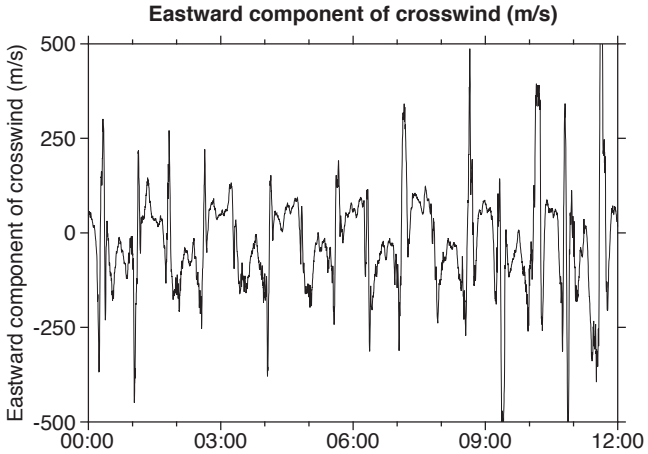
Thermosphere density and crosswind speed along the GOCE orbit

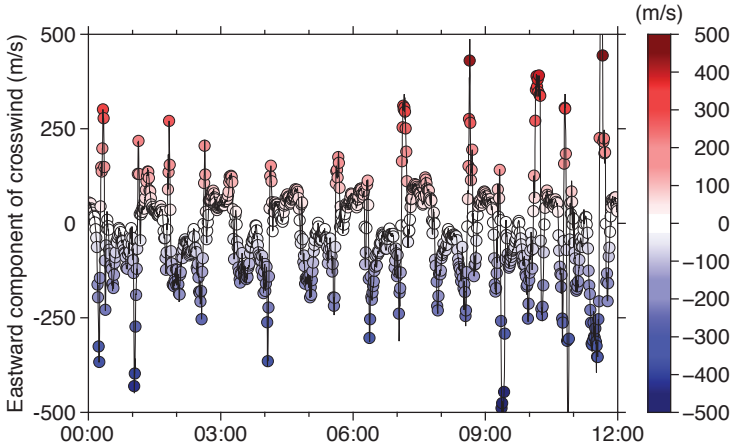
Introduction



The monthly grids of data in this document have been created from the time series data, using the steps described below.

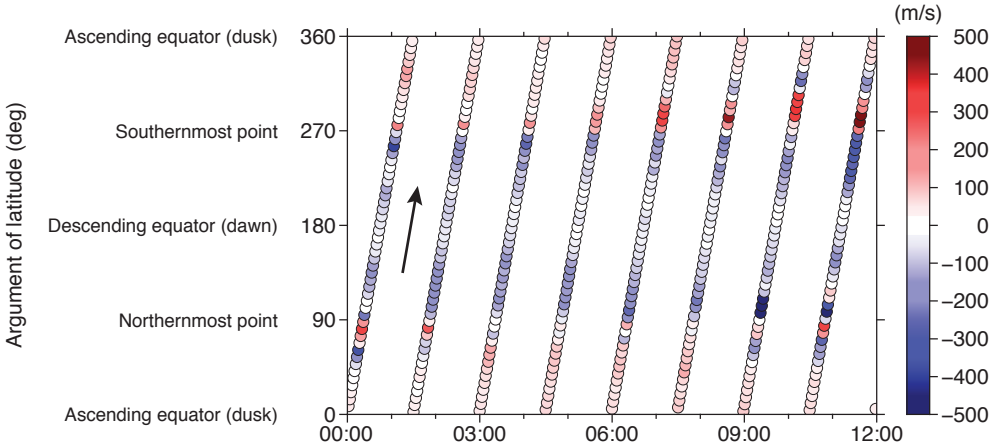
For clarity, this example will display only 12 hours, or about 8 orbits of gridded data.

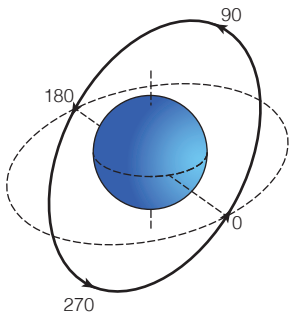
The figures on the left all show the same 12-hour sample of crosswind data, collected on April 5, 2010.



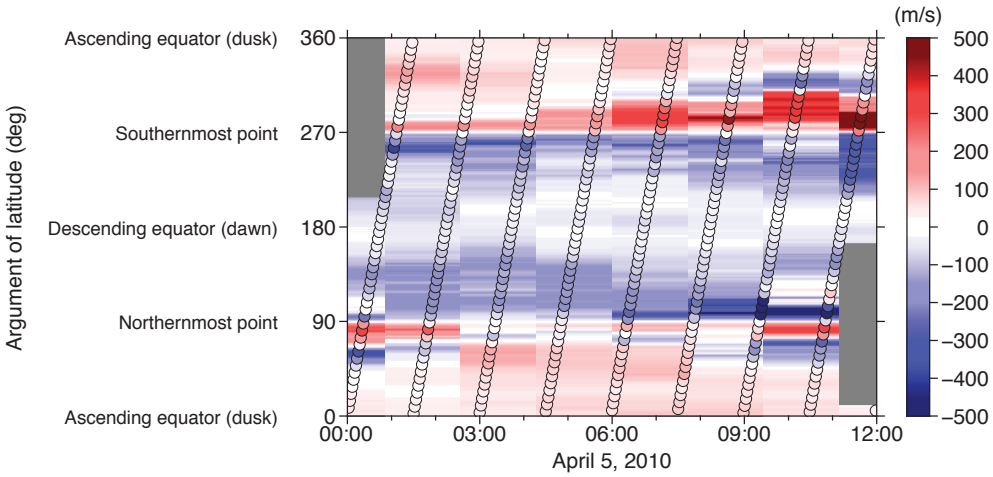
First, the data values have been assigned a colour from a colour scale.

The Y-axis can now be replaced by the argument of latitude, which is the angle measured along the orbit, from the ascending (northward) crossing of the equatorial plane.





For GOCE's orbit, the equator is always crossed at dusk on ascending (northward) passes, and at dawn during descending passes.



The data can then be represented in a grid of rectangular bins. Where no data is available, the bins are painted in gray.

The gridded data can be useful for quickly identifying availability of data, as well as for identifying data of special interest.

For this purpose, the error estimates, orbital altitude and solar and geomagnetic activity, are plotted as well.

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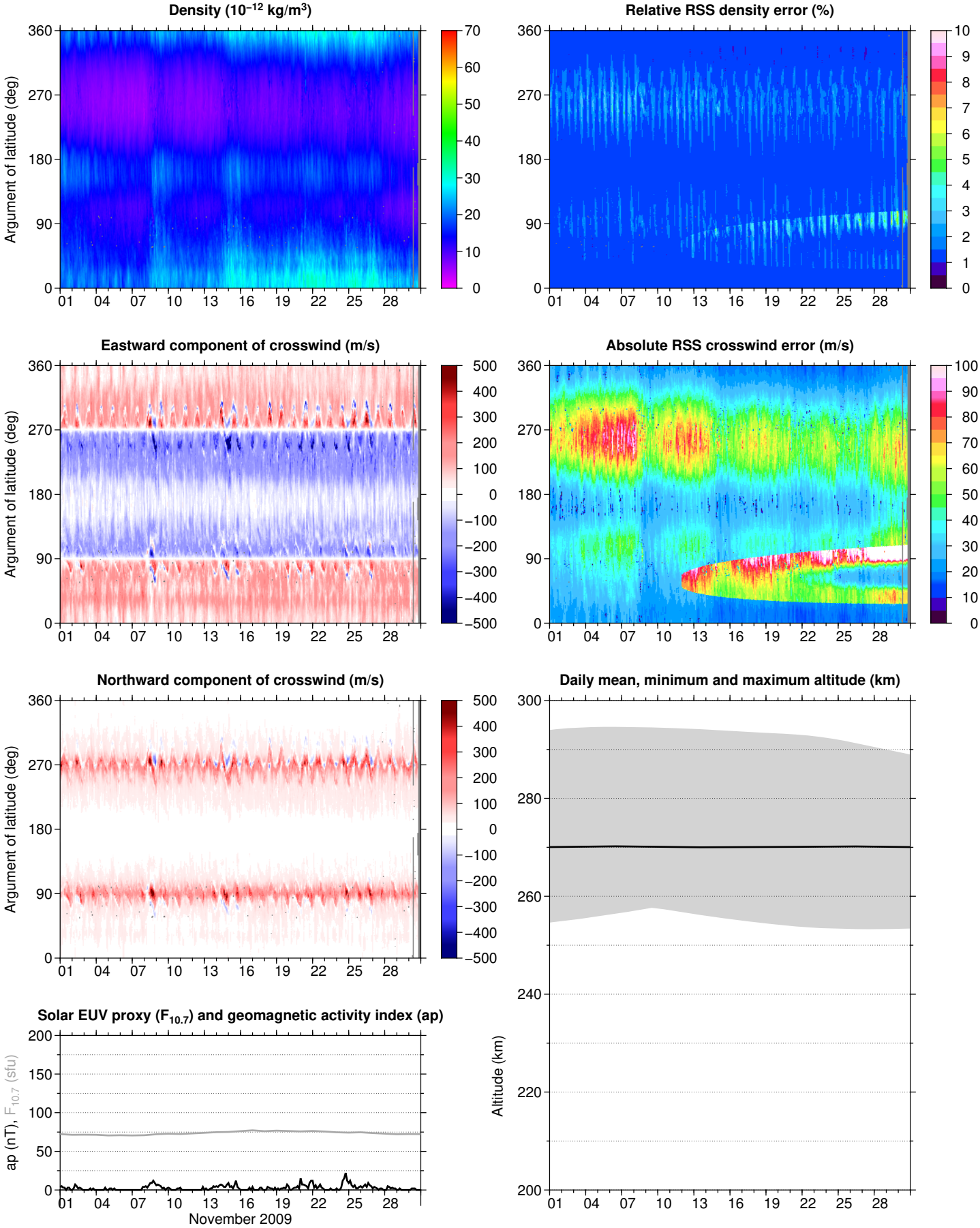
November 2009



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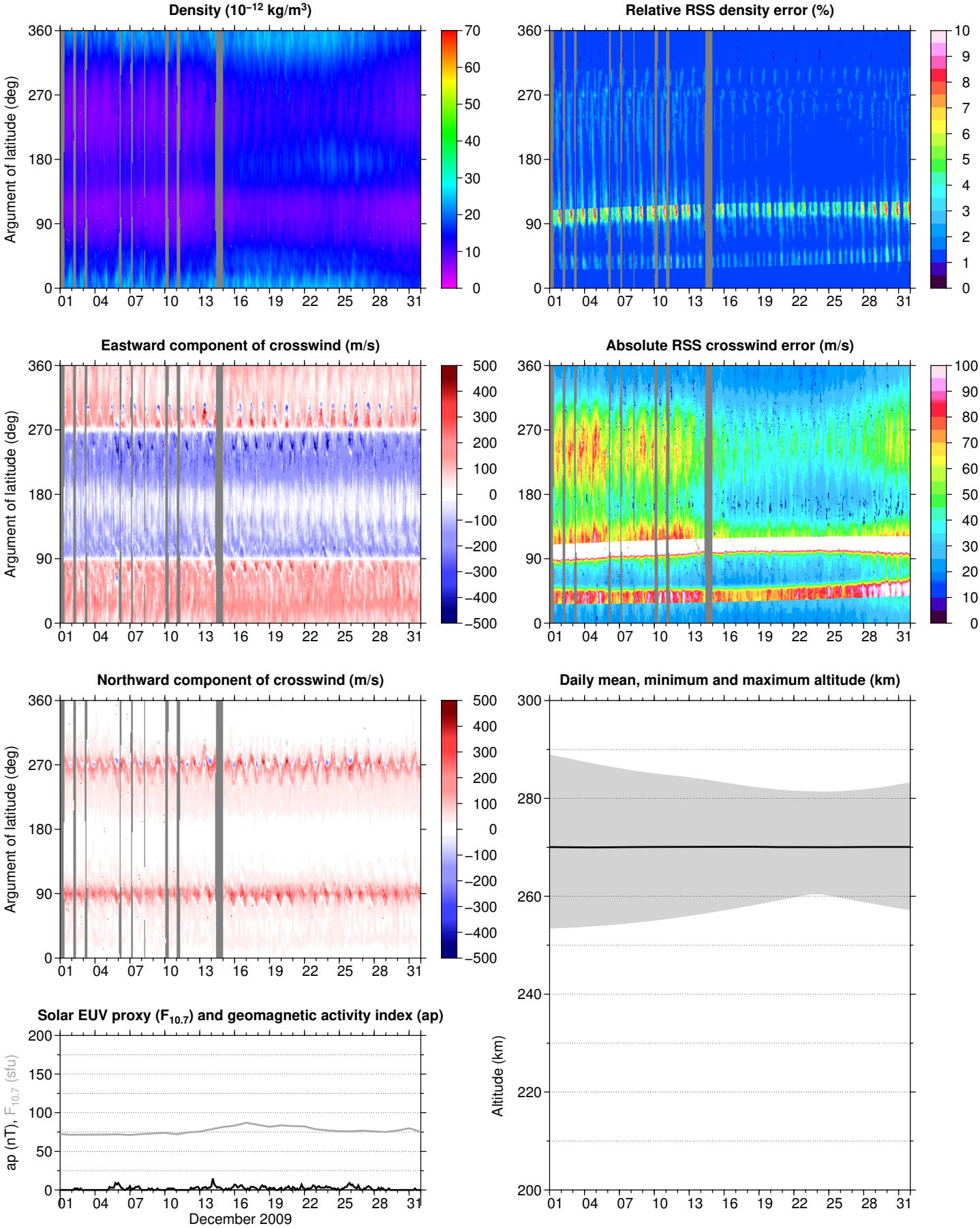

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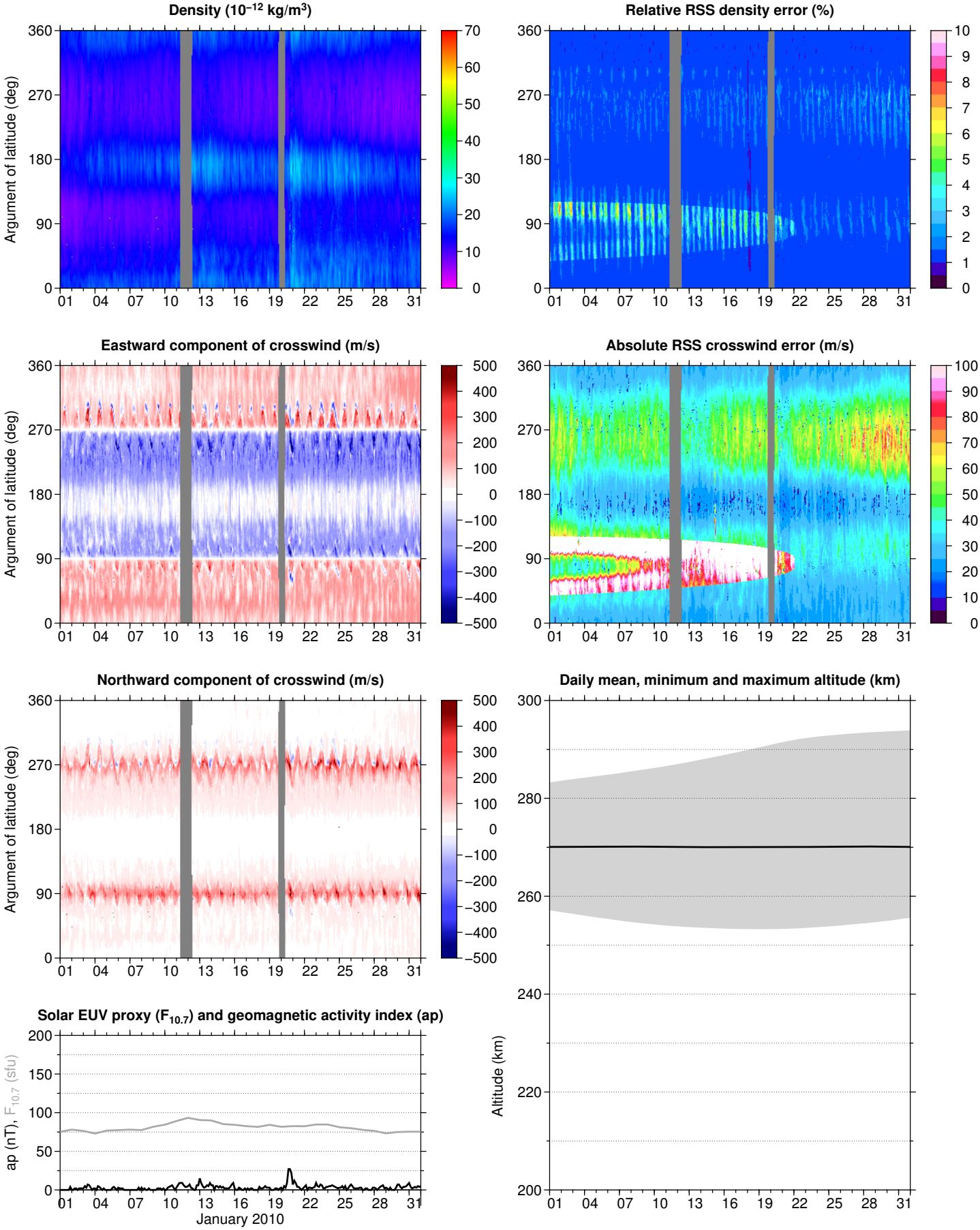

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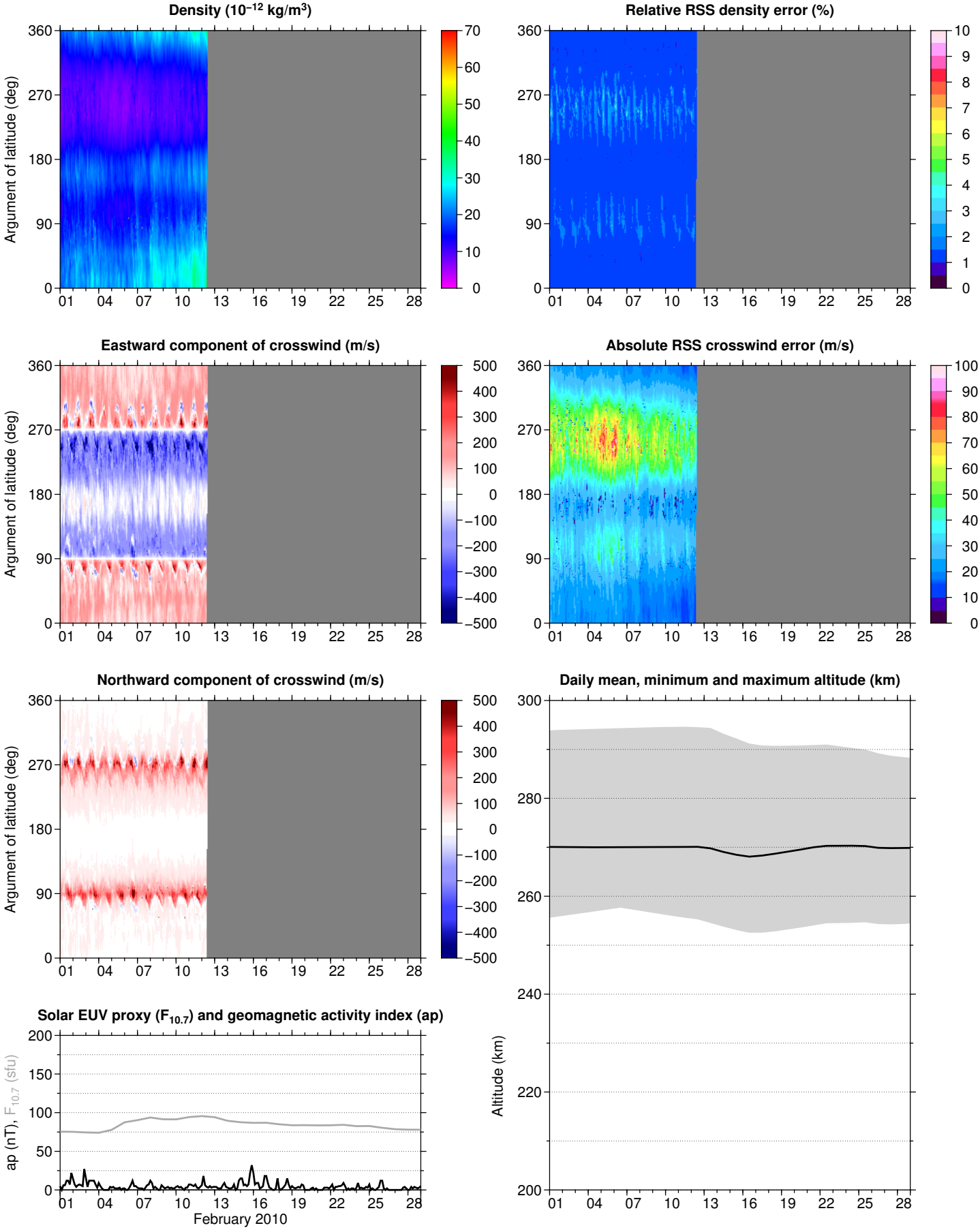

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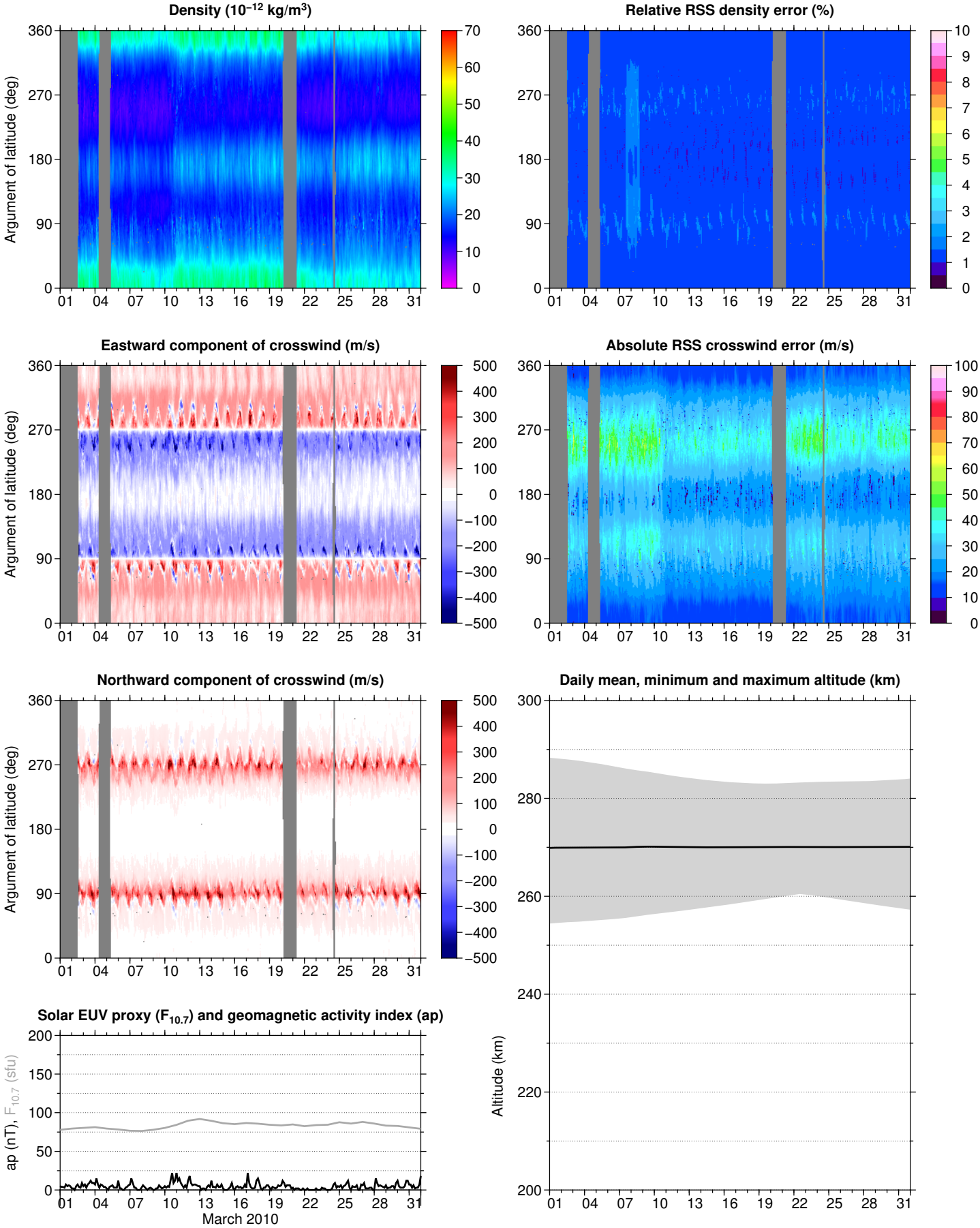

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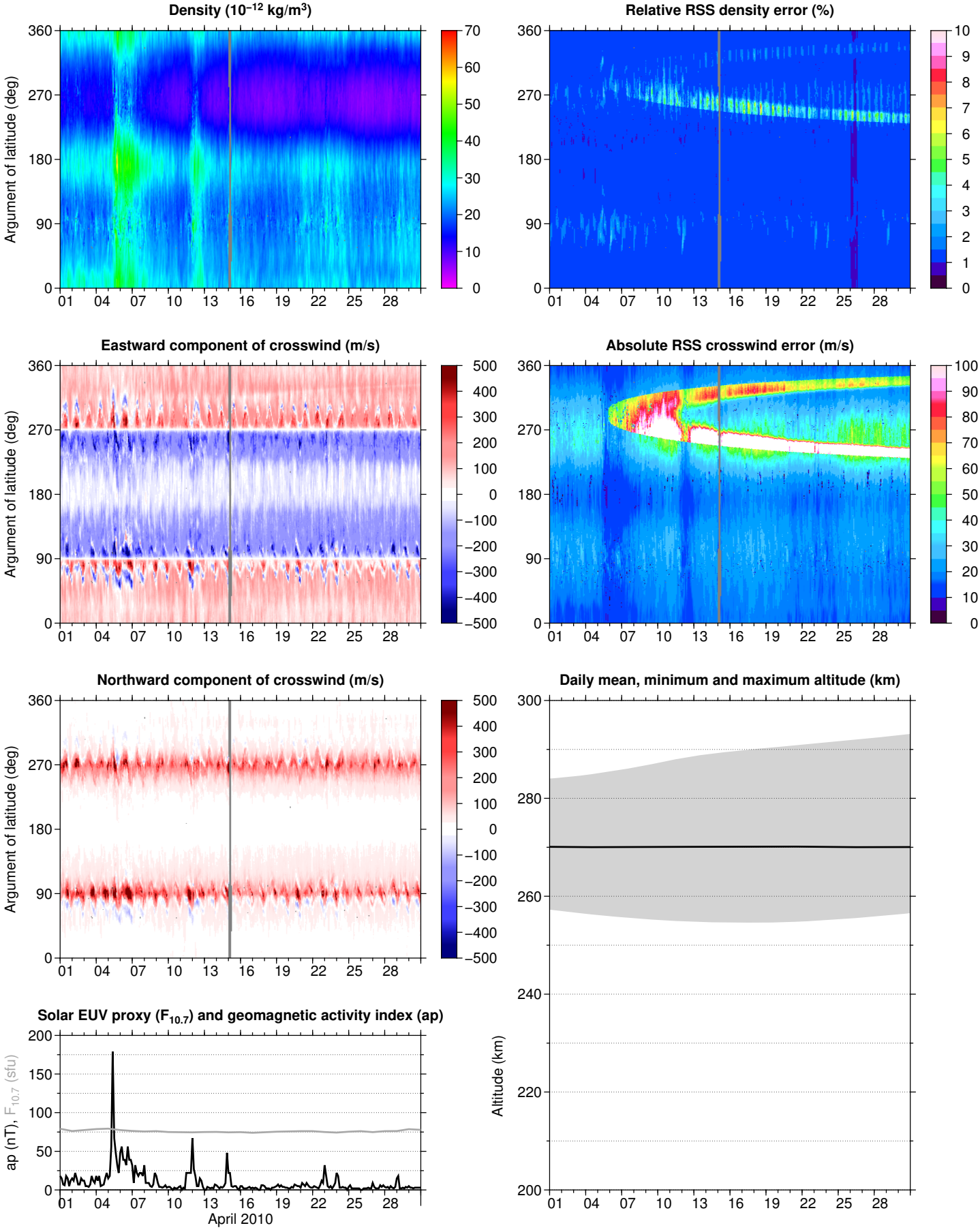

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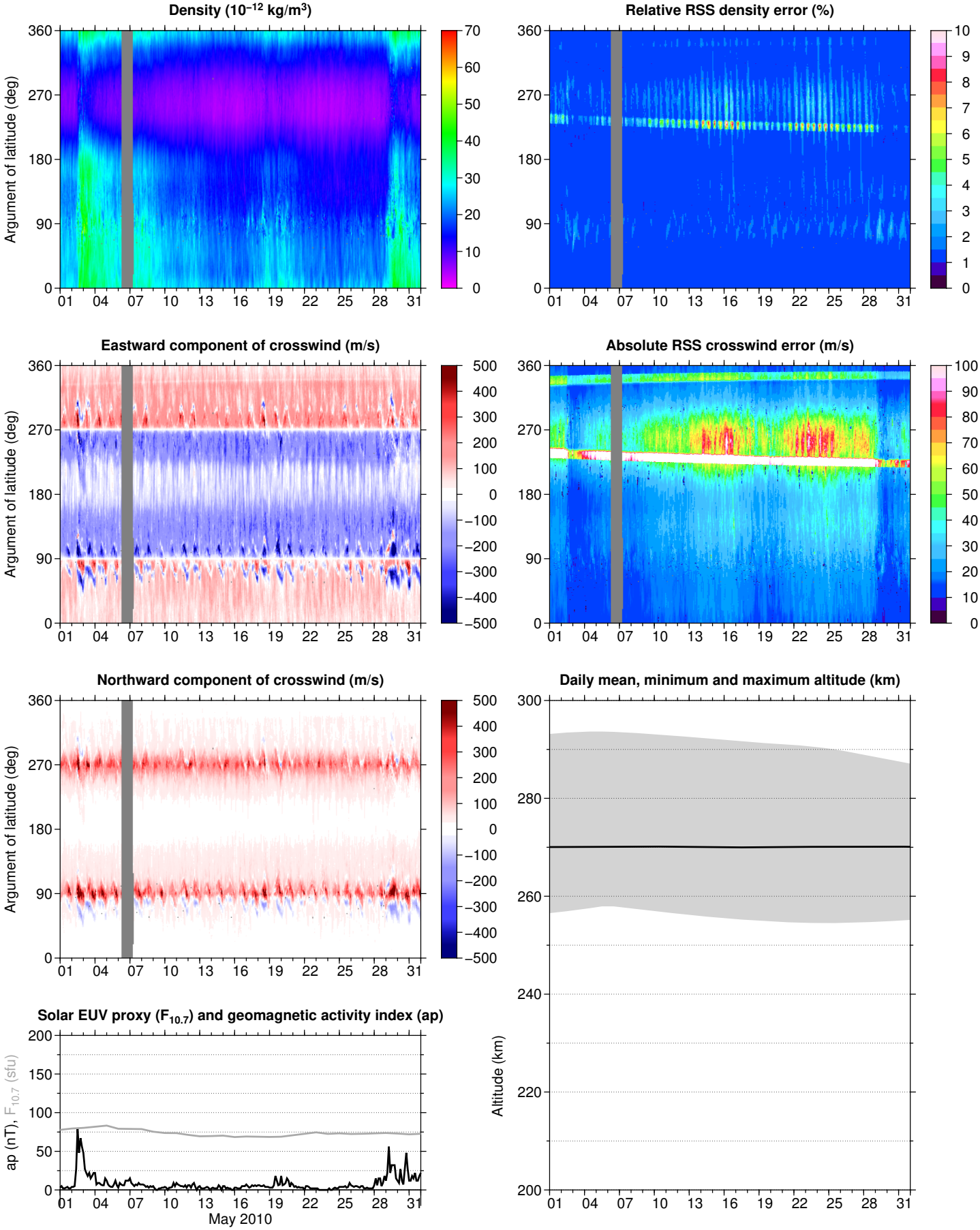

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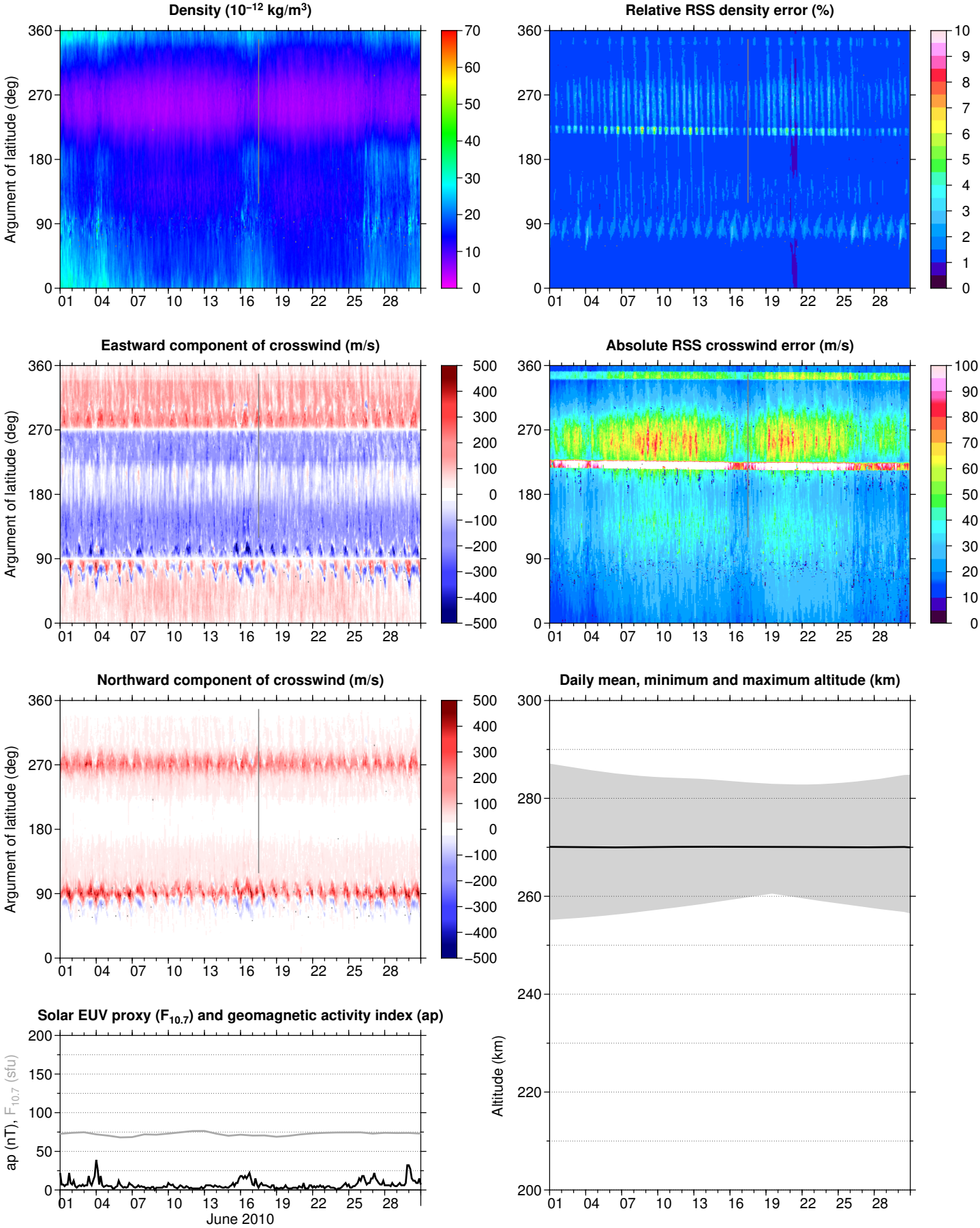

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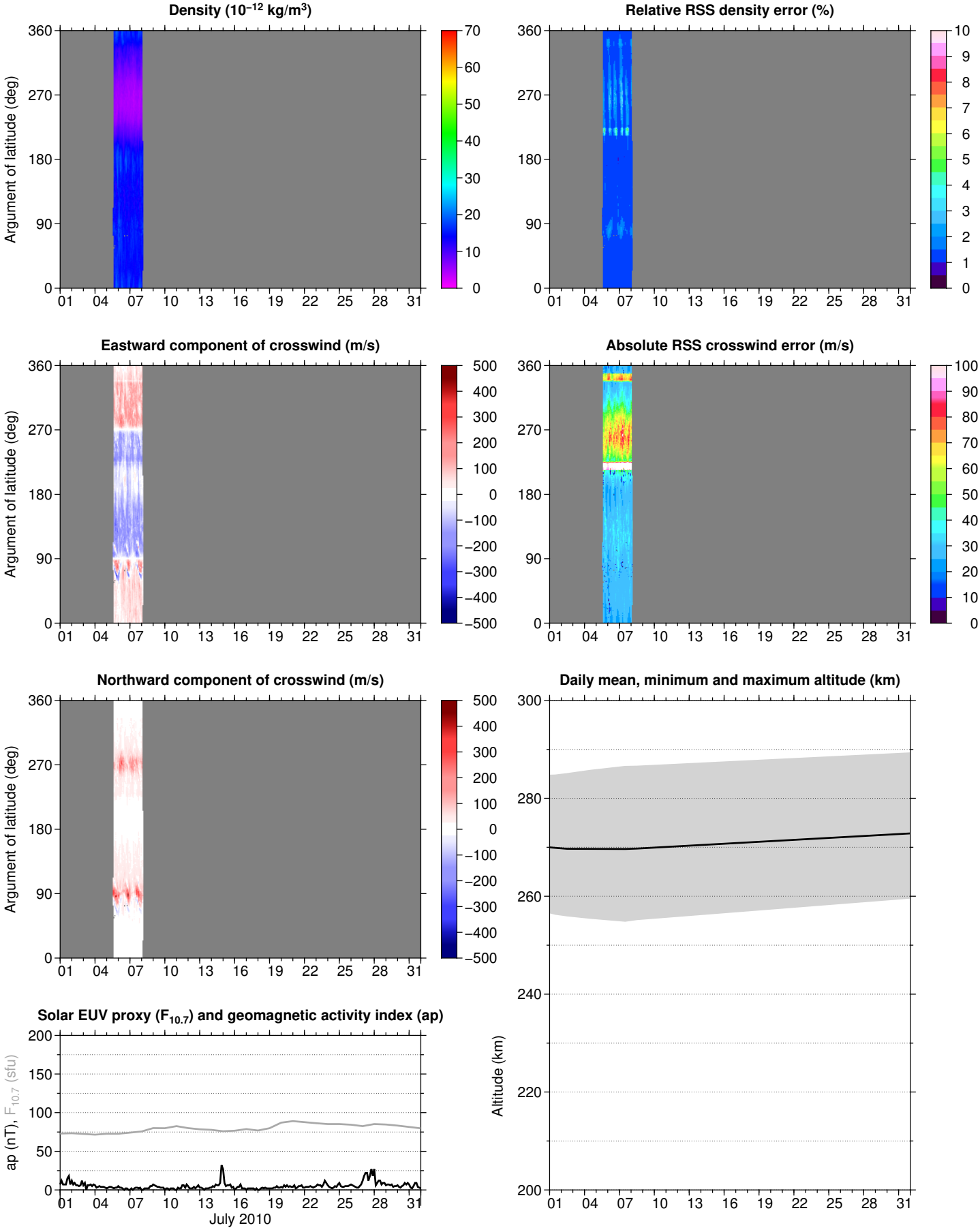

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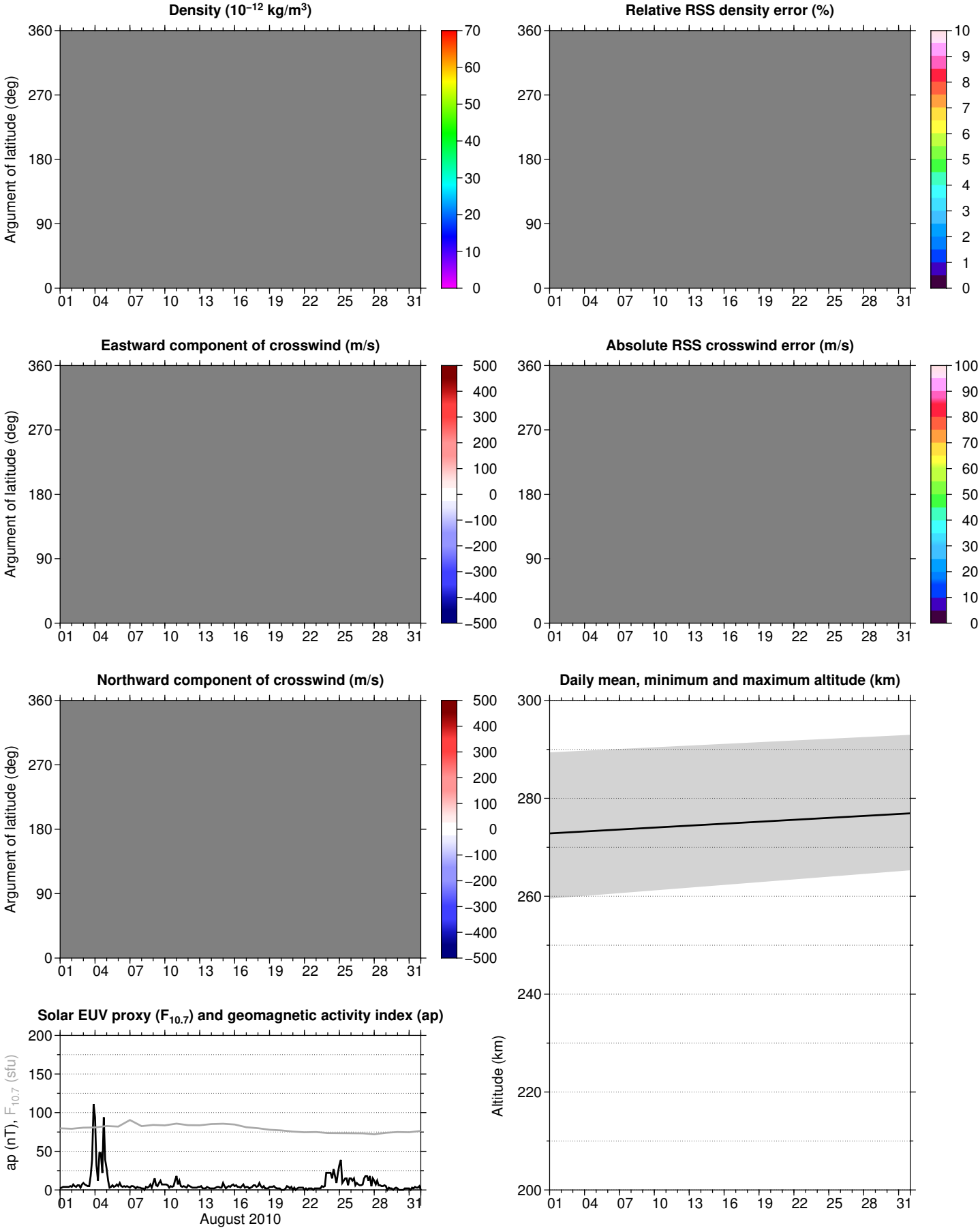

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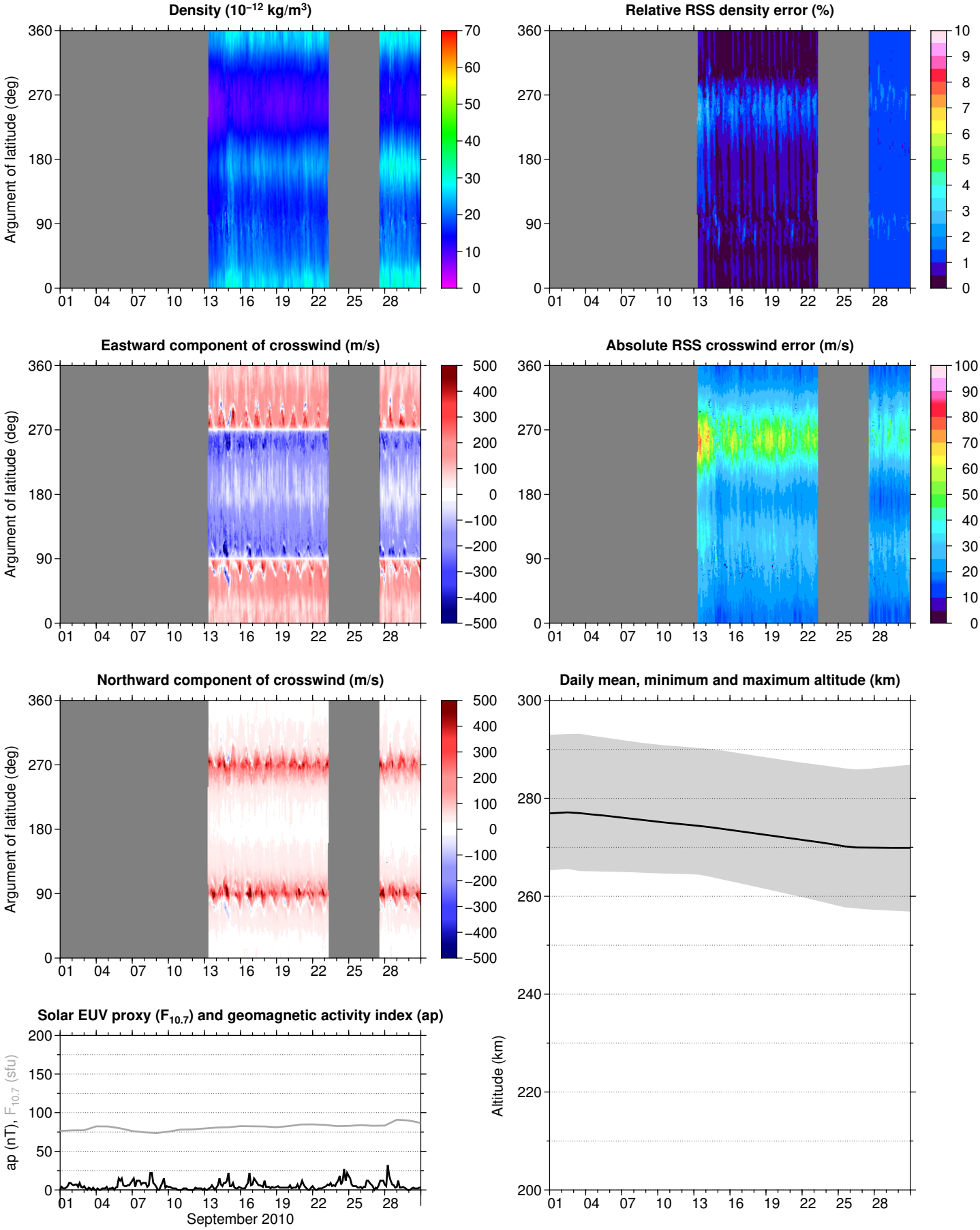

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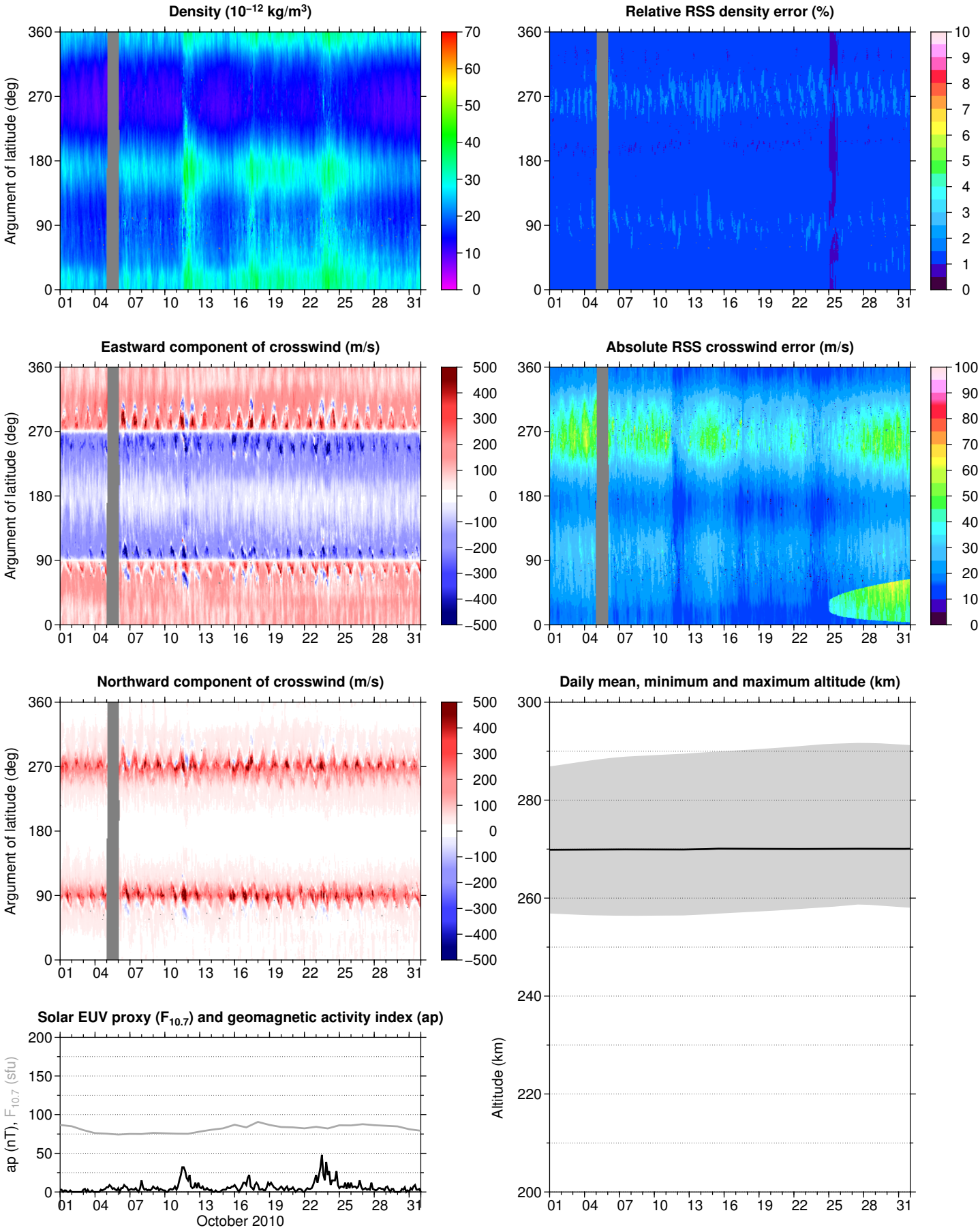

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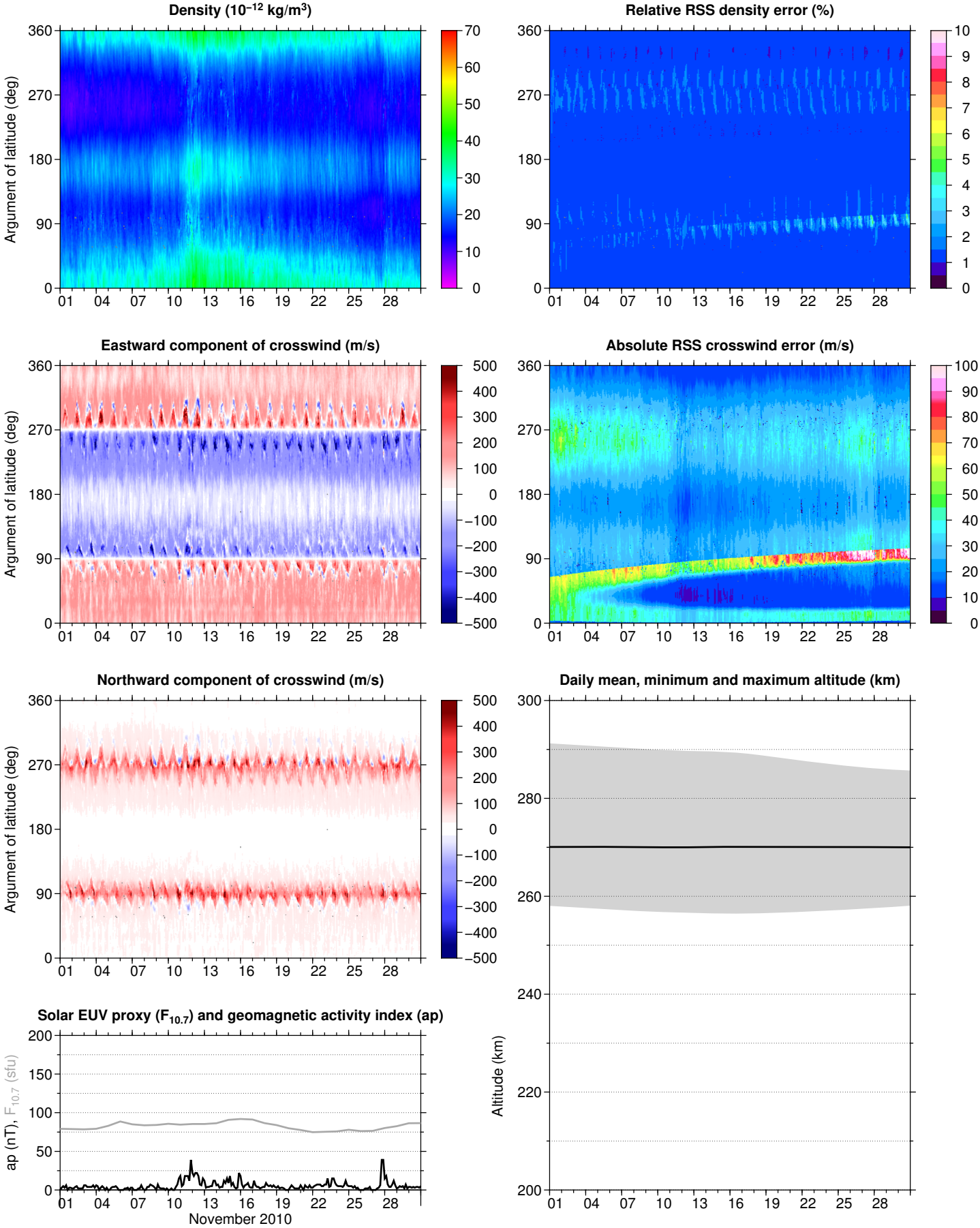

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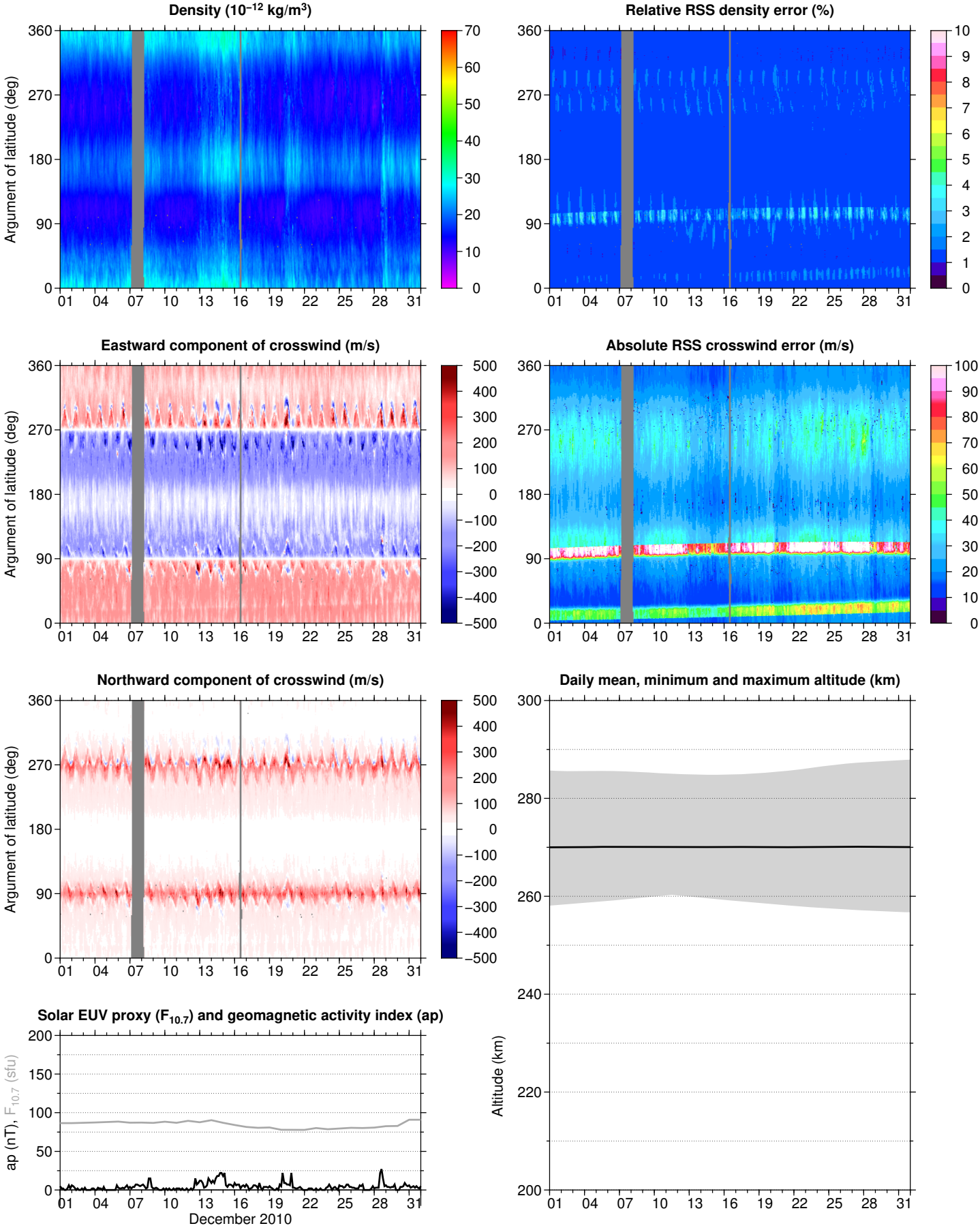

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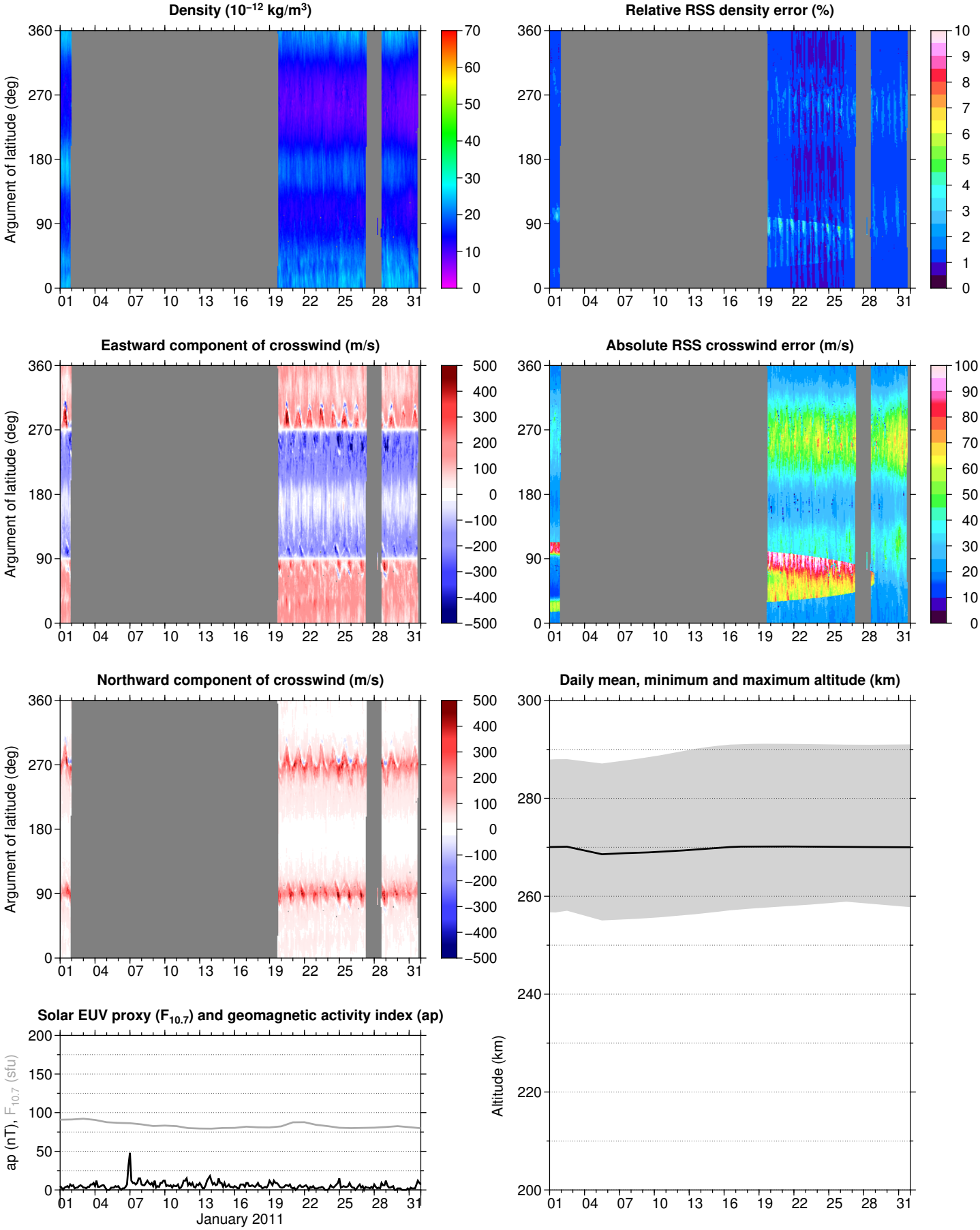

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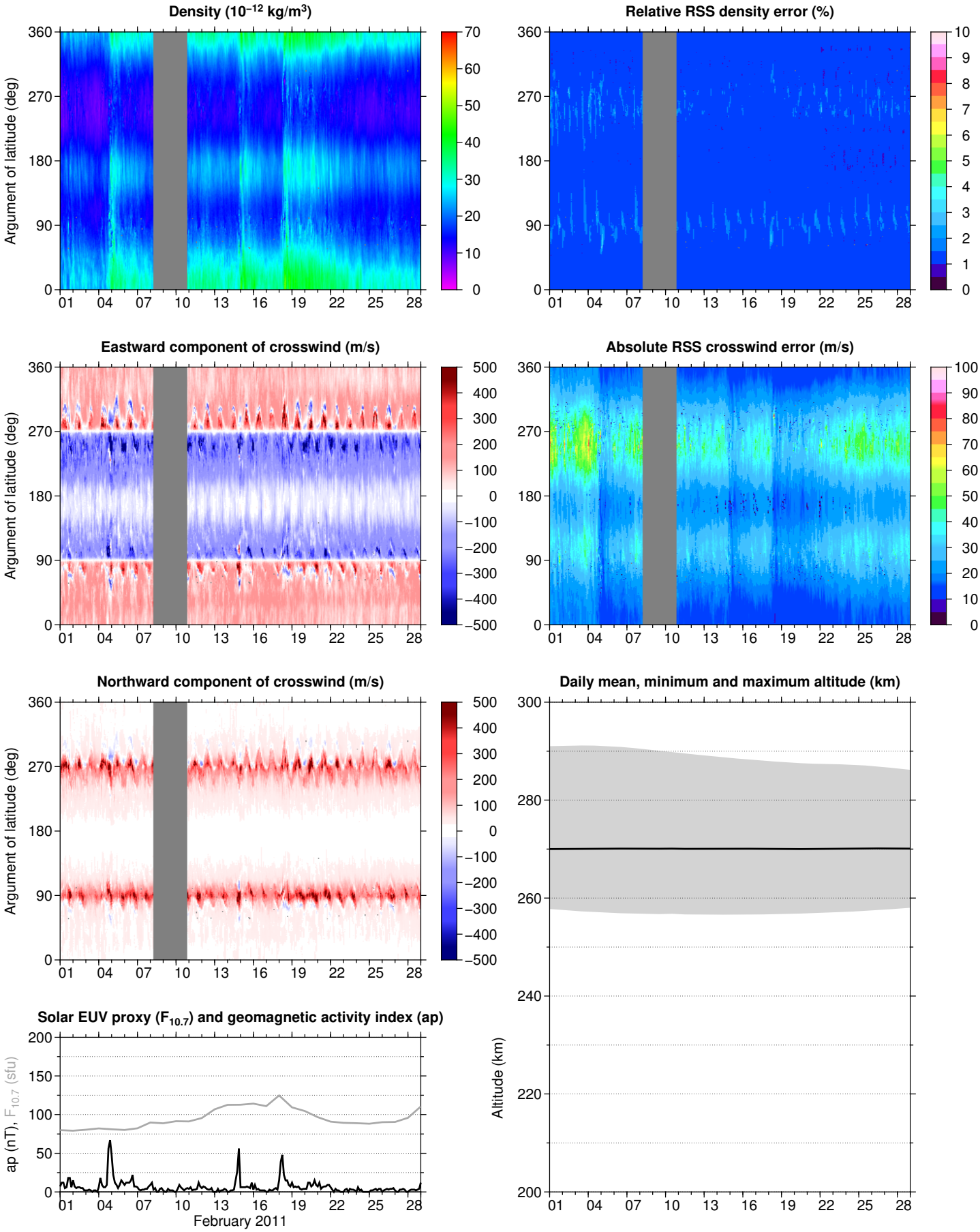

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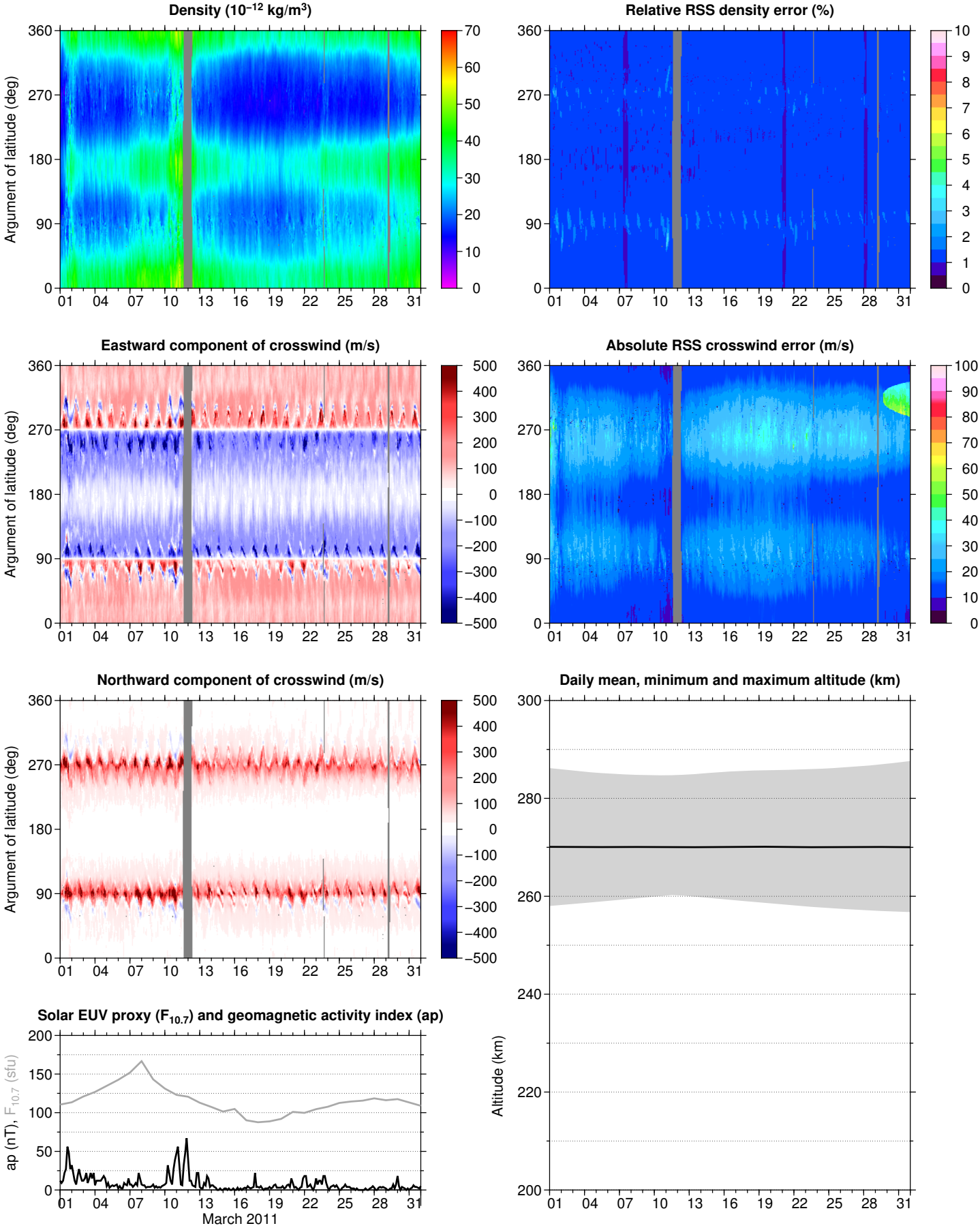

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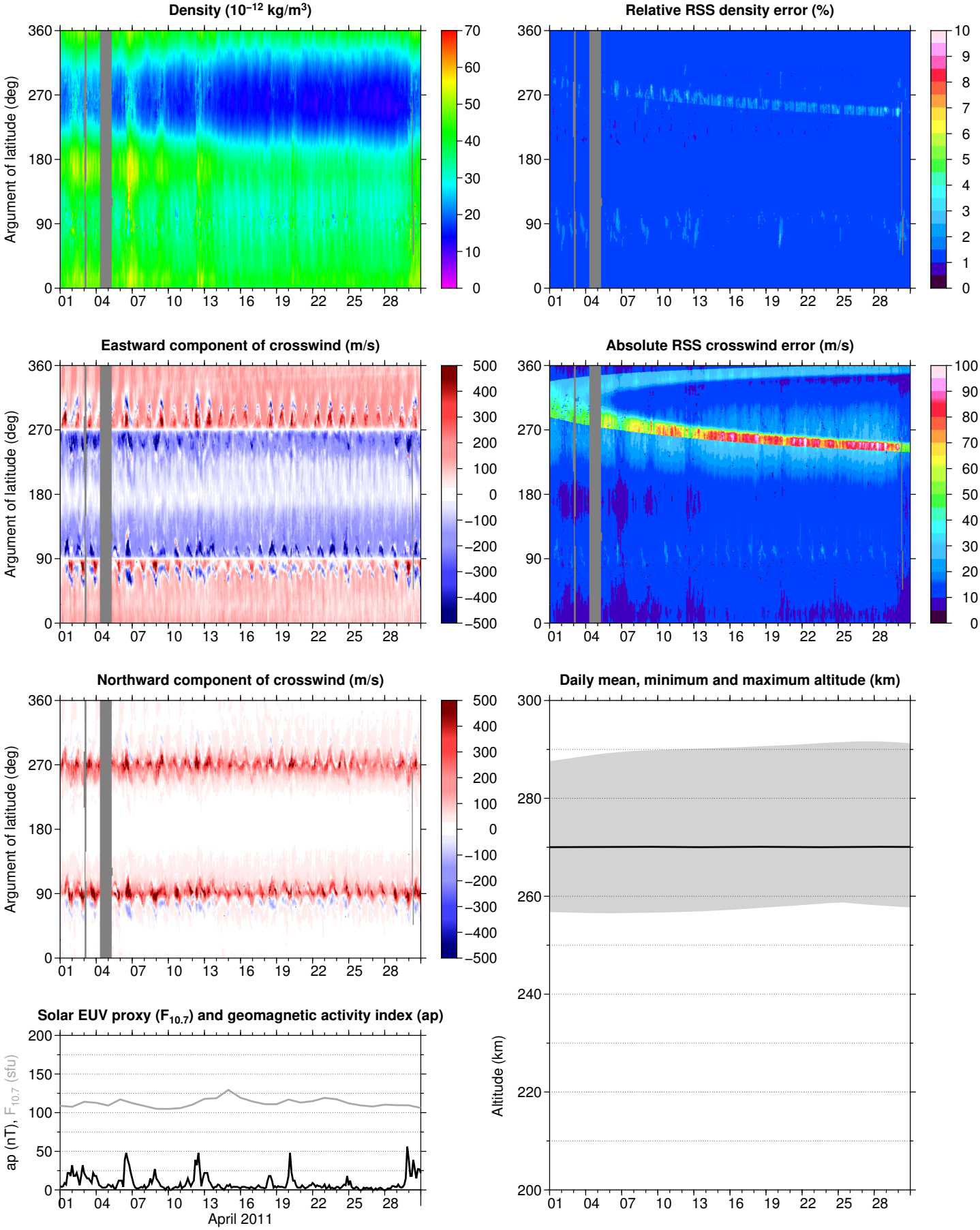

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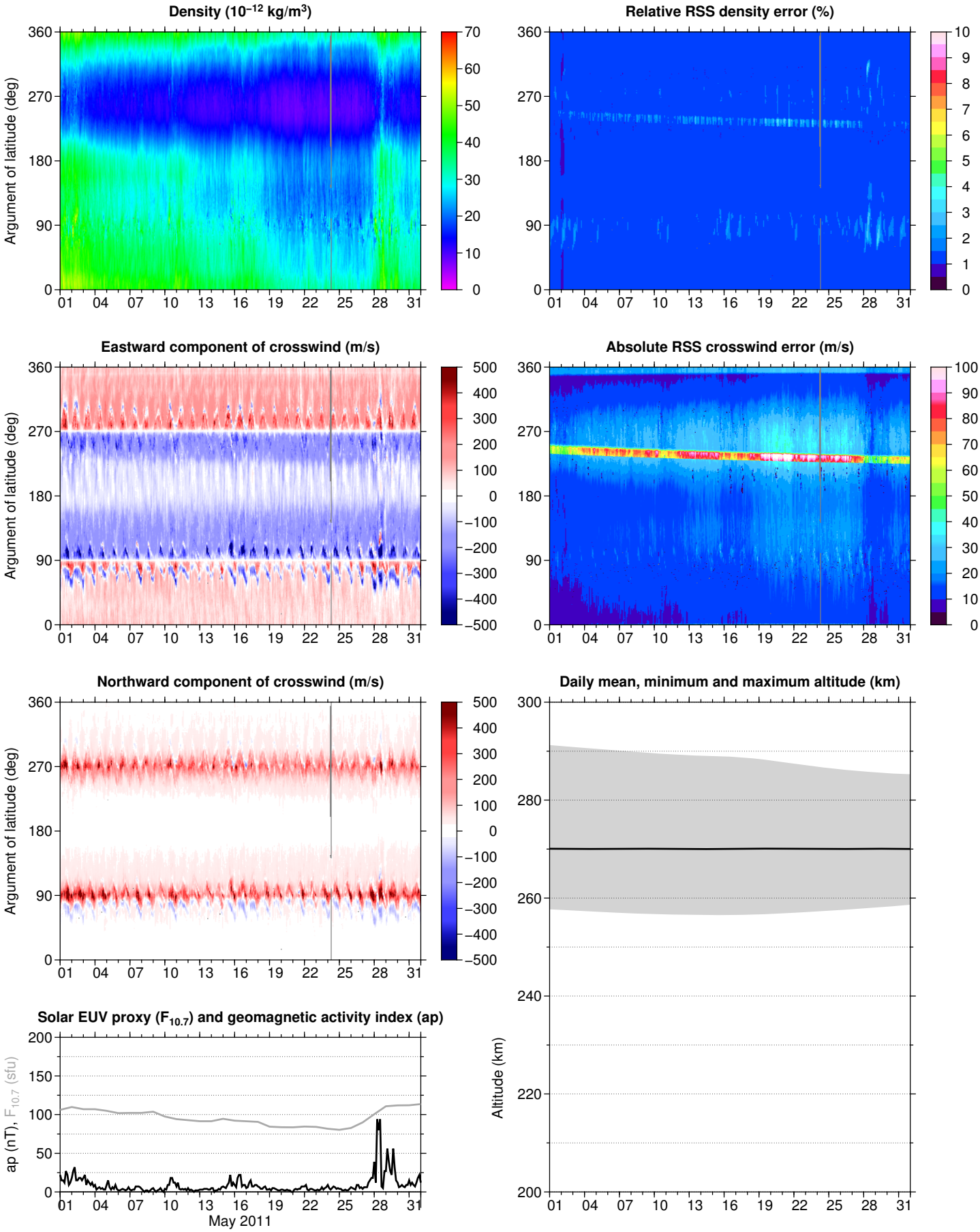

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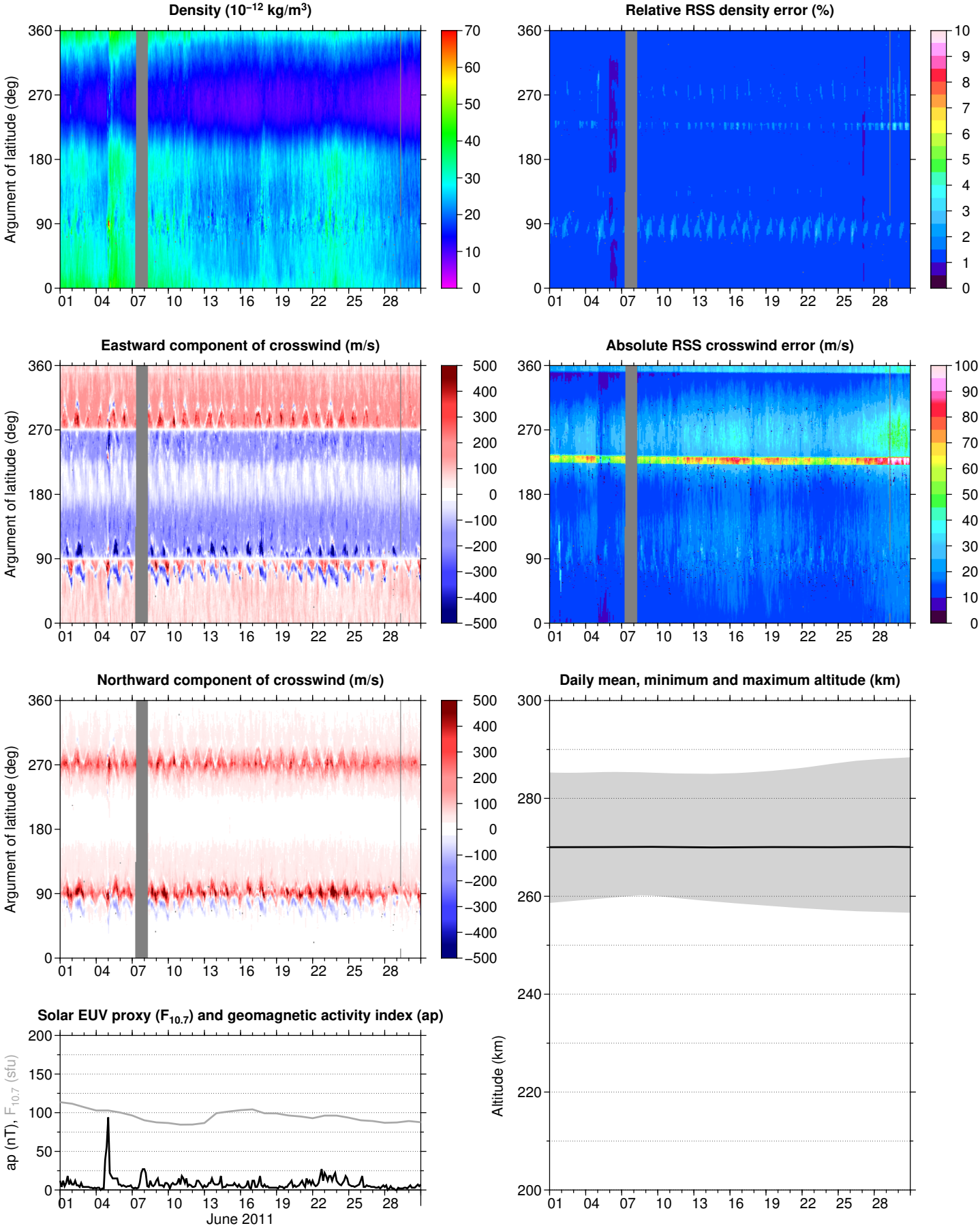

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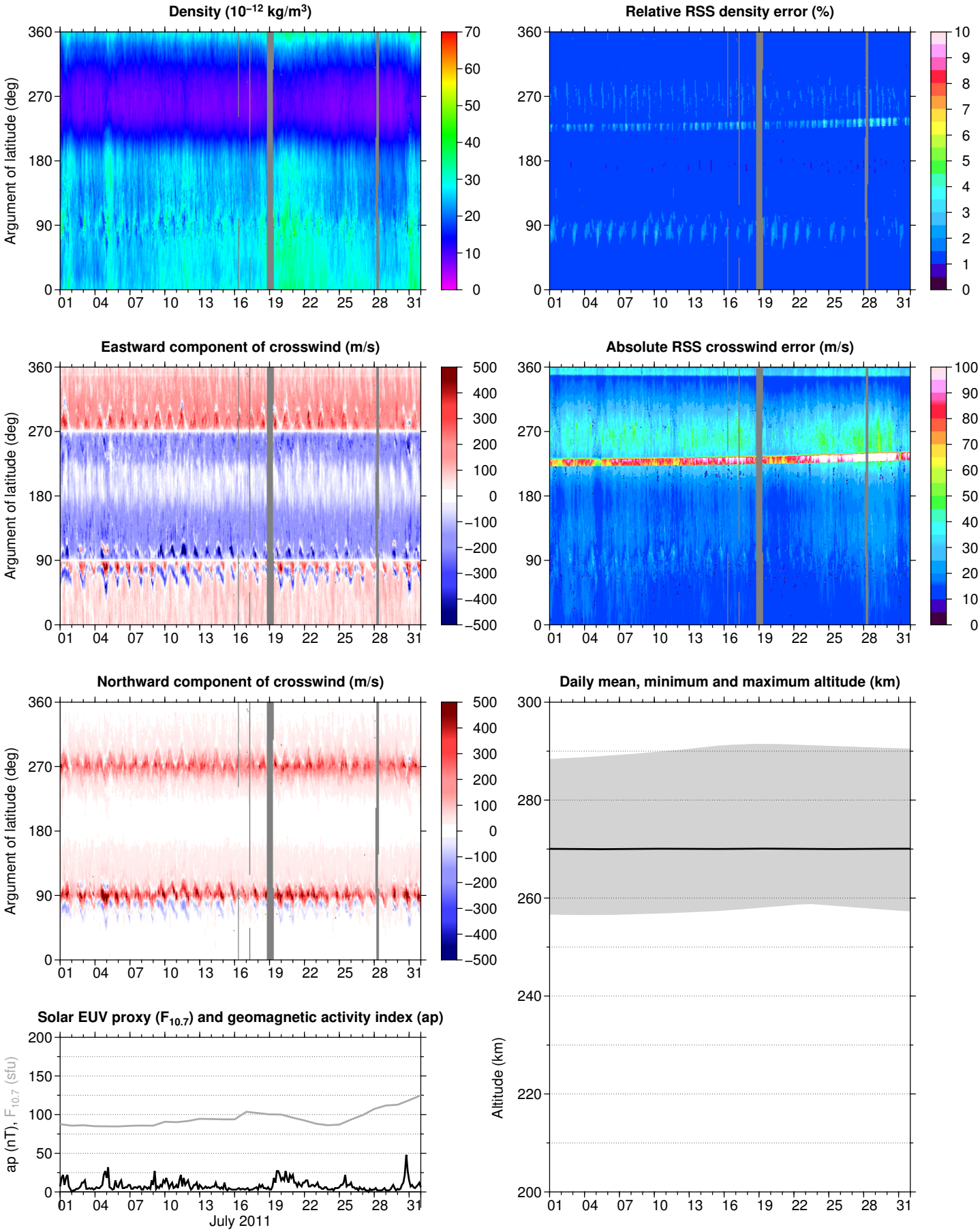

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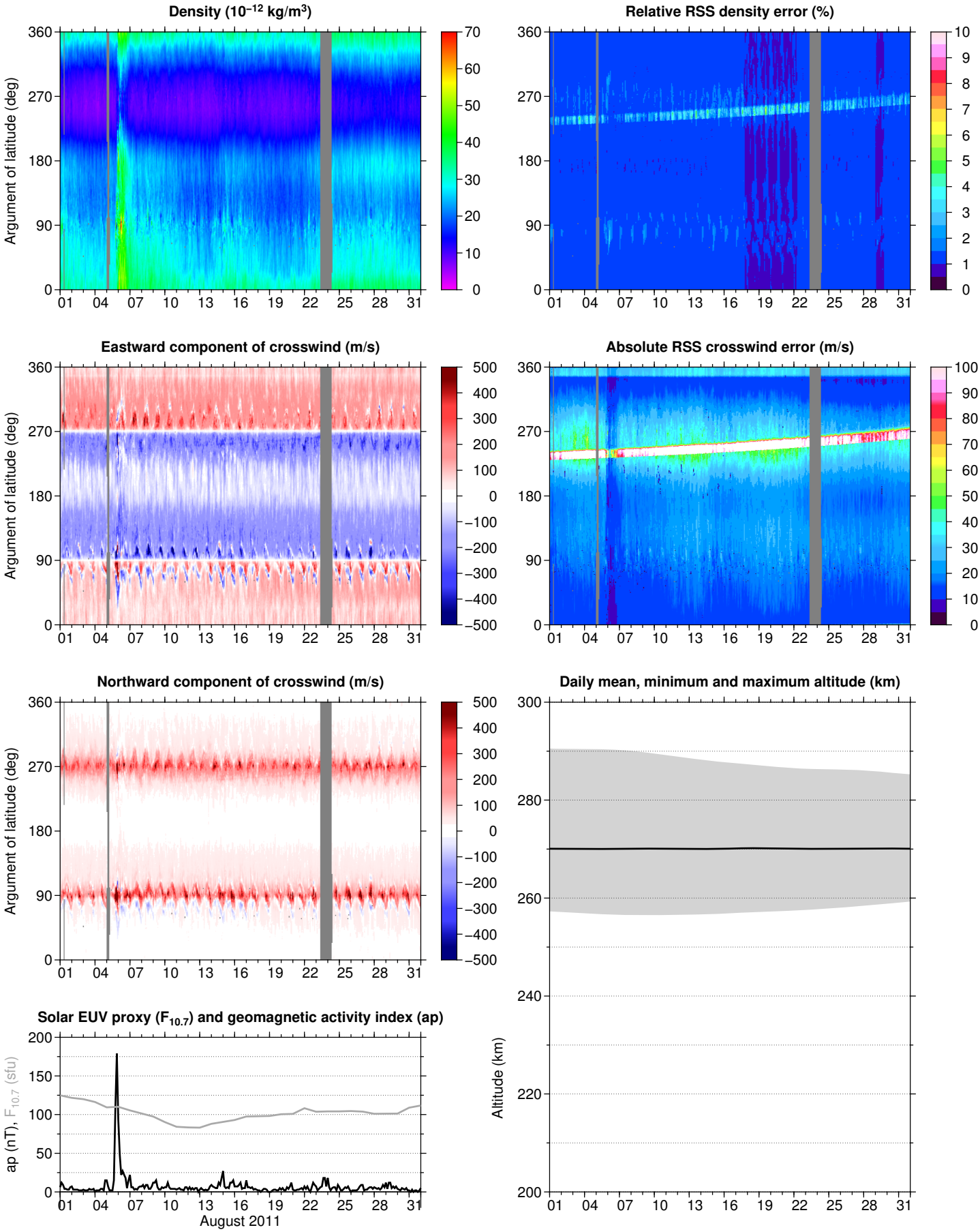

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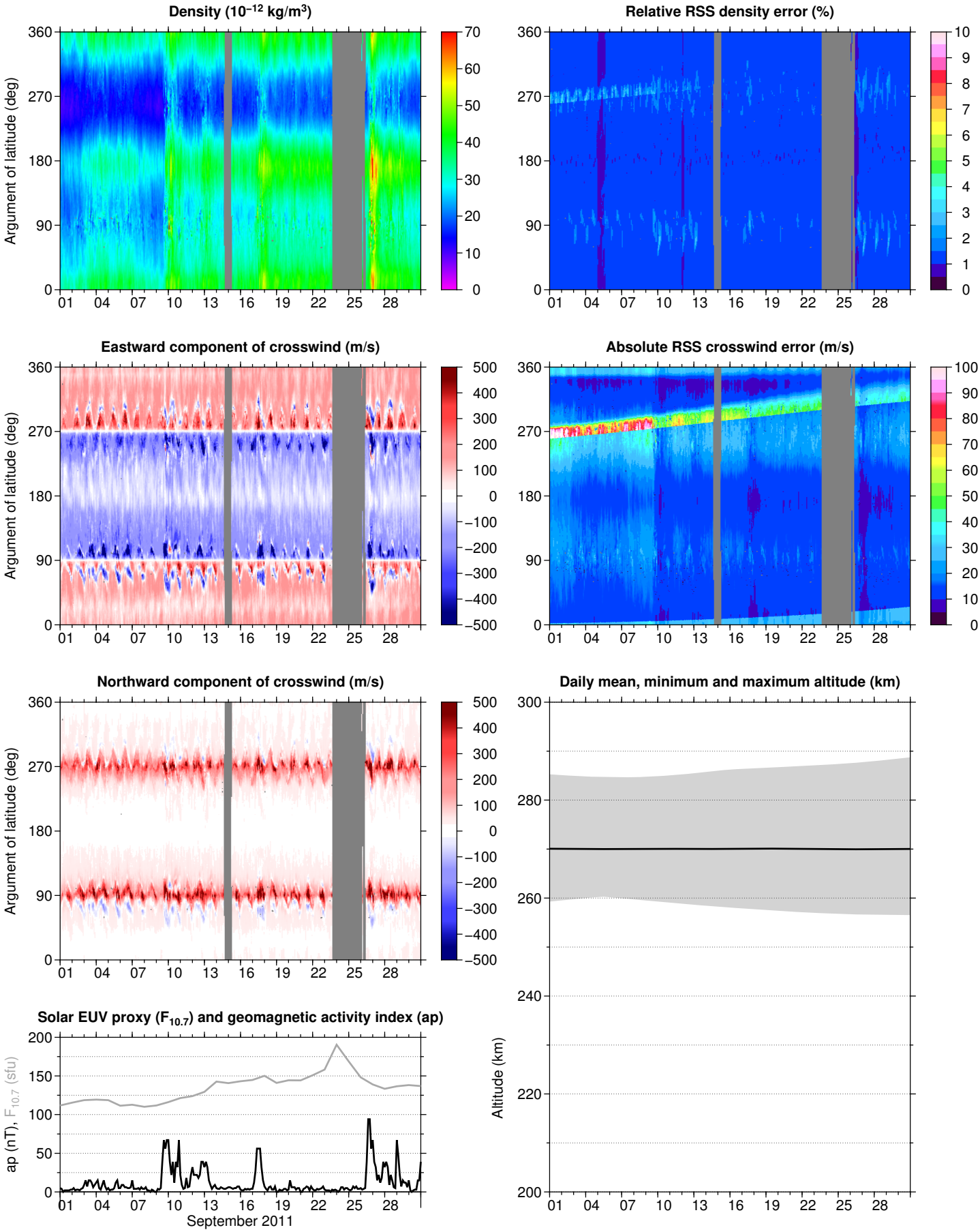

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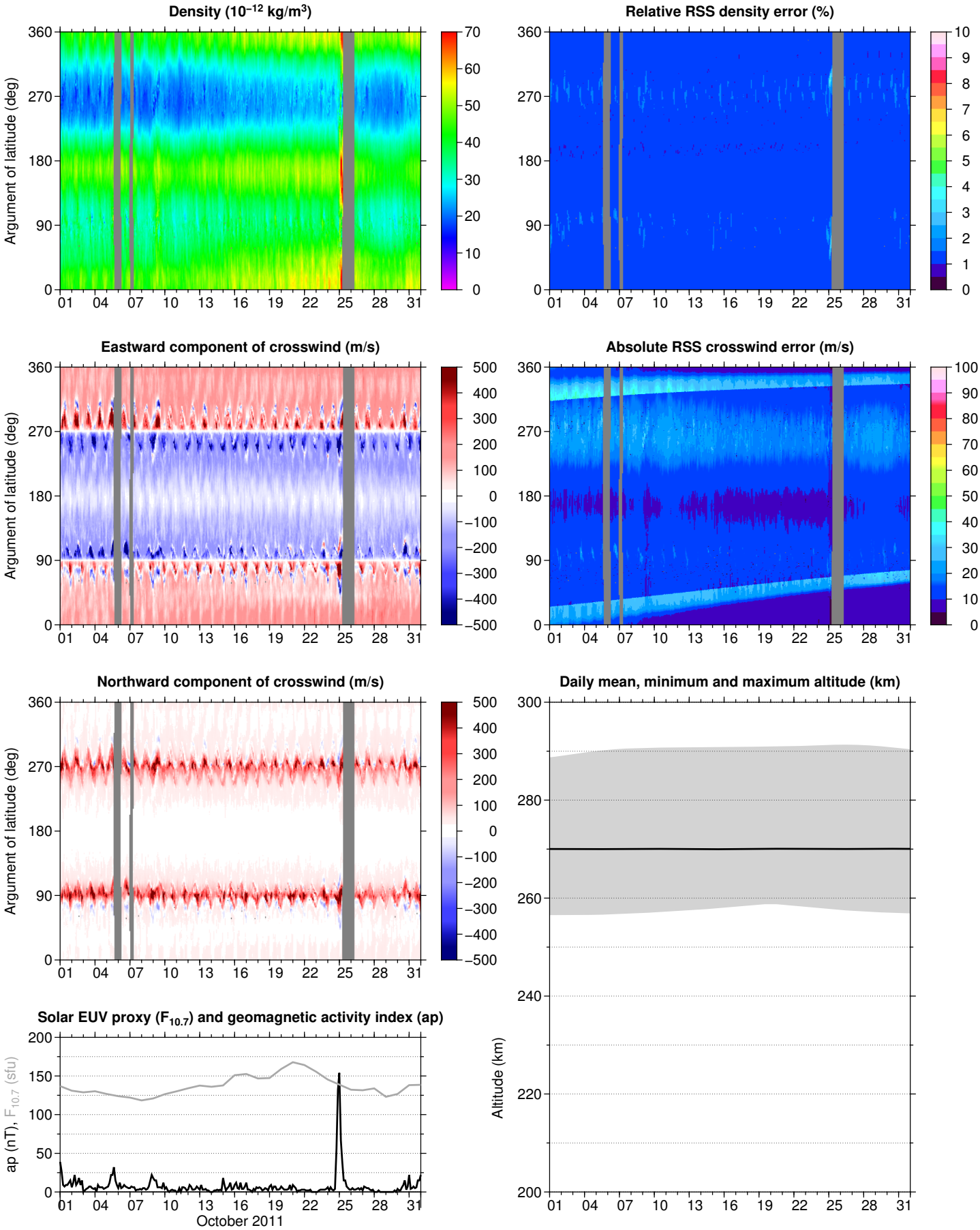

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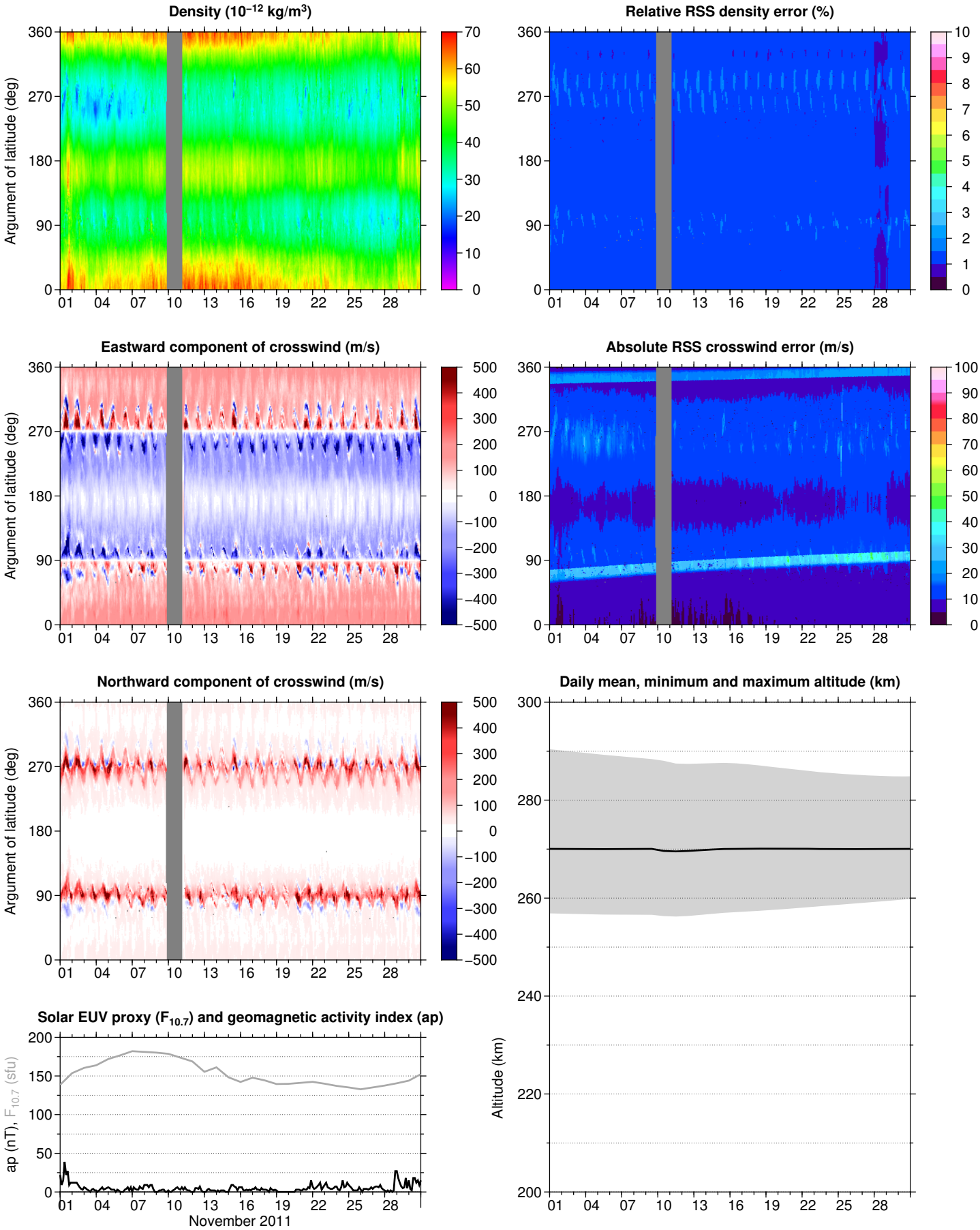

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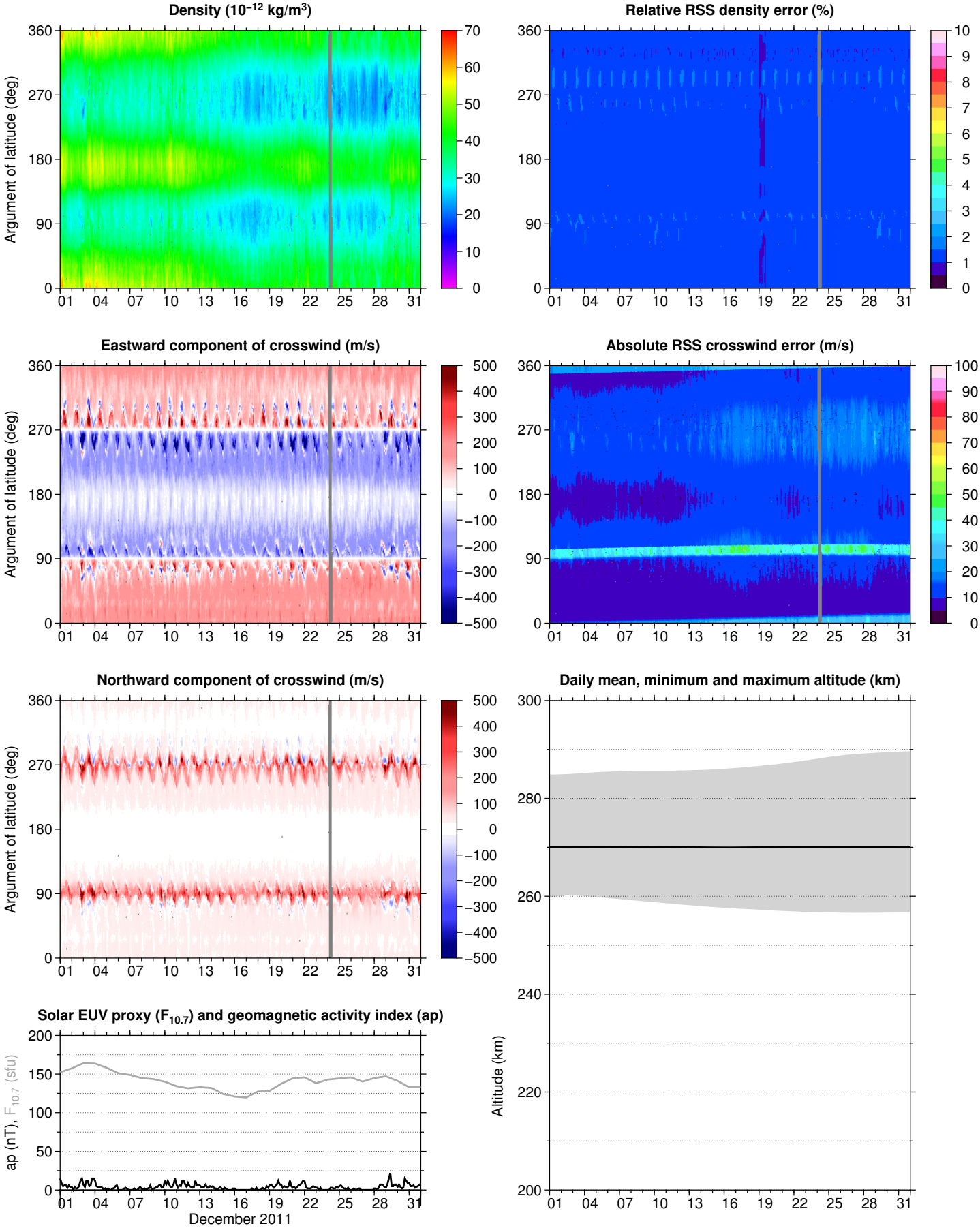

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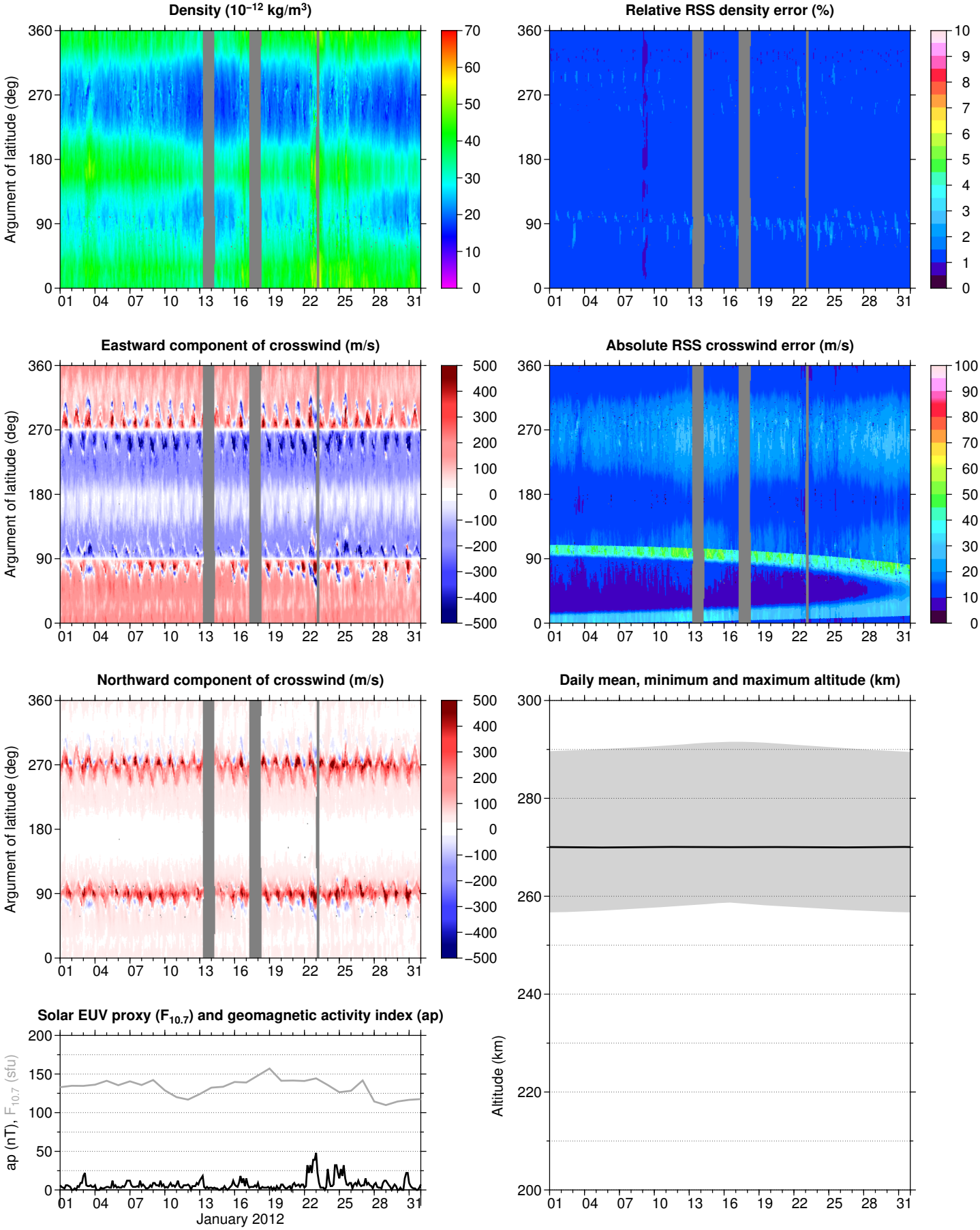

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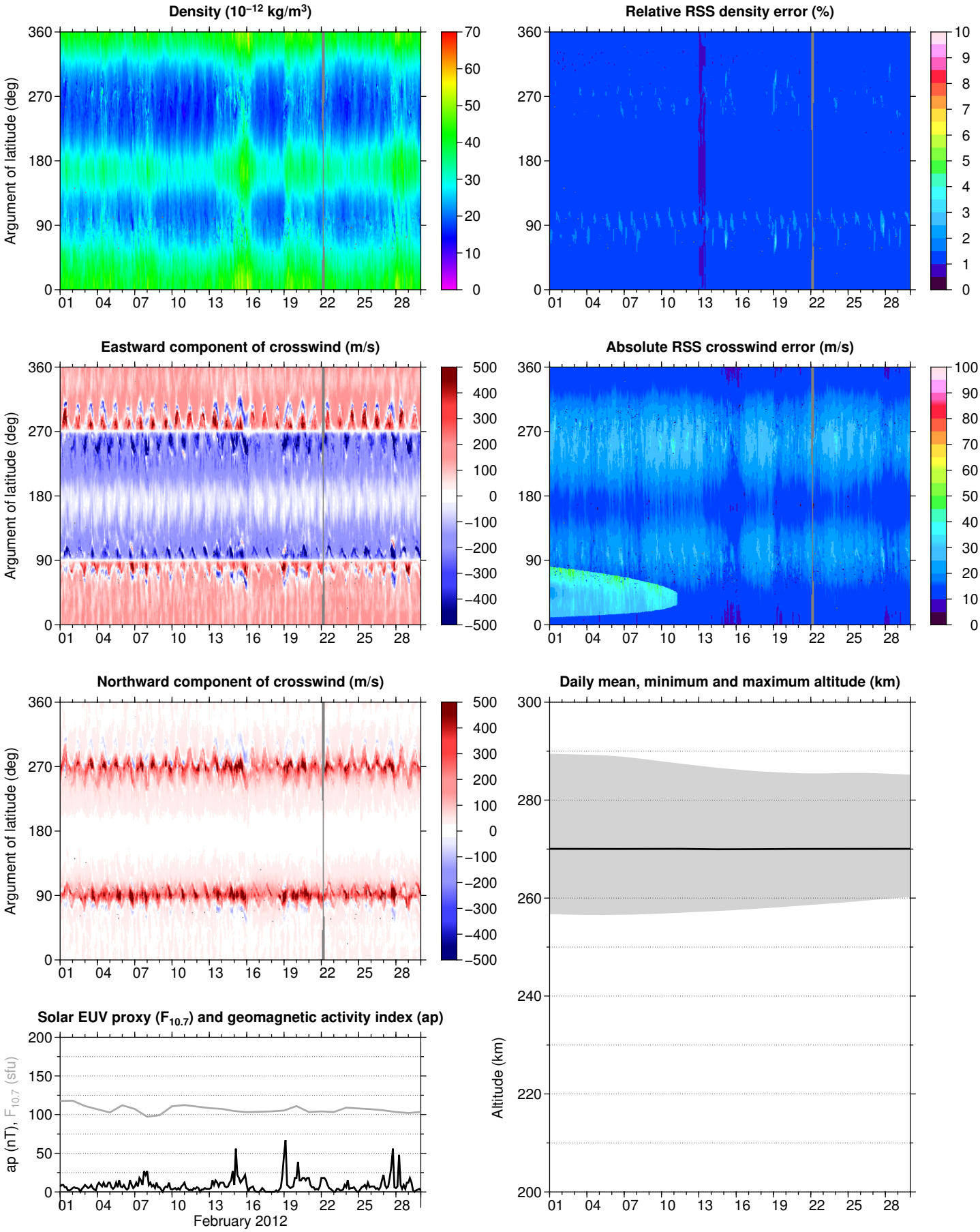

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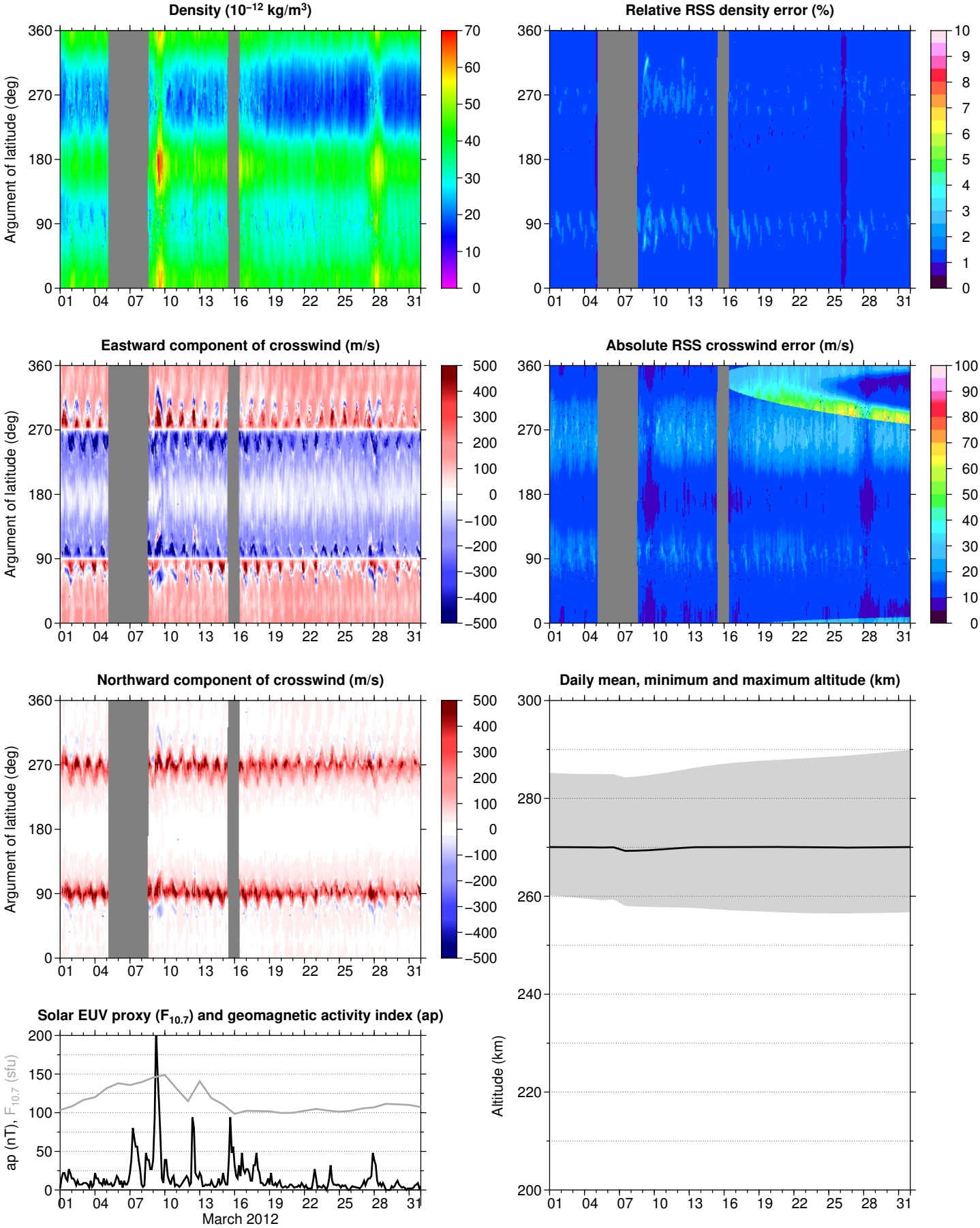

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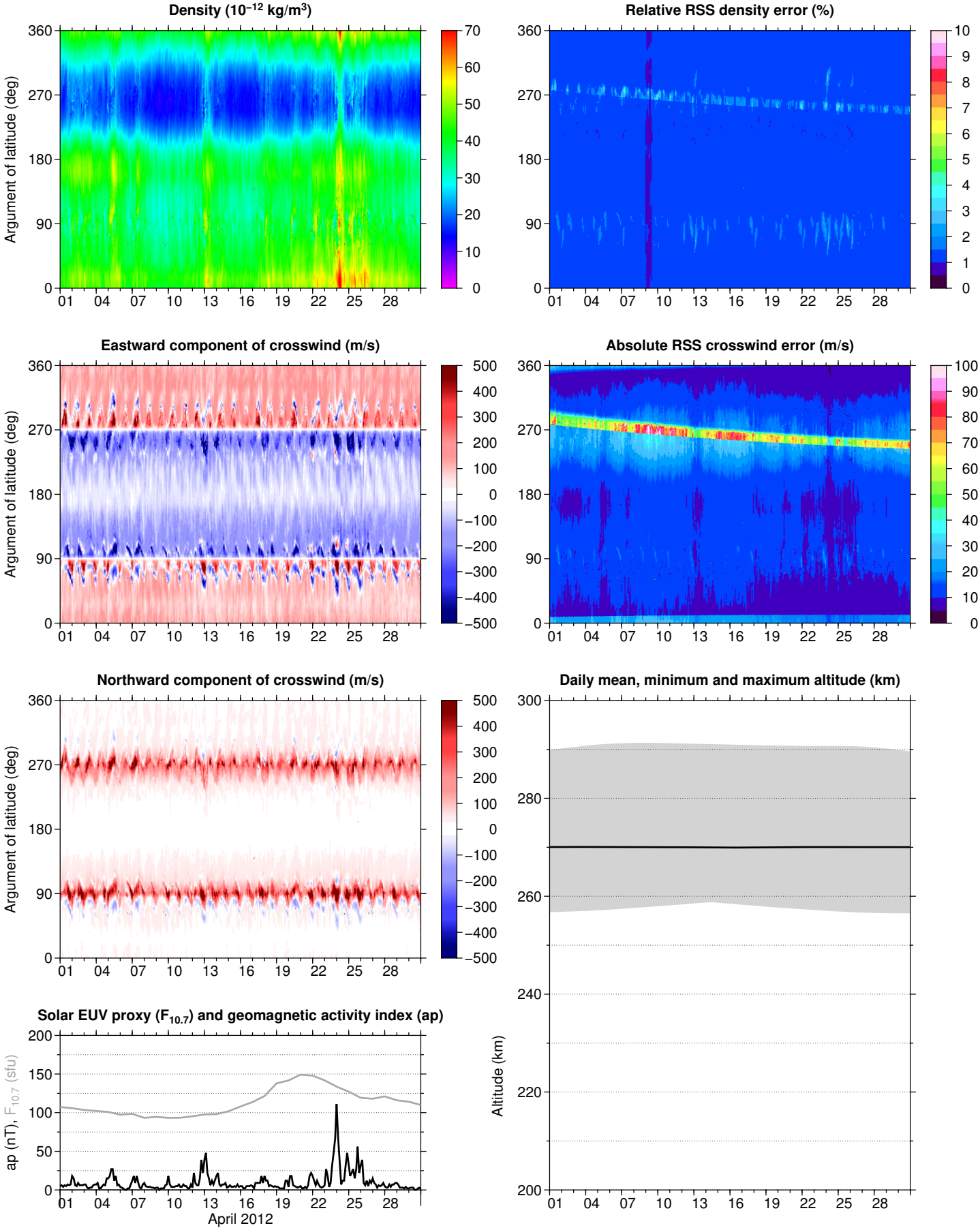
Thermosphere density and crosswind speed along the GOCE orbit

April 2012



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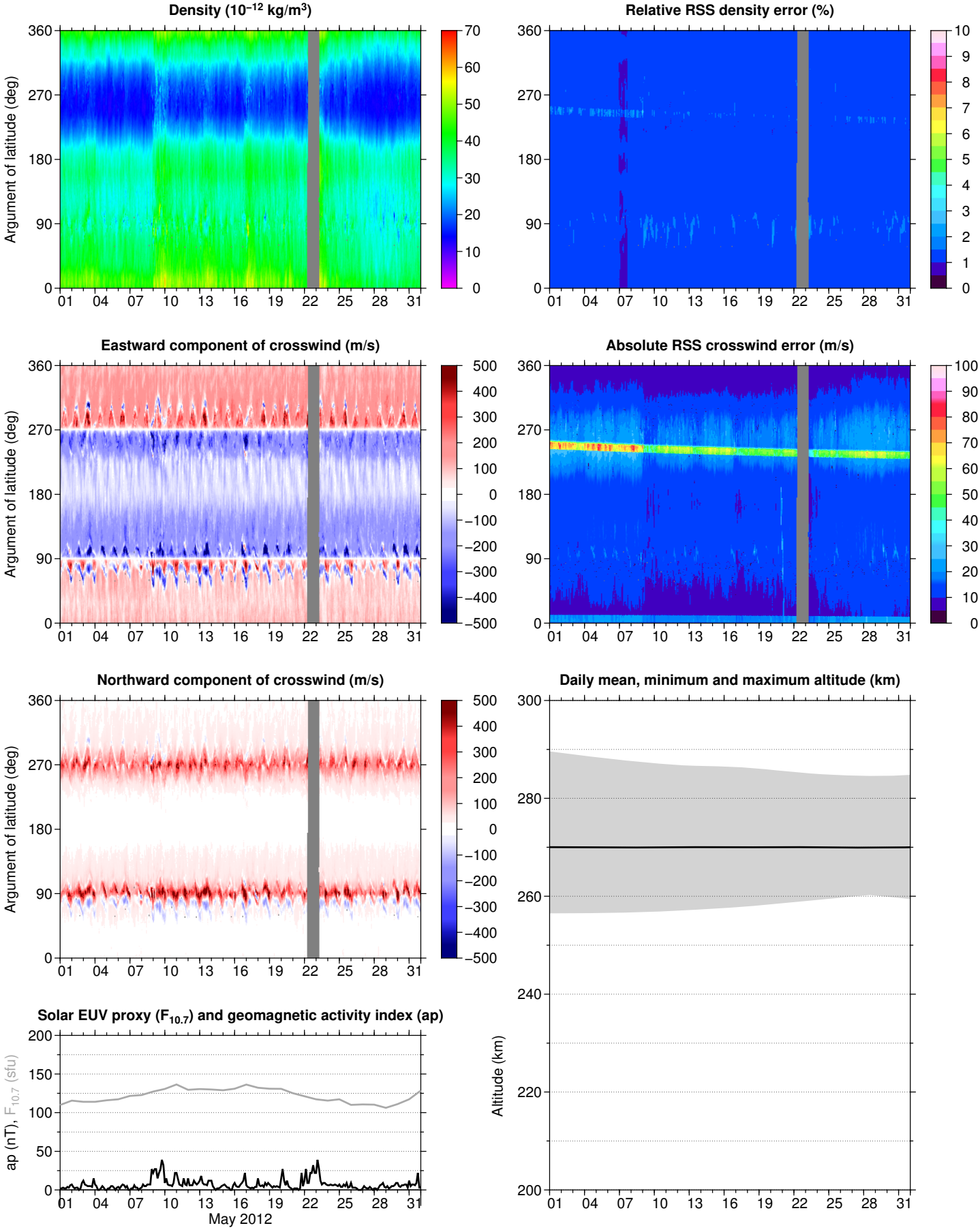
Thermosphere density and crosswind speed along the GOCE orbit

May 2012



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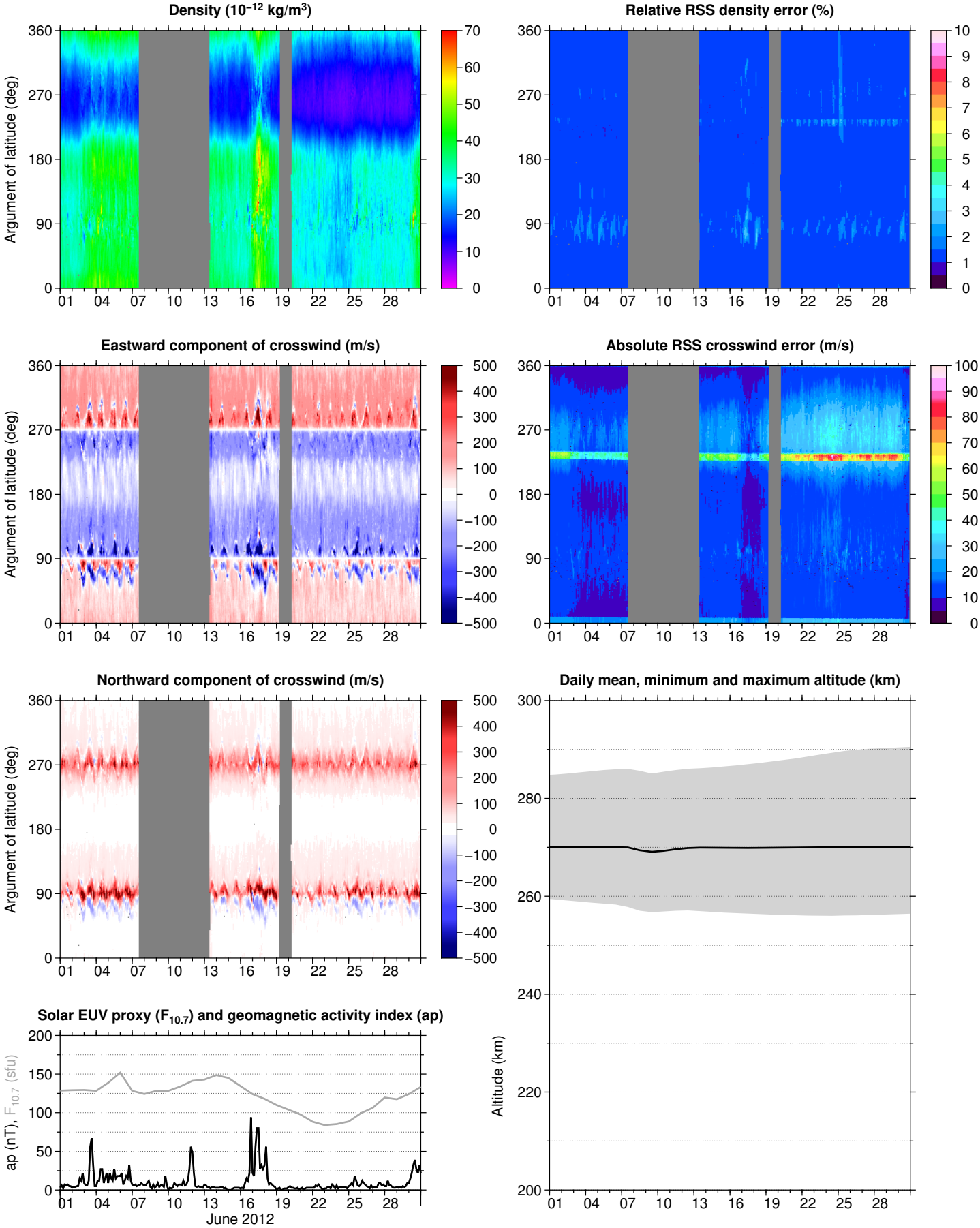
Thermosphere density and crosswind speed along the GOCE orbit

June 2012



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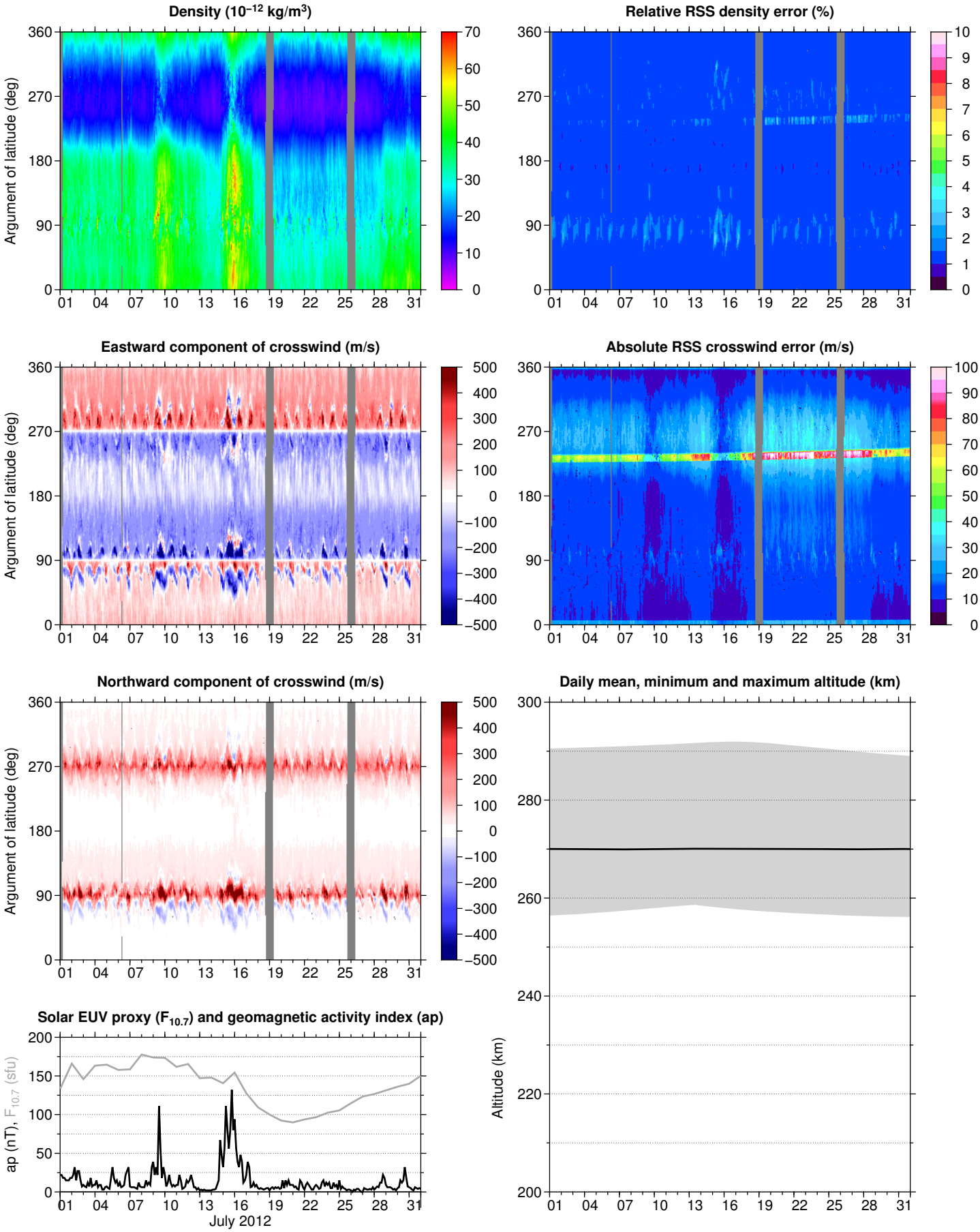
Thermosphere density and crosswind speed along the GOCE orbit

July 2012



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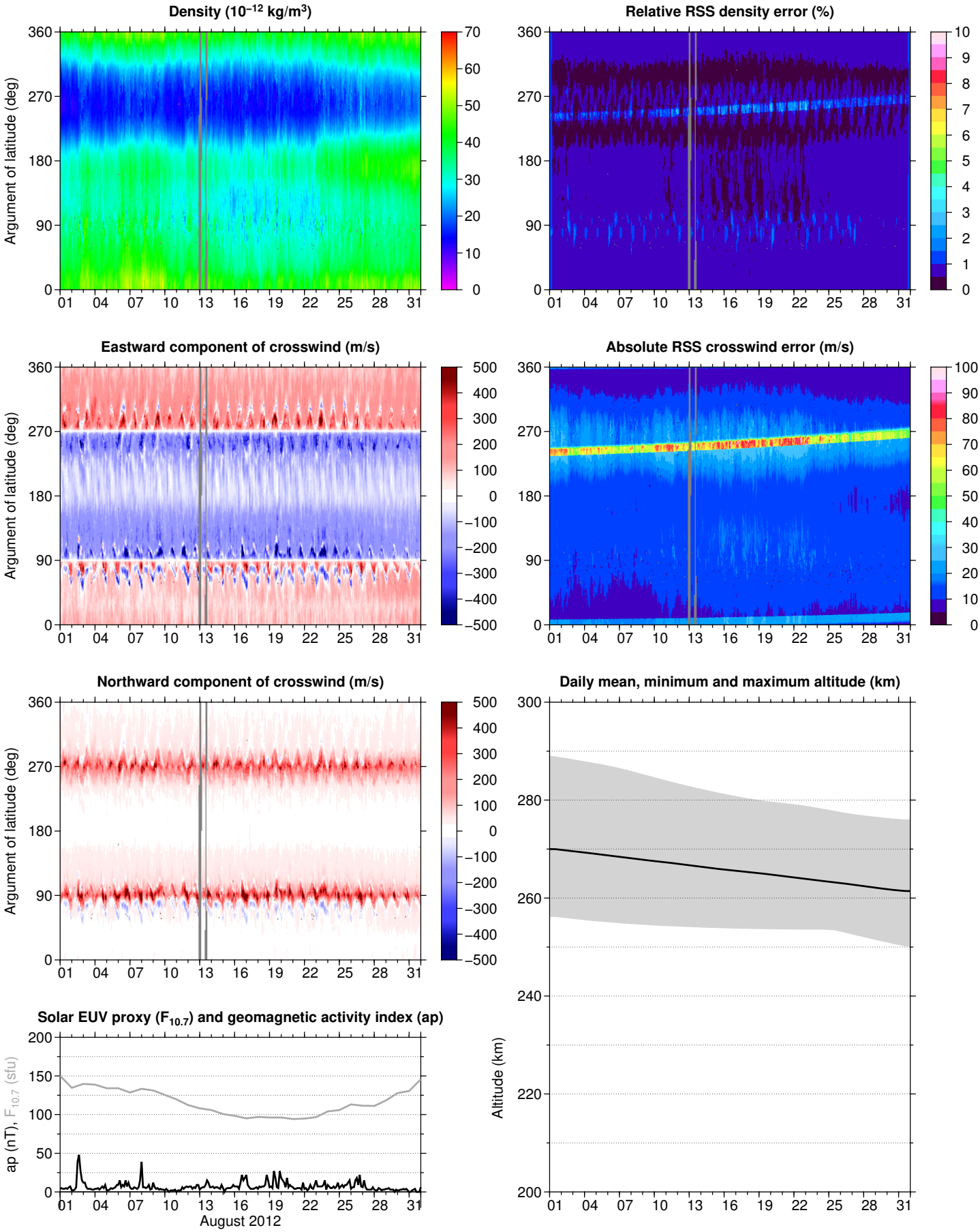
Thermosphere density and crosswind speed along the GOCE orbit

August 2012



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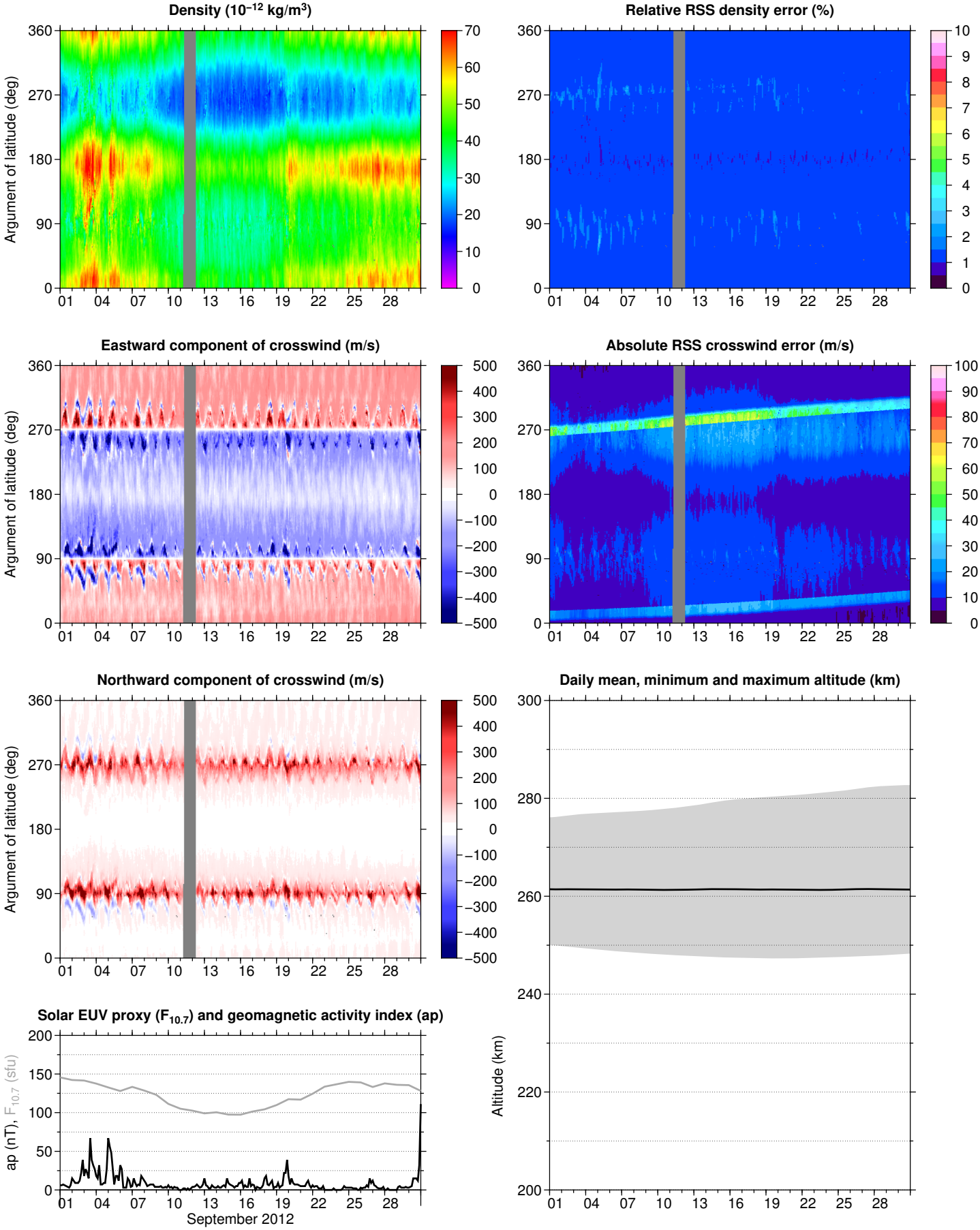
Thermosphere density and crosswind speed along the GOCE orbit

September 2012



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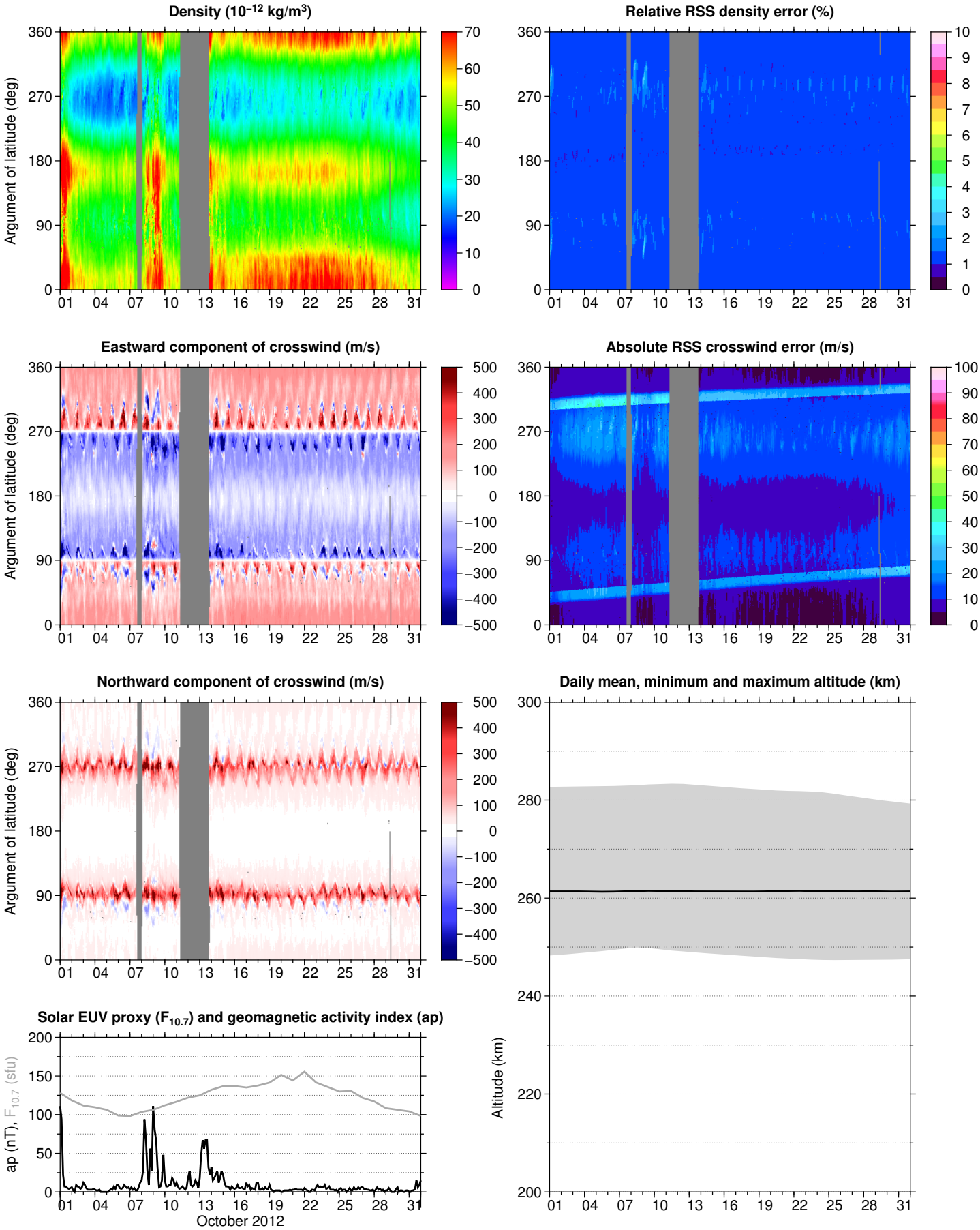
Thermosphere density and crosswind speed along the GOCE orbit

October 2012



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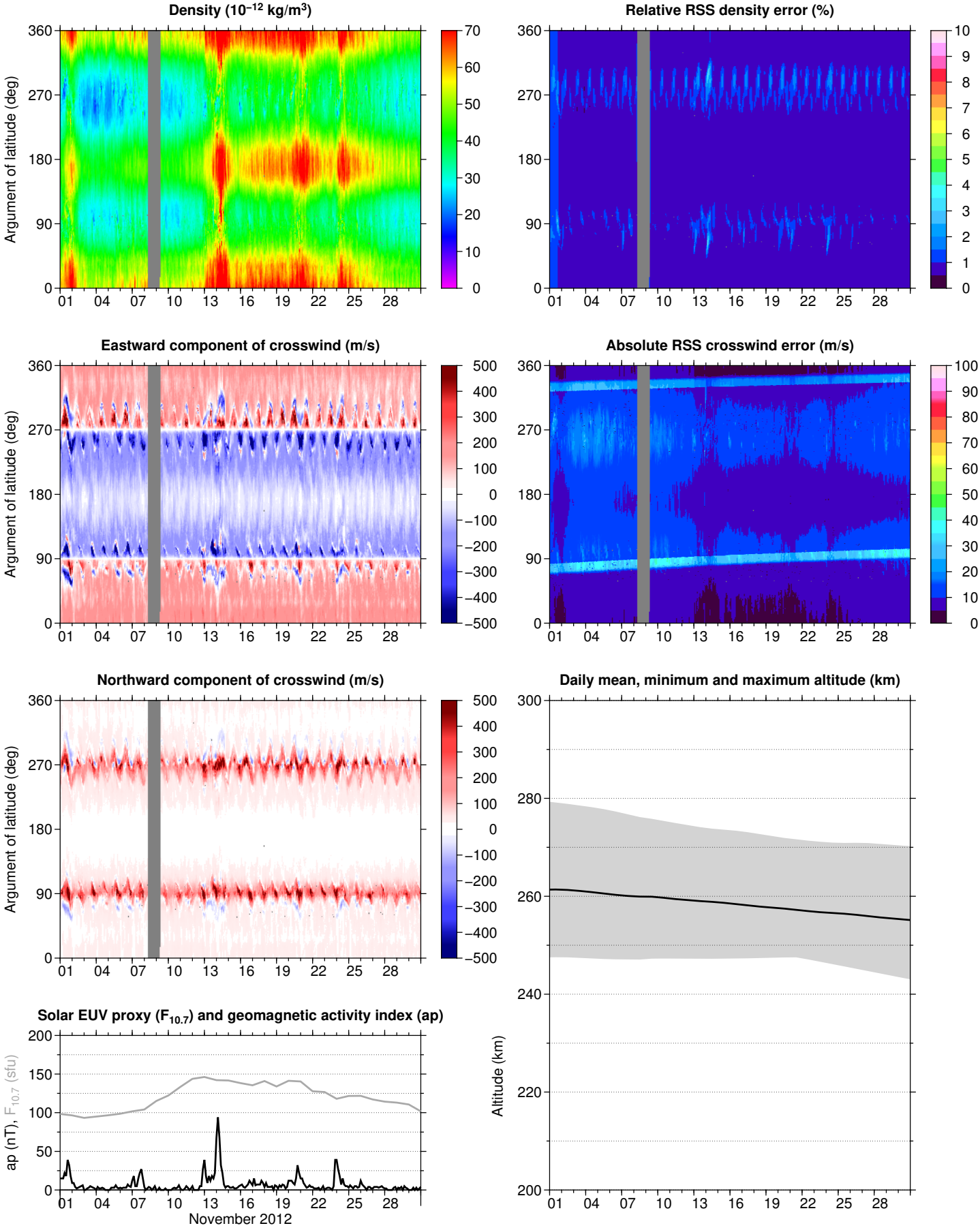
Thermosphere density and crosswind speed along the GOCE orbit

November 2012



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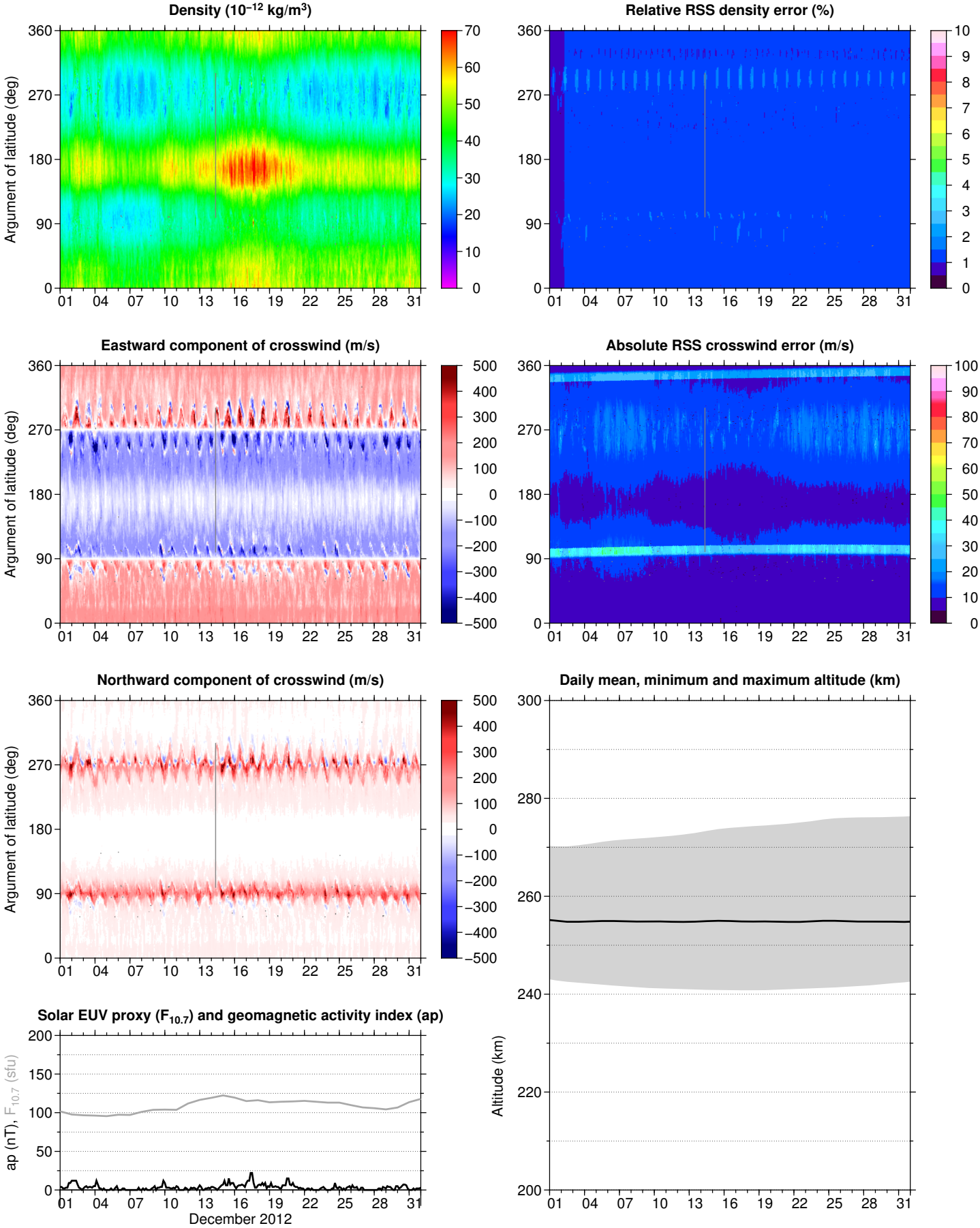
Thermosphere density and crosswind speed along the GOCE orbit

December 2012



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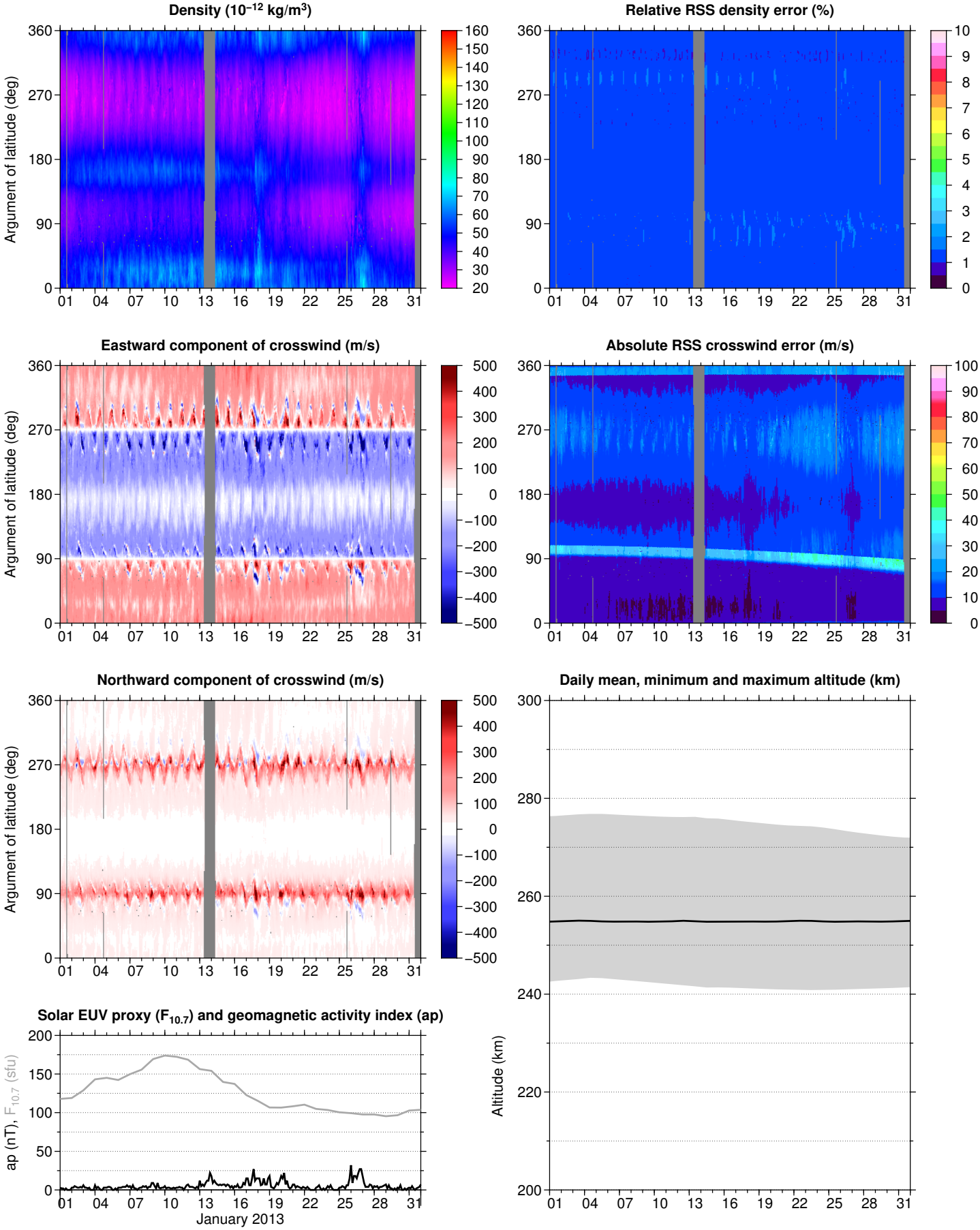
Thermosphere density and crosswind speed along the GOCE orbit

January 2013



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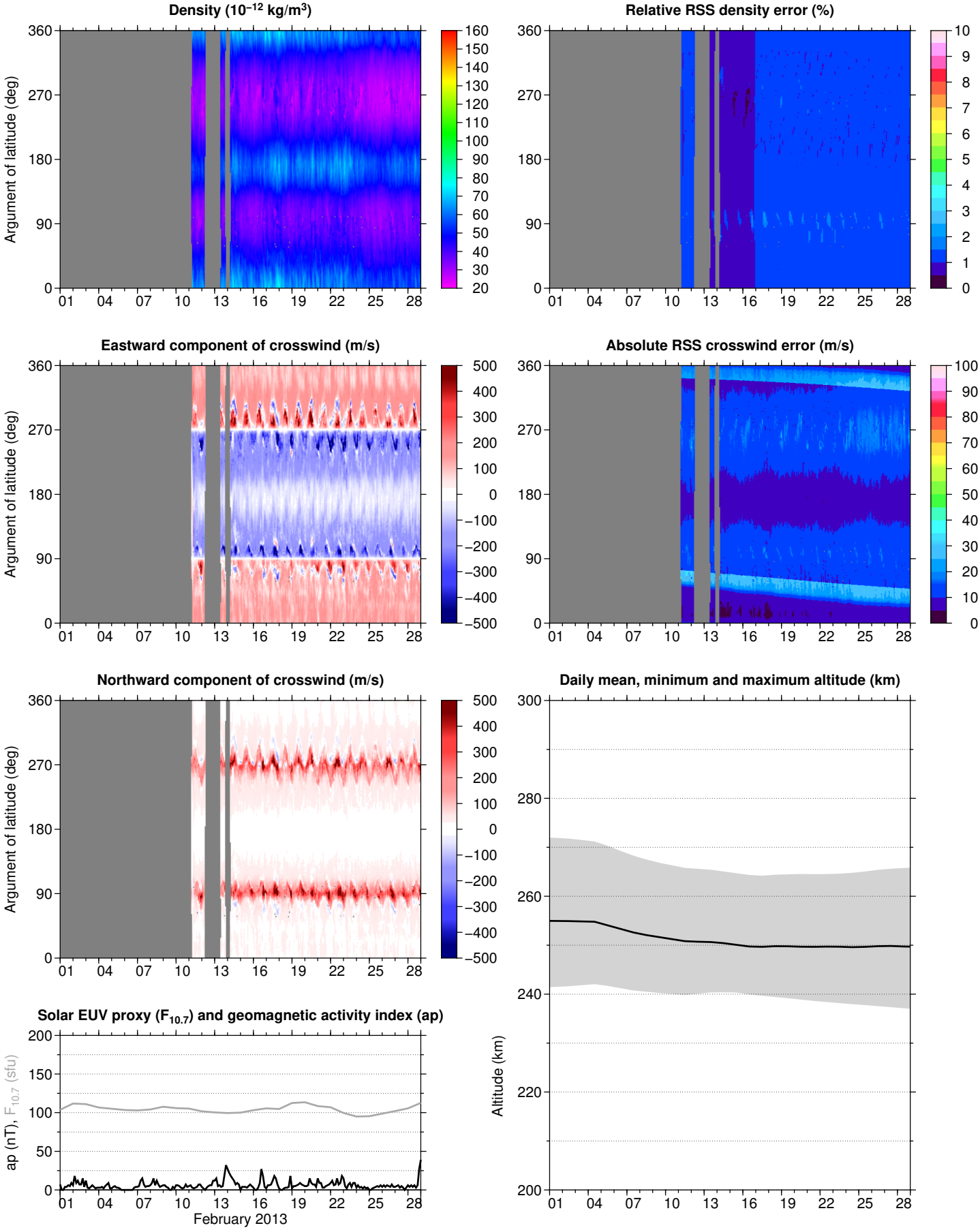
Thermosphere density and crosswind speed along the GOCE orbit

February 2013



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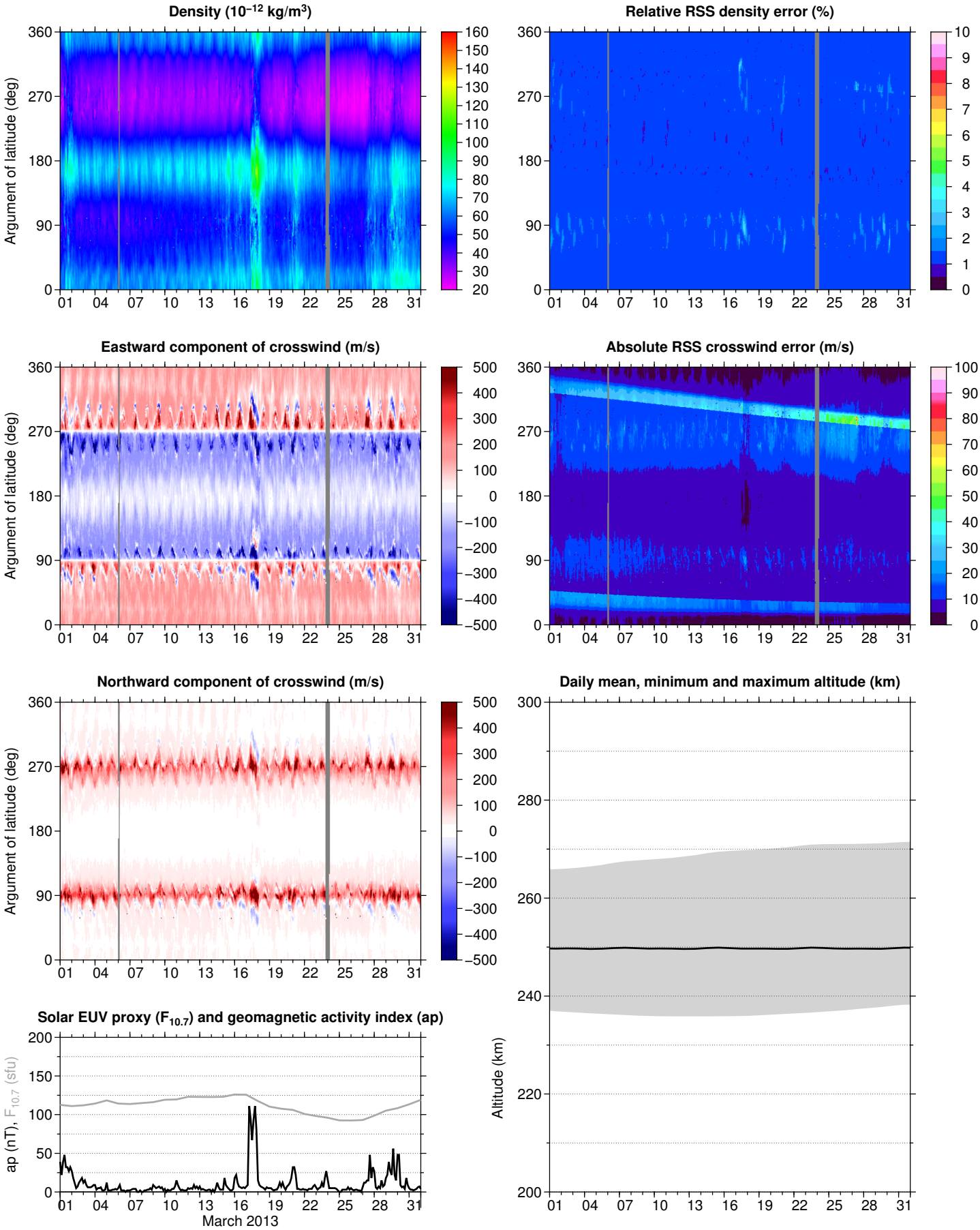
Thermosphere density and crosswind speed along the GOCE orbit

March 2013



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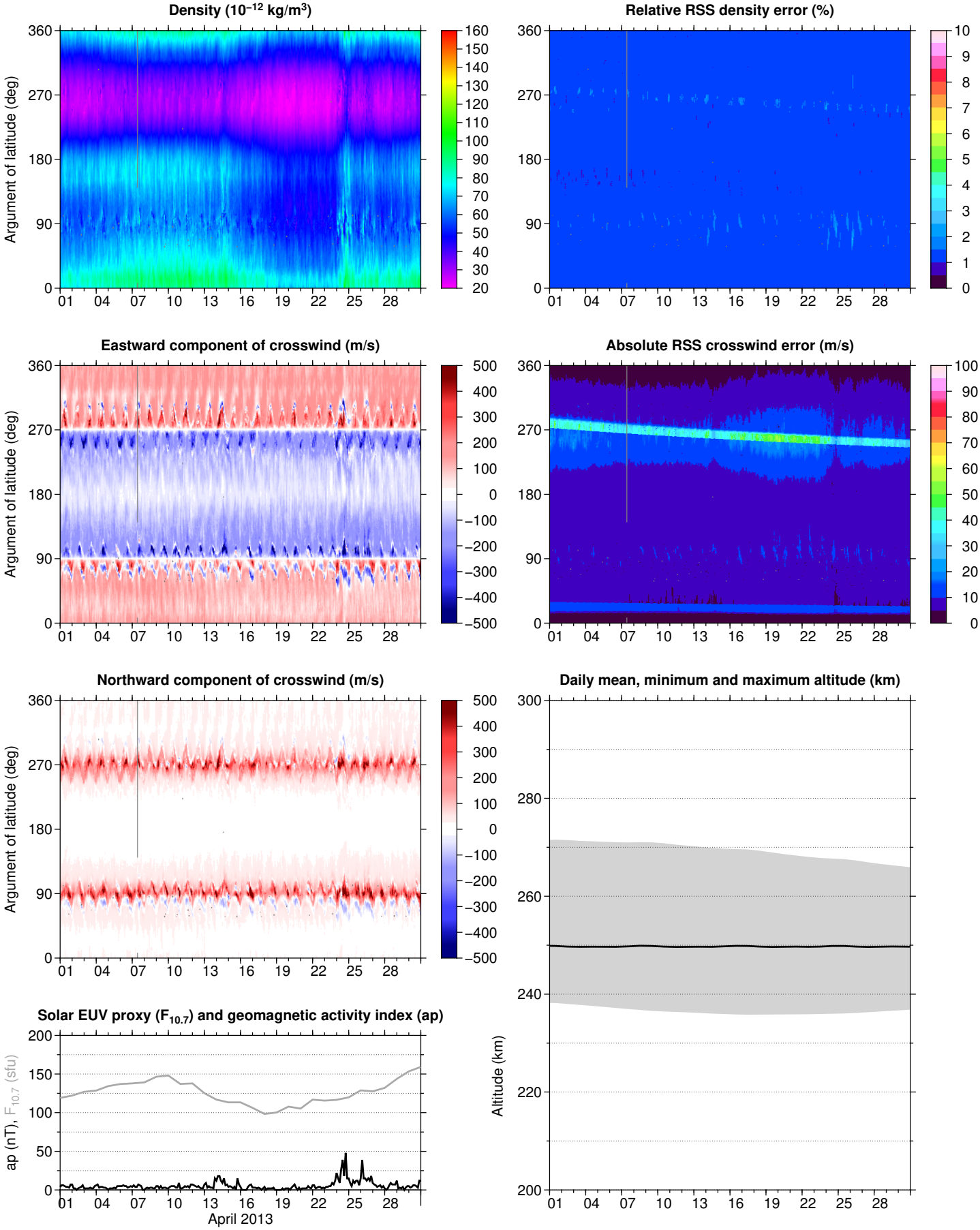
Thermosphere density and crosswind speed along the GOCE orbit

April 2013



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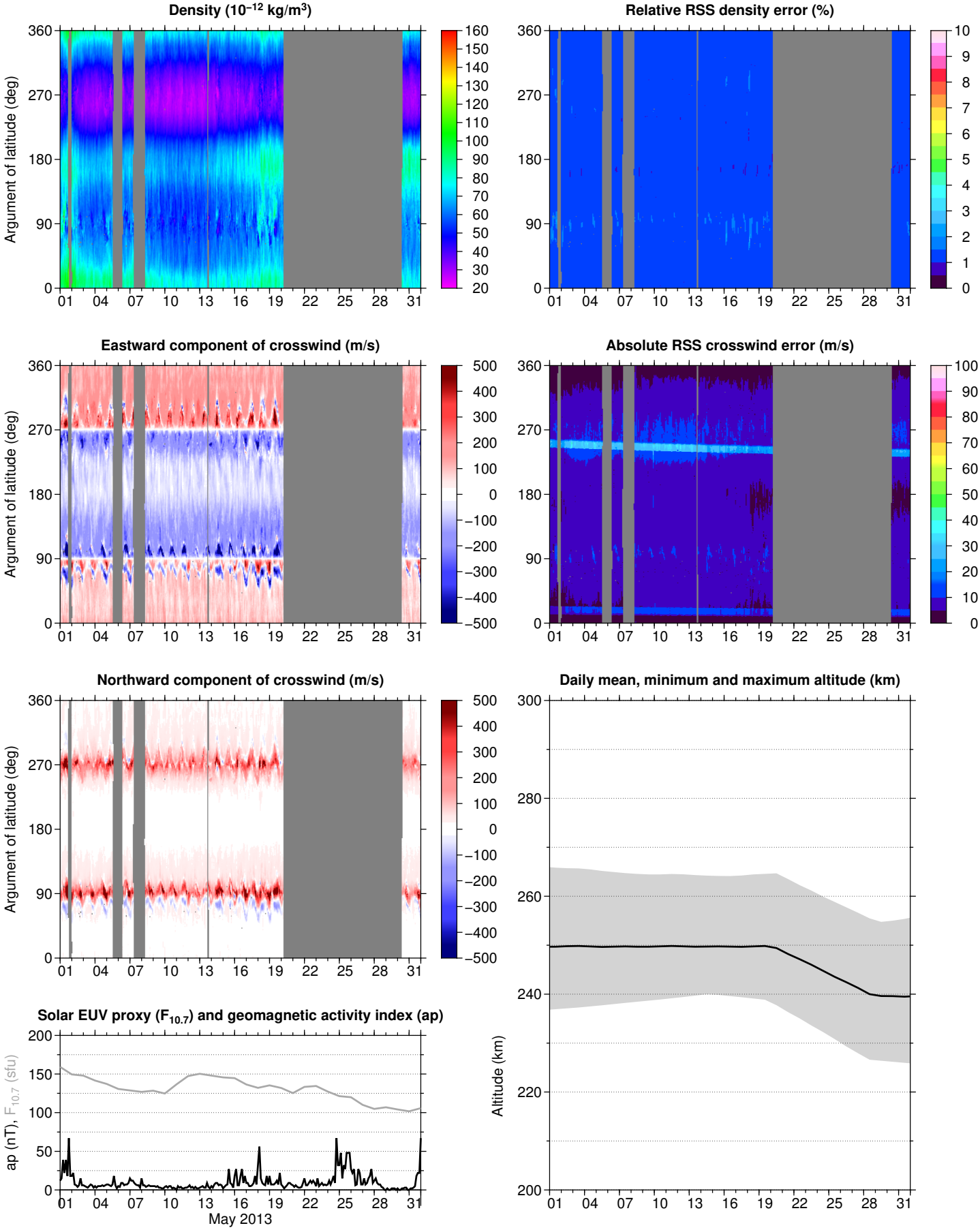
Thermosphere density and crosswind speed along the GOCE orbit

May 2013



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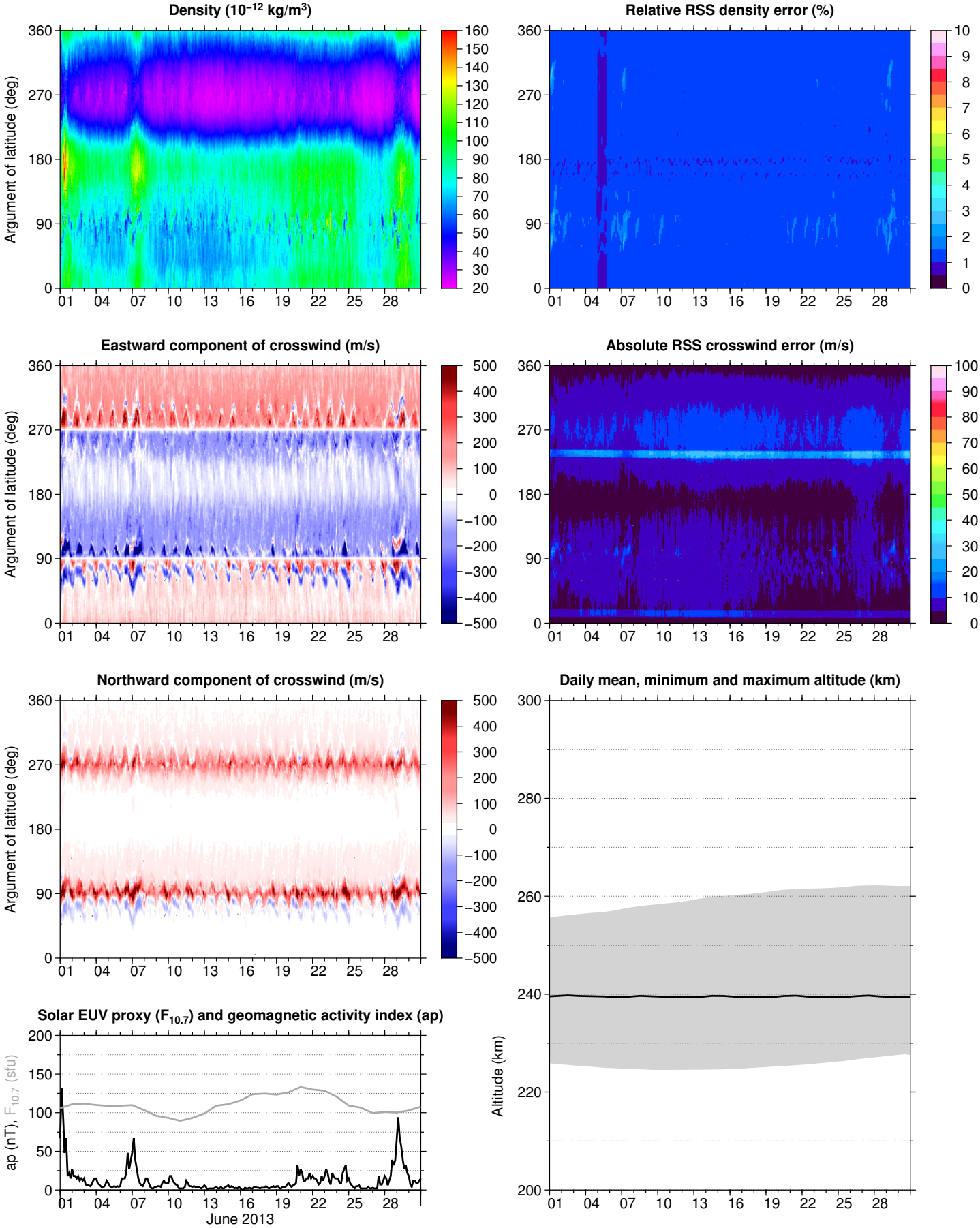
Thermosphere density and crosswind speed along the GOCE orbit

June 2013



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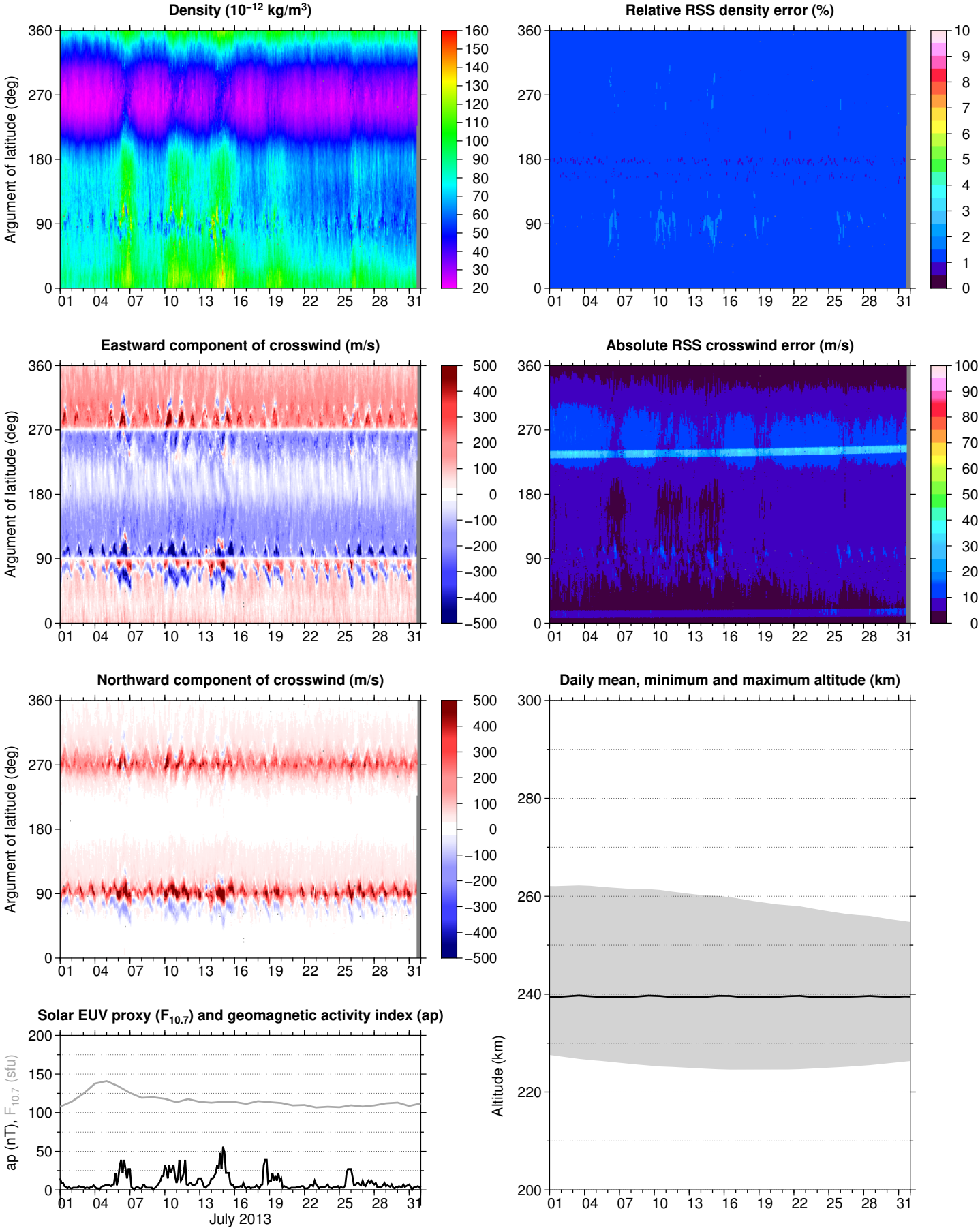
Thermosphere density and crosswind speed along the GOCE orbit

July 2013



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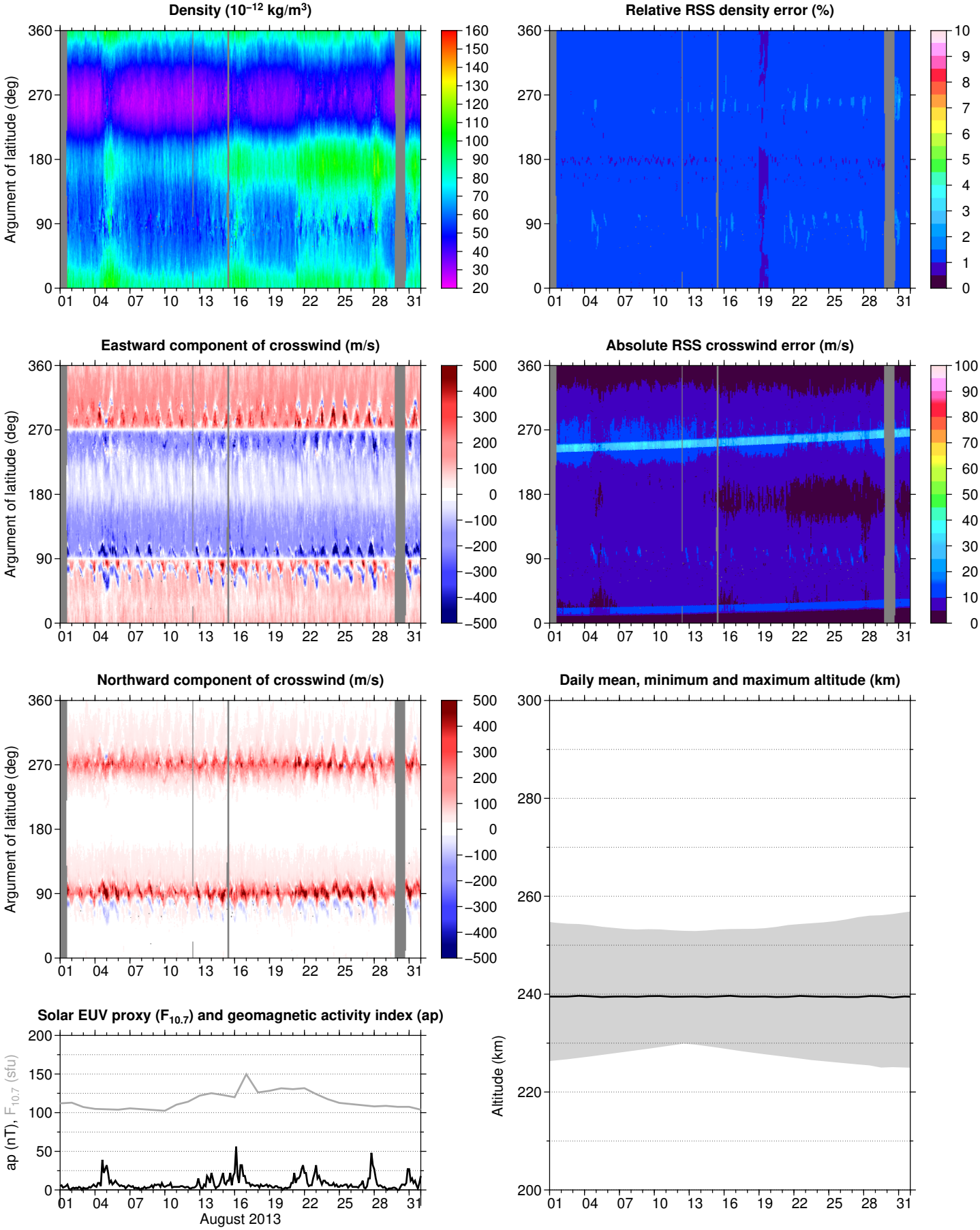
Thermosphere density and crosswind speed along the GOCE orbit

August 2013



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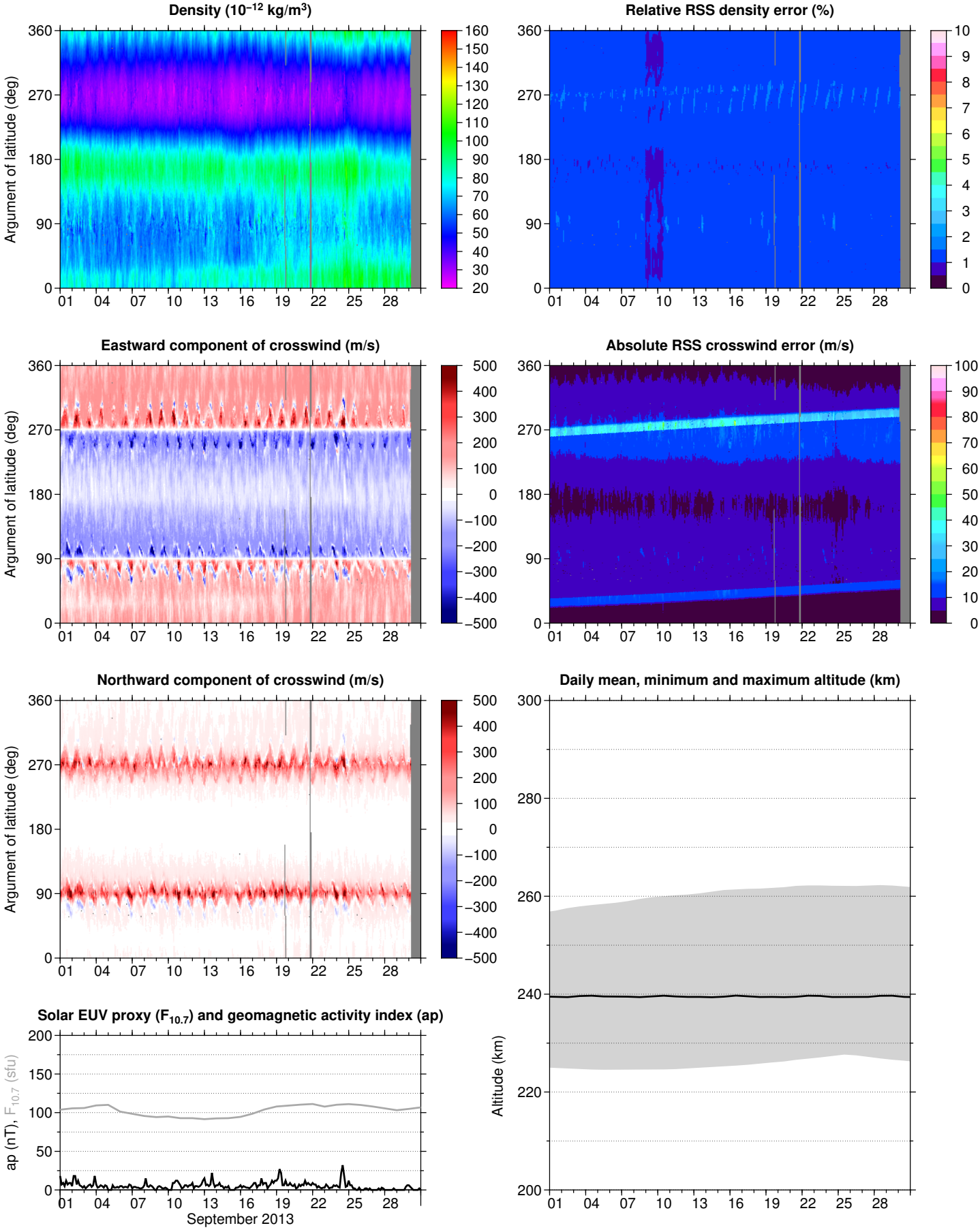
September 2013



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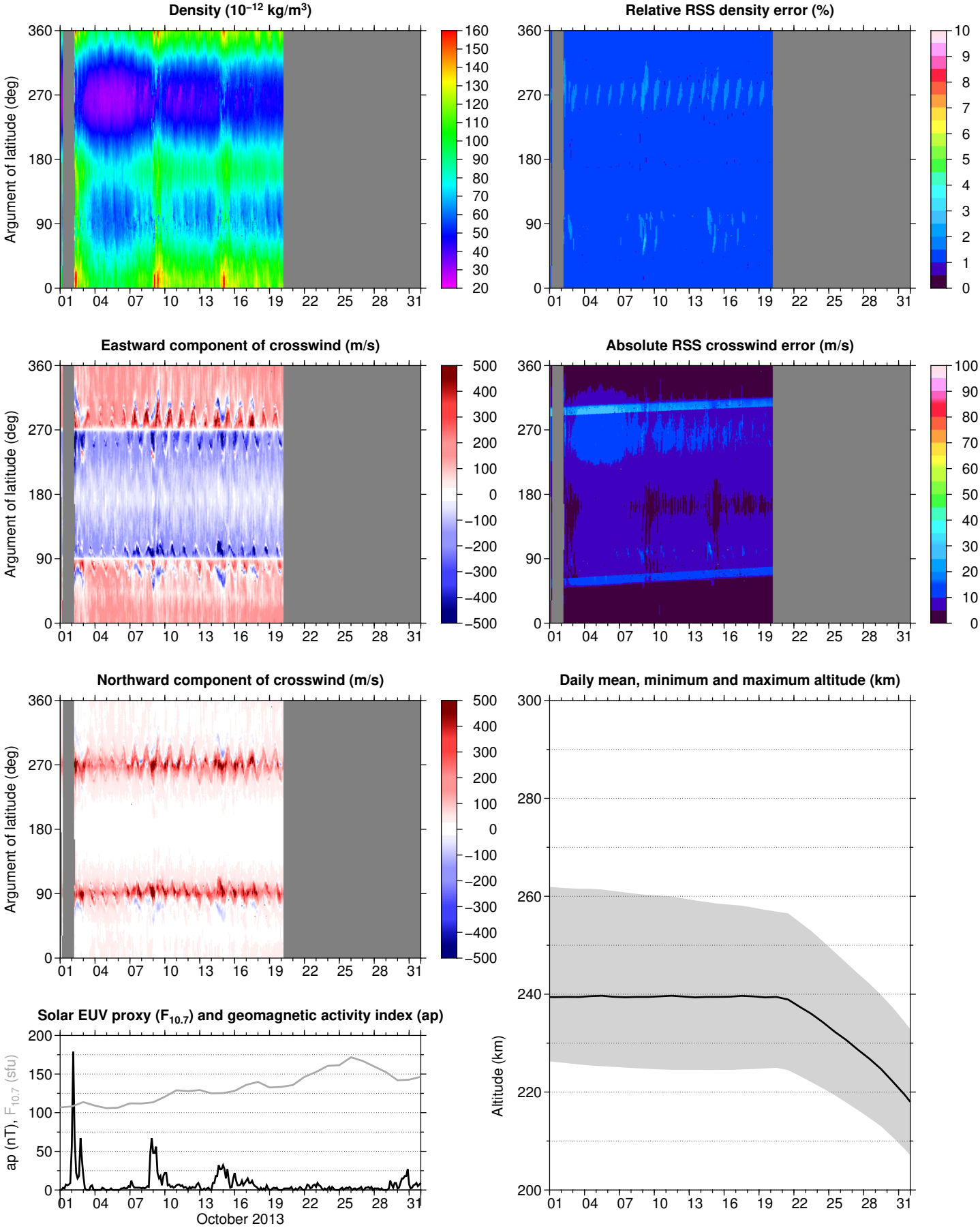
Thermosphere density and crosswind speed along the GOCE orbit

October 2013



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