Supplement material

Table S1. Source parameters of the three strongest earthquakes recorded in Thessaly area during March 2021. Links for data retrieved from the seismological centers: NOA (https://bbnet.gein.noa.gr/HL/seismicity/mts/revised-moment-tensors); UOA (http://www.geophysics.geol.uoa.gr/stations/gmapv3_db/index.php); AUTH (http://geophysics.geo.auth.gr/ss/); GEOFON/GFZ (https://geofon.gfz-potsdam.de/); GCMT (https://www.globalcmt.org/); USGS (https://earthquake.usgs.gov/earthquakes/); GEOSCOPE (http://geoscope.ipgp.fr/index.php/en/catalog/250-catalog-of-earthquakes-in-2021); EMSC (https://www.emsc-csem.org/Earthquake/index_tensors.php); INGV (http://terremoti.ingv.it/en/events).

Earthquake	$\phi_N^{(o)}$	$\lambda_E^{(o)}$	h (km)	M_w	m_b	M_L	M_s	M_o (N*m)	Center
3.3.2021 10:16:08	39.7545	22.1992	10	6.3		6.0		3.17e+18	NOA
	39.7505	22.1980	7	6.3		6.0		3.12 e+18	UOA
	39.732	22.218	6	6.2		6.0			AUTH
	39.77	22.14	10	6.3				3.10 e+18	GFZ
	39.65	22.14	12	6.3			6.3	3.14e+18	GCMT
	39.7641	22.1756	10	6.3					USGS
	39.7641	22.1756	10	6.2				2.7 e+18	GEOSCOPE
	39.76	22.21	8	6.3					EMSC
	39.6	22.1	10	6.3				3.6 e+18	INGV
4.3.2021 18:38:19	39.771	22.0958	11.3	6.0		5.9		1.36 e+18	NOA
	39.7757	22.0852	15.0	6.1				2.03 e+18	UOA
	39.782	22.116	10	5.9		5.8			AUTH
	39.7886	22.1189	10		5.8				USGS
	39.80	22.20	17	6.3				3.30 e+18	GFZ
12.3.2021 12:57:50	39.8387	22.0134	7.0			5.2			NOA
	39.8265	22.0075	5			5.2			UOA
	39.805	21.922	7			5.1			AUTH
	39.81	22.02	10	5.5				2.3 e+17	GFZ
	39.77	21.96	12	5.6			5.6	2.7 e+17	GCMT
	39.855	22.0304	10	5.6				2.92 e+17	USGS
	39.84	22.01	7	5.6					EMSC
	39.72	22.08	10	5.6				3.6 e+17	INGV

Table S2. Geometric features of the two Nodal Planes determined in moment tensor solutions produced by several national and international seismological centers for the three strong earthquakes of March 2021. Links for data retrieved from the seismological centers as in Table S1.

Earthquake	Strike (°)	Dip (°)	Rake (°)	Center
3.3.2021 10:16:08	146 305	59 59	-79 -108	NOA
	130 309	54 54	-89 -91	UOA
	131 314	54 36	-92 -88	AUTH
	130 310	45 44	-90 -89	GFZ
	119 324	45 48	-109 -72	GCMT
	307 139	36 55	-100 -83	USGS
	321 127	33 57	-78 -98	GEOSCOPE
	116 327	41 53	-114 -70	INGV
4.3.2021 18:38:19	112 287	59 31	-87 -95	NOA
	308 131	50 40	-92 -88	UOA
	287 109	30 60	-92 -89	AUTH
	146 329	48 41	-91 -88	GFZ
12.3.2021 12:57:50	120 294	40 49	-85 -94	GFZ
	97 302	42 51	-109 -73	GCMT
	111 295	29 61	-93° -88	USGS
	96 325	37 64	-133 -63	INGV

Table S3: Specifications of the Sentinel-1 SAR SLC images used in our InSAR analysis.

Satellite	Sensing date	Subswath number	Relative orbit	Pass direction
Sentinel-1 A	25/02/2021	IW1	102	Ascending
Sentinel-1 B	03/03/2021	IW1	102	Ascending
Sentinel-1 A	09/03/2021	IW1	102	Ascending
Sentinel-1 B	15/03/2021	IW1	102	Ascending
Sentinel-1 A	24/02/2021	IW1	80	Descending
Sentinel-1 A	8/03/2021	IW1	80	Descending
Sentinel-1 B	14/03/2021	IW1	80	Descending

Table S4: Master and slave scenes forming interferometric pairs used to detect and measure deformation of the three largest earthquake events that occurred in the Thessaly area during March 2021.

Pair	Satellite	Sensing date	Pass direction
1st	Sentinel-1 A (master)	25/02/2021	Ascending
	Sentinel-1 B (slave)	03/03/2021	Ascending
2nd	Sentinel-1 B (master)	03/03/2021	Ascending
	Sentinel-1 A (slave)	09/03/2021	Ascending
3rd	Sentinel-1 A (master)	09/03/2021	Ascending
	Sentinel-1 B (slave)	15/03/2021	Ascending
4th	Sentinel-1 A (master)	24/02/2021	Descending
	Sentinel-1 A (slave)	8/03/2021	Descending
5th	Sentinel-1 A (master)	8/03/2021	Descending
	Sentinel-1 B (slave)	14/03/2021	Descending