



*Supplement of*

**Brief communication: Tritium concentration and age of firn accumulation in an ice cave of Mount Olympus (Greece)**

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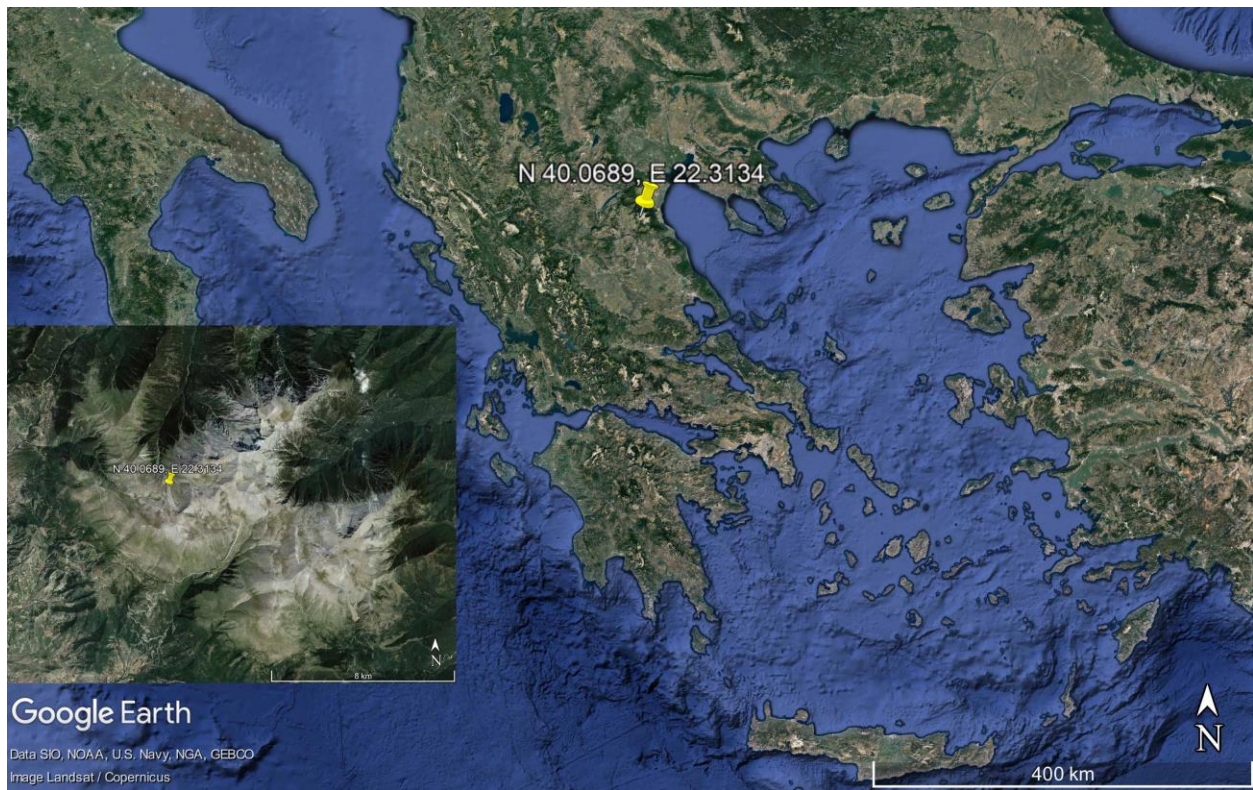


Figure S1. Location of Mt. Olympus and the Christaki Pothole in Greece (satellite image source from: © Google Earth 2022).



Figure S2. Descending into the Christaki Pothole.



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

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

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

Table S3. Table with the GNIP stations in Greece.

Site	Latitude	Longitude	Altitude
Alexandroupolis	40.849998	25.879999	6
Athens	37.900002	23.73	27
Heraklion	35.330002	25.18	47
Methoni	36.830002	21.719999	33
Patras	38.279999	21.790001	100
Rhodes	36.380001	28.1	42
Thessaloniki	40.669998	22.959999	32
Ioannina (non GNIP)	39.663611	20.852222	480
Christaki pothole	40.068954	22.313373	2290