Institute (algorithm name)	Radiative transfer	Satellite instrument	Algorithm specifics and aerosol type	Height	Reference(s)
BIRA-IASB (MAPIR)	Line-by-line Lidort, Mie	IASI	Optimal estimation; dust, ash	Vertical profiles and averaging kernels, 1 km resolution from 1 to 6 km, 1.5 to 2 degrees of freedom	Vandenbussche et al. (2013) Vandenbussche and De Mazière (2017)
DLR (IMARS)	No direct forward modelling, optical properties from Mie	IASI	PCA, spectral matching, Bayesian probability; dust, ice clouds, possible application to ash	Effective layer height from emission temperature	Klüser et al. (2011, 2012), Banks et al. (2013)
LMD	4A/OP-DISORT	IASI	Refractive indices from Volz (1972, 1973) and Balkanski et al. (2007)	Average weighted layer height	Peyridieu et al. (2010, 2013), Capelle et al. (2014)
LISA (AEROIASI)	Line-by-line KOPRA, Mie	IASI	Tikhonov–Philips auto-adaptive regularisation; dust	Vertical profiles and averaging kernels, 1 km resolution from 0 to 9 km, approx. 1.5 degrees of freedom	Cuesta et al. (2015)
KNMI	Line-by-line DISAMAR Henyey–Greenstein phase function	GOME-2	Optimal estimation; all types	Effective layer height, accuracy of 0.5–1 km if AOD > 0.3	Sanders and de Haan (2013)
IUP	Line-by-line SCIATRAN T-matrix	SCIAMACHY	Adjoint RTE; dust	Effective layer height	Lelli et al. (2017)