

Table of ceasefire violations as of 24 November 2019¹⁰

SMM position	Event location	Means	No.	Observation	Description	Weapon	Date, time
SMM camera in Chermalyk (government-controlled, 77km S of Donetsk)	3-5km SSE	Recorded	3	Projectile	ESE to WNW	N/K	22-Nov, 18:40
	3-5km SSE	Recorded	3	Projectile	ESE to WNW	N/K	22-Nov, 18:41
SMM camera at Donetsk Filtration Station (15km N of Donetsk)	0.5-1km S	Recorded	3	Projectile	WNW to ESE	N/K	22-Nov, 21:32
	0.5-1km SSE	Recorded	1	Explosion	Undetermined	N/K	22-Nov, 22:01
	0.5-1km SSW	Recorded	5	Projectile	WNW to ESE	N/K	22-Nov, 22:16
SMM camera 1.5km NE of Hnutove (government-controlled, 90km S of Donetsk)	3-5km SE	Recorded	1	Explosion	Outgoing (also recorded by SMM camera in Lomakyne)	N/K	22-Nov, 18:48
	3-5km SE	Recorded	1	Projectile	SW to NE (subsequent to previous event, also recorded by SMM camera in Lomakyne)	N/K	22-Nov, 18:48
	3-5km SE	Recorded	2	Projectile	SW to NE (also recorded by SMM camera in Lomakyne)	N/K	22-Nov, 18:48
	3-5km SE	Recorded	3	Projectile	SW to NE (also recorded by SMM camera in Lomakyne)	N/K	22-Nov, 18:49
	3-5km ESE	Recorded	1	Projectile	SW to NE	N/K	22-Nov, 18:58
	3-5km ESE	Recorded	1	Explosion	Undetermined	N/K	22-Nov, 18:59
	3-5km SE	Recorded	2	Projectile	SW to NE	N/K	22-Nov, 19:25
	2-4km ESE	Recorded	1	Projectile	N to S	N/K	22-Nov, 20:08
	3-5km SE	Recorded	7	Projectile	NNE to SSW	N/K	23-Nov, 00:53
	2-4km ESE	Recorded	1	Muzzle flash		N/K	23-Nov, 03:33
	2-4km ESE	Recorded	1	Projectile	SW to NE (subsequent to previous event)	N/K	23-Nov, 03:33
	2-4km ESE	Recorded	3	Projectile	SW to NE	N/K	23-Nov, 03:37
	3-5km ESE	Recorded	2	Projectile	SW to NE	N/K	23-Nov, 16:55
	3-5km ESE	Recorded	2	Explosion	Undetermined	N/K	23-Nov, 18:08
	3-5km ESE	Recorded	2	Explosion	Undetermined	N/K	23-Nov, 18:09
SMM camera E of Lomakyne (government-controlled, 90km S of Donetsk)	7-9km ENE	Recorded	3	Projectile	W to E	N/K	22-Nov, 18:00
	7-9km ENE	Recorded	2	Projectile	W to E	N/K	22-Nov, 18:00
	3-5km E	Recorded	1	Projectile	W to E	N/K	22-Nov, 19:23
	3-5km E	Recorded	2	Projectile	SW to NE	N/K	22-Nov, 19:24
	3-5km E	Recorded	1	Projectile	Undetermined	N/K	22-Nov, 19:25
	3-5km E	Recorded	3	Projectile	SW to NE	N/K	22-Nov, 19:25
	5-7km E	Recorded	5	Projectile	Also recorded by SMM camera in Shyrokyne	N/K	23-Nov, 17:00

¹⁰ 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.

	5-7km E	Recorded	1	Projectile	Also recorded by SMM camera in Shyrokyne	N/K	23-Nov, 18:28
SMM camera at entry-exit checkpoint in Maiorsk (government-controlled, 45km NE of Donetsk)	3-5km ENE	Recorded	10	Projectile	N to S	N/K	22-Nov, 23:45
SMM camera at entry-exit checkpoint in Marinka (government-controlled, 23km SW of Donetsk)	2-4km NNE	Recorded	5	Projectile	E to W	N/K	22-Nov, 19:45
	2-4km NNE	Recorded	5	Projectile	ESE to WNW	N/K	22-Nov, 19:45
	2-4km NNE	Recorded	6	Projectile	ESE to WNW	N/K	22-Nov, 19:47
	2-4km NNE	Recorded	1	Projectile	ESE to WNW	N/K	22-Nov, 19:49
	2-4km NNE	Recorded	4	Projectile	SE to NW	N/K	22-Nov, 19:50
SMM camera at entry-exit checkpoint in Pyshevyk (government-controlled, 84km S of Donetsk)	2-4km ESE	Recorded	1	Explosion	Undetermined	N/K	22-Nov, 19:00
SMM camera 1km SW of Shyrokyne (government-controlled, 100km S of Donetsk)	8-10km N	Recorded	1	Illumination flare	In vertical flight (also recorded by SMM camera in Lomakyne)	N/K	22-Nov, 18:37
	3-6km N	Recorded	1	Explosion	Undetermined	N/K	22-Nov, 18:47
	3-6km N	Recorded	2	Explosion	Undetermined	N/K	22-Nov, 18:48
	3-6km N	Recorded	1	Projectile	W to E	N/K	22-Nov, 18:48
	3-6km N	Recorded	3	Projectile	W to E	N/K	22-Nov, 18:49
	3-6km N	Recorded	2	Projectile	ESE to WNW	N/K	22-Nov, 18:53
	3-6km NNE	Recorded	1	Projectile	ESE to WNW	N/K	22-Nov, 19:12
	4-8km N	Recorded	2	Explosion	Undetermined	N/K	22-Nov, 19:16
	4-8km N	Recorded	1	Explosion	Undetermined	N/K	22-Nov, 19:17
	4-8km N	Recorded	1	Projectile	W to E	N/K	22-Nov, 19:24
	5-7km N	Recorded	1	Projectile	W to E	N/K	22-Nov, 22:15
	5-7km N	Recorded	2	Explosion	Undetermined	N/K	22-Nov, 22:16
	5-7km N	Recorded	1	Muzzle flash		N/K	22-Nov, 22:17
	5-7km N	Recorded	2	Projectile	W to E (subsequent to previous event)	N/K	22-Nov, 22:17
	5-7km N	Recorded	2	Projectile	ESE to WNW	N/K	22-Nov, 22:17
	5-7km N	Recorded	9	Projectile	ESE to WNW	N/K	22-Nov, 22:23
	5-7km N	Recorded	1	Projectile	W to E	N/K	22-Nov, 23:18
	5-7km N	Recorded	1	Explosion	Impact (subsequent to previous event)	N/K	22-Nov, 23:18
	5-7km N	Recorded	1	Projectile	W to E	N/K	22-Nov, 23:20
	5-7km N	Recorded	1	Projectile	SE to NW	N/K	22-Nov, 23:25
	5-7km N	Recorded	2	Projectile	W to E	N/K	22-Nov, 23:43
	5-7km N	Recorded	5	Projectile	W to E	N/K	22-Nov, 23:44
	5-7km N	Recorded	1	Explosion	Undetermined	N/K	22-Nov, 23:44
	5-7km N	Recorded	2	Projectile	SW to NE (in vertical flight)	N/K	22-Nov, 23:45
	5-7km N	Recorded	2	Projectile	W to E	N/K	23-Nov, 00:14
	5-7km N	Recorded	3	Projectile	E to W	N/K	23-Nov, 00:35
5-7km NNE	Recorded	1	Explosion	Undetermined	N/K	23-Nov, 01:35	
5-7km NNE	Recorded	1	Projectile	W to E	N/K	23-Nov, 01:35	

	5-7km N	Recorded	1	Projectile	In vertical flight	N/K	23-Nov, 01:39
	5-7km NNE	Recorded	1	Projectile	E to W	N/K	23-Nov, 02:26
	5-7km N	Recorded	1	Projectile	In vertical flight	N/K	23-Nov, 02:26
	5-7km N	Recorded	1	Burst	E to W	N/K	23-Nov, 02:26
	5-7km N	Recorded	22	Projectile	W to E	N/K	23-Nov, 02:37
	5-7km N	Recorded	3	Projectile	W to E	N/K	23-Nov, 03:32
	5-7km N	Recorded	8	Projectile	W to E	N/K	23-Nov, 03:33
	5-7km N	Recorded	7	Projectile	E to W	N/K	23-Nov, 04:05
	5-7km N	Recorded	1	Projectile	W to E	N/K	23-Nov, 04:05
	5-7km NNE	Recorded	2	Projectile	W to E	N/K	23-Nov, 04:10
	5-7km NNE	Recorded	1	Explosion	Undetermined	N/K	23-Nov, 04:10
	5-7km NNE	Recorded	1	Projectile	W to E	N/K	23-Nov, 04:24
	5-7km N	Recorded	1	Projectile	SSE to NNW	N/K	23-Nov, 04:25
	5-7km N	Recorded	7	Projectile	W to E	N/K	23-Nov, 04:37
	5-7km N	Recorded	1	Burst	W to E	N/K	23-Nov, 04:37
	5-7km NNE	Recorded	1	Projectile	W to E	N/K	23-Nov, 04:43
	5-7km NNE	Recorded	2	Projectile	W to E	N/K	23-Nov, 04:44
	3-5km NNE	Recorded	4	Projectile	E to W	N/K	23-Nov, 05:01
	3-5km NNE	Recorded	1	Projectile	E to W	N/K	23-Nov, 05:04
	3-5km NNE	Recorded	1	Explosion	Undetermined	N/K	23-Nov, 16:42
	3-5km N	Recorded	1	Projectile	WSW to ENE	N/K	23-Nov, 16:56
	3-5km N	Recorded	1	Projectile	W to E	N/K	23-Nov, 17:08
	3-5km N	Recorded	1	Projectile	In vertical flight	N/K	23-Nov, 17:59
	3-5km N	Recorded	1	Explosion	Undetermined (also recorded by SMM camera in Lomakyne)	N/K	23-Nov, 18:02
	3-5km N	Recorded	3	Projectile	W to E	N/K	23-Nov, 18:14
	3-5km N	Recorded	1	Explosion	Undetermined	N/K	23-Nov, 18:21
SMM camera in Svitlodarsk (government-controlled, 57km NE of Donetsk)	2-4km WSW	Recorded	4	Projectile	N to S	N/K	22-Nov, 21:08
	5-7km ESE	Recorded	1	Projectile		N/K	23-Nov, 18:08
	5-7km ESE	Recorded	2	Projectile		N/K	23-Nov, 18:15
Svitlodarsk (government-controlled, 57km NE of Donetsk)	3-5km SE	Heard	1	Explosion	Undetermined	N/K	22-Nov, 18:47
	4-6km SE	Heard	2	Explosion	Undetermined	N/K	22-Nov, 19:34
	4-6km SE	Heard	1	Explosion	Undetermined	N/K	22-Nov, 19:42
	4-6km SE	Heard	2	Explosion	Undetermined	N/K	22-Nov, 22:23
	4-6km SE	Heard	1	Explosion	Undetermined	N/K	22-Nov, 22:58
	3-5km SE	Heard	4	Burst		HMG	22-Nov, 23:02
	3-5km SE	Heard	3	Burst		HMG	22-Nov, 23:16
	3-5km SW	Heard	1	Explosion	Undetermined	N/K	23-Nov, 11:16
	3-5km SE	Heard	1	Explosion	Undetermined	N/K	23-Nov, 11:24
	3-4km SE	Heard	3	Explosion	Undetermined	N/K	23-Nov, 13:18-13:20
	3-5km SE	Heard	1	Explosion	Undetermined	N/K	23-Nov, 14:50
About 500m NE of Kamianka (government-controlled, 20km N of Donetsk)	2-3km ESE	Heard	1	Explosion	Undetermined	N/K	23-Nov, 09:23
SW edge of Novoluhanske (government-controlled, 53km NE of Donetsk)	1-2km S	Heard	10	Shot		Small arms	23-Nov, 09:45
	1km SW	Heard and saw	1	Explosion	Impact	N/K	23-Nov, 10:25
	5-7km SE	Heard and saw	1	Explosion	Impact	N/K	23-Nov, 11:16
	5-7km SE	Heard	1	Explosion	Undetermined	N/K	23-Nov, 11:24
	2-3km NNW	Heard	1	Explosion	Undetermined	N/K	23-Nov, 10:28

Holmivskiyi (non-government-controlled, 49km NE of Donetsk)	2-3km E	Heard	1	Explosion	Undetermined	N/K	23-Nov, 11:17
	2-3km E	Heard	1	Explosion	Undetermined	N/K	23-Nov, 11:23
SMM camera in Berezove (government-controlled, 31km SW of Donetsk)	4-6km SE	Recorded	3	Projectile	NNE to SSW	N/K	24-Nov, 17:16
SMM camera in Chermalyk (government-controlled, 77km S of Donetsk)	2-3km SE	Recorded	22	Projectile	NE to SW	N/K	23-Nov, 20:59
	4-6km SSE	Recorded	1	Projectile	NE to SW	N/K	23-Nov, 23:43
	4-6km SSE	Recorded	1	Explosion	Impact (subsequent to previous event)	N/K	23-Nov, 23:43
SMM camera at Donetsk Filtration Station (15km N of Donetsk)	500-800m S	Recorded	1	Explosion	Impact	N/K	23-Nov, 20:35
	500-800m S	Recorded	1	Explosion	Outgoing	N/K	23-Nov, 20:35
	500-800m S	Recorded	1	Muzzle flash		N/K	23-Nov, 21:00
	500-800m S	Recorded	1	Projectile	E to W	N/K	23-Nov, 21:00
	500-800m S	Recorded	2	Muzzle flash		N/K	23-Nov, 21:01
	500-800m S	Recorded	1	Explosion	Undetermined	N/K	23-Nov, 21:01
	500-800m S	Recorded	1	Muzzle flash		N/K	23-Nov, 21:45
	500-800m S	Recorded	2	Muzzle flash		N/K	23-Nov, 21:46
	500-800m S	Recorded	9	Muzzle flash		N/K	23-Nov, 22:01
	500-800m S	Recorded	11	Muzzle flash		N/K	23-Nov, 22:02
	500-800m S	Recorded	2	Muzzle flash		N/K	23-Nov, 22:03
	500-800m SSW	Recorded	1	Projectile	NW to SE	N/K	23-Nov, 22:23
	500-800m S	Recorded	1	Explosion	Undetermined	N/K	23-Nov, 22:25
	0.7-1km S	Recorded	1	Projectile	NE to SW	N/K	23-Nov, 22:38
	500-800m SSW	Recorded	2	Projectile	NE to SW	N/K	23-Nov, 22:55
	0.8-1km S	Recorded	1	Projectile	NE to SW	N/K	23-Nov, 22:58
	1-1.5km SSW	Recorded	1	Explosion	Undetermined	N/K	23-Nov, 23:00
	1-1.5km SSW	Recorded	1	Explosion	Undetermined	N/K	23-Nov, 23:03
	500-800m SSW	Recorded	9	Muzzle flash		N/K	23-Nov, 23:08
	500-800m SSW	Recorded	1	Projectile	NE to SW	N/K	23-Nov, 23:08
	500-800m SSW	Recorded	2	Projectile	NE to SW	N/K	23-Nov, 23:28
	0.8-1km S	Recorded	1	Muzzle flash		N/K	23-Nov, 23:42
	1-1.5km S	Recorded	1	Explosion	Undetermined	N/K	23-Nov, 23:43
	1km S	Recorded	3	Projectile	NNW to SSE	N/K	23-Nov, 23:44
	0.5-1km S	Recorded	1	Illumination flare	In vertical flight	N/K	24-Nov, 00:25
	1-2km S	Recorded	1	Explosion	Undetermined	N/K	24-Nov, 00:25
	0.5-1km S	Recorded	1	Explosion	Airburst	N/K	24-Nov, 00:26
	0.5-1km S	Recorded	1	Projectile	NNW to SSE (airburst)	N/K	24-Nov, 00:26
	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	24-Nov, 01:33
	0.5-1km SSW	Recorded	1	Projectile	NW to SE	N/K	24-Nov, 01:33
	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	24-Nov, 01:36
	1-2km SSW	Recorded	3	Projectile	WNW to ESE	N/K	24-Nov, 02:43
	300-600m SSW	Recorded	5	Burst	NW to SE	N/K	24-Nov, 03:05
400-700m S	Recorded	1	Muzzle flash		N/K	24-Nov, 03:05	
300-600m SSW	Recorded	2	Burst	NE to SW	N/K	24-Nov, 03:23	
300-600m SSW	Recorded	1	Projectile	WNW to ESE (subsequent to previous event)	N/K	24-Nov, 03:23	

	300-600m SSW	Recorded	3	Burst	NNW to SSE	N/K	24-Nov, 03:30
	300-600m SSW	Recorded	1	Burst	NW to SE	N/K	24-Nov, 03:44
	300-600m SSW	Recorded	1	Muzzle flash		N/K	24-Nov, 03:49
	300-600m SSW	Recorded	2	Burst	NNW to SSE	N/K	24-Nov, 03:49
	300-600m SSW	Recorded	2	Burst	NNE to SSW	N/K	24-Nov, 03:49
	300-600m SSW	Recorded	3	Burst	NNW to SSE	N/K	24-Nov, 03:56
	300-600m SSW	Recorded	2	Burst	NNE to SSW	N/K	24-Nov, 03:56
	1-3km S	Recorded	1	Explosion	Also recorded by SMM cameras in Avdiivka and Oktiabr Mine	N/K	24-Nov, 18:22
SMM camera 1.5km NE of Hnutove (government-controlled, 90km S of Donetsk)	3-5km ESE	Recorded	5	Explosion	Undetermined	N/K	23-Nov, 18:43
	2-4km ESE	Recorded	1	Projectile	W to E	N/K	23-Nov, 22:31
	2-4km ESE	Recorded	3	Projectile	SW to NE	N/K	24-Nov, 03:37
SMM camera in Krasnohorivka (government-controlled, 21km W of Donetsk)	2-3km NE	Recorded	3	Projectile	W to E	N/K	23-Nov, 23:04
SMM camera E of Lomakyne (government-controlled, 90km S of Donetsk)	5-7km E	Recorded	2	Projectile	SSW to NNE (also recorded by SMM camera in Shyrokyne)	N/K	24-Nov, 00:24
	5-7km E	Recorded	4	Projectile	SSW to NNE (also recorded by SMM camera in Shyrokyne)	N/K	24-Nov, 00:33
	5-7km E	Recorded	4	Projectile	SSW to NNE (also recorded by SMM camera in Shyrokyne)	N/K	24-Nov, 01:03
SMM camera at entry-exit checkpoint in Maiorsk (government-controlled, 45km NE of Donetsk)	2-3km ENE	Recorded	5	Projectile	N to S	N/K	23-Nov, 19:57
	1-2km ENE	Recorded	1	Projectile	N to S	N/K	23-Nov, 21:05
SMM camera at Oktiabr mine (non-government-controlled, 9km NW of Donetsk city centre)	2-4km NNE	Recorded	2	Projectile	In vertical flight (also recorded by SMM cameras at the DFS and in Avdiivka)	N/K	24-Nov, 18:07
SMM camera 1km SW of Shyrokyne (government-controlled, 100km S of Donetsk)	3-5km N	Recorded	1	Projectile	E to W	N/K	23-Nov, 19:10
	4-7km N	Recorded	3	Projectile	WNW to ESE	N/K	23-Nov, 19:15
	5-7km N	Recorded	7	Projectile	E to W	N/K	23-Nov, 20:06
	3-5km NNE	Recorded	1	Projectile	SE to NW	N/K	23-Nov, 21:09
	5-7km N	Recorded	2	Projectile	W to E	N/K	23-Nov, 21:25
	5-7km N	Recorded	5	Projectile	W to E	N/K	23-Nov, 21:31

3-5km NNE	Recorded	1	Projectile	SE to NW	N/K	23-Nov, 21:31
5-7km N	Recorded	2	Explosion	Undetermined	N/K	23-Nov, 21:59
5-7km N	Recorded	1	Projectile	W to E	N/K	23-Nov, 21:59
5-7km N	Recorded	1	Projectile	W to E	N/K	23-Nov, 22:01
3-5km N	Recorded	1	Projectile	SSE to NNW	N/K	23-Nov, 22:11
3-5km NNE	Recorded	1	Muzzle flash		N/K	23-Nov, 22:11
5-7km N	Recorded	2	Projectile	W to E	N/K	23-Nov, 22:22
3-5km NNE	Recorded	9	Projectile	ESE to WNW	N/K	23-Nov, 22:29
5-7km N	Recorded	1	Projectile	W to E	N/K	23-Nov, 22:35
3-5km NNE	Recorded	1	Projectile	SSE to NNW	N/K	23-Nov, 22:43
5-7km N	Recorded	1	Explosion	Undetermined	N/K	23-Nov, 22:50
3-5km NNE	Recorded	1	Projectile	SSE to NNW	N/K	23-Nov, 23:08
5-7km N	Recorded	3	Projectile	WSW to ENE	N/K	23-Nov, 23:16
3-5km NNE	Recorded	5	Projectile	ESE to WNW	N/K	23-Nov, 23:31
3-5km NNE	Recorded	5	Projectile	ESE to WNW	N/K	23-Nov, 23:57
3-5km NNE	Recorded	1	Projectile	In vertical flight	N/K	23-Nov, 23:57
3-5km NNE	Recorded	1	Projectile	SSW to NNE	N/K	23-Nov, 23:57
3-5km NNE	Recorded	1	Projectile	S to N	N/K	24-Nov, 00:03
3-5km NNE	Recorded	3	Projectile	SE to NW	N/K	24-Nov, 00:03
5-7km N	Recorded	8	Projectile	WSW to ENE	N/K	24-Nov, 00:07
3-5km NNE	Recorded	1	Projectile	SE to NW	N/K	24-Nov, 00:12
5-7km N	Recorded	2	Projectile	W to E	N/K	24-Nov, 00:13
3-5km NNE	Recorded	3	Projectile	ESE to WNW	N/K	24-Nov, 00:31
3-5km NNE	Recorded	7	Projectile	ESE to WNW	N/K	24-Nov, 00:35
5-7km N	Recorded	1	Projectile	ESE to WNW	N/K	24-Nov, 00:35
3-5km NNE	Recorded	1	Explosion	Undetermined	N/K	24-Nov, 00:36
3-5km NNE	Recorded	1	Projectile	SSE to NNW	N/K	24-Nov, 00:36
3-5km NNE	Recorded	1	Projectile	ESE to WNW	N/K	24-Nov, 00:36
3-5km NNE	Recorded	5	Projectile	SSE to NNW	N/K	24-Nov, 00:43
3-5km NNE	Recorded	2	Projectile	ESE to WNW	N/K	24-Nov, 00:43
3-5km N	Recorded	1	Projectile	WSW to ENE	N/K	24-Nov, 00:53
5-7km N	Recorded	1	Projectile	WSW to ENE (also recorded by SMM camera in Lomakyne)	N/K	24-Nov, 00:53
3-5km NNE	Recorded	2	Projectile	ESE to WNW	N/K	24-Nov, 01:03
3-5km NNE	Recorded	1	Projectile	S to N	N/K	24-Nov, 01:03
3-5km N	Recorded	3	Projectile	WSW to ENE	N/K	24-Nov, 01:03
5-7km N	Recorded	2	Explosion	Undetermined	N/K	24-Nov, 01:17
5-7km N	Recorded	2	Projectile	W to E	N/K	24-Nov, 01:18
5-7km N	Recorded	3	Projectile	SSW to NNE	N/K	24-Nov, 01:18
5-7km N	Recorded	8	Projectile	SW to NE (also recorded by SMM camera in Lomakyne)	N/K	24-Nov, 01:22
5-7km N	Recorded	1	Explosion	Undetermined	N/K	24-Nov, 01:24
5-7km N	Recorded	5	Projectile	ESE to WNW	N/K	24-Nov, 01:32
7-8km N	Recorded	3	Projectile	WSW to ENE	N/K	24-Nov, 01:36
7-8km N	Recorded	12	Projectile	WSW to ENE	N/K	24-Nov, 01:40
7-8km N	Recorded	1	Projectile	In vertical flight	N/K	24-Nov, 01:40
7-8km N	Recorded	1	Projectile	WSW to ENE	N/K	24-Nov, 01:43
3-5km NNE	Recorded	3	Projectile	ESE to WNW	N/K	24-Nov, 01:51
7-8km N	Recorded	5	Projectile	WSW to ENE	N/K	24-Nov, 01:55
7-8km N	Recorded	7	Projectile	W to E	N/K	24-Nov, 01:58
7-8km N	Recorded	2	Projectile	WSW to ENE	N/K	24-Nov, 02:01
7-8km N	Recorded	1	Projectile	WSW to ENE	N/K	24-Nov, 02:07
3-5km NNE	Recorded	3	Projectile	ESE to WNW	N/K	24-Nov, 02:10
7-8km N	Recorded	1	Muzzle flash		N/K	24-Nov, 02:10

	7-8km N	Recorded	4	Projectile	WSW to ENE (subsequent to previous event, also recorded by SMM camera in Lomakyne)	N/K	24-Nov, 02:10
	7-8km N	Recorded	3	Projectile	WSW to ENE	N/K	24-Nov, 02:22
	7-8km N	Recorded	4	Explosion	Undetermined	N/K	24-Nov, 02:34
	3-5km NNE	Recorded	1	Projectile	ESE to WNW	N/K	24-Nov, 02:47
	7-8km N	Recorded	1	Projectile	ESE to WNW	N/K	24-Nov, 02:59
	7-8km N	Recorded	1	Projectile	WSW to ENE	N/K	24-Nov, 03:02
	7-8km N	Recorded	3	Projectile	ESE to WNW	N/K	24-Nov, 03:11
	3-5km NNE	Recorded	1	Projectile	WSW to ENE	N/K	24-Nov, 03:16
	3-5km NNE	Recorded	6	Projectile	WSW to ENE	N/K	24-Nov, 03:17
	3-5km NNE	Recorded	3	Projectile	WSW to ENE	N/K	24-Nov, 03:22
	3-5km NNE	Recorded	4	Projectile	SE to NW	N/K	24-Nov, 03:22
	7-8km N	Recorded	4	Projectile	WSW to ENE	N/K	24-Nov, 03:24
	7-8km N	Recorded	1	Projectile	WSW to ENE	N/K	24-Nov, 03:27
	5-7km N	Recorded	2	Projectile	WSW to ENE	N/K	24-Nov, 03:32
	5-7km N	Recorded	3	Projectile	ESE to WNW	N/K	24-Nov, 03:51
	5-7km N	Recorded	1	Projectile	ESE to WNW	N/K	24-Nov, 04:00
	5-7km N	Recorded	1	Projectile	SE to NW	N/K	24-Nov, 04:22
	2-4km NNE	Recorded	2	Projectile	E to W	N/K	24-Nov, 16:13
	3-5km NNE	Recorded	1	Projectile	In vertical flight	N/K	24-Nov, 16:13
	3-5km N	Recorded	2	Projectile	SE to NW	N/K	24-Nov, 16:14
	4-6km N	Recorded	5	Projectile	SW to NE	N/K	24-Nov, 16:20
	4-6km N	Recorded	9	Projectile	SE to NW	N/K	24-Nov, 16:21
	4-6km N	Recorded	2	Projectile	SE to NW	N/K	24-Nov, 16:22
	4-6km N	Recorded	1	Projectile	In vertical flight	N/K	24-Nov, 16:47
	4-6km N	Recorded	1	Explosion	Undetermined	N/K	24-Nov, 16:48
	3-5km N	Recorded	1	Projectile	E to W (in vertical flight)	N/K	24-Nov, 16:48
	4-6km N	Recorded	1	Projectile	In vertical flight	N/K	24-Nov, 16:49
	4-6km N	Recorded	2	Projectile	In vertical flight	N/K	24-Nov, 16:50
	3-5km N	Recorded	3	Projectile	E to W	N/K	24-Nov, 16:50
SMM camera in Svitlodarsk (government-controlled, 57km NE of Donetsk)	5-7km ESE	Recorded	1	Burst	NNE to SSW	N/K	24-Nov, 17:55
Krasnohorivka (government-controlled, 21km W of Donetsk)	1-2km SE	Heard	2	Explosion	Undetermined	N/K	24-Nov, 10:48-10:51
	1-2km SE	Heard	30	Burst		HMG	24-Nov, 10:48-10:51
SE edge of Avdiivka (government-controlled, 17km N of Donetsk)	3-5km SW	Heard	3	Explosion	Undetermined	N/K	24-Nov, 09:31
	3-5km SW	Heard	1	Explosion	Undetermined	N/K	24-Nov, 11:19
About 700m NW of Petrivske (non-government-controlled, 41km S of Donetsk)	2-3km S	Heard	6	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	24-Nov, 09:20
	2-3km S	Heard	5	Burst	Assessed as outside the disengagement area	Small arms	24-Nov, 09:20
	2-3km S	Heard	10	Burst	Assessed as outside the disengagement area	HMG	24-Nov, 09:27

	2-3km S	Heard	2	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	24-Nov, 09:27
	2-3km S	Heard	14	Burst	Assessed as outside the disengagement area	HMG	24-Nov, 09:38
	2-3km S	Heard	2	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	24-Nov, 09:40
Svitlodarsk (government-controlled, 57km NE of Donetsk)	2-3km SE	Heard	3	Burst		HMG	23-Nov, 18:52
	2-3km SE	Heard	5	Shot		Small arms	23-Nov, 19:04
	4-6km SE	Heard	2	Explosion	Undetermined	N/K	23-Nov, 19:08
	2-3km SE	Heard	6	Burst		HMG	23-Nov, 19:12
	4-6km SE	Heard	1	Explosion	Undetermined	N/K	23-Nov, 19:22
	2-3km SE	Heard	8	Burst		HMG	23-Nov, 19:23
	2-3km SE	Heard	21	Shot		Small arms	23-Nov, 19:38
	2-3km SE	Heard	7	Shot		Small arms	23-Nov, 20:03
	2-3km SE	Heard	3	Burst		HMG	23-Nov, 20:30
	2-3km SE	Heard	7	Burst		HMG	23-Nov, 20:47
	2-3km SE	Heard	5	Burst		HMG	23-Nov, 20:54
	4-6km SE	Heard	4	Explosion	Undetermined	N/K	23-Nov, 21:01
	2-3km SE	Heard	6	Burst		HMG	23-Nov, 21:05
	2-3km SE	Heard	14	Burst		HMG	23-Nov, 21:14
	2-3km SE	Heard	11	Burst		HMG	23-Nov, 21:22
	3-5km SE	Heard	21	Burst		HMG	23-Nov, 21:39-21:42
	2-4km SE	Heard	7	Shot		Small arms	23-Nov, 21:43
	3-5km SE	Heard	6	Burst		Small arms	23-Nov, 21:43
	3-5km SE	Heard	5	Shot		Small arms	23-Nov, 21:56
	3-5km SE	Heard	18	Burst		HMG	23-Nov, 22:03-22:06
	3-5km SE	Heard	9	Burst		HMG	23-Nov, 22:35
	3-5km SE	Heard	2	Shot		Small arms	23-Nov, 22:40
	3-5km SE	Heard	7	Burst		HMG	23-Nov, 22:42
	3-5km SE	Heard	25	Burst		HMG	23-Nov, 22:53-22:57
	3-5km SE	Heard	6	Shot		Small arms	23-Nov, 22:54
	3-5km SE	Heard	27	Burst		HMG	23-Nov, 23:02-23:04
	3-5km SE	Heard	4	Burst		HMG	23-Nov, 23:07
	3-5km SE	Heard	7	Burst		HMG	23-Nov, 23:25
	3-5km SE	Heard	11	Shot		Small arms	23-Nov, 23:35
	3-5km SE	Heard	9	Burst		HMG	23-Nov, 23:35
3-5km SE	Heard	3	Burst		HMG	23-Nov, 22:44	
3-5km SE	Heard	8	Shot		Small arms	23-Nov, 23:51	
3-5km SE	Heard	6	Burst		HMG	23-Nov, 23:59	

	3-5km SE	Heard	18	Burst		HMG	24-Nov, 10:10
	3-5km SE	Heard	2	Burst		HMG	24-Nov, 10:31
	2-3km SE	Heard	9	Burst		HMG	24-Nov, 12:10
	2-3km SE	Heard	2	Explosion	Undetermined	N/K	24-Nov, 12:11
	2-3km SE	Heard	11	Burst		HMG	24-Nov, 12:30
	3-5km SE	Heard	5	Explosion	Undetermined	N/K	24-Nov, 14:10
	3-5km SE	Heard	7	Explosion	Undetermined	N/K	24-Nov, 14:14
	3-4km SE	Heard	6	Explosion	Undetermined	N/K	24-Nov, 18:13-18:19
About 500m NE of Kamianka (government-controlled, 20km N of Donetsk)	2-3km ESE	Heard	1	Explosion	Undetermined	N/K	24-Nov, 09:23
	2-4km SSW	Heard	4	Burst		HMG	24-Nov, 10:03
	2-3km N	Heard	4	Explosion	Undetermined	N/K	24-Nov, 10:07
	2-3km N	Heard	1	Explosion	Undetermined	N/K	24-Nov, 10:10
	4-5km E	Heard	3	Explosion	Undetermined	N/K	24-Nov, 11:07
N edge of Popasna (government-controlled, 69km west of Luhansk)	7-10km S	Heard	5	Explosion	Undetermined	N/K	24-Nov, 07:10-07:11
E edge of Popasna (government-controlled, 69km west of Luhansk)	2-3km SSE	Heard	3	Shot		Cannon (30mm)	24-Nov, 14:07