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INITIAL SOLAR IRRADIANCE MEASUREMENTS FROM THE NOAA-14 SBUV/2 INSTRUMENT

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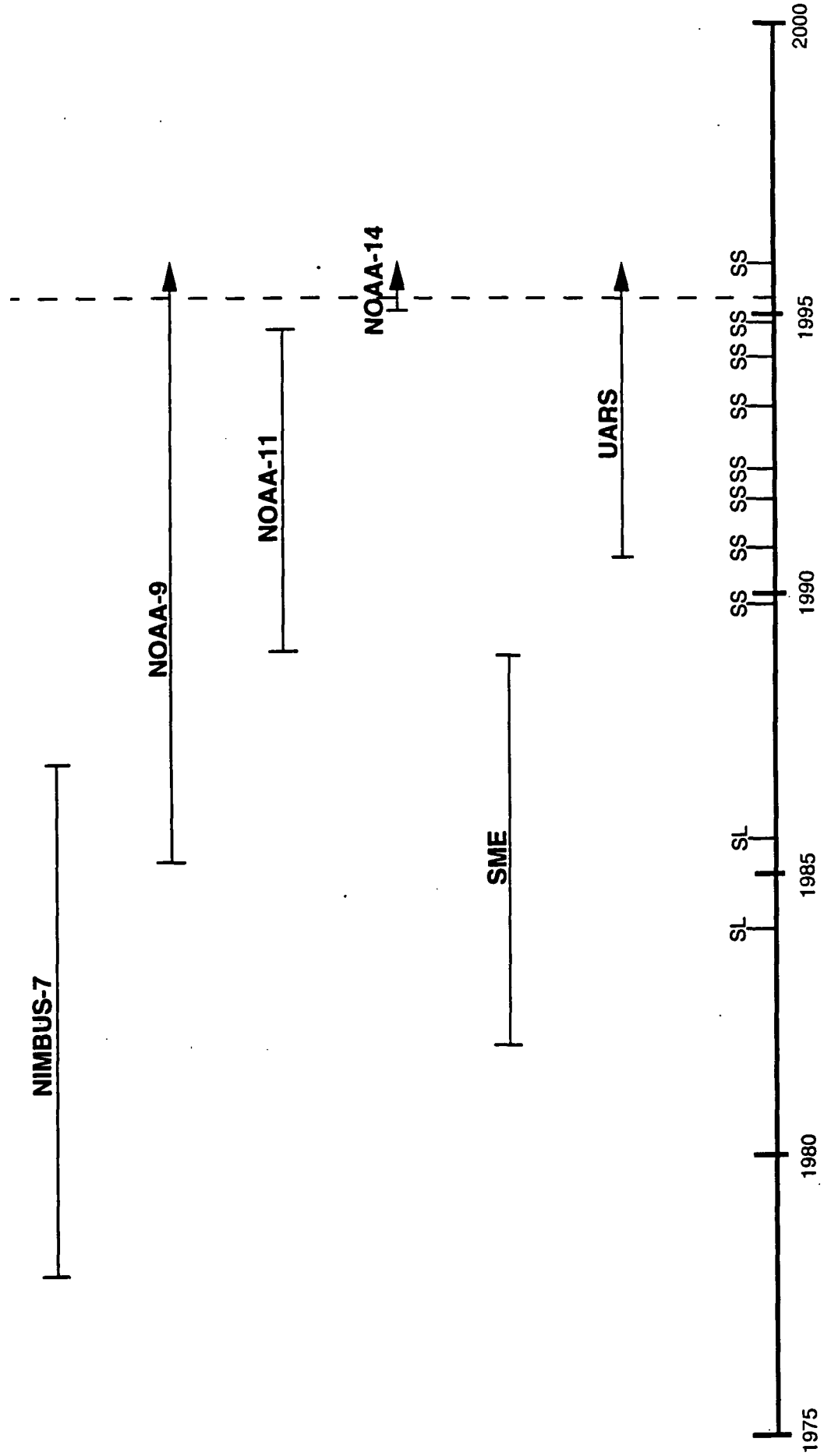
Hughes STX Corporation

¹Supported by NASA Grant NASW-4864 and NASA Contract NAS5-31755

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NOAA-14 SBUV/2 INSTRUMENT (NASA.
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Unclas

SPACE BORNE SOLAR UV IRRADIANCE OBSERVATION



SBUV/2 ON NOAA POLAR ORBITING SATELLITES FOR OZONE AND SOLAR IRRADIANCE MEASUREMENTS

1/4 meter double-beam spectrometer

1.1 nm resolution

160 - 405 nm

Solar Views

Sweep mode (full spectrum includes Mg II at 0.15 nm) - once per day

Discrete mode (12 steps around Mg II line) - once per day

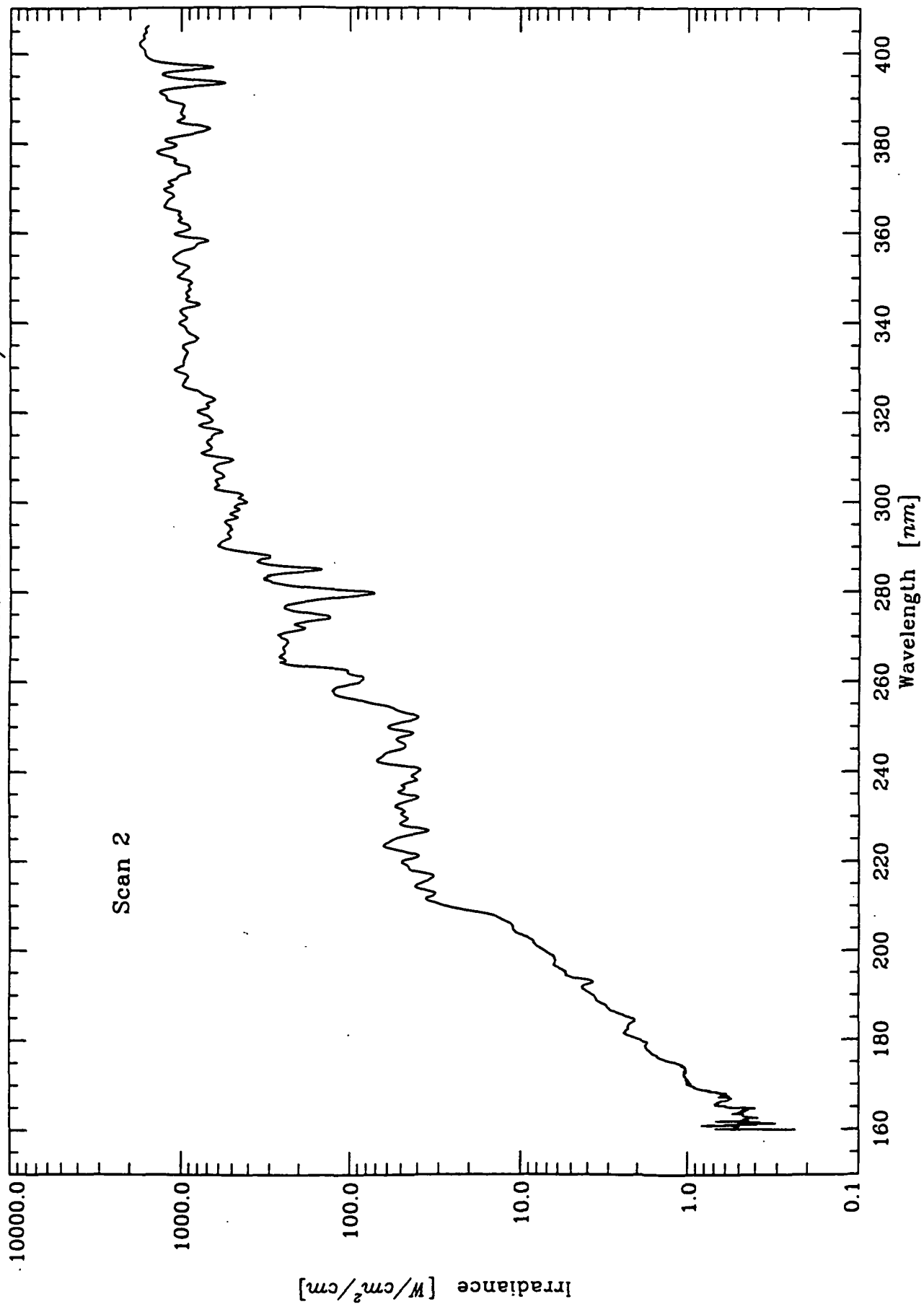
Discrete mode (ozone channels) - once per day

Absolute calibration is not internally tracked

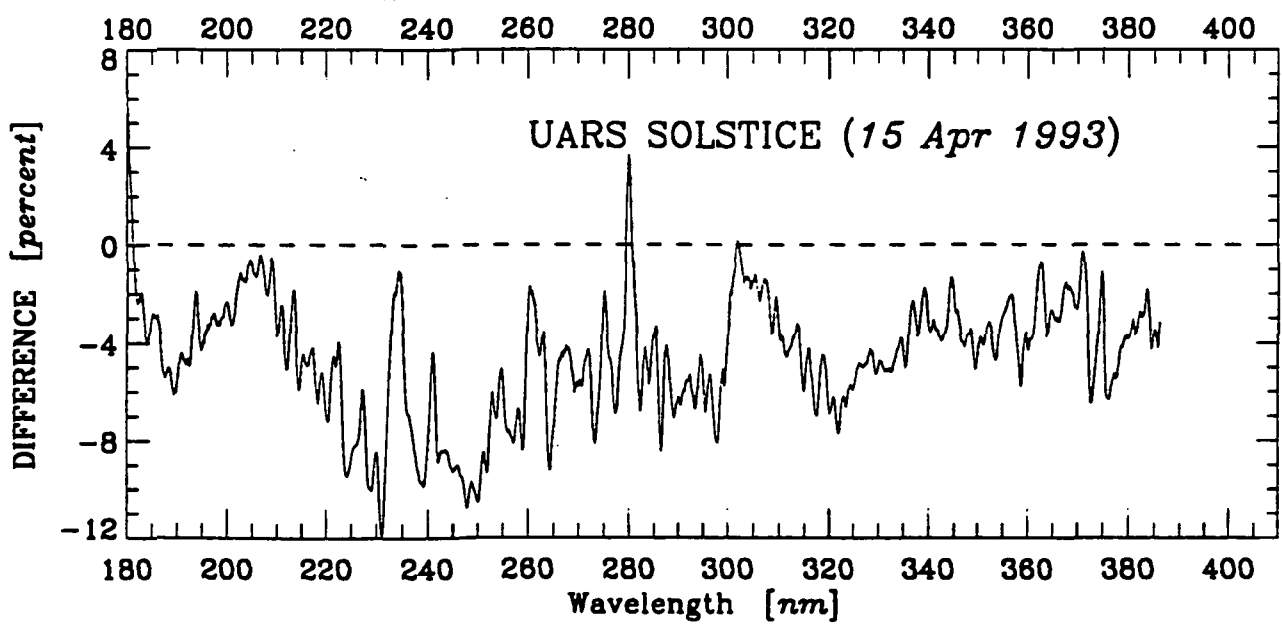
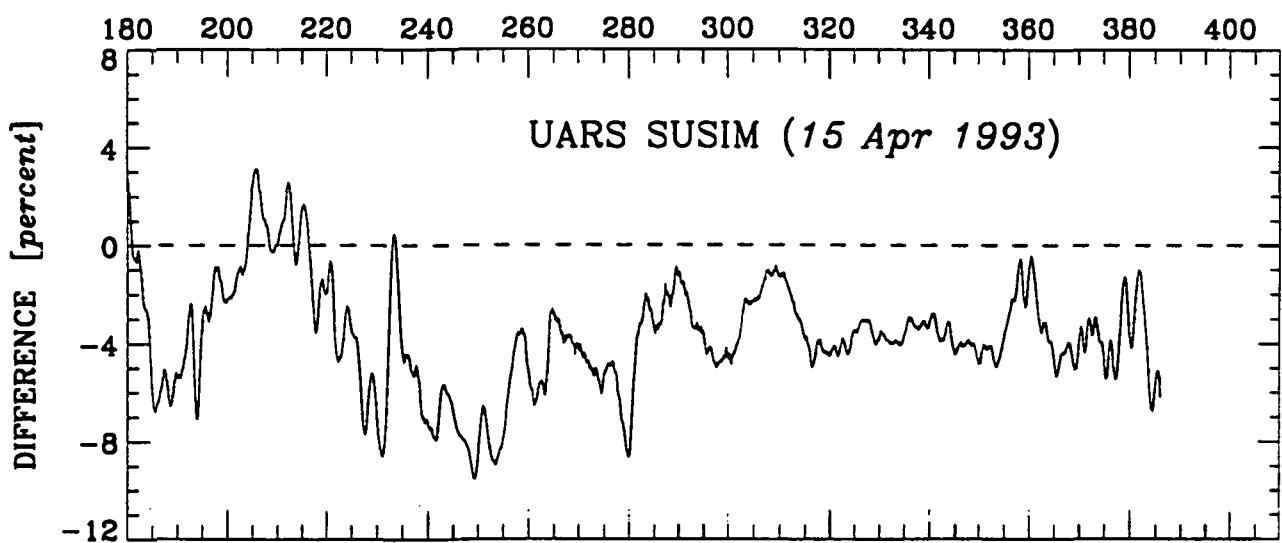
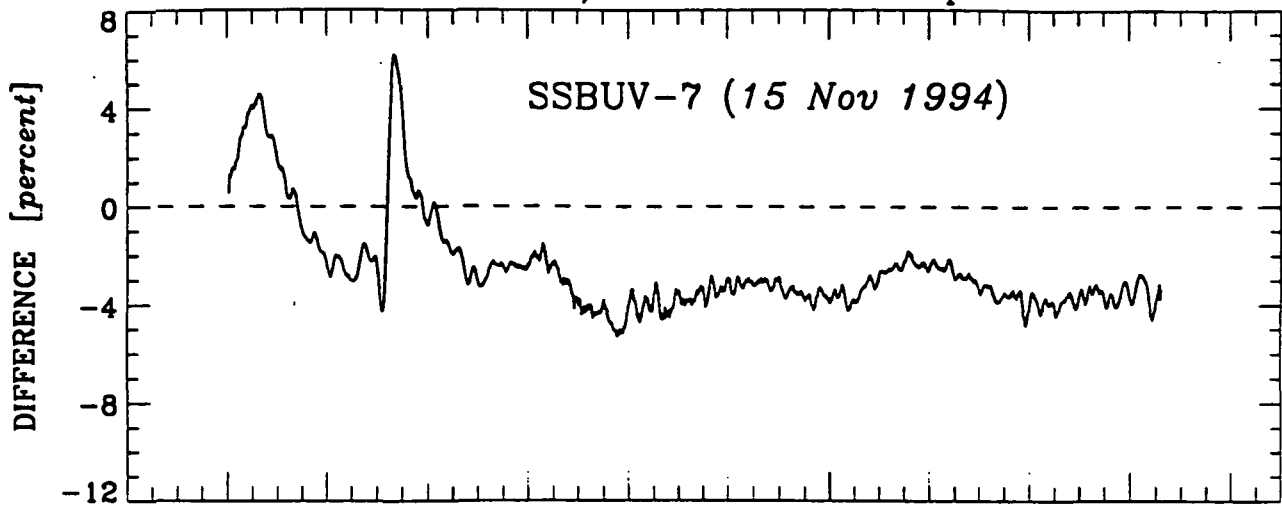
Wavelength calibration is tracked to <0.02 nm

Mg index does not require absolute radiometric calibration

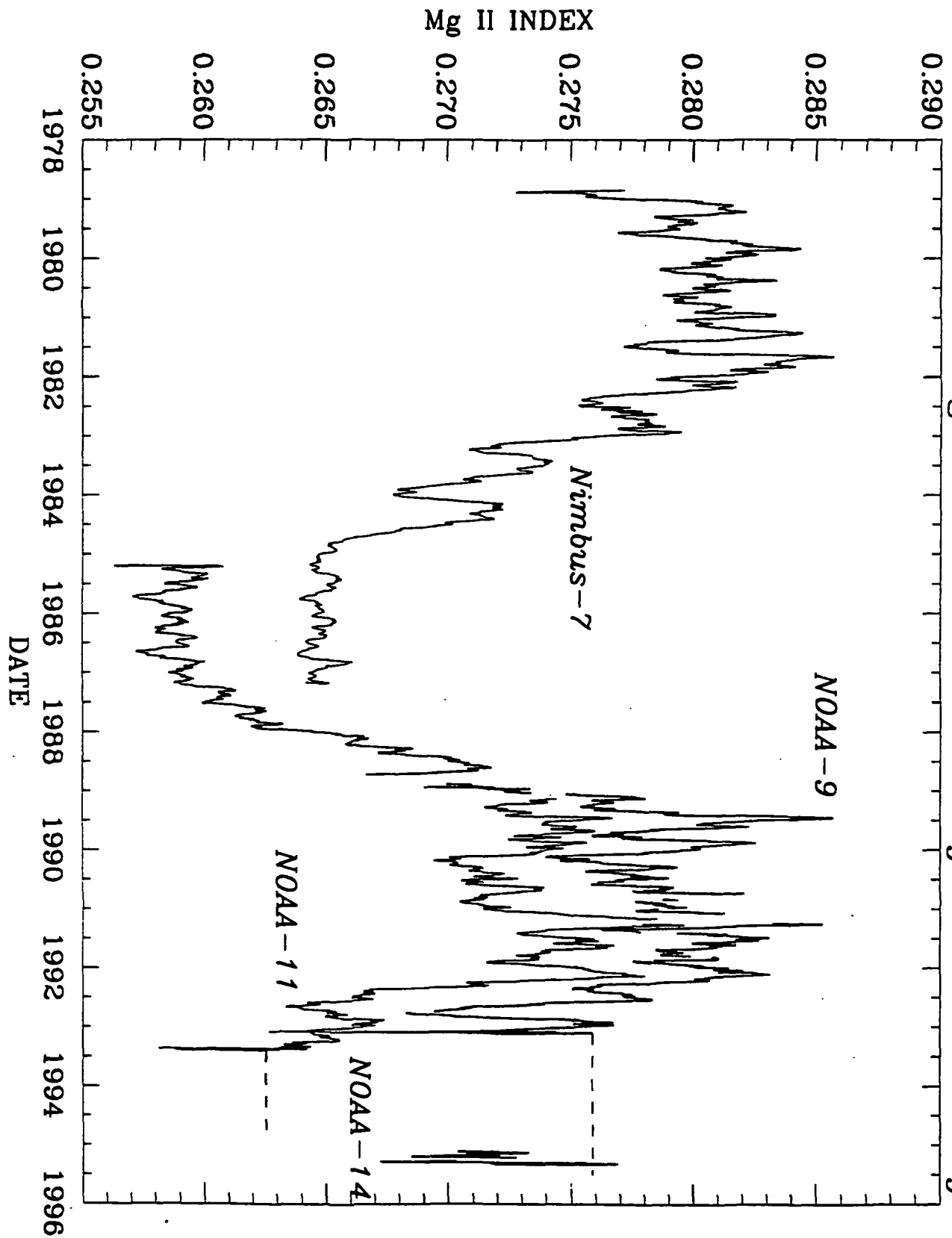
NOAA-14 Absolute Irradiance for 1995/ 41

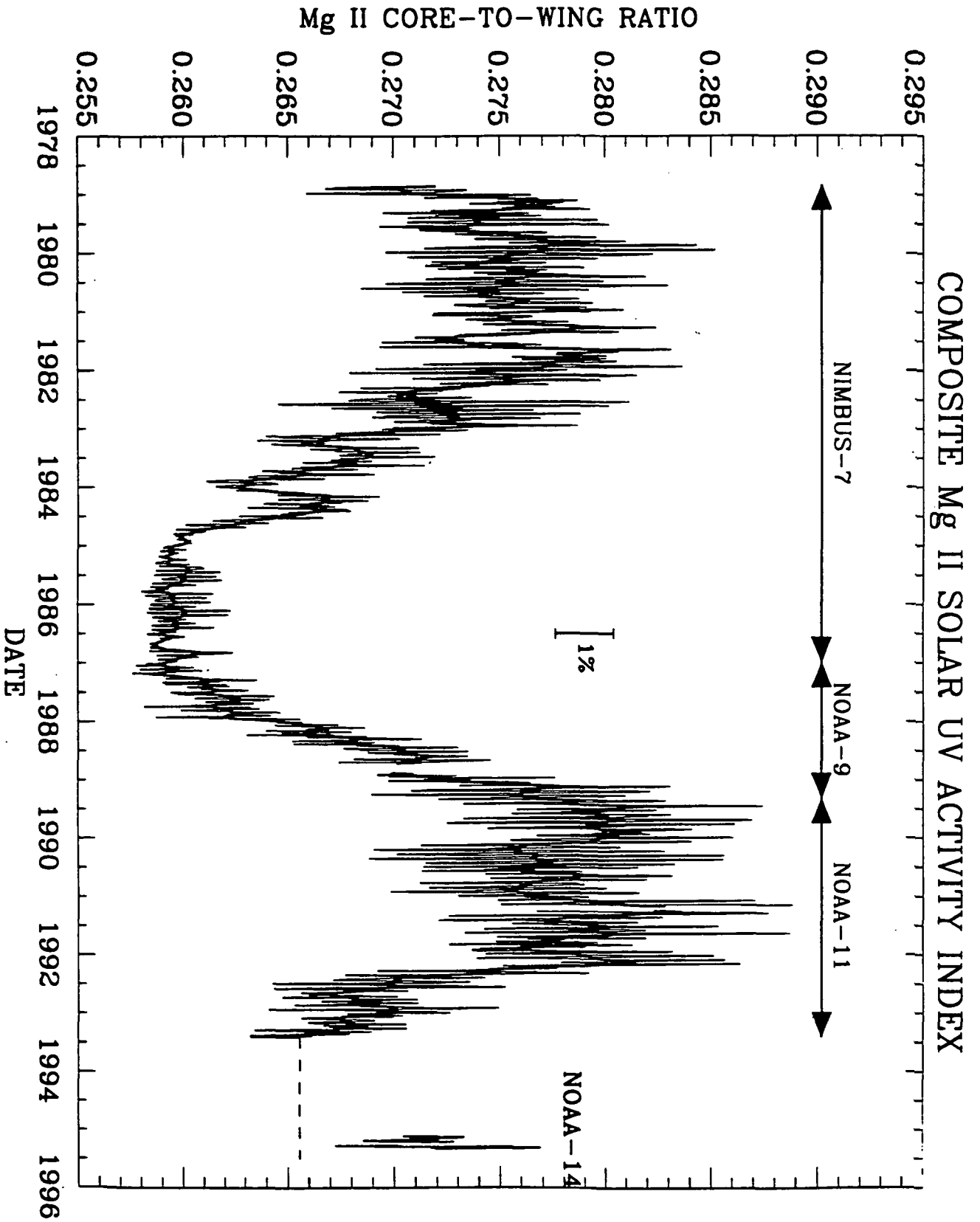


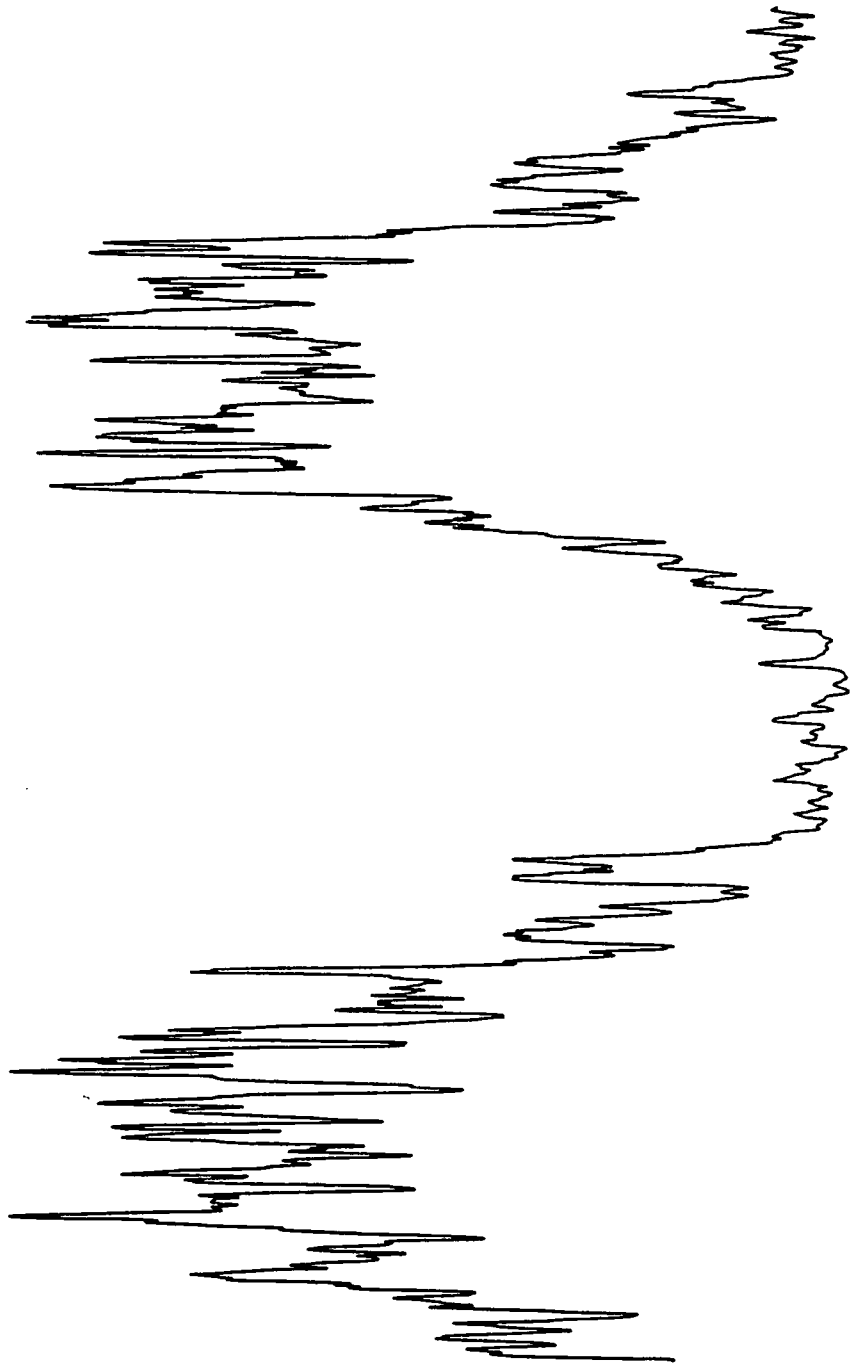
NOAA-14 SBUV/2 Irradiance Comparisons



SBUV-series Mg II INDEX DATA: 27 day RUNNING average



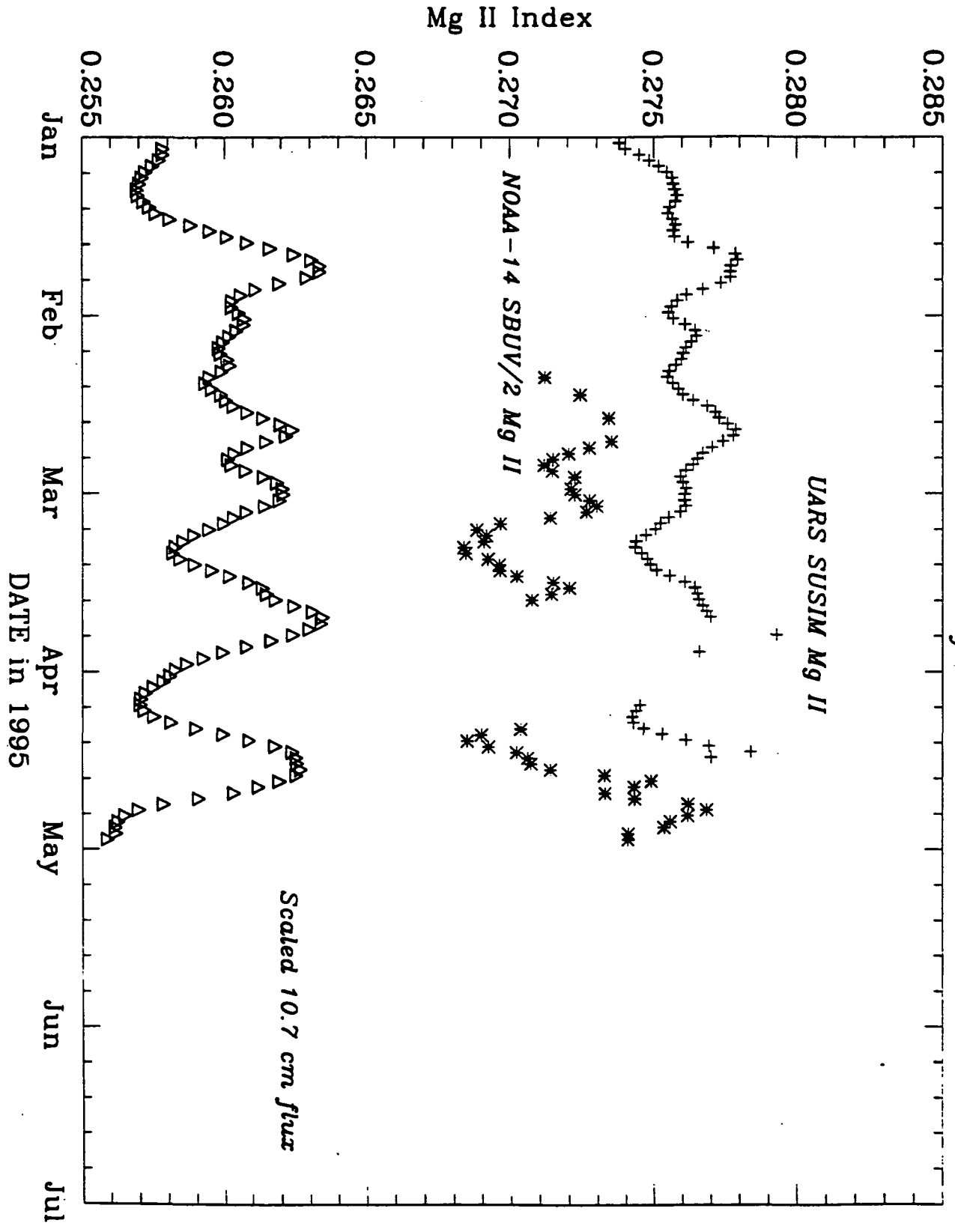




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Solar Activity Measurements



CONCLUSIONS

NOAA-14, beginning in February 1995, continues series of SBUV/2 solar irradiance measurements which began in 1984.

NOAA-11 terminated solar observations in October 1994.

NOAA-9 continues to operate and can provide overlap with considerable work.

Initial results from NOAA-14

Calibration offset between SUSIM and SSBUV

Grating drive unlock problems

Show Mg II variations are detectable during solar minimum with 13 day variations consisted with 10.7 cm solar flux