

Data used for CH₄ compilation

Data set name	Data type	Reference	CH ₄ offset (ppb)
NGRIP_Be18	NGRIP ice core	This study	0
GRIP_FI01	GRIP ice core	GRIP data Flückiger (2001, unpublished)*	17.69
GISP2_Br96	GISP2 ice core	Brook et al. (1996)	34.13
GISP2_Br09	GISP2 ice core	Brook (2009)	-1.81
GISP2_Mi13	GISP2 ice core	Mitchell et al. (2013)	-6.15
TALDICE_Bo17	TALDICE ice core	Bock et al. (2017)	0
TALDICE_Sc10	TALDICE ice core	Schilt et al. (2010)	-2.09
EDML_Sc10	EDML ice core	Schilt et al. (2010)	-4.63
WAIS_Mi13a	WAIS (WDC05A) ice core	Mitchell et al. (2013)	-6.15
WAIS_Mi13b	WAIS (WDC06A) ice core	Mitchell et al. (2013)	-6.15
EDC_FI02	EDC ice core	Flückiger et al. (2002)	4.23

Additional data used for time matching

Data set name	Data type	Reference
NGRIP_d18O	NGRIP ice core $\delta^{18}\text{O}(\text{H}_2\text{O})$	Rasmussen et al. (2006); Vinther et al. (2006)
NGRIP_Ba12	NGRIP ice core	Baumgartner et al. (2014)
NEEM_Bu12	NEEM firn model	Buizert et al. (2012)
NOAA_Alert	Alert flasks	Dlugokencky et al. (2017)
LawDome_Ma06	Law Dome firn and ice core	MacFarling Meure et al. (2006)
CapeGrim_csiro	Cape Grim flasks	CSIRO (27 November 2017)