

Table of ceasefire violations as of 10 November 2019⁸

SMM position	Event location	Means	No.	Observation	Description	Weapon	Date, time
SMM camera in Avdiivka (government-controlled, 17km N of Donetsk)	3-4km SE	Recorded	1	Projectile	S to N (also recorded by both SMM cameras in Verkhnoшыroki vske and Avdiivka)	N/K	8-Nov, 20:38
	3-4km SE	Recorded	1	Muzzle flash		N/K	8-Nov, 20:38
	3-4km SE	Recorded	1	Explosion	Undetermined	N/K	8-Nov, 20:38
	4-5km SSE	Recorded	2	Projectile	NNW to SSE (also recorded by both SMM cameras in Verkhnoшыroki vske and Avdiivka)	N/K	8-Nov, 21:31
SMM camera in Chermalyk (government-controlled, 77km S of Donetsk)	1-2km SE	Recorded	3	Projectile	ESE to WNW	N/K	8-Nov, 19:38
	2-4km S	Recorded	1	Projectile	WNW to ESE	N/K	8-Nov, 22:46
SMM camera at Donetsk Filtration Station (15km N of Donetsk)	2-4km SSW	Recorded	1	Explosion	Airburst	N/K	8-Nov, 18:46
	300-800m S	Recorded	1	Projectile	W to E	N/K	8-Nov, 23:00
	0.5-1km SSE	Recorded	2	Explosion	Undetermined	N/K	9-Nov, 01:10
	0.5-1km SSW	Recorded	2	Projectile	W to E	N/K	9-Nov, 01:10
	0.5-1km S	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 02:10
SMM camera 1.5km NE of Hnutove (government-controlled, 90km S of Donetsk)	1-2km SSW	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 03:13
	2-3km E	Recorded	1	Projectile	NNE to SSW	N/K	8-Nov, 19:34
	2-3km E	Recorded	2	Explosion	Impact	N/K	8-Nov, 19:34
	2-3km E	Recorded	4	Explosion	Impact	N/K	8-Nov, 19:38
	2-3km E	Recorded	1	Projectile	NNE to SSW	N/K	8-Nov, 19:47
	2-3km E	Recorded	1	Explosion	Impact	N/K	8-Nov, 19:47
	2-4km ESE	Recorded	1	Projectile	WSW to ENE	N/K	8-Nov, 23:21
	2-4km ESE	Recorded	1	Explosion	Outgoing	N/K	8-Nov, 23:31
	2-4km ESE	Recorded	1	Explosion	Outgoing	N/K	9-Nov, 03:34
SMM camera E of Lomakyne (government-controlled, 90km S of Donetsk)	2-4km ESE	Recorded	1	Projectile	SSW to NNE	N/K	9-Nov, 03:34
	2-4km ESE	Recorded	1	Explosion	Impact	N/K	9-Nov, 03:34
SMM camera E of Lomakyne (government-controlled, 90km S of Donetsk)	2-3km ESE	Recorded	1	Explosion	Impact	N/K	8-Nov, 18:24
	1-2km ENE	Recorded	1	Projectile	NW to SE	N/K	8-Nov, 19:09
	2-4km ENE	Recorded	1	Projectile	NW to SE	N/K	8-Nov, 21:53
SMM camera at entry-exit checkpoint in Maiorsk (government-controlled, 45km NE of Donetsk)	2-4km ENE	Recorded	1	Projectile	NW to SE	N/K	8-Nov, 22:33
	2-4km ENE	Recorded	1	Projectile	NW to SE	N/K	8-Nov, 22:33
SMM camera 1km SW of Shyrokyne (government-	3-5km N	Recorded	5	Projectile	W to E	N/K	8-Nov, 16:44
	3-5km N	Recorded	2	Projectile	N to S	N/K	8-Nov, 16:44
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	8-Nov, 16:44

⁸ The table only includes ceasefire violations directly observed by the SMM and it may include those also assessed to be live-fire exercises, controlled detonations, etc. Details provided – in terms of distance, direction, weapons-type, etc. – are based on assessments provided by monitors on the ground, and are not always necessarily precise. When information is not known (indicated with an “N/K”), the SMM was unable to ascertain such information due to distance, weather conditions and/or other considerations. Ceasefire violations recorded by more than one patrol and assessed to be the same are entered only once.

controlled, 100km S of Donetsk)	3-5km N	Recorded	4	Projectile	W to E	N/K	8-Nov, 16:45	
	3-5km N	Recorded	20	Projectile	W to E	N/K	8-Nov, 16:52	
	3-5km N	Recorded	16	Projectile	W to E	N/K	8-Nov, 16:53	
	3-5km N	Recorded	1	Projectile	W to E	N/K	8-Nov, 16:54	
	3-5km N	Recorded	2	Projectile	W to E	N/K	8-Nov, 16:56	
	3-5km N	Recorded	1	Illumination flare	In vertical flight	N/K	8-Nov, 16:57	
	3-5km N	Recorded	3	Projectile	W to E	N/K	8-Nov, 16:58	
	3-5km NNW	Recorded	1	Illumination flare	In vertical flight	N/K	8-Nov, 16:58	
	3-5km N	Recorded	16	Projectile	W to E	N/K	8-Nov, 16:59	
	3-5km N	Recorded	2	Projectile	E to W	N/K	8-Nov, 16:59	
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	8-Nov, 16:59	
	3-5km N	Recorded	7	Projectile	W to E	N/K	8-Nov, 17:00	
	3-5km N	Recorded	6	Projectile	W to E	N/K	8-Nov, 17:02	
	3-5km N	Recorded	3	Projectile	W to E	N/K	8-Nov, 17:11	
		3-5km N	Recorded	2	Projectile	In vertical flight	N/K	8-Nov, 17:11
3-5km N		Recorded	4	Projectile	In vertical flight	N/K	8-Nov, 17:12	
3-5km N		Recorded	5	Muzzle flash		N/K	8-Nov, 17:12	
	3-5km N	Recorded	10	Projectile	W to E	N/K	8-Nov, 17:12	
	3-5km N	Recorded	5	Explosion	Undetermined	N/K	8-Nov, 17:13	
	3-5km N	Recorded	9	Projectile	W to E	N/K	8-Nov, 17:13	
	3-5km N	Recorded	5	Projectile	W to E	N/K	8-Nov, 17:14	
	3-5km N	Recorded	3	Projectile	W to E	N/K	8-Nov, 17:28	
	3-5km N	Recorded	1	Explosion	Impact	N/K	8-Nov, 17:32	
	3-5km N	Recorded	4	Projectile	E to W	N/K	8-Nov, 17:38	
	3-5km N	Recorded	1	Explosion	Impact	N/K	8-Nov, 17:39	
	3-5km N	Recorded	1	Projectile	E to W	N/K	8-Nov, 17:39	
	3-5km N	Recorded	5	Projectile	E to W	N/K	8-Nov, 17:41	
	3-5km N	Recorded	11	Projectile	W to E	N/K	8-Nov, 17:43	
	3-5km N	Recorded	5	Projectile	E to W	N/K	8-Nov, 17:43	
	3-5km N	Recorded	1	Projectile	In vertical flight	N/K	8-Nov, 17:43	
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	8-Nov, 17:43	
	3-5km N	Recorded	5	Projectile	W to E	N/K	8-Nov, 17:44	
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	8-Nov, 17:44	
	3-5km N	Recorded	11	Projectile	W to E	N/K	8-Nov, 17:46	
	3-5km N	Recorded	1	Projectile	In vertical flight	N/K	8-Nov, 17:46	
	3-5km N	Recorded	7	Projectile	W to E	N/K	8-Nov, 17:47	
	3-5km N	Recorded	23	Projectile	E to W	N/K	8-Nov, 17:47	
		3-5km NNE	Recorded	13	Explosion	Undetermined	N/K	8-Nov, 17:47
		3-5km N	Recorded	13	Projectile	W to E	N/K	8-Nov, 17:49
		3-5km N	Recorded	2	Projectile	In vertical flight	N/K	8-Nov, 17:49
3-5km N		Recorded	2	Projectile	E to W	N/K	8-Nov, 17:49	
3-5km N		Recorded	5	Projectile	W to E	N/K	8-Nov, 17:50	
3-5km N		Recorded	1	Burst	In vertical flight	N/K	8-Nov, 18:09	
3-5km N		Recorded	7	Projectile	E to W	N/K	8-Nov, 18:11	
3-5km N		Recorded	1	Explosion	Airburst	N/K	8-Nov, 18:11	
3-5km N		Recorded	2	Explosion	Impact	N/K	8-Nov, 18:11	
3-5km N		Recorded	1	Muzzle flash		N/K	8-Nov, 18:12	
3-5km N		Recorded	5	Projectile	E to W	N/K	8-Nov, 18:12	
3-5km N		Recorded	2	Projectile	E to W	N/K	8-Nov, 18:13	
3-5km N		Recorded	1	Projectile	SSE to NNW	N/K	8-Nov, 18:13	
3-5km NNE		Recorded	3	Explosion	Undetermined	N/K	8-Nov, 18:13	
3-5km N		Recorded	5	Projectile	E to W	N/K	8-Nov, 18:14	
3-5km N		Recorded	2	Muzzle flash		N/K	8-Nov, 18:15	
3-5km N		Recorded	11	Projectile	E to W	N/K	8-Nov, 18:15	
3-5km N		Recorded	3	Projectile	E to W	N/K	8-Nov, 18:16	
3-5km N		Recorded	2	Projectile	SE to NW	N/K	8-Nov, 18:16	
3-5km N		Recorded	9	Projectile	E to W	N/K	8-Nov, 18:17	
3-5km N		Recorded	2	Muzzle flash		N/K	8-Nov, 18:18	
3-5km N		Recorded	9	Projectile	E to W	N/K	8-Nov, 18:18	

	3-5km N	Recorded	1	Explosion		N/K	8-Nov, 18:24
	3-5km N	Recorded	1	Projectile	SW to NE	N/K	9-Nov, 00:45
	3-5km N	Recorded	2	Projectile	WSW to ENE	N/K	9-Nov, 00:49
	3-5km N	Recorded	1	Muzzle flash		N/K	9-Nov, 01:00
	3-5km N	Recorded	1	Projectile	WSW to ENE (subsequent to previous event)	N/K	9-Nov, 01:00
	3-5km N	Recorded	1	Explosion	Airburst	N/K	9-Nov, 01:00
	3-5km N	Recorded	2	Projectile	WSW to ENE	N/K	9-Nov, 01:04
	6-8km N	Recorded	1	Projectile	S to N (also recorded by the SMM camera in Lomakyne)	N/K	9-Nov, 01:09
	3-5km N	Recorded	3	Projectile	W to E	N/K	9-Nov, 01:09
	3-5km N	Recorded	4	Projectile	WSW to ENE	N/K	9-Nov, 01:10
	3-5km N	Recorded	5	Projectile	WSW to ENE	N/K	9-Nov, 01:11
	3-5km N	Recorded	1	Projectile	SW to NE	N/K	9-Nov, 01:12
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 01:15
	3-5km N	Recorded	3	Projectile	W to E	N/K	9-Nov, 01:16
	3-5km N	Recorded	1	Projectile	W to E	N/K	9-Nov, 01:16
	3-5km N	Recorded	2	Projectile	W to E	N/K	9-Nov, 01:17
	3-5km N	Recorded	18	Projectile	W to E	N/K	9-Nov, 01:18
	3-5km N	Recorded	12	Projectile	W to E	N/K	9-Nov, 01:19
	3-5km N	Recorded	1	Projectile	W to E	N/K	9-Nov, 01:26
	3-5km N	Recorded	1	Projectile	W to E	N/K	9-Nov, 01:27
	3-5km N	Recorded	1	Projectile	W to E	N/K	9-Nov, 01:28
	3-5km N	Recorded	3	Projectile	W to E	N/K	9-Nov, 01:29
	3-5km N	Recorded	5	Projectile	SW to NE	N/K	9-Nov, 01:31
	3-5km N	Recorded	1	Projectile	WSW to ENE	N/K	9-Nov, 01:32
	3-5km N	Recorded	1	Projectile	ESE to WNW	N/K	9-Nov, 01:32
	3-5km N	Recorded	1	Projectile	WSW to ENE	N/K	9-Nov, 01:35
	3-5km N	Recorded	2	Projectile	WSW to ENE	N/K	9-Nov, 01:36
	3-5km NNE	Recorded	2	Projectile	W to E	N/K	9-Nov, 01:38
	3-5km N	Recorded	1	Projectile	WSW to ENE	N/K	9-Nov, 01:40
	3-5km N	Recorded	5	Projectile	WSW to ENE	N/K	9-Nov, 01:45
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 01:45
	3-5km N	Recorded	1	Projectile	WSW to ENE	N/K	9-Nov, 01:47
	3-5km N	Recorded	1	Projectile	W to E	N/K	9-Nov, 01:51
	3-5km N	Recorded	1	Projectile	W to E	N/K	9-Nov, 01:52
	3-5km N	Recorded	2	Projectile	W to E	N/K	9-Nov, 01:53
	3-5km N	Recorded	2	Projectile	W to E	N/K	9-Nov, 01:54
	3-5km N	Recorded	1	Projectile	W to E	N/K	9-Nov, 01:56
	3-5km N	Recorded	1	Projectile	W to E	N/K	9-Nov, 01:57
	3-5km N	Recorded	4	Projectile	W to E	N/K	9-Nov, 02:01
	3-5km N	Recorded	3	Projectile	W to E	N/K	9-Nov, 02:02
	3-5km N	Recorded	1	Projectile	W to E	N/K	9-Nov, 02:05
	3-5km N	Recorded	1	Projectile	W to E	N/K	9-Nov, 02:06
	3-5km N	Recorded	1	Projectile	W to E	N/K	9-Nov, 02:12
	3-5km N	Recorded	1	Projectile	W to E	N/K	9-Nov, 02:16
	3-5km N	Recorded	1	Projectile	W to E	N/K	9-Nov, 02:20
	3-5km N	Recorded	1	Projectile	SW to NE	N/K	9-Nov, 02:26
	3-5km N	Recorded	1	Projectile	SW to NE	N/K	9-Nov, 02:33
	3-5km N	Recorded	1	Projectile	SW to NE	N/K	9-Nov, 02:35
	3-5km N	Recorded	1	Projectile	S to N	N/K	9-Nov, 02:35
	3-5km N	Recorded	2	Projectile	SW to NE	N/K	9-Nov, 02:37
	3-5km N	Recorded	2	Projectile	SW to NE	N/K	9-Nov, 02:38
	3-5km N	Recorded	1	Projectile	SW to NE	N/K	9-Nov, 02:41
	3-5km N	Recorded	1	Projectile	WSW to ENE	N/K	9-Nov, 02:42
	3-5km N	Recorded	1	Projectile	WSW to ENE	N/K	9-Nov, 02:43
	3-5km N	Recorded	1	Projectile	WSW to ENE	N/K	9-Nov, 02:48
	3-5km N	Recorded	2	Explosion	Undetermined	N/K	9-Nov, 02:48

	3-5km N	Recorded	1	Projectile	WSW to ENE	N/K	9-Nov, 02:51
	3-5km N	Recorded	1	Projectile	WSW to ENE	N/K	9-Nov, 02:54
	3-5km N	Recorded	1	Projectile	WSW to ENE	N/K	9-Nov, 02:57
About 1km N of Avdiivka (government-controlled, 17km N of Donetsk)	1-2km ESE	Heard	2	Shot		Small arms	9-Nov, 11:52
Krasnohorivka (government-controlled, 21km W of Donetsk)	4-6km SW	Heard	1	Explosion	Undetermined	N/K	9-Nov, 10:46
About 500m NW of Petrivske (non-government-controlled, 41km S of Donetsk)	6-8km NW	Heard	20	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	9-Nov, 13:30-13:40
	6-8km NW	Heard	1	Burst	Assessed as outside the disengagement area	HMG	9-Nov, 13:30
Donetsk city centre (non-government-controlled)	8-10km NW	Heard	14	Explosion	Undetermined	N/K	9-Nov, 15:55-16:05
About 2km SW of Pyshchevyk (government-controlled, 84km S of Donetsk)	2-3km NE	Heard	11	Shot		Small arms	9-Nov, 09:34-09:47
	3-4km SSE	Heard	7	Explosion	Undetermined	N/K	9-Nov, 09:34-09:47
	3-4km SSE	Heard	1	Shot		Small arms	9-Nov, 09:34-09:47
	2-4km SSE	Heard	10	Explosion	Undetermined	N/K	9-Nov, 13:10-13:15
	2-4km SE	Heard	27	Explosion	Undetermined	N/K	9-Nov, 12:48-12:55
	2-4km SE	Heard	Uncountable	Burst		Small arms	9-Nov, 12:48-12:55
E part of Talakivka (government-controlled, 90km south of Donetsk)	3-5km ESE	Heard	3	Burst		HMG	9-Nov, 11:22-11:26
	3-5km ESE	Heard	2	Explosion	Undetermined	N/K	9-Nov, 11:22-11:26
	3-5km ESE	Heard	5	Explosion	Undetermined	N/K	9-Nov, 11:40-11:46
	3km ESE	Heard	19	Shot		Small arms	9-Nov, 11:40-11:46
	3-5km ESE	Heard	21	Explosion	Undetermined	N/K	9-Nov, 11:53-11:57
	3-5km ESE	Heard	80	Burst		Small arms	9-Nov, 11:57-12:08
	3-5km ESE	Heard	21	Explosion	Undetermined	N/K	9-Nov, 11:57-12:08
	3-5km ESE	Heard	12	Shot		AGL	9-Nov, 11:57-12:08
About 3km SE of Lomakyne (government-controlled, 93km S of Donetsk)	4-6km E	Heard	23	Explosion	Undetermined	N/K	9-Nov, 11:56-12:18
	4-6km E	Heard		Shots and bursts	Uncountable	N/K	9-Nov, 11:56-12:18
	4-6km E	Heard	3	Explosion	Undetermined	N/K	9-Nov, 12:18-12:21
	2-5km ENE	Heard	44	Explosion	Undetermined	N/K	9-Nov, 12:49-13:00
	2-5km ENE	Heard	11	Shot		N/K	9-Nov, 12:49-13:00

	2-5km ENE	Heard	Uncountable	Shots and bursts		Small arms	9-Nov, 12:49-13:00
	3-5km ENE	Heard	3	Explosion	Outgoing	N/K	9-Nov, 13:06-13:13
	3-5km ENE	Heard	3	Explosion	Impact	N/K	9-Nov, 13:06-13:13
	3-5km ENE	Heard	15	Burst		Small arms	9-Nov, 13:06-13:13
	2-5km ENE	Heard	2	Explosion	Outgoing	N/K	9-Nov, 13:18-13:21
	2-5km ENE	Heard	2	Explosion	Impact	N/K	9-Nov, 13:18-13:21
About 1.5km NE of Bohdanivka (government-controlled, 41km SW of Donetsk)	3-5km NNW	Heard	10	Explosion	Undetermined (assessed as outside the Petrivske disengagement area)	N/K	9-Nov, 13:13-13:41
Svitlodarsk (government-controlled, 57km NE of Donetsk)	4-5km S	Heard	8	Burst		HMG	8-Nov, 23:00-23:03
	4-5km S	Heard	6	Burst		HMG	8-Nov, 23:44
	4-5km SW	Heard	6	Explosion	Undetermined	N/K	9-Nov, 15:50
	4-5km SW	Heard	45	Burst		HMG	9-Nov, 15:52-16:00
	4-5km SE	Heard	2	Explosion	Undetermined	N/K	9-Nov, 16:02
	4-5km SW	Heard	4	Explosion	Undetermined	N/K	9-Nov, 16:04
	4-5km SW	Heard	3	Explosion	Undetermined	N/K	9-Nov, 16:05
	4-5km SW	Heard	1	Explosion	Undetermined	N/K	9-Nov, 16:10
Horlivka (non-government-controlled, 39km NE of Donetsk)	6-8km SW	Heard	1	Explosion	Undetermined	N/K	8-Nov, 22:27
	4-6km W	Heard	10	Shot	30 mm cannon	IFV (type N/K)	8-Nov, 22:40-22:45
	4-6km W	Heard	16	Burst		HMG	8-Nov, 22:40-22:45
About 6km NW of Horlivka (non-government controlled, 39km NE of Donetsk)	3-5km NW	Heard	1	Explosion	Undetermined	N/K	9-Nov, 13:06
	2-3km NW	Heard	1	Shot		Small arms	9-Nov, 13:28
SMM camera in Kriakivka (government-controlled, 38km NW of Luhansk)	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	8-Nov, 21:46
	2-4km SSW	Recorded	1	Projectile	NW to SE	N/K	8-Nov, 21:50
	2-4km SSW	Recorded	2	Projectile	NW to SE	N/K	8-Nov, 21:52
	2-4km SSW	Recorded	1	Projectile	NW to SE	N/K	8-Nov, 21:55
	2-4km SSW	Recorded	2	Projectile	NNW to SSE	N/K	8-Nov, 21:56
	2-4km SSW	Recorded	1	Explosion	Impact	N/K	8-Nov, 21:56
	2-4km SSW	Recorded	1	Projectile	NW to SE	N/K	8-Nov, 21:57
	2-4km SSW	Recorded	2	Projectile	NW to SE	N/K	8-Nov, 21:58
	2-4km SSW	Recorded	1	Projectile	NW to SE	N/K	8-Nov, 22:00
	2-4km SSW	Recorded	4	Projectile	NW to SE	N/K	8-Nov, 22:02
	2-4km SSW	Recorded	1	Projectile	NW to SE	N/K	8-Nov, 22:03
	2-4km SSW	Recorded	1	Projectile	WSW to ENE	N/K	8-Nov, 22:05
	2-4km SSW	Recorded	1	Projectile	NW to SE	N/K	8-Nov, 22:05
	2-4km SSW	Recorded	7	Projectile	NW to SE	N/K	8-Nov, 22:06
	2-4km SSW	Recorded	3	Projectile	NW to SE	N/K	8-Nov, 22:07
	2-4km SSW	Recorded	1	Projectile	ESE to WNW	N/K	8-Nov, 22:07
	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	8-Nov, 22:07
	2-4km SSW	Recorded	2	Explosion	Undetermined	N/K	8-Nov, 22:08
	2-4km SSW	Recorded	4	Explosion	Undetermined	N/K	8-Nov, 22:09
	2-4km SSW	Recorded	9	Projectile	ESE to WNW	N/K	8-Nov, 22:11
2-4km SSW	Recorded	4	Projectile	ESE to WNW	N/K	8-Nov, 22:13	
2-4km SSW	Recorded	4	Projectile	NW to SE	N/K	8-Nov, 22:13	

	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	8-Nov, 22:13
	2-4km SSW	Recorded	3	Projectile	WNW to ESE	N/K	8-Nov, 22:14
	2-4km SSW	Recorded	1	Projectile	ESE to WNW	N/K	8-Nov, 22:15
	2-4km SSW	Recorded	2	Projectile	WNW to ESE	N/K	8-Nov, 22:15
	2-4km SSW	Recorded	1	Projectile	ESE to WNW	N/K	8-Nov, 22:16
	2-4km SSW	Recorded	2	Projectile	ESE to WNW	N/K	8-Nov, 22:17
	2-4km SSW	Recorded	2	Projectile	ESE to WNW	N/K	8-Nov, 22:18
	2-4km SSW	Recorded	2	Projectile	WNW to ESE	N/K	8-Nov, 22:18
	2-4km SSW	Recorded	5	Projectile	WNW to ESE	N/K	8-Nov, 22:19
	2-4km SSW	Recorded	1	Projectile	WNW to ESE	N/K	8-Nov, 22:20
	2-4km SSW	Recorded	2	Projectile	WNW to ESE	N/K	8-Nov, 22:23
	2-4km S	Recorded	1	Explosion	Undetermined	N/K	8-Nov, 22:23
	2-4km SSW	Recorded	1	Projectile	WNW to ESE	N/K	8-Nov, 22:24
	2-4km SSW	Recorded	3	Projectile	WNW to ESE	N/K	8-Nov, 22:25
	2-4km SSW	Recorded	1	Projectile	ESE to WNW	N/K	8-Nov, 22:27
	2-4km SSW	Recorded	1	Projectile	WNW to ESE	N/K	8-Nov, 22:29
	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	8-Nov, 22:30
	2-4km SSW	Recorded	1	Projectile	ESE to WNW	N/K	8-Nov, 22:30
	2-4km SSW	Recorded	1	Projectile	NNE to SSW	N/K	8-Nov, 22:42
	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	8-Nov, 22:42
	2-4km SSW	Recorded	2	Projectile	NNE to SSW	N/K	8-Nov, 22:43
	2-4km SSW	Recorded	2	Explosion	Undetermined	N/K	8-Nov, 22:44
	2-4km SSW	Recorded	1	Projectile	NNE to SSW	N/K	8-Nov, 22:44
	2-4km SSW	Recorded	7	Projectile	WNW to ESE	N/K	8-Nov, 22:46
	2-4km SSW	Recorded	2	Projectile	WNW to ESE	N/K	8-Nov, 22:54
	2-4km SSW	Recorded	1	Projectile	WNW to ESE	N/K	8-Nov, 22:56
	2-4km SSW	Recorded	2	Projectile	WNW to ESE	N/K	8-Nov, 23:00
	2-4km SSW	Recorded	6	Projectile	WNW to ESE	N/K	8-Nov, 23:01
SMM camera in Zolote (government-controlled, 60km W of Luhansk)	2-4km ENE	Recorded	1	Projectile	SW to NE (assessed as outside the Zolote disengagement area)	N/K	8-Nov, 20:54
	3-5km NNE	Recorded	1	Explosion	Assessed as outside the Zolote disengagement area	N/K	8-Nov, 21:39
4km SW of Almazna (non-government-controlled, 55km W of Luhansk)	6-8km SW	Heard	1	Explosion	Undetermined	N/K	9-Nov, 09:35-09:36
SMM camera in Chermalyk (government-controlled, 77km S of Donetsk)	2-3km SE	Recorded	1	Explosion	Airburst	N/K	9-Nov, 17:23
	2-3km SE	Recorded	1	Projectile	SW to NE	N/K	9-Nov, 17:43
	2-3km SE	Recorded	1	Explosion	Airburst, subsequent to previous event	N/K	9-Nov, 17:43
	2-3km SSE	Recorded	1	Projectile	NE to SW	N/K	9-Nov, 18:22
	2-3km SSE	Recorded	1	Projectile	NE to SW	N/K	9-Nov, 18:35
	2-4km SSE	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 19:43
	2-4km SSE	Recorded	1	Projectile	ENE to WSW	N/K	9-Nov, 20:57
	4-5km SSE	Recorded	1	explosion	Undetermined	N/K	9-Nov, 21:23
	4-5km SSE	Recorded	1	Projectile	S to N	N/K	9-Nov, 21:23
	6-8km SSE	Recorded	1	Explosion	Undetermined (also recorded by the SMM camera in Pyshevyk)	N/K	9-Nov, 21:34
	6-8km SSE	Recorded	1	Explosion	Undetermined (also recorded by the SMM camera in	N/K	9-Nov, 21:47

	6-8km SSE	Recorded	2	Explosion	Pyshchevyk) Undetermined(also recorded by the SMM camera in Pyshchevyk)	N/K	9-Nov, 21:51
	4-5km SE	Recorded	1	Projectile	SW to NE	N/K	9-Nov, 22:50
	2-4km SE	Recorded	1	Projectile	NE to SW	N/K	9-Nov, 23:39
	2-4km SE	Recorded	1	Projectile	NE to SW	N/K	9-Nov, 23:40
	2-4km SE	Recorded	1	Projectile	NE to SW	N/K	10-Nov, 01:16
	1-3km SSE	Recorded	1	Projectile	WNW to ESE	N/K	10-Nov, 16:55
	1-3km SE	Recorded	16	Projectile	NNE to SSW	N/K	10-Nov, 17:31
SMM camera at Donetsk Filtration Station (15km N of Donetsk)	800m SSW	Recorded	3	Projectile	WNW to ESE	N/K	9-Nov, 21:33
	300-800m S	Recorded	1	Projectile	NNE to SSW	N/K	10-Nov, 00:56
	0.5-1km S	Recorded	1	Explosion	Undetermined	N/K	10-Nov, 01:54
	0.5-1km SSE	Recorded	1	Explosion	Undetermined	N/K	10-Nov, 02:14
	0.5-1km S	Recorded	1	Explosion	Outgoing	N/K	10-Nov, 02:26
	0.5-1km S	Recorded	1	Projectile	NW to SE	N/K	10-Nov, 02:26
	0.5-1km SSE	Recorded	1	Explosion	Undetermined	N/K	10-Nov, 02:34
	0.5-1km SSW	Recorded	3	Projectile	NNW to SSE	N/K	10-Nov, 02:41
	0.5-1km SSE	Recorded	2	Explosion	Undetermined	N/K	10-Nov, 03:38
	0.5-1km S	Recorded	2	Explosion	Undetermined	N/K	10-Nov, 03:59
	0.5-1km SSE	Recorded	3	Explosion	Undetermined	N/K	10-Nov, 03:59
	0.5-1km S	Recorded	1	Projectile	W to E	N/K	10-Nov, 03:59
	0.5-1km S	Recorded	1	Explosion	Outgoing	N/K	10-Nov, 03:59
	0.8-1.5km SSW	Recorded	4	Projectile	WNW to ESE	N/K	10-Nov, 04:27
	0.5-1km SSE	Recorded	1	Explosion	Undetermined	N/K	10-Nov, 05:17
	0.5-1km SSE	Recorded	1	Explosion	Undetermined	N/K	10-Nov, 05:19
	1-2km SSW	Recorded	1	Explosion		N/K	10-Nov, 05:24
SMM camera 1.5km NE of Hnutove (government-controlled, 90km S of Donetsk)	3-5km ESE	Recorded	1	Muzzle flash		N/K	10-Nov, 00:46
	3-5km ESE	Recorded	1	Projectile	SW to NE	N/K	10-Nov, 00:46
	3-5km ESE	Recorded	1	Explosion	Impact	N/K	10-Nov, 00:46
SMM camera in Hranitne (government-controlled, 60km S of Donetsk)	2-4km E	Recorded	5	Projectile	NW to SE	N/K	9-Nov, 22:27
	2-4km E	Recorded	1	Projectile	NW to SE	N/K	9-Nov, 22:31
SMM camera E of Lomakyne (government-controlled, 90km S of Donetsk)	2-4km ENE	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 22:27
	2-4km ENE	Recorded	1	Projectile	SW to NE	N/K	9-Nov, 22:27
	2-4km E	Recorded	1	Muzzle flash	Also recorded by the SMM camera in Shyrokyne	N/K	9-Nov, 22:41
	2-4km E	Recorded	1	Explosion	Undetermined, Also recorded by Shyrokyne camera	N/K	9-Nov, 22:41
	2-4km E	Recorded	1	Explosion	Undetermined, Also recorded by the SMM camera in Shyrokyne	N/K	9-Nov, 22:42
	2-4km E	Recorded	1	Projectile	SW to NE	N/K	9-Nov, 22:42
SMM camera at entry-exit checkpoint in Maiorsk (government-controlled, 45km NE of Donetsk)	2-4km ENE	Recorded	2	Projectile	N to S	N/K	9-Nov, 21:55
	2-4km ENE	Recorded	1	Projectile	NNW to SSE	N/K	9-Nov, 22:18
	2-4km ENE	Recorded	1	Illumination flare	NE to SW	N/K	9-Nov, 22:21
	2-4km ENE	Recorded	1	Projectile	NNW to SSE	N/K	9-Nov, 23:33
	3-5km ENE	Recorded	1	Projectile	NW to SE	N/K	10-Nov, 03:08
	2-4km ENE	Recorded	1	Projectile	N to S	N/K	10-Nov, 03:32
SMM camera at entry-exit checkpoint in	2-4km NNE	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 20:52
	2-4km NNE	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 21:12

Marinka (government-controlled, 23km SW of Donetsk)	2-4km NNE	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 21:18	
SMM camera at entry-exit checkpoint in Pyshchevyk (government-controlled, 84km S of Donetsk)	3-5km ESE	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 20:17	
	3-5km ESE	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 20:29	
	3-5km ENE	Recorded	2	Explosion	Undetermined	N/K	9-Nov, 20:31	
	3-5km ESE	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 20:36	
	3-5km ESE	Recorded	4	Projectile	SW to NE	N/K	9-Nov, 20:36	
	3-5km ESE	Recorded	1	Projectile	N to S	N/K	9-Nov, 20:36	
	3-5km ESE	Recorded	10	Projectile	SW to NE	N/K	9-Nov, 20:37	
	3-5km ENE	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 20:37	
	3-5km ESE	Recorded	3	Projectile	SW to NE	N/K	9-Nov, 20:38	
	3-5km ESE	Recorded	2	Projectile	SW to NE	N/K	9-Nov, 20:44	
	3-5km ENE	Recorded	1	Projectile	SW to NE	N/K	9-Nov, 21:00	
	3-5km ENE	Recorded	1	Explosion	Impact	N/K	9-Nov, 21:00	
	3-5km ENE	Recorded	2	Projectile	W to E	N/K	9-Nov, 21:01	
	3-5km ENE	Recorded	2	Explosion	Undetermined	N/K	9-Nov, 21:13	
	3-5km E	Recorded	2	Projectile	N to S	N/K	9-Nov, 21:34	
	3-5km ENE	Recorded	2	explosion	Undetermined	N/K	9-Nov, 21:51	
	3-5km ESE	Recorded	8	Projectile	NNW to SSE	N/K	9-Nov, 23:09	
SMM camera 1km SW of Shyrokyne (government-controlled, 100km S of Donetsk)	3-5km N	Recorded	1	Projectile	W to E	N/K	9-Nov, 17:31	
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 17:31	
	3-5km N	Recorded	2	Projectile	E to W	N/K	9-Nov, 17:36	
	3-5km N	Recorded	1	Projectile	W to E	N/K	9-Nov, 17:43	
	3-5km N	Recorded	1	Explosion	Airburst, subsequent to previous event	N/K	9-Nov, 17:43	
	3-5km N	Recorded	8	Projectile	E to W	N/K	9-Nov, 18:42	
	3-5km NNE	Recorded	2	Muzzle flash		N/K	9-Nov, 18:42	
	3-5km N	Recorded	5	Projectile	E to W	N/K	9-Nov, 18:43	
	3-5km N	Recorded	9	Projectile	E to W	N/K	9-Nov, 18:44	
	3-5km N	Recorded	3	Projectile	E to W	N/K	9-Nov, 18:45	
	3-5km N	Recorded	2	Projectile	E to W	N/K	9-Nov, 18:46	
	3-5km N	Recorded	4	Explosion	Undetermined	N/K	9-Nov, 18:54	
	3-5km N	Recorded	7	Explosion	Undetermined	N/K	9-Nov, 18:55	
	3-5km N	Recorded	1	Projectile	W to E	N/K	9-Nov, 18:55	
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 18:58	
	3-5km NNE	Recorded	1	Projectile	W to E	N/K	9-Nov, 19:07	
	3-5km N	Recorded	3	Projectile	E to W	N/K	9-Nov, 19:11	
	3-5km N	Recorded	29	Projectile	E to W	N/K	9-Nov, 19:14	
	3-5km N	Recorded	9	Projectile	E to W	N/K	9-Nov, 19:15	
	3-5km N	Recorded	2	Projectile	E to W	N/K	9-Nov, 19:16	
	3-5km N	Recorded	9	Projectile	W to E	N/K	9-Nov, 19:17	
	3-5km N	Recorded	15	Projectile	E to W	N/K	9-Nov, 19:17	
	3-5km N	Recorded	3	Explosion	Undetermined	N/K	9-Nov, 19:17	
	3-5km N	Recorded	9	Projectile	W to E	N/K	9-Nov, 19:19	
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 19:19	
	3-5km N	Recorded	1	Projectile	SSW to NNE	N/K	9-Nov, 19:22	
		3-5km N	Recorded	1	Muzzle flash		N/K	9-Nov, 19:22
		3-5km N	Recorded	1	Projectile	SW to NE (subsequent to previous event)	N/K	9-Nov, 19:22
		3-5km N	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 19:29
		3-5km NNE	Recorded	3	Projectile	W to E	N/K	9-Nov, 19:31
		3-5km N	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 19:43
		3-5km N	Recorded	2	Explosion	Undetermined	N/K	9-Nov, 19:44
	3-5km N	Recorded	4	Projectile	W to E	N/K	9-Nov, 19:44	
	3-5km N	Recorded	1	Projectile	E to W	N/K	9-Nov, 19:44	
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 19:45	
	3-5km N	Recorded	1	Projectile	SW to NE	N/K	9-Nov, 19:47	
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 19:47	

	3-5km N	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 19:52
	6-8km N	Recorded	1	Explosion	Undetermined	N/K	9-Nov, 20:24
	6-8km NNE	Recorded	2	Explosion	Undetermined	N/K	9-Nov, 20:25
	3-5km NNE	Recorded	16	Projectile	W to E	N/K	9-Nov, 20:31
	3-5km NNE	Recorded	3	Projectile	W to E	N/K	9-Nov, 20:33
	3-5km NNE	Recorded	1	Projectile	W to E	N/K	9-Nov, 20:47
	3-5km NNE	Recorded	3	Projectile	W to E	N/K	9-Nov, 21:14
	2-4km E	Recorded	1	Projectile	SW to NE	N/K	9-Nov, 22:41
	3-5km N	Recorded	7	Explosion	Undetermined	N/K	10-Nov, 16:55
	3-5km N	Recorded	7	Explosion	Undetermined	N/K	10-Nov, 16:56
	3-5km N	Recorded	2	Projectile	W to E	N/K	10-Nov, 17:08
	3-5km N	Recorded	2	Explosion	Undetermined	N/K	10-Nov, 17:08
	3-5km N	Recorded	2	Explosion	Undetermined	N/K	10-Nov, 17:10
	3-5km N	Recorded	7	Explosion	Undetermined	N/K	10-Nov, 17:11
	3-5km NNE	Recorded	2	Projectile	W to E	N/K	10-Nov, 17:18
	3-5km N	Recorded	4	Projectile	W to E	N/K	10-Nov, 17:22
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	10-Nov, 17:22
	3-5km N	Recorded	4	Projectile	W to E	N/K	10-Nov, 17:24
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	10-Nov, 17:24
	3-5km N	Recorded	2	Projectile	W to E	N/K	10-Nov, 17:30
	3-5km N	Recorded	3	Projectile	SW to NE	N/K	10-Nov, 17:31
	3-5km N	Recorded	15	Projectile	W to E	N/K	10-Nov, 17:37
	3-5km N	Recorded	10	Projectile	E to W	N/K	10-Nov, 17:38
	3-5km N	Recorded	2	Projectile	W to E	N/K	10-Nov, 17:39
	3-5km N	Recorded	3	Projectile	W to E	N/K	10-Nov, 17:40
	3-5km N	Recorded	1	Projectile	Undetermined	N/K	10-Nov, 17:40
	3-5km N	Recorded	3	Projectile	W to E	N/K	10-Nov, 17:42
	3-5km N	Recorded	1	Projectile	SW to NE	N/K	10-Nov, 17:43
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	10-Nov, 17:46
	3-5km N	Recorded	2	Projectile	W to E	N/K	10-Nov, 17:47
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	10-Nov, 17:47
	3-5km N	Recorded	2	Projectile	W to E	N/K	10-Nov, 17:50
	3-5km N	Recorded	3	Projectile	W to E	N/K	10-Nov, 17:52
	3-5km N	Recorded	8	Projectile	SW to NE	N/K	10-Nov, 17:53
	3-5km N	Recorded	6	Projectile	W to E	N/K	10-Nov, 17:54
About 1km NW of the railway station in Yasynuvata (non-government-controlled, 16km NE of Donetsk)	2-3km SW	Heard	1	Explosion	Undetermined	N/K	10-Nov, 12:40
	2-3km SW	Heard	1	Explosion	Undetermined	N/K	10-Nov, 13:23
About 2km E of Avdiivka (government-controlled, 17km N of Donetsk)	1-2km E	Heard	2	Shot		Small arms	10-Nov, 11:32
W edge of Petrivske (non-government-controlled, 41km S of Donetsk)	1km SSW	Heard	6	Shot	Assessed as inside the disengagement area	Small arms	10-Nov, 08:55
About 2km N of Petrivske (non-government-controlled, 41km S of Donetsk)	1-2km SW	Heard	10	Shot	Unable to assess whether inside or outside the disengagement area	Small arms	10-Nov, 12:02
	3-5km W	Heard	3	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	10-Nov, 12:47
	1-2km SSE	Heard	1	Shot	Assessed as outside the disengagement	Small arms	10-Nov, 14:00

About 2km E of Bohdanivka (government-controlled, 41km SW of Donetsk)	2-3km SE	Heard	6	Shot	area Assessed as inside the Petrivske disengagement area	Small arms	10-Nov, 07:57
E edge of Lebedynske (government-controlled, 99km S of Donetsk)	2-3km NE	Heard	3	Shot		Small arms	10-Nov, 10:03
	1-2km E	Heard	6	Shot		Small arms	10-Nov, 10:11
	1-2km E	Heard	1	Shot		Small arms	10-Nov, 10:17
	1-2km SE	Heard	1	Shot		Small arms	10-Nov, 10:36
Berdianske (government-controlled, 103km S of Donetsk)	1-2km ENE	Heard	60	Burst		HMG	10-Nov, 11:08-11:13
	2km NE	Heard	3	Shot		IFV (BMP-2, 30mm)	10-Nov, 11:18
	1-2km ESE	Heard	70	Shot		Small arms	10-Nov, 11:23-11:26
	600-800m ENE	Heard	25	Burst		HMG	10-Nov, 11:28-11:33
	1-2km ENE	Heard	65	Shot		Small arms	10-Nov, 11:45-11:51
	1-2km NE	Heard	2	Shot		Small arms	10-Nov, 11:58
Orlivske (government-controlled, 82km S of Donetsk)	6-8km SE	Heard	2	Explosion	Undetermined	N/K	10-Nov, 13:27
Verkhnotoretske (government-controlled, 23km NE of Donetsk)	3-4km S	Heard	1	Explosion	Undetermined	N/K	10-Nov, 11:47
Novobakhmutivka (government-controlled, 28km N of Donetsk)	4-5km NE	Heard	5	Explosion	Undetermined	N/K	10-Nov, 13:30-13:34
Svitlodarsk (government-controlled, 57km NE of Donetsk)	3-4km SE	Heard	3	Burst		HMG	10-Nov, 15:10
	4-5km SE	Heard	2	Explosion	Undetermined	N/K	10-Nov, 16:12
	2-3km SE	Heard	1	Explosion	Undetermined	N/K	10-Nov, 16:22
	4-5km SE	Heard	2	Explosion	Undetermined	N/K	10-Nov, 16:30
N edge of Popasna (government-controlled, 69km W of Luhansk)	5-10km SE	Heard	45	Explosion	Undetermined (assessed as outside the Zolote disengagement area)	N/K	9-Nov, 21:30-22:30
	5-10km SE	Heard	25	Burst	Assessed as outside the Zolote disengagement area	HMG	9-Nov, 21:30-22:30
	5-10km SE	Heard	43	Burst	Assessed as outside the Zolote disengagement area	Small arms	9-Nov, 21:30-22:30
	5-10km SE	Heard	35	Shot	Assessed as outside the Zolote disengagement area	Small arms	9-Nov, 21:30-22:30
	7-10km S	Heard	6	Explosion	Undetermined	N/K	10-Nov, 16:20-16:25