

Spectra, detector, and filter files used for LYRA radiometric model simulations

IED 30 Nov 2007

Spectra

Currently, 8 different spectra are used. (Irradiance values are in $W m^{-2} nm^{-1}$.)

/projects/lyra/rm/data_solarspec/LYRAdavos.dat
spectrum taken on ground in Davos, covering 280,...,4000 nm

/projects/lyra/rm/data_solarspec/timed-see-minimum.dat
“solar-minimum” TIMED/SEE spectrum taken 24 Feb 2005, covering 0.5 – 1 000 000 nm

/projects/lyra/rm/data_solarspec/timed-see-high.dat
“high-flux” TIMED/SEE spectrum taken 11 Nov 2003, covering 0.5,...,1 000 000 nm

/projects/lyra/rm/data_solarspec/OLD/timed-see-maximum.dat
“solar-maximum” TIMED/SEE spectrum taken 28 Oct 2003, covering 0.5,...,1 000 000 nm

/home/dammasch/lyracal/See_03112003_Flarespec_13a_v9.txt
TIMED/SEE spectrum taken 03 Nov 2003 briefly after X3.9 flare, covering 0.5,...,194.5 nm

/home/dammasch/lyracal/See_03112003_Preflarespec_13a_v9.txt
TIMED/SEE spectrum taken 03 Nov 2003 before X3.9 flare, covering 0.5,...,194.5 nm

/home/dammasch/lyracal/See_28102003_Flarespec_13a_v9.txt
TIMED/SEE spectrum taken 28 Oct 2003 briefly after X17 flare, covering 0.5,...,194.5 nm

/home/dammasch/lyracal/See_28102003_Preflarespec_13a_v9.txt
TIMED/SEE spectrum taken 28 Oct 2003 before X17 flare, covering 0.5,...,194.5 nm

In fact, the first three TIMED/SEE spectra are identical between 194.5 nm and 1 000 000 nm. For simulation purposes, this “tail” is also appended in the last four TIMED/SEE spectra.

Filters

There are data sets for 14 different filters. The first 6 are currently used. (Transmittance values are without unit.)

/projects/lyra/rm/data_filter/A127102005.DAT
“Aluminium” filter (channels 1-3, 2-3, 3-3), covering 0.042,...,2655 nm

/projects/lyra/rm/data_filter/Zr300nm.DAT
“Zirconium(300nm)” filter (channels 1-4, 3-4), covering 0.042,...,2596 nm

/projects/lyra/rm/data_filter/Zrresult.DAT
“Zirconium(150nm)” filter (channel 2-4), covering 0.042,...,2596 nm

/projects/lyra/rm/data_filter/Lyman122XN27102005.DAT
“Lyman XN” filter (channels 1-1, 2-1), covering 110,...,2667 nm

/projects/lyra/rm/data_filter/LymanN122_x_XN122_27102005.DAT
“Lyman N+XN” filter (channel 3-1), covering 115,...,2590 nm

/projects/lyra/rm/data_filter/Herzberg27102005.DAT
“Herzberg” filter (channels 1-2, 2-2, 3-2), covering 160,...,2656 nm

The following data sets are currently not used for LYRA simulations:

```
/projects/lyra/rm/data_filter/Lyman122N27102005.DAT
/projects/lyra/rm/data_filter/Lyman122VN_x_122XN_27102005.DAT
/projects/lyra/rm/data_filter/LymanACTON122VN.DAT
/projects/lyra/rm/data_filter/LymanN122_x_N122_27102005.DAT
/projects/lyra/rm/data_filter/LymanXN122_x_XN122_27102005.DAT
/projects/lyra/rm/data_filter/OPEN.DAT
/projects/lyra/rm/data_filter/PF2.DAT
/projects/lyra/rm/data_filter/Zr_x_Zr.DAT
```

Detectors

There are data sets for 23 different detectors. The first 9 are currently used. (Responsivity values are in A/W.)

```
/projects/lyra/rm/data_detector/AXUVTOTALresponse.DAT
"AXUV20A/B/C/D" detectors (channels 1-4, 3-1, 3-3, 3-4), covering 0.0001,...,1240 nm
```

```
/projects/lyra/rm/data_detector/MSM11TOTAL.DAT
"MSM11" detector (channel 1-3), covering 1,...,1100 nm
```

```
/projects/lyra/rm/data_detector/MSM12Radio.DAT
"MSM12" detector (channel 1-1), covering 45,...,1100 nm
```

```
/projects/lyra/rm/data_detector/MSM15TOTAL.DAT
"MSM15" detector (channel 2-3), covering 1,...,1100 nm
```

```
/projects/lyra/rm/data_detector/MSM19TOTAL.DAT
"MSM19" detector (channel 2-4), covering 1,...,1100 nm
```

```
/projects/lyra/rm/data_detector/MSM21Radio.DAT
"MSM21" detector (channel 2-1), covering 45,...,1100 nm
```

```
/projects/lyra/rm/data_detector/PIN10Radio.DAT
"PIN10" detector (channel 1-2), covering 1,...,1100 nm
```

```
/projects/lyra/rm/data_detector/PIN11TOTAL.DAT
"PIN11" detector (channel 2-2), covering 1,...,1100 nm
```

```
/projects/lyra/rm/data_detector/PIN12TOTAL.DAT
"PIN12" detector (channel 3-2), covering 1,...,1127 nm
```

The following data sets are currently not used for LYRA simulations:

```
/projects/lyra/rm/data_detector/A8591MSMH.DAT
/projects/lyra/rm/data_detector/A9054AMSMF.DAT
/projects/lyra/rm/data_detector/AXUVNEWMODEL.DAT
/projects/lyra/rm/data_detector/A106GaN.DAT
/projects/lyra/rm/data_detector/AlN200nmUS.DAT
/projects/lyra/rm/data_detector/AlNideal.DAT
/projects/lyra/rm/data_detector/MSM8TOTAL-ROB.DAT
/projects/lyra/rm/data_detector/MSM8TOTAL.DAT
/projects/lyra/rm/data_detector/PIN7TOTAL.DAT
/projects/lyra/rm/data_detector/PIN8TOTAL.DAT
/projects/lyra/rm/data_detector/detectors130nm.DAT
/projects/lyra/rm/data_detector/detectors180nm.DAT
/projects/lyra/rm/data_detector/detectorsGaN.DAT
/projects/lyra/rm/data_detector/unity.DAT
```