



Présentation CEMS. Mercredi 2 décembre 2020 10h30-12h.

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Evaluation of RTTOV to IR satellite observations from the 1970s and 1980s.

**Évaluation de RTTOV aux observations des satellites IR
des années 1970 et 1980.**

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The present study is a part of the Copernicus Climate Change Service (C3S) project on early satellite data rescue (311c Lot 1). This project started in order to evaluate the possibility to use the observations from infrared and microwave instruments, which flew in space in 70s to 90s, in the next ECMWF ERA-6 reanalysis. The project focused on infrared sensors such as the HIRS-1 to -4, MVIRI, IRIS-D, VTPR, MRIR, THIR, SIRS, HRIR, SSU and PMR. In this project, we (CNRM) are involved in studying the capability of RTTOV to simulate the infrared instruments cited before. There are three main objectives. The first one is to provide the RTTOV clear-sky coefficients for all IR instruments. The second one is to provide a validation of the RTTOV coefficients to IR on a large independent profile dataset (25000 profiles). The third objective is to provide forward model errors based on underlying spectroscopy variability using three LBLRTM versions. This presentation will show the principal results found during the development of this project.