1DVAR studies with SEVIRI data and the HIRLAM model

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Potential use of SEVIRI data in the HIRLAM model VAR analysis is being investigated at SMHI. Initially, we test the performance of SEVIRI IR-channels simulations using RTTOV for clear sky cases. These simulations are being done utilizing the HIRLAM model output to set up the atmospheric conditions. Using these results, long-term bias-monitoring of SEVIRI measurements and HIRLAM model equivalents in observation space can be performed and are presented. Thereby, deficiencies in the radiative transfer calculations and shortcomings of the NWP model can be identified and characterized.

Furthermore, preliminary studies addressing the possible utilisation of SEVIRI clear sky IR radiances within HIRLAM VAR analysis system are examined. These studies are being done including achievements of a 1D-VAR code that analyses HIRLAM profiles and SEVIRI data. Therewith obtained results as well as a discussion about possible data thinning of the utilized satellite measurements are shown within this presentation.

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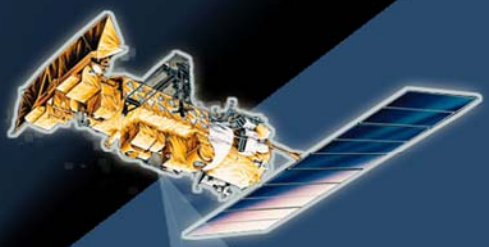

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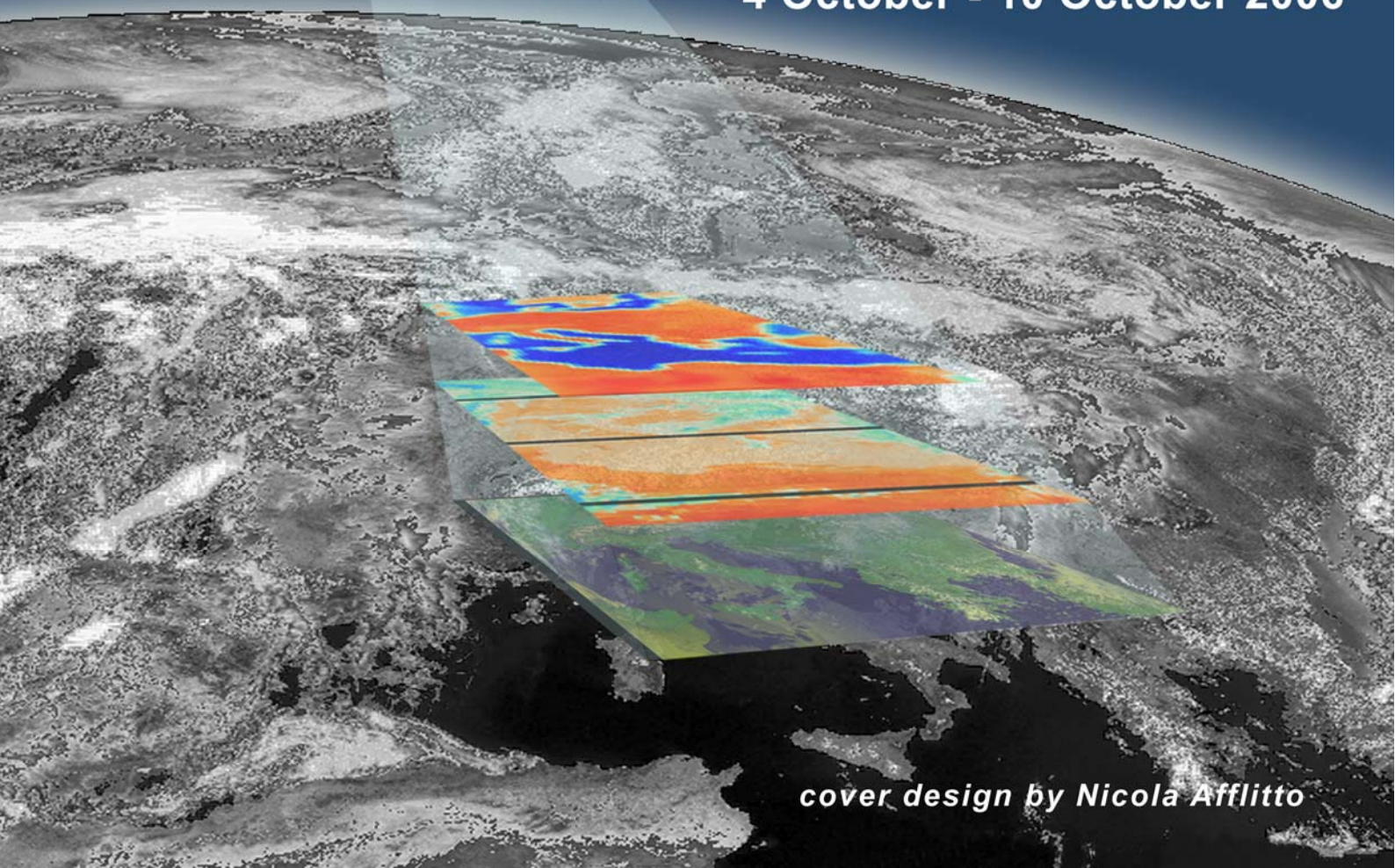

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