

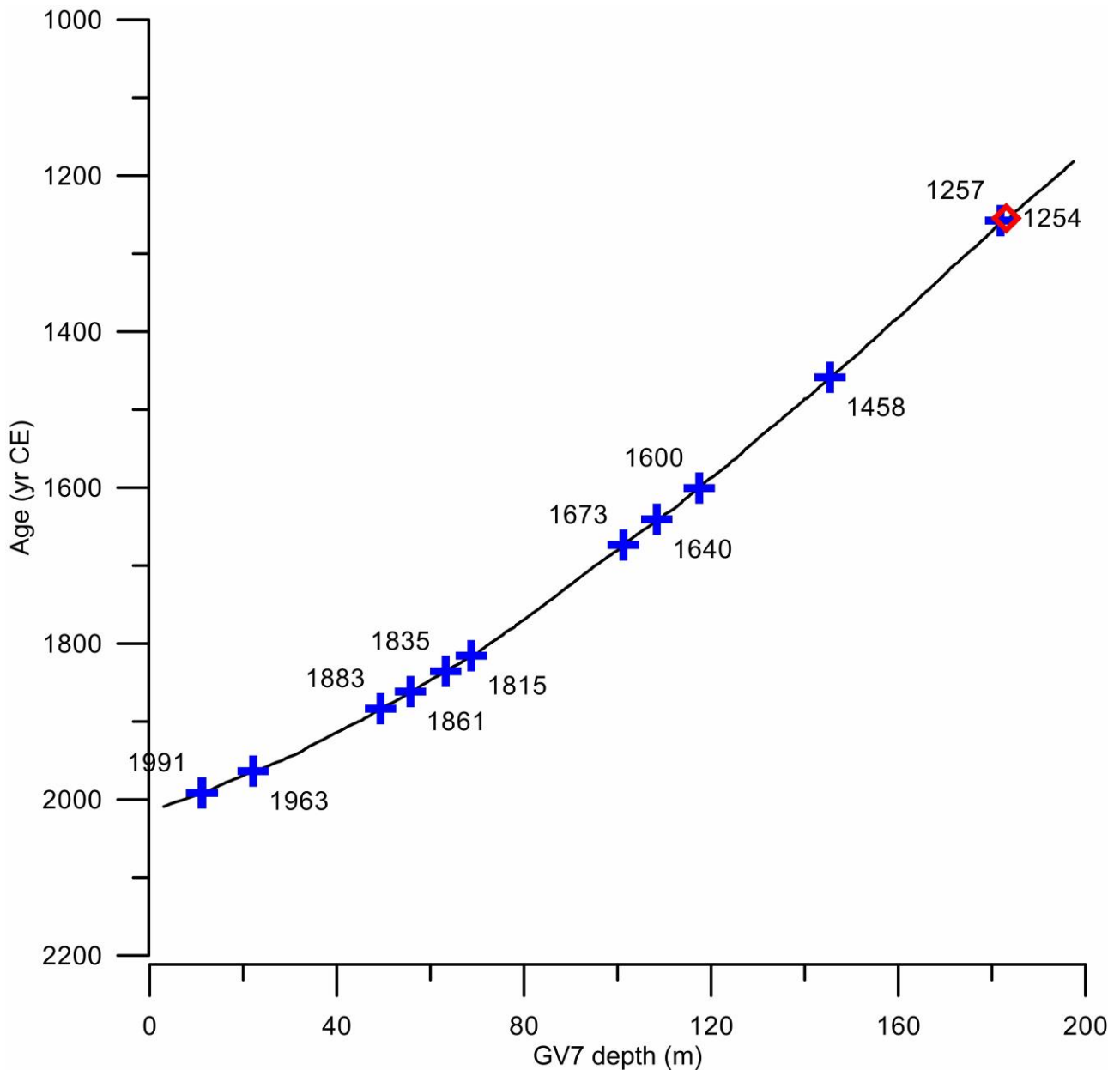


Figure S1: Depth vs. Age curve according to the preliminary dating of the core. Blue crosses mark the identified known eruptions along the 197 m of the GV7 core. The empty red diamond shows the Mt. Rittmann tephra layer.

	Reproducibility (RSD %) This <u>W</u> ork	Detection Limit ($\mu\text{g/L}$) This <u>W</u> ork	Reproducibility (RSD %) Morganti et al. (2007)	Detection Limit ($\mu\text{g/L}$) Morganti et al. (2007)
Li⁺	0.4	0.01	-	-
Na⁺	0.7	0.20	2.0	0.09
K⁺	1.2	0.64	1.9	0.13
Mg²⁺	0.8	0.77	1.5	0.11
Ca²⁺	2.3	0.37	1.5	0.11
F⁻	4.1	0.11	0.6	0.01
MSA	1.7	1.69	1.9	0.1
Cl⁻	0.9	0.67	1.5	0.15
NO₃⁻	1.8	0.71	0.9	0.02
SO₄²⁻	1.5	0.91	1.8	0.08

Table S1: Evaluation of method performances with respect to Morganti et al. (2007).

	EDC 96	GV7
Mean sulfate concentration ($\mu\text{g/L}$)	102.53	33.96

Table S2: Comparison of the SO₄²⁻ concentration at GV7 and at Dome C.