

## **OPTRAN Version 7**

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OPTRAN (Optical Path TRANsmittance) is a fast and accurate radiative transfer model for simulating radiometric measurements and computing radiance Jacobians of the atmospheric state variables. Since 1999, when OPTRAN version 6 was presented at the Tenth International TOVS conference, a number of important improvements have been made and implemented in OPTRAN version 7, including a constrained regression to improve Jacobian profiles, a reduction of the number of layers from 300 to 100 and a new way to handle polychromatic effects in channel transmittance calculations. In this presentation, we will review the changes that contribute to the improvements and demonstrate the statistics on the accuracy and efficiency of its forward and Jacobian models. We will also describe our plans for its future development.

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