

Direct, longwave radiative forcing of mineral dust: sensitivity study and improvement of its estimation

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■ Motivation

- The direct radiative forcing in the longwave domain is far from negligible (Markowicz et al., 2003; Vogelmann et al., 2003)
- However, it remains largely unexplored and is poorly understood
 - Presence of mineral dust is not dominant
 - Difficulties to parameterize accurately RTM and the lack of knowledge of the aerosol properties in the LW range, and of the thermodynamic state of the atmosphere

■ Poster outline

- Climatology study of the “typical” mineral dust in Barcelona
- Sensitivity study of its LW RF
- Application of tools recently developed by the EARLINET community to improve the estimation of the LW direct RF

Concept behind the improvement of the estimation of the LW, direct radiative forcing caused by large particles, namely dust particles (Sicard et al., Geophys. Res. Lett. 2014)

