Supplementary Information

Tritium concentration and age of firn accumulation in ice caves of Mt. Olympos (Greece)

Georgios Lazaridis[1,*], Konstantinos Stamoulis[2,*], Despina Dora[1], Iraklis Kalogeropoulos[3], Konstantinos P. Trimmis[4]

[1]School of Geology, Aristotle University of Thessaloniki, Thessaloniki 54124, Greece
[2]Physics Department, University of Ioannina, Ioannina, 45221, Greece
[3]Hellenic Speleological Society, Thessaloniki, 54124, Greece
[4]Department of Anthropology and Archaeology, University of Bristol, Bristol, BS8 1TH, England
*These authors contributed equally to this work

Correspondence to: Georgios Lazaridis (geolaz@geo.auth.gr)
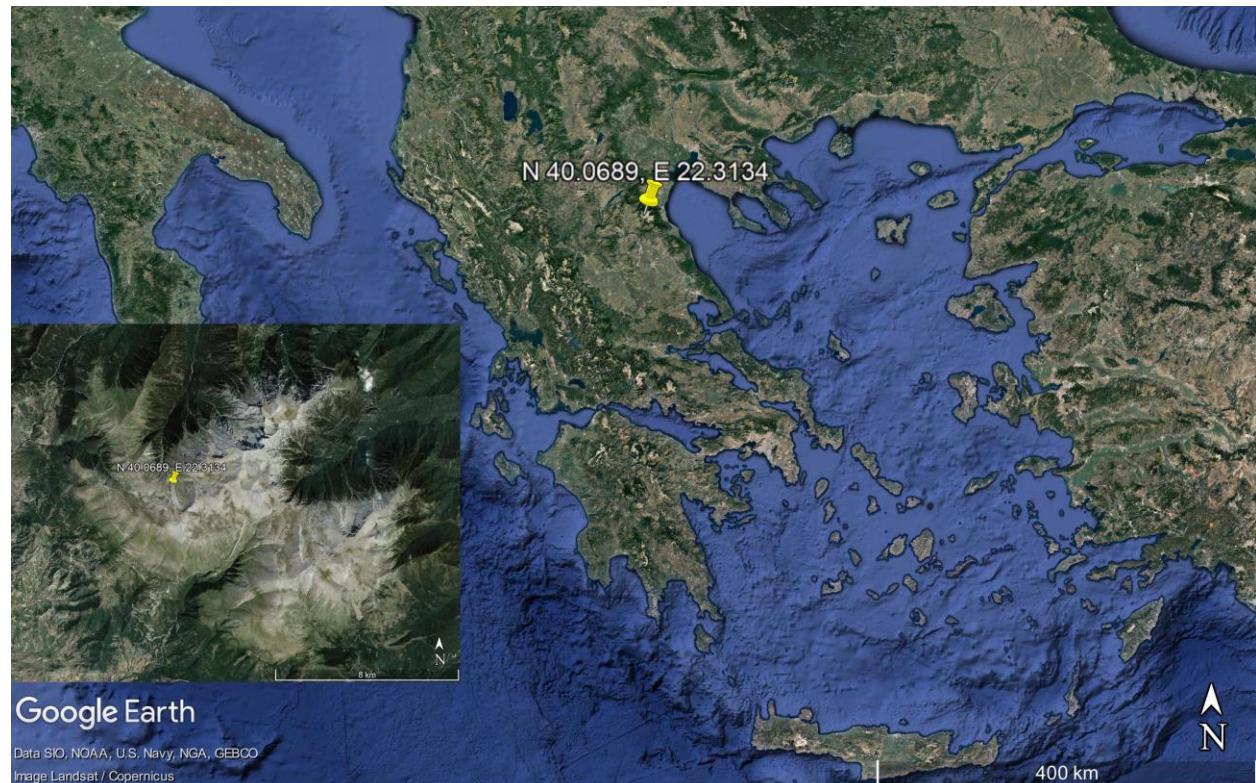
Figure S1. Location of Mt. Olympos and the Christaki Pothole in Greece (© Google Earth).

Figure S2. Descending into the Christaki Pothole.

Figure S3. The Christaki Pothole interior and the sampled ice plug.

Figure S4. Sampling location and procedure in the Christaki Pothole.

Table S1. Tritium concentrations of the ice samples. Depth is measured from the top of the ice collumn.

Code #	Depth (cm)	Tritium (TU±1σ)
1	5	7.2 ± 0.6
3	15	3.6 ± 0.3
5	25	3.5 ± 0.3
7	35	3.0 ± 0.3
9	45	1.1 ± 0.1
11	55	3.5 ± 0.3
13	65	0.9 ± 0.1
15	75	2.0 ± 0.2
17	85	5.5 ± 0.5
19	95	9.7 ± 0.8
21	105	6.9 ± 0.6
23	115	3.2 ± 0.3
25	125	3.2 ± 0.3
27	135	7.7 ± 0.6
29	145	5.4 ± 0.5
31	155	1.9 ± 0.2
33	165	9.2 ± 0.8
35	175	6.2 ± 0.5
37	185	7.0 ± 0.6
39	195	11 ± 0.9
41	205	3.6 ± 0.3

Table S2. Mean annual tritium concentrations at selected years, and the respective concentrations after decay.

Years before sampling	Annual mean tritium (TU)	Tritium after decay (TU)
10	5.3	3.0
15	5.0	2.1
17	5.9	2.3
25	8.1	2.0
30	7.7	1.4
35	10.1	1.4
40	30.7	3.2
45	59.8	4.8
50	134.3	8.1
51	225.8	12.8
52	358.9	19.3
53	743.5	37. 8
54	1089.4	52.3
55	222.0	10.1
56	50.0	2.2