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D O C U M E N T

document title/ *titre du document*

**DOPPLER CENTROID
CHARACTERISTICS FOR
ERS-2 SAR DATA ACQUIRED
DURING THE PERIOD:
1-14 JULY 2000**

a

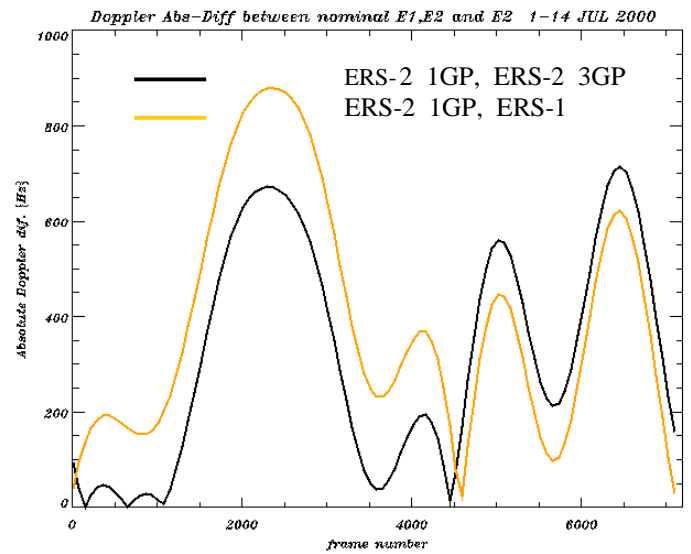
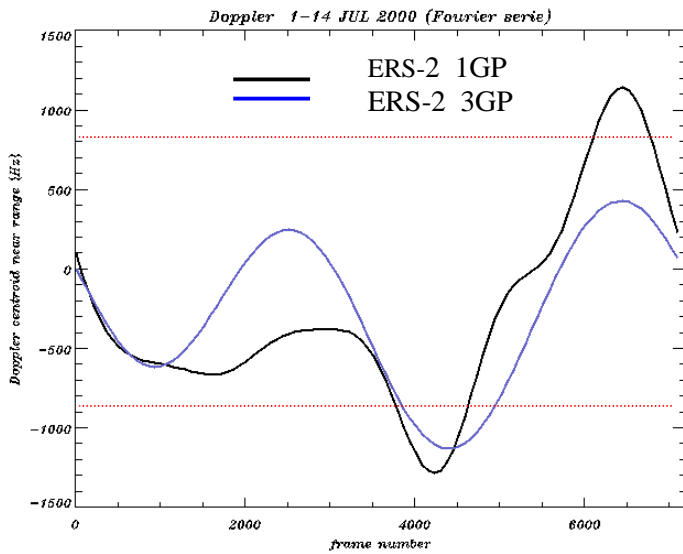
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doppler_2000_07_1_jul1.doc

1. Doppler Centroid model and Doppler Centroid differences

Left: Comparison between Doppler Centroid for ERS-2 3GP mode (up to 7th Feb. 2000) (blue) and for ERS-2 1GP(5) data (black) acquired between 1st – 14th July 2000 (left).

Right: Absolute Doppler Centroid difference between new ERS-2 1GP(5) and ERS-2 3GP (black), and between ERS-2 1GP(5) and ERS-1 (orange).



2. Doppler Model Coefficients (Fourier Series)

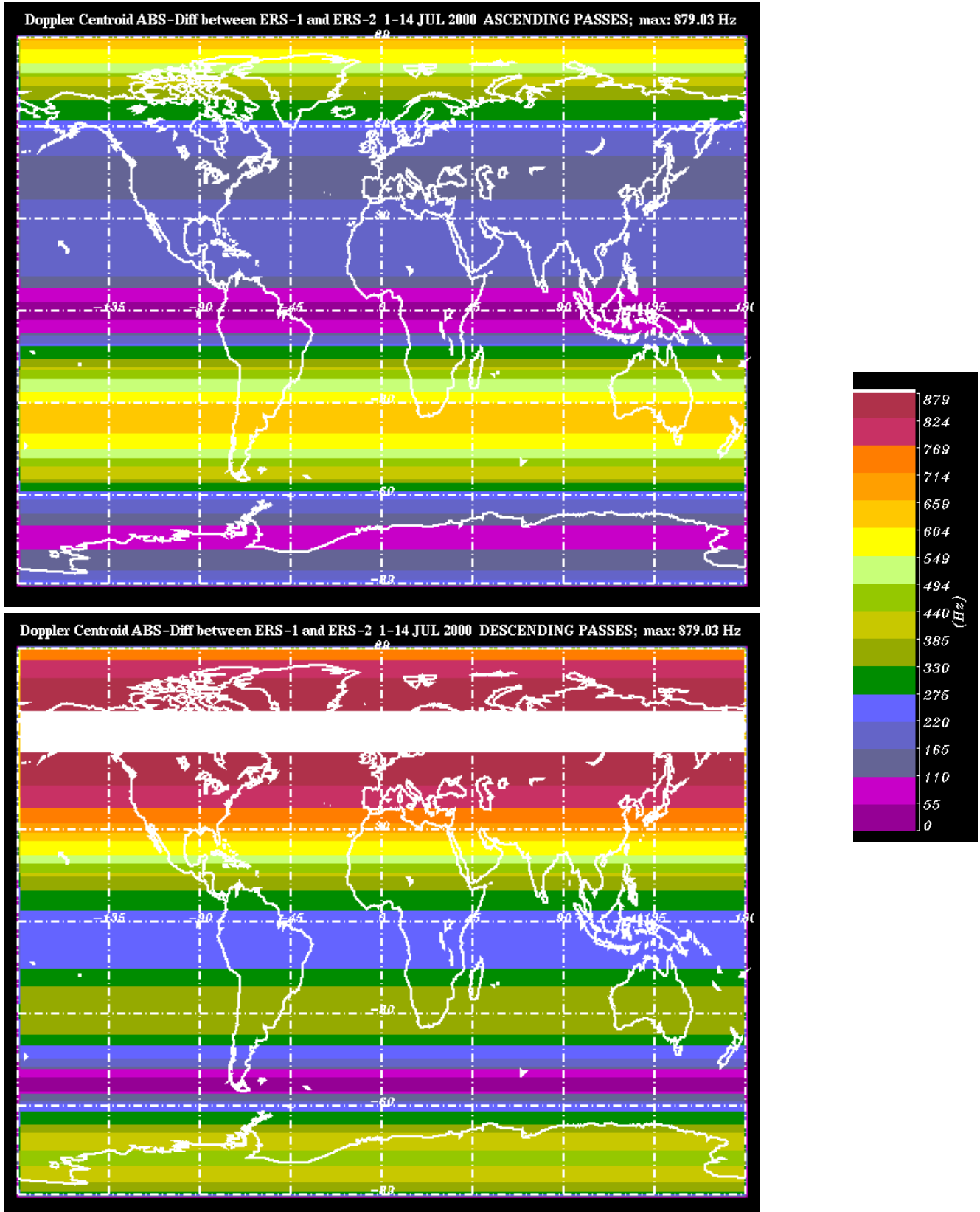
a_0 = -271.33361816
a_1 = 261.82157028
b_1 = 161.46967960
a_2 = 8.25048430
b_2 = 281.76994276
a_3 = -25.08909708
b_3 = 7.66467808
a_4 = -10.65482408
b_4 = 82.07076933
a_5 = -58.86571363
b_5 = 3.88217641
a_6 = 8.91681357
b_6 = -12.51129349

3. Doppler Difference maps

These maps intend to provide an easy way to identify the expected Doppler difference for a certain InSAR pair as a function of the acquisition time and geographical area.

The Doppler Centroid difference estimated around the orbit is overlaid on a map and colour coded. The Doppler difference for a complete orbit is split in one map for ascending and one for descending passes. The maximum error on these maps can be up to +/- 200 Hz and it is due to the fact that Doppler models are derived from SAR wave mode data and that attitude is less stable than for nominal 3GP mode.

4. Absolute Doppler Centroid difference between ERS-2 1GP (1-14/07/00) and ERS-1



5. Absolute Doppler Centroid difference between ERS-2 1GP (1-14/07/00) and ERS-2 3GP (up to 7/2/00)

