4A/OP: An operational fast and accurate radiative transfer model for the infrared

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4A/OP is a user-friendly software for various scientific applications, co-developed by LMD (Laboratoire de Meteorologie Dynamique) and NOVELTIS with the support of CNES (the French Space Agency). NOVELTIS is in charge of the industrialization and the distribution of the LMD 4A radiative transfer model. 4A (4A stands for Automatized Atmospheric Absorption Atlas) is a fast and accurate line-by-line radiative transfer model particularly efficient in the thermal infrared region of the spectrum. NOVELTIS has created an "operational" version of this code called 4A/OP. The 4A/OP software is a version of the 4A code for distribution to registered users. This version is regularly updated and improved and contains a graphical user interface and a reference documentation. The associated Website http://www.noveltis.fr/4AOP/ includes an on-line registration form. 4A/OP has the official support of CNES for radiative transfer applications in the infrared. This software is used by several research groups and can be integrated in operational processing chains. In particular, 4A/OP is the reference radiative transfer model for IASI level 1 Cal/Val and level 1 operational processing. Thanks to the computation of Jacobians, the model can also be coupled with an inversion algorithm for the atmospheric constituent retrieval from infrared radiance measurements.