

Year	Author	Model	Parameterization	Effects	Forcing
1994	Jones et al.	Hadley	Empirical (CDNC Vs Na)	Cloud albedo effect of sulphate aerosol	-1.3 W/m ²
2005	Quass, Boucher, Lohmann	LMDZ, ECHAM	CDNC Vs AOD constrained by MODIS	Cloud albedo effect	-0.3 to -0.5
2000	Lohmann, Feichter, Penner, Leaitch	ECHAM	Mechanistic parameterization of cloud nucleation (updraft velocity and activation rate (updraft velocity, size, chemical composition))	Cloud albedo and lifetime effect (sulphate and carbonaceous aerosols)	-1.1 (int) to -1.5 (ext) (60% due to carbonaceous aerosol) (40% due to albedo effect)
2006	Ming, Ramaswamy, Donner et al.	GFDL	Prognostic Nd scheme, in addition to LWP and amount. Activation as a source of Nd.	Cloud albedo and lifetime effect (sulphate, sea salt and organic aerosols)	-1.8
2008	Storelvmo et al.	CAM-Oslo	Ice cloud	Effect on cold clouds	+0.2 W/m ²

Year	Author	Platform	Observation	Relationship	Notes
1992	Leitch et al.	Aircraft	Aerosol mass, Cloud	CDNC Vs CCN	Warm clouds
2008	Quass, Boucher, et al	CERES and MODIS	Albedo and cloud cover, AOD, LWP, CDNC	CDNC Vs AOD LWP Vs AOD Cloud cover Vs AOD	-0.2 W/m ² (albedo); -0.1 to -3 (lifetime)
2003	Feingold	ARM ground (radar and lidar, radiometer)	Cloud drop size, aerosol extinction, LWP	Effective radius Vs aerosol extinction Slope Vs velocity	Non-precip, warm cloud
2002	Peng, Lohmann, Leitch, et al	Aircraft	Albedo, LWC, aerosol number, droplet number drizzling number	Polluted: LWC larger, drizzling smaller, Droplet smaller	60% due to droplet size; 40% due to larger LWC
2003	Sassen et al.	Aircraft, lidar	Ice nuclei, aerosol profile	IN and aerosol concentration	Mixed phase cloud