary Information:
“Stratospheric ozone observations inconsistent with high solar cycle spectral variations”

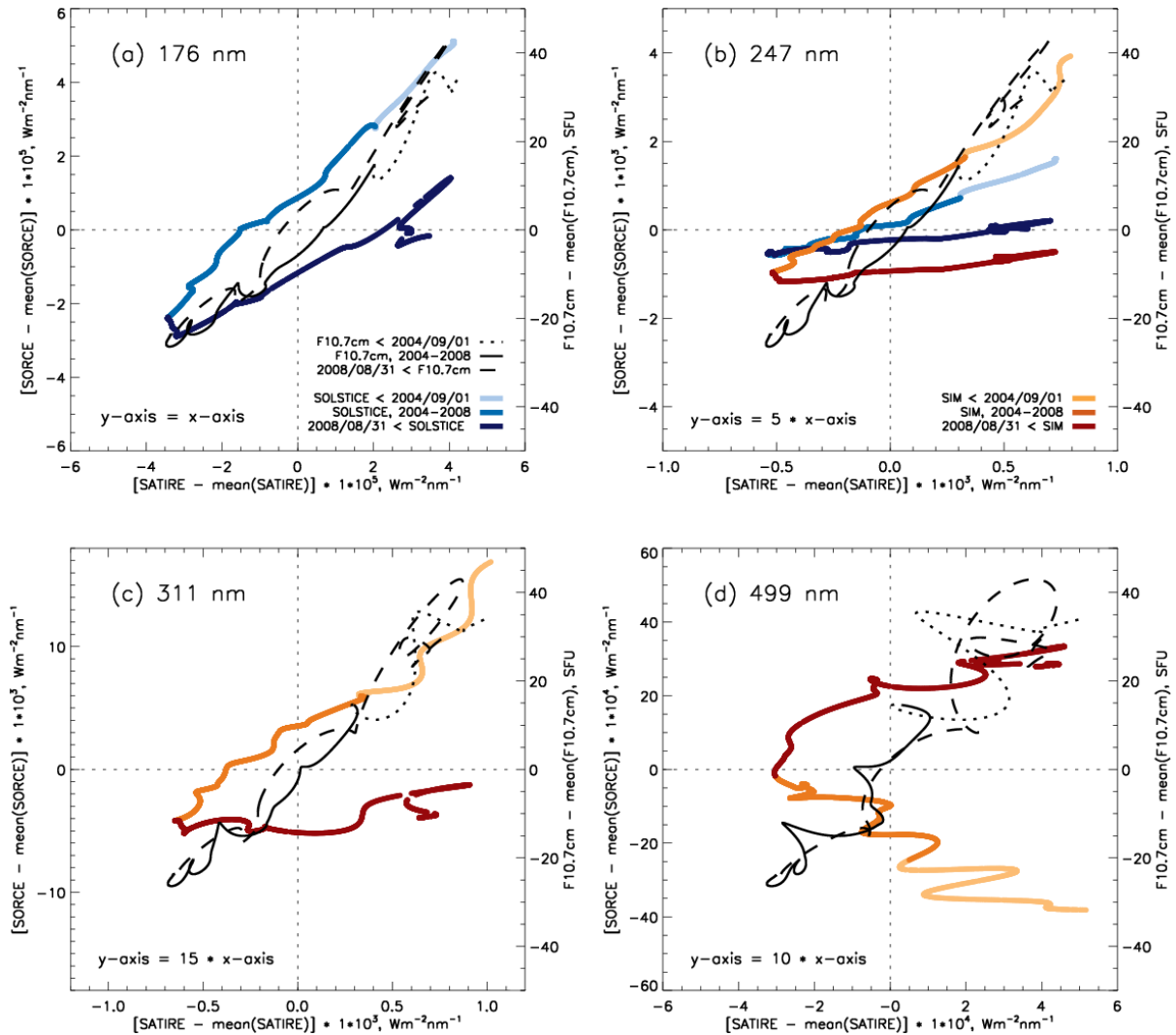


Figure S1 | SATIRE-S regressed against SORCE and 10.7 cm radio flux. (a) SOLSTICE (blue) at 176 nm, (b) SOLSTICE and SIM (orange) at 247 nm, (c) SIM at 311 nm and (d) SIM at 499 nm. Absolute minus time series mean is plotted. Light colours are for the period prior to 2004/09/01 (dotted-black for F10.7), medium colours (solid) for 2004/09/01–2008/08/31, and dark colours (dashed) after 31/08/2008. The left y-axis range relative to the x-axis is in the bottom left of each plot. The right axis is the F10.7 radio flux, always -50 to +50 solar flux units (SFU).

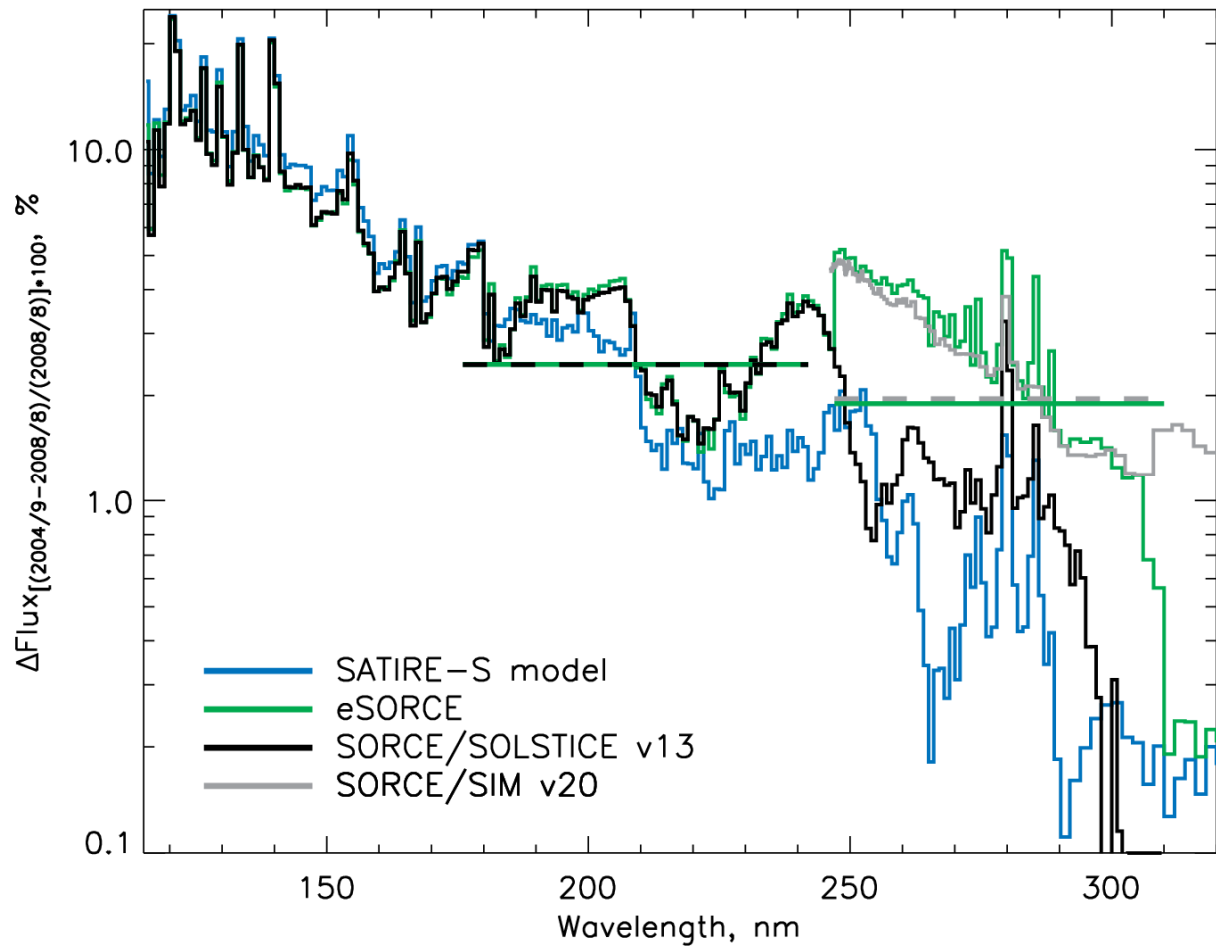


Figure S2 | Percentage UV flux change between three-month averages centred on 2004/09/01 and 2008/08/31. SORCE/SIM version 20 (grey), SORCE/SOLSTICE version 13 (black), eSORCE (green) and SATIRE-S (blue). Horizontal dashed and dotted bars are the percentage change for integrated bands 176-242 nm and 247-310 nm, for eSORCE and SORCE (grey, SIM; black, SOLSTICE), respectively.

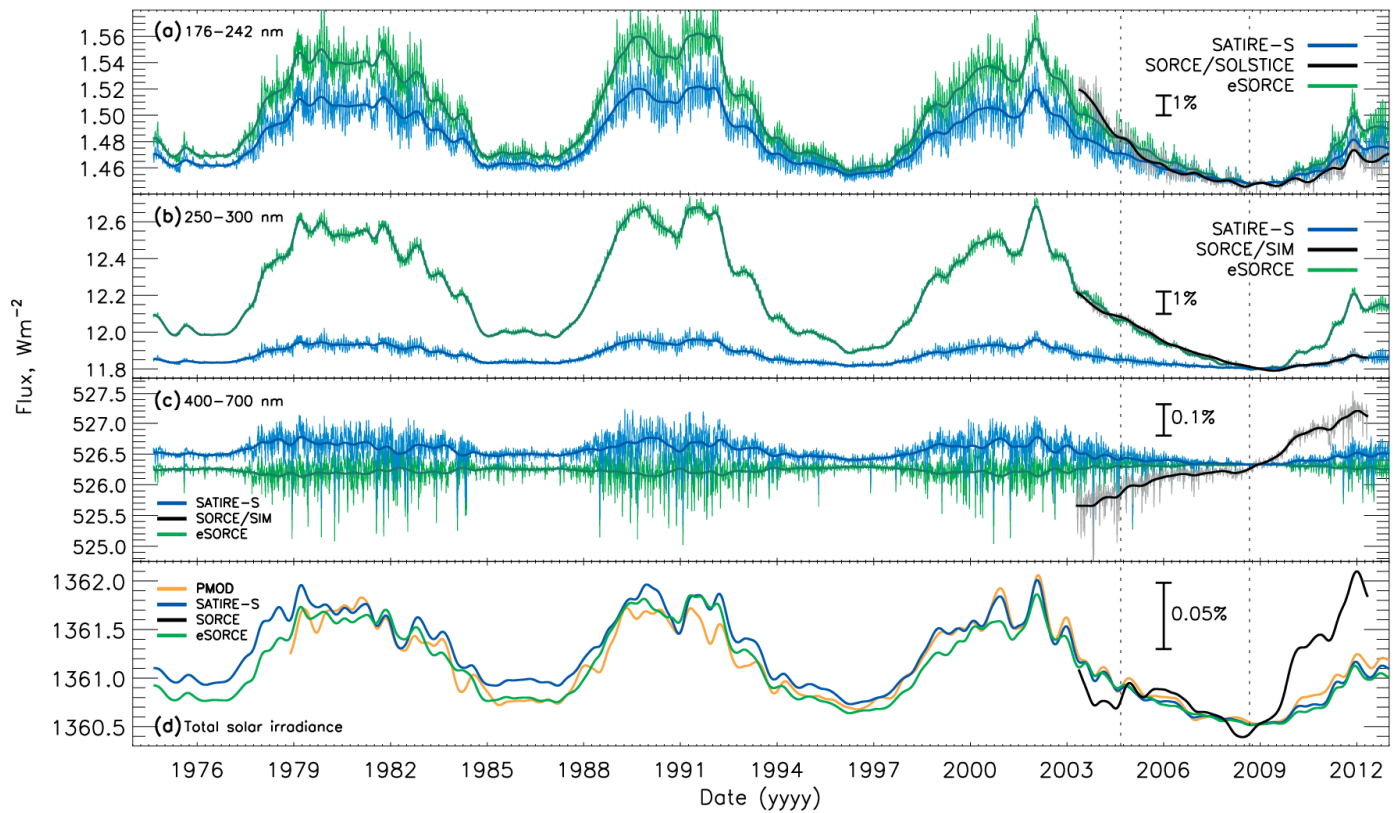


Figure S3 | Irradiance time series for selected integrated bands, 1974-2013. (a) 176-242 nm, (b) 250-300 nm, (c) 400-700 nm and (d) Total Solar Irradiance (TSI). Time series for SATIRE-S (light blue, daily; dark blue, smoothed), eSORCE (light-green, daily; green, smoothed), SORCE (SOLSTICE in (a), SIM in (b) and (c); grey, daily; black, smoothed) and the PMOD TSI composite (orange, (d) only). Only smoothed TSI time series are shown. Vertical bars indicate the relative change in percent. Dotted vertical lines represent the boundaries for the period used to extrapolate SORCE from.