



## **Some thoughts on effective emissions**

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Usually, emissions from local sources, such as aircraft, ships or large industrial complexes, are implemented in global chemistry transport models (CTMs) simply by homogeneously distributing the emissions in the large scale grid box of the CTM. This method neglects non-linear chemical processes occurring during the dilution of the emissions from the local exhaust to the regional scale of the CTM grid box. Petry et al. (1998) introduced the concept of effective emission in order to parameterise the local processes during dilution. Since then, several other concepts have been suggested. The present paper compares the concept and evaluates them with respect to their global effects.