



Equivalence of data fusion and simultaneous retrieval

Simone Ceccherini, Bruno Carli, and Piera Raspollini
IFAC-CNR, Firenze, Italy (s.ceccherini@ifac.cnr.it)

A new method for the data fusion of atmospheric vertical profiles, referred to as complete fusion, is presented. The performance of the method is compared with that of weighted and arithmetic means using the measurements of the MIPAS instrument. The complete fusion perfectly reproduces the results of the simultaneous retrieval with equal error estimates and number of degrees of freedom, while arithmetic and weighted means have relatively low vertical resolution and differ from the simultaneous retrieval by more than their errors.