

Table of ceasefire violations as of 4 November 2018¹

SMM position	Event location	Means	No.	Observation	Description	Weapon	Date, time
SMM camera in Avdiivka (government-controlled, 17km N of Donetsk)	2-5km SSE	Recorded	5	Projectile	SW to NE	N/K	2-Nov, 20:05
	2-5km SSE	Recorded	1	Explosion	Undetermined	N/K	2-Nov, 20:10
	2-5km SSE	Recorded	1	Projectile	NE to SW	N/K	2-Nov, 20:21
	2-5km SSE	Recorded	2	Projectile	NE to SW	N/K	2-Nov, 20:39
	2-5km SSE	Recorded	3	Explosion	Undetermined	N/K	2-Nov, 21:30
	2-5km SSE	Recorded	1	Projectile	NE to SW	N/K	2-Nov, 21:55
	2-3km SSE	Recorded	1	Projectile	SW to NE	N/K	2-Nov, 21:55
	2-5km SSE	Recorded	2	Projectile	NE to SW	N/K	2-Nov, 22:39
SMM camera in Berezove (government-controlled, 31km SW of Donetsk)	2-4km SE	Recorded	3	Projectile	SW to NE	N/K	2-Nov, 20:23
	2-4km SE	Recorded	1	Explosion	Undetermined	N/K	2-Nov, 20:24
	2-4km SE	Recorded	6	Projectile	SW to NE	N/K	2-Nov, 20:25
	2-4km SE	Recorded	3	Explosion	Undetermined	N/K	2-Nov, 20:26
	2-4km SE	Recorded	2	Projectile	SW to NE	N/K	2-Nov, 20:26
	2-4km SE	Recorded	1	Projectile	SW to NE	N/K	2-Nov, 20:32
SMM camera at Donetsk Filtration Station (15km N of Donetsk)	1-2km S	Recorded	1	Projectile	SE to NW	N/K	2-Nov, 18:30
	1-2km S	Recorded	1	Explosion	Incoming	N/K	2-Nov, 18:30
	1-2km S	Recorded	1	Muzzle flash		N/K	2-Nov, 18:33
	1-2km S	Recorded	1	Projectile	SE to NW	N/K	2-Nov, 18:33
	1-2km S	Recorded	3	Projectile	W to E	N/K	2-Nov, 18:33
	1.5-2km S	Recorded	1	Explosion	Undetermined	N/K	2-Nov, 18:40
	2-3km SW	Recorded	1	Projectile	W to E	N/K	2-Nov, 18:49
	1-2km S	Recorded	3	Projectile	E to W	N/K	2-Nov, 19:52
	1-2km S	Recorded	2	Projectile	E to W	N/K	2-Nov, 19:53
	2-3km S	Recorded	20	Projectile	W to E	N/K	2-Nov, 19:54
	2-3km S	Recorded	4	Projectile	E to W	N/K	2-Nov, 19:55
	2-3km S	Recorded	6	Projectile	W to E	N/K	2-Nov, 19:55
	3-5km S	Recorded	1	Projectile	E to W	N/K	2-Nov, 20:33
	3-5km SW	Recorded	1	Projectile	W to E	N/K	2-Nov, 21:29
	3-5km S	Recorded	5	Projectile	E to W	N/K	2-Nov, 21:38
	3-5km S	Recorded	1	Explosion	Undetermined	N/K	2-Nov, 21:38
	3-5km S	Recorded	3	Projectile	E to W	N/K	2-Nov, 21:39
	3-5km SW	Recorded	1	Projectile	W to E	N/K	2-Nov, 21:39
	3-5km SSE	Recorded	4	Projectile	E to W	N/K	2-Nov, 21:52
	3-5km SSW	Recorded	3	Projectile	NNE to SSW	N/K	2-Nov, 21:52
	3-5km SSW	Recorded	1	Projectile	W to E	N/K	2-Nov, 21:54
	3-5km SW	Recorded	1	Projectile	NW to SE	N/K	2-Nov, 22:08
	3-5km SSW	Recorded	1	Projectile	NNE to SSW	N/K	2-Nov, 22:10
	3-5km SSE	Recorded	9	Projectile	SSE to NNW	N/K	2-Nov, 22:10
	3-5km SW	Recorded	1	Explosion	Undetermined	N/K	3-Nov, 00:09
	3-5km SSW	Recorded	2	Explosion	Undetermined	N/K	3-Nov, 01:48
	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	3-Nov, 02:26
	2-4km SSW	Recorded	1	Projectile	NW to SE	N/K	3-Nov, 02:26
	2-4km SW	Recorded	1	Projectile	W to E	N/K	3-Nov, 02:27
	2-4km SW	Recorded	28	Projectile	W to E	N/K	3-Nov, 02:28
	3-5km SW	Recorded	7	Projectile	W to E	N/K	3-Nov, 02:30
	3-5km SW	Recorded	2	Projectile	NE to SW	N/K	3-Nov, 02:30
	3-5km SW	Recorded	1	Explosion	Undetermined	N/K	3-Nov, 02:30
2-4km SSW	Recorded	1	Projectile	WNW to ESE	N/K	3-Nov, 02:59	
1-2km S	Recorded	1	Projectile	W to E	N/K	3-Nov, 04:48	
1-2km S	Recorded	20	Projectile	W to E	N/K	3-Nov, 04:49	
1-2km S	Recorded	4	Projectile	W to E	N/K	3-Nov, 04:50	
1-2km S	Recorded	13	Projectile	W to E	N/K	3-Nov, 04:51	

¹ 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.

	1-2km S	Recorded	38	Projectile	W to E	N/K	3-Nov, 04:59
	1-2km S	Recorded	6	Projectile	W to E	N/K	3-Nov, 05:00
	1-2km S	Recorded	5	Projectile	W to E	N/K	3-Nov, 05:01
	1-2km SSE	Recorded	8	Projectile	E to W	N/K	3-Nov, 17:18
	1-2km S	Recorded	12	Explosion	Impact	N/K	3-Nov, 17:18
	1-2km SE	Recorded	6	Explosion	Undetermined	N/K	3-Nov, 17:19
	1-2km SSE	Recorded	8	Projectile	E to W	N/K	3-Nov, 17:18
	1-2km SE	Recorded	6	Explosion	Undetermined	N/K	3-Nov, 17:19
	1-2km SE	Recorded	1	Projectile	E to W	N/K	3-Nov, 17:19
	1-2km SSW	Recorded	3	Projectile	W to E	N/K	3-Nov, 17:21
	1-2km SSW	Recorded	1	Explosion	Undetermined	N/K	3-Nov, 17:21
	1-2km SSW	Recorded	5	Projectile	W to E	N/K	3-Nov, 17:22
	1-2km SSW	Recorded	4	Explosion	Undetermined	N/K	3-Nov, 17:22
	1-2km S	Recorded	2	Explosion	Undetermined	N/K	3-Nov, 17:23
	1-2km S	Recorded	1	Explosion	Undetermined	N/K	3-Nov, 17:24
	1-2km SW	Recorded	1	Explosion	Undetermined	N/K	3-Nov, 17:25
	1-2km SSW	Recorded	1	Explosion	Undetermined	N/K	3-Nov, 17:27
	1-2km SSE	Recorded	1	Explosion	Undetermined	N/K	3-Nov, 17:27
	1-2km S	Recorded	1	Explosion	Undetermined	N/K	3-Nov, 17:28
	1-2km SE	Recorded	1	Explosion	Undetermined	N/K	3-Nov, 17:29
	1-2km S	Recorded	1	Explosion	Undetermined	N/K	3-Nov, 17:29
	1-2km SSW	Recorded	2	Explosion	Undetermined	N/K	3-Nov, 17:29
	1-2km SW	Recorded	2	Explosion	Undetermined	N/K	3-Nov, 17:30
	1-2km SSW	Recorded	1	Projectile	W to E	N/K	3-Nov, 17:30
	1-2km SSW	Recorded	3	Projectile	W to E	N/K	3-Nov, 17:31
	1-2km S	Recorded	8	Projectile	W to E	N/K	3-Nov, 17:32
	1-2km SSW	Recorded	1	Explosion	Undetermined	N/K	3-Nov, 17:32
	1-2km SW	Recorded	2	Explosion	Undetermined	N/K	3-Nov, 17:33
	1-2km SW	Recorded	2	Explosion	Undetermined	N/K	3-Nov, 17:34
	1-2km S	Recorded	2	Explosion	Undetermined	N/K	3-Nov, 17:34
SMM camera in Hranitne (government-controlled, 60km S of Donetsk)	2-4km ESE	Recorded	4	Projectile	NW to SE	N/K	2-Nov, 20:03
SMM camera in Kriakivka (government-controlled, 38km NW of Luhansk)	3-5km WSW	Recorded	1	Muzzle Flash		N/K	3-Nov, 01:44
	3-5km WSW	Recorded	1	Projectile	ESE to WNW	N/K	3-Nov, 01:44
	3-5km WSW	Recorded	2	Illumination flare		N/K	3-Nov, 01:45
	3-5km WSW	Recorded	5	Projectile	Undetermined	N/K	3-Nov, 01:45
SMM camera E of Lomakyne (government-controlled, 15km NE of Mariupol)	3-5km NE	Recorded	3	Projectile	SE to NW	N/K	2-Nov, 18:58
	3-5km ENE	Recorded	3	Projectile	NW to SE	N/K	2-Nov, 19:00
	3-5km NE	Recorded	2	Projectile	SE to NW	N/K	2-Nov, 19:02
	3-5km ENE	Recorded	2	Projectile	NW to SE	N/K	2-Nov, 19:03
	2-5km NE	Recorded	4	Projectile	SE to NW	N/K	3-Nov, 01:05
SMM camera at entry-exit checkpoint in Maiorsk (government-controlled, 45km NE of Donetsk)	2-7km SE	Recorded	1	Projectile	W to E	N/K	2-Nov, 22:23
	0.5-1km SE	Recorded	1	Projectile	SE to NW	N/K	2-Nov, 22:27
	5-7km E	Recorded	1	Projectile	W to E	N/K	2-Nov, 23:06
SMM camera at entry-exit checkpoint in Marinka (government-controlled,	2-4km N	Recorded	3	Projectile	E to W	N/K	2-Nov, 19:44
	2-4km NNE	Recorded	3	Projectile	E to W	N/K	2-Nov, 19:45
	2-4km NE	Recorded	1	Projectile	W to E	N/K	2-Nov, 22:19
	2-4km NE	Recorded	1	Projectile	W to E	N/K	2-Nov, 22:20
	2-4km NNE	Recorded	16	Projectile	W to E	N/K	2-Nov, 22:24

23km SW of Donetsk)	2-4km NNE	Recorded	23	Projectile	W to E	N/K	2-Nov, 22:25
SMM camera at entry-exit checkpoint in Pyshevyk (government-controlled, 25km NE of Mariupol)	4-8km SSE	Recorded	1	Illumination flare	In vertical flight	N/K	2-Nov, 22:42
	4-8km S	Recorded	1	Explosion	Undetermined	N/K	2-Nov, 22:54
	4-8km S	Recorded	2	Projectile	E to W	N/K	2-Nov, 23:17
	4-8km S	Recorded	1	Explosion	Undetermined	N/K	2-Nov, 23:17
	4-8km SSE	Recorded	1	Explosion	Undetermined	N/K	2-Nov, 23:17
	4-8km SSE	Recorded	8	Projectile	E to W	N/K	3-Nov, 01:05
	4-8km SSE	Recorded	5	Projectile	W to E	N/K	3-Nov, 01:05
	4-8km SSE	Recorded	1	Projectile	W to E	N/K	3-Nov, 01:14
	4-8km SSE	Recorded	1	Projectile	In vertical flight	N/K	3-Nov, 01:14
	4-8km SSE	Recorded	1	Projectile	Undetermined	N/K	3-Nov, 02:27
SE part of Avdiivka (government-controlled, 17km N of Donetsk)	2-4km SE	Heard	4	Explosion	Undetermined	N/K	3-Nov, 09:07
	2-4km SE	Heard	3	Burst		HMG	3-Nov, 09:07
	2-4km SE	Heard	1	Explosion	Undetermined	N/K	3-Nov, 09:13
	2-4km SE	Heard	5	Explosion	Undetermined	N/K	3-Nov, 09:43
	2-4km SE	Heard	2	Burst		HMG	3-Nov, 09:43
S edge of Avdiivka (government-controlled, 17km N of Donetsk)	2-4km SE	Heard	3	Explosion	Undetermined	N/K	3-Nov, 09:55-09:59
	2-4km SE	Heard	5	Explosion	Undetermined	N/K	3-Nov, 11:11-11:15
	2-4km SE	Heard	4	Explosion	Undetermined	N/K	3-Nov, 12:23-12:25
	2-4km SE	Heard	5	Explosion	Undetermined	N/K	3-Nov, 12:51-12:53
	2-4km SE	Heard	3	Explosion	Undetermined	N/K	3-Nov, 13:28-13:29
6km NW of Donetsk city centre	5-8km N	Heard	1	Explosion	Undetermined	N/K	3-Nov, 09:56
	5-8km N	Heard	1	Explosion	Undetermined	N/K	3-Nov, 09:59
Oleksandrivka (non-government-controlled, 20km SW of Donetsk)	4-6km S	Heard	1	Explosion	Undetermined	N/K	3-Nov, 14:00
Petrivske (non-government-controlled, 41km S of Donetsk)	3-4km SSE	Heard	2	Burst	Assessed as outside the disengagement area	Small arms	3-Nov, 09:25
1km NW of railway station in Yasynuvata (non-government-controlled, 16km NE of Donetsk)	1.5-2km SW	Heard	6	Explosion	Undetermined	N/K	3-Nov, 09:40
	1.5-2km SW	Heard	12	Explosion	Undetermined	N/K	3-Nov, 09:42-09:45
	1.5km SW	Heard	2	Burst		HMG	3-Nov, 09:46-09:51
	1.5km SW	Heard	70	Shot		Small arms	3-Nov, 09:46-09:51
	1.5km SW	Heard	7	Burst		Small arms	3-Nov, 09:46-09:51
	1.5-2km SW	Heard	1	Explosion	Undetermined	N/K	3-Nov, 09:52
	1.5km SW	Heard	12	Shot		Small arms	3-Nov, 09:54
	1-1.5km SW	Heard	1	Explosion	Undetermined	N/K	3-Nov, 09:55
	1.5-2km SW	Heard	1	Explosion	Undetermined	N/K	3-Nov, 09:57
	1-1.5km SW	Heard	1	Explosion	Undetermined	N/K	3-Nov, 09:58
	1.5-2km SW	Heard	1	Explosion	Undetermined	N/K	3-Nov, 09:59
	3km NNW	Heard	1	Explosion	Undetermined	N/K	3-Nov, 11:05
	2km NNW	Heard	1	Explosion	Undetermined	N/K	3-Nov, 11:25
	1-2km NNW	Heard	1	Explosion	Undetermined	N/K	3-Nov, 11:31
	1.5km WSW	Heard	6	Shot		Small arms	3-Nov, 11:57

	1km WSW	Heard	1	Shot		Small arms	3-Nov, 11:59
	1km WSW	Heard	17	Shot		Small arms	3-Nov, 12:03
	4-5km WSW	Heard	5	Explosion	Undetermined	N/K	3-Nov, 13:02
	1-2km S	Heard	3	Shot		Small arms	3-Nov, 13:05
	4-5km W	Heard	6	Explosion	Undetermined	N/K	3-Nov, 13:06
	1-2km W	Heard	4	Shot		Small arms	3-Nov, 13:06
	1-2km W	Heard	2	Explosion	Undetermined	N/K	3-Nov, 13:07
	3-4km WSW	Heard	6	Explosion	Undetermined	N/K	3-Nov, 13:08
	3-4km WSW	Heard	3	Explosion	Undetermined	N/K	3-Nov, 13:09
	1-2km NNW	Heard	8	Shot		Small arms	3-Nov, 13:10
	1-2km NNW	Heard	5	Shot		Small arms	3-Nov, 13:11
	1-2km S	Heard	3	Burst		HMG	3-Nov, 13:11
	1-2km S	Heard	14	Shot		Small arms	3-Nov, 13:12
	1-2km NNW	Heard	11	Shot		Small arms	3-Nov, 13:12
	3-4km WSW	Heard	4	Explosion	Undetermined	N/K	3-Nov, 13:13
	1-2km SSW	Heard	25	Shot		Small arms	3-Nov, 13:15
	1-2km SSW	Heard	2	Burst		HMG	3-Nov, 13:15
	1-2km SSW	Heard		Burst	Uncountable, overlapping	HMG	3-Nov, 13:16
	1-2km N	Heard	5	Shot		Small arms	3-Nov, 13:16
	1-2km S	Heard	15	Shot		Small arms	3-Nov, 13:18
	1-2km NW	Heard	8	Shot		Small arms	3-Nov, 13:19
	1-2km S	Heard	10	Burst		HMG	3-Nov, 13:21
	3-4km SSW	Heard	3	Explosion	Undetermined	N/K	3-Nov, 13:22
	1-2km S	Heard	4	Shot		Small arms	3-Nov, 13:24
	1-2km S	Heard	6	Burst		HMG	3-Nov, 13:25
	5-6km SSW	Heard	1	Explosion	Undetermined	N/K	3-Nov, 13:26
	1-2km NNW	Heard	14	Shot		Small arms	3-Nov, 13:28
	1-2km NNW	Heard	2	Burst		HMG	3-Nov, 13:28
	1-2km S	Heard		Shots and bursts	Uncountable, overlapping	Small arms	3-Nov, 13:29
	1-2km S	Heard	10	Shot		Small arms	3-Nov, 13:40
	1-2km S	Heard		Burst	Uncountable, overlapping	HMG	3-Nov, 13:39-13:44
	1-2km S	Heard	10	Burst		HMG	3-Nov, 13:45
	1-2km S	Heard	8	Burst		HMG	3-Nov, 13:46
	1-2km S	Heard	10	Shot		Small arms	3-Nov, 13:47
	1-2km S	Heard	6	Burst		HMG	3-Nov, 13:50
1km NNW of Pyschchevyk (government-controlled, 25km NE of Mariupol)	N/K SSE	Heard	3	Explosion	Undetermined	N/K	3-Nov, 09:45-09:51
2.5km SSE of Lomakyne (government-controlled, 15km NE of	N/K NE	Heard	7	Burst		HMG	3-Nov, 10:40

Mariupol)							
Svitlodarsk (government- controlled, 57km NE of Donetsk)	3-4km SSE	Heard	8	Shot		Small arms	2-Nov, 19:05
	3-4km SSE	Heard	13	Shot		Small arms	2-Nov, 19:11
	3-4km SSE	Heard	5	Shot		Small arms	2-Nov, 19:15
	7-8km SSW	Heard	4	Explosion	Undetermined	N/K	2-Nov, 19:17
	3-4km SSE	Heard	2	Burst		HMG	2-Nov, 19:20
	3-4km SSE	Heard	6	Shot		Small arms	2-Nov, 19:22
	3-4km SSE	Heard	6	Shot		Small arms	2-Nov, 19:38
	3-4km SW	Heard	5	Shot		Small arms	2-Nov, 19:40
	3-4km SSE	Heard	4	Shot		Small arms	2-Nov, 19:44
	3-4km SSE	Heard	18	Shot		Small arms	2-Nov, 19:50- 19:54
	3-4km SSE	Heard	10	Shot		Small arms	2-Nov, 19:56
	3-4km SSE	Heard	3	Burst		HMG	2-Nov, 20:02
	3-4km SSE	Heard	4	Shot		AGL	2-Nov, 20:07
	3-4km SSE	Heard	4	Shot		AGL	2-Nov, 20:09
	3-4km SSE	Heard	4	Shot		AGL	2-Nov, 20:11
	3-4km SSE	Heard	9	Shot		Small arms	2-Nov, 20:14
	3-4km SSE	Heard	6	Shot		Small arms	2-Nov, 20:15
	3-4km SSE	Heard	4	Shot		AGL	2-Nov, 20:16
	3-4km SSE	Heard	3	Burst		HMG	2-Nov, 20:17
	3-4km SSE	Heard	1	Burst		HMG	2-Nov, 20:18
	3-4km SSE	Heard	9	Shot		Small arms	2-Nov, 20:20
	3-4km SSE	Heard	12	Shot		Small arms	2-Nov, 20:22
	3-4km SSE	Heard	12	Shot		Small arms	2-Nov, 20:24
	3-4km SSE	Heard	6	Shot		Small arms	2-Nov, 20:35
	3-4km SSE	Heard	10	Shot		Small arms	2-Nov, 20:40
	3-4km SSE	Heard	14	Shot		AGL	2-Nov, 20:58
	3-4km SSE	Heard	6	Shot		Small arms	2-Nov, 21:02
	3-4km SSE	Heard	8	Shot		Small arms	2-Nov, 21:10
	3-4km SSE	Heard	6	Shot		Small arms	2-Nov, 21:30
	3-4km SSE	Heard	7	Shot		Small arms	2-Nov, 21:35
	3-4km SSE	Heard	4	Shot		Small arms	2-Nov, 21:44
	3-4km SSE	Heard	1	Explosion	Undetermined	N/K	2-Nov, 21:54
	3-4km SSE	Heard	22	Shot		Small arms	2-Nov, 21:55- 21:28
3-4km SSE	Heard	4	Shot		AGL	2-Nov, 22:00	
3-4km SSE	Heard	6	Shot		Small arms	2-Nov, 22:04	
3-4km SSE	Heard	2	Explosion	Undetermined	N/K	2-Nov, 22:05	
3-4km SSE	Heard	1	Explosion	Undetermined	N/K	2-Nov, 22:07	
3-4km SSE	Heard	10	Shot		Small arms	2-Nov, 22:31	
3-4km SSE	Heard	8	Shot		Small arms	2-Nov, 22:35	

	3-4km SSE	Heard	6	Shot		Small arms	2-Nov, 22:40
	3-4km SSE	Heard	1	Explosion	Undetermined	N/K	2-Nov, 22:41
	3-4km SSE	Heard	1	Explosion	Undetermined	N/K	2-Nov, 22:55
	3-4km SSE	Heard	9	Shot		Small arms	2-Nov, 22:56
	3-4km SSE	Heard	1	Explosion	Undetermined	N/K	2-Nov, 23:11
	3-4km SSE	Heard	18	Shot		Small arms	2-Nov, 23:25-23:28
	3-4km SSE	Heard	3	Explosion	Undetermined	N/K	2-Nov, 23:30
	3-4km SSE	Heard	12	Shot		Small arms	2-Nov, 23:31
	3-4km SSE	Heard	9	Explosion	Undetermined	N/K	2-Nov, 23:32-23:36
	3-4km S	Heard	4	Burst		HMG	3-Nov, 09:11
	5-7km S	Heard	31	Explosion	Undetermined	N/K	3-Nov, 09:19-09:21
	4-5km S	Heard	1	Explosion	Undetermined	N/K	3-Nov, 09:32
	3km S	Heard	16	Burst		HMG	3-Nov, 09:36-09:40
	4-5km S	Heard	1	Explosion	Undetermined	N/K	3-Nov, 14:55
	4-5km S	Heard	12	Explosion	Undetermined	N/K	3-Nov, 16:10
	4-5km S	Heard	1	Explosion	Undetermined	N/K	3-Nov, 16:20
	4-5km S	Heard	30	Explosion	Undetermined	N/K	3-Nov, 17:15-17:30
	4-5km S	Heard	2	Explosion	Undetermined	N/K	3-Nov, 17:40
	4km S	Heard	2	Explosion	Undetermined	N/K	3-Nov, 17:45
Horlivka (non-government-controlled, 39km NE of Donetsk)	5-7km WSW	Heard	50	Explosion	Undetermined	Artillery (type N/K)	2-Nov, 18:34-19:50
	5-7km WSW	Heard	15	Burst		HMG	2-Nov, 18:34-19:50
	5-7km WSW	Heard	15	Explosion	Undetermined	Artillery (type N/K)	2-Nov, 19:00-19:05
	5-7km WSW	Heard	17	Burst		HMG	2-Nov, 19:00-19:05
	5-7km WSW	Heard	9	Burst		HMG	2-Nov, 20:07-20:09
	5-7km WSW	Heard	5	Explosion	Undetermined	N/K	2-Nov, 20:07-20:09
	5-7km WSW	Heard	2	Explosion	Undetermined	Artillery (type N/K)	2-Nov, 20:34
	5-7km WSW	Heard	1	Explosion	Undetermined	N/K	2-Nov, 21:20
	5-7km NW	Heard	2	Explosion	Undetermined	N/K	2-Nov, 21:54
	5-7km WSW	Heard	12	Explosion	Undetermined	N/K	2-Nov, 22:01-22:03
5-7km WSW	Heard	6	Explosion	Undetermined	N/K	2-Nov, 22:21-22:23	
E edge of Kamianka (government-controlled, 20km N of Donetsk)	4-5km SSE	Heard	4	Explosion	Undetermined	N/K	3-Nov, 09:00
	3-4km SSE	Heard	10	Explosion	Undetermined	N/K	3-Nov, 09:40-09:42
	3-4km SSE	Heard	10	Burst		Small arms	3-Nov, 09:43-09:45
Holmivskiyi (non-government-controlled 49km NE of Donetsk)	2-3km ESE	Heard	1	Explosion	Undetermined	N/K	3-Nov, 10:13
	3-4km W	Heard	1	Explosion	Undetermined	N/K	3-Nov, 10:22
	2-3km ESE	Heard	1	Explosion	Undetermined	N/K	3-Nov, 10:23
SMM camera in Kriakivka (government-controlled,	3-5km WSW	Recorded	1	Muzzle Flash		N/K	3-Nov, 01:44
	3-5km WSW	Recorded	1	Projectile	ESE to WNW	N/K	3-Nov, 01:44
	3-5km WSW	Recorded	2	Illumination		N/K	3-Nov, 01:45

38km NW of Luhansk)				flare			
	3-5km WSW	Recorded	5	Projectile	Undetermined	N/K	3-Nov, 01:45
SMM camera at Prince Ihor Monument SE of Stanytsia Luhanska bridge (15km NE of Luhansk)	0.8-1.5km NNW	Recorded	3	Projectile	ESE to WNW (assessed as inside the disengagement area)	N/K	2-Nov, 19:49
	1-1.5km NW	Recorded	2	Projectile	NW to SE (assessed as inside the disengagement area)	N/K	2-Nov, 20:54
	0.3-1km NW	Recorded	4	Projectile	ENE to WSW (assessed as inside the disengagement area)	N/K	2-Nov, 21:18
	0.3-1km NNW	Recorded	5	Projectile	NE to SW (assessed as inside the disengagement area)	N/K	2-Nov, 21:19
	0.3-1km NNW	Recorded	6	Projectile	NE to SW (assessed as inside the disengagement area)	N/K	2-Nov, 21:20
	0.3-1km NNW	Recorded	2	Explosion	Outgoing (assessed as inside the disengagement area)	N/K	2-Nov, 21:20
	0.3-1km NNW	Recorded	4	Projectile	ENE to WSW (assessed as inside the disengagement area)	N/K	2-Nov, 21:21
	0.3-1km N	Recorded	5	Projectile	E to W (assessed as inside the disengagement area)	N/K	2-Nov, 21:22
	0.3-1km NNW	Recorded	1	Projectile	E to W (assessed as inside the disengagement area)	N/K	2-Nov, 21:23
	0.3-1km NNW	Recorded	1	Explosion	Undetermined (assessed as inside the disengagement area)	N/K	2-Nov, 21:23
	SMM camera in Stanytsia Luhanska (government-controlled, 16km NE of Luhansk)	0.5-1km S	Recorded	5	Projectile	W to E (assessed as inside the disengagement area)	N/K
0.5-1km SSW		Recorded	4	Projectile	NNE to SSW (assessed as inside the disengagement area)	N/K	2-Nov, 21:23
0.5-1km S		Recorded	3	Projectile	N to S (assessed as inside the disengagement area)	N/K	2-Nov, 21:24

					area)		
	2-5km N	Recorded	1	Illumination flare	In vertical flight (assessed as outside the disengagement area)	N/K	3-Nov, 16:38
SMM camera in Zolote (government-controlled, 60km W of Luhansk)	2-5km NE	Recorded	1	Projectile	NW to SE (assessed as outside the disengagement area)	N/K	2-Nov, 21:12
	2-5km ENE	Recorded	5	Projectile	SE to NW (assessed as outside the disengagement area)	N/K	3-Nov, 00:51
	1-3km SE	Recorded	4	Projectile	SW to NE (assessed as inside the disengagement area)	N/K	3-Nov, 01:17
E edge of Stanytsia Luhanska (government-controlled, 16km NE of Luhansk)	2-3km SSW	Heard	10	Burst	Assessed as outside of the disengagement area	HMG	2-Nov, 19:14-19:32
	1.5-2km SW	Heard	27	Burst	Assessed as outside of the disengagement area	Small arms	2-Nov, 19:50-19:55
	1.5-2km SSW	Heard	17	Shot	Assessed as outside of the disengagement area	Small arms	2-Nov, 19:50-19:55
	4-5km SW	Heard	3	Explosion	Undetermined (unable to assess whether inside or outside the disengagement area)	N/K	2-Nov, 19:17-19:20
	4-5km SSW	Heard	3	Burst	Unable to assess whether inside or outside the disengagement area	Small arms	2-Nov, 19:58-20:02
	2-3km SSW	Heard	3	Burst	Assessed as outside of the disengagement area	Small arms	2-Nov, 20:02-20:04
	3-4km SW	Heard	1	Explosion	Undetermined (Unable to assess whether inside or outside the disengagement area)	N/K	2-Nov, 20:02-20:04
	4-5km SSW	Heard	3	Burst	Unable to assess whether inside or outside the disengagement area	Small arms	2-Nov, 20:04-20:07
	2-3km SSW	Heard	11	Burst	Assessed as outside of the	Small arms	2-Nov, 20:17-21:28

					disengagement area		
	2-3km SSW	Heard	4	Shot	Assessed as outside of the disengagement area	Small arms	2-Nov, 20:20-20:22
	2-3km SSW	Heard	3	Explosion	Undetermined (Assessed as outside of the disengagement area)	N/K	2-Nov, 20:20-21:22
	5-6km SW	Heard	17	Burst	Assessed as outside of the disengagement area	Small arms	2-Nov, 20:23-21:28
	2-6km SSW	Heard	300	Shot and burst	Unable to assess whether inside or outside the disengagement area	Small arms	2-Nov, 21:05-21:10
	2-3km SSW	Heard	25	Burst	Assessed as outside of the disengagement area	HMG	2-Nov, 21:18-21:28
	6-8km SW	Heard	1	Explosion	Undetermined (assessed as outside of the disengagement area)	Artillery (type N/K)	2-Nov, 23:32
Kalynove (non-government-controlled, 60km W of Luhansk)	2-3km SW	Heard	3	Shot		IFV (BMP-2) canon (30mm)	3-Nov, 09:15-09:16
N edge of Zolote (government-controlled, 60km W of Luhansk)	2-3km SSE	Heard	2	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	3-Nov, 12:00-12:02
	1-2km E	Heard	15	Shot	Assessed as outside the disengagement area	Small arms	3-Nov, 13:44-13:49
Obozne (non-government-controlled, 18km N of Luhansk)	1.5-2km NE	Heard	6	Shot		Small arms	3-Nov, 13:15-13:23
2km E of Valuiske (government-controlled, 20km NE of Luhansk)	3-4km SSW	Heard	2	Shot	Assessed as outside the disengagement area	Small arms	3-Nov, 15:08
SMM camera in Avdiivka (government-controlled, 17km N of Donetsk)	3-5km SSE	Recorded	1	Projectile	S to N	N/K	3-Nov, 20:53
	3-5km SE	Recorded	1	Explosion	Undetermined	N/K	4-Nov, 01:47
SMM camera in Berezove (government-	3-5km SE	Recorded	4	Projectile	SW to NE	N/K	3-Nov, 20:36
	3-5km SSE	Recorded	7	Projectile	SW to NE	N/K	4-Nov, 04:56

controlled, 31km SW of Donetsk)	3-5km SSE	Recorded	1	Projectile	SW to NE	N/K	4-Nov, 04:57
SMM camera in Chermalyk (government- controlled, 31km NE of Mariupol)	3-5km S	Recorded	3	Projectile	WSW to ENE	N/K	3-Nov, 22:23
	3-5km S	Recorded	1	Projectile	WSW to ENE	N/K	3-Nov, 22:25
	3-5km S	Recorded	2	Projectile	WSW to ENE	N/K	3-Nov, 22:26
	3-5km S	Recorded	1	Projectile	SE to NW	N/K	3-Nov, 22:29
	3-5km S	Recorded	2	Projectile	ENE to WSW	N/K	3-Nov, 23:14
	2-4km SSW	Recorded	1	Projectile	WSW to ENE	N/K	4-Nov, 17:23
SMM camera at Donetsk Filtration Station (15km N of Donetsk)	2-4km SSW	Recorded	2	Projectile	WSW to ENE	N/K	4-Nov, 17:25
	1-2km SSW	Recorded	1	Projectile	NE to SW	N/K	3-Nov, 23:01
	1-2km SSW	Recorded	1	Projectile	NNW to SSE	N/K	3-Nov, 23:08
	1-2km SSW	Recorded	2	Projectile	W to E	N/K	3-Nov, 23:08
	1-2km S	Recorded	2	Projectile	NNW to SSE	N/K	3-Nov, 23:15
	1-2km S	Recorded	3	Projectile	NW to SE	N/K	3-Nov, 23:15
	1-2km S	Recorded	3	Projectile	W to E	N/K	3-Nov, 23:15
	1-2km SW	Recorded	1	Explosion	Undetermined	N/K	3-Nov, 23:48
	1-2km SW	Recorded	1	Explosion	Undetermined	N/K	4-Nov, 00:03
	1-2km S	Recorded	1	Explosion	Undetermined	N/K	4-Nov, 00:03
	1-2km SW	Recorded	3	Projectile	NW to SE	N/K	4-Nov, 00:07
	1-2km S	Recorded	1	Projectile	W to E	N/K	4-Nov, 00:14
	1-2km S	Recorded	1	Projectile	WNW to ESE	N/K	4-Nov, 00:14
	1-2km S	Recorded	1	Projectile	NNW to SSE	N/K	4-Nov, 00:14
	1-2km SW	Recorded	1	Projectile	N to S	N/K	4-Nov, 02:04
SMM camera 1.5km NE of Hnutove (government- controlled, 20km NE of Mariupol)	2-4km E	Recorded	2	Projectile	NNW to SSE	N/K	3-Nov, 19:54
	3-5km ENE	Recorded	4	Projectile	S to N	N/K	4-Nov, 00:08
	3-5km E	Recorded	25	Projectile	S to N	N/K	4-Nov, 01:30
	3-5km E	Recorded	22	Projectile	S to N	N/K	4-Nov, 01:49
SMM camera in Hranitne (government- controlled, 60km S of Donetsk)	3-5km SE	Recorded	1	Projectile	NW to SE	N/K	4-Nov, 03:06
SMM camera E of Lomakyne (government- controlled, 15km NE of Mariupol)	2-6km NE	Recorded	1	Projectile	S to N	N/K	4-Nov, 00:14
	2-6km NE	Recorded	2	Projectile	WNW to ESE	N/K	4-Nov, 00:14
	2-6km NE	Recorded	4	Projectile	S to N	N/K	4-Nov, 01:46
	2-6km NE	Recorded	1	Projectile	WNW to ESE	N/K	4-Nov, 01:46
	2-4km E	Recorded	6	Projectile	NNW to SSE	N/K	4-Nov, 17:12
SMM camera at entry-exit checkpoint in Maiorsk (government- controlled, 45km NE of Donetsk)	3-5km ESE	Recorded	1	Burst	N to S	N/K	4-Nov, 02:25
	2-4km NNE	Recorded	1	Projectile	W to E	N/K	3-Nov, 18:36
SMM camera at entry-exit checkpoint in Marinka (government- controlled, 23km SW of Donetsk)	2-4km NE	Recorded	2	Projectile	W to E	N/K	3-Nov, 18:43
	2-4km NNE	Recorded	2	Projectile	E to W	N/K	4-Nov, 00:23
	2-4km NNE	Recorded	1	Muzzle flash		N/K	4-Nov, 00:23
	2-4km NNE	Recorded	2	Projectile	W to E	N/K	3-Nov, 18:38
SMM camera at Oktiabr mine (non- government- controlled, 9km NW of Donetsk city centre)	2-4km NE	Recorded	1	Projectile	NW to SE	N/K	4-Nov, 17:14

SMM camera in Kriakivka (government-controlled, 38km NW of Luhansk)	3-5km SW	Recorded	3	Projectile	ESE to WNW	N/K	3-Nov, 22:55
	3-5km SW	Recorded	8	Projectile	ESE to WNW	N/K	3-Nov, 23:25
	3-5km SW	Recorded	2	Explosion	Undetermined	N/K	3-Nov, 23:25
	3-5km SW	Recorded	1	Explosion	Undetermined	N/K	3-Nov, 23:26
	3-5km SW	Recorded	4	Projectile	ESE to WNW	N/K	3-Nov, 23:28
	3-5km SSW	Recorded	1	Explosion	Undetermined	N/K	4-Nov, 00:31
	3-5km SW	Recorded	1	Projectile	ESE to WNW	N/K	4-Nov, 05:07
	3-5km SSW	Recorded	3	Explosion	Undetermined	N/K	4-Nov, 05:07
	3-5km SSW	Recorded	3	Explosion	Undetermined	N/K	4-Nov, 05:08
	3-5km SSW	Recorded	3	Explosion	Undetermined	N/K	4-Nov, 05:10
	3-5km SSW	Recorded	2	Explosion	Undetermined	N/K	4-Nov, 05:11
SMM camera on N edge of Popasna (government-controlled, 69km W of Luhansk)	3-5km E	Recorded	1	Projectile	In vertical flight	N/K	4-Nov, 16:56
	3-5km E	Recorded	1	Projectile	In vertical flight	N/K	4-Nov, 16:57
SMM camera at entry-exit checkpoint in Pyshchevyk (government-controlled, 25km NE of Mariupol)	2-3km S	Recorded	1	Illumination flare	In vertical flight	N/K	3-Nov, 19:11
	1-2km SE	Recorded	2	Projectile	WNW to ESE	N/K	4-Nov, 00:14
	1-2km SE	Recorded	3	Projectile	E to W	N/K	4-Nov, 01:46
	1-2km SE	Recorded	7	Projectile	WNW to ESE	N/K	4-Nov, 01:46
SE part of Avdiivka (government-controlled, 17km N of Donetsk)	3-5km S	Heard	3	Explosion	Undetermined	N/K	4-Nov, 09:13-09:16
	3-5km S	Heard	4	Explosion	Undetermined	N/K	4-Nov, 09:19-09:21
	3-5km SSW	Heard	7	Explosion	Undetermined	N/K	4-Nov, 09:22-09:32
S edge of Avdiivka (government-controlled, 17km N of Donetsk)	3-5km E	Heard	4	Explosion	Undetermined	N/K	4-Nov, 12:34
2km NW of Debal'tseve (non-government-controlled, 58km NE of Donetsk)	5-10km W	Heard	20	Explosion	Undetermined	N/K	4-Nov, 12:15-13:00
	5-10km W	Heard	2	Shot		Small arms	4-Nov, 12:51-12:52
	5-10km W	Heard	1	Burst		Small arms	4-Nov, 13:00
1km S of Novohryhorivka (non-government-controlled, 61km NE of Donetsk)	5-10km W	Heard	2	Explosion	Undetermined	N/K	4-Nov, 14:05
	5-10km W	Heard	1	Explosion	Undetermined	N/K	4-Nov, 14:35
Donetsk central railway station (non-government-controlled, 6km NW of Donetsk)	3-4km NE	Heard	6	Burst		HMG	4-Nov, 08:36-08:43
	3-4km NE	Heard	8	Shot		Small arms	4-Nov, 08:36-08:43
	3-4km NE	Heard	1	Shot		Small arms	4-Nov, 08:47
	3-5km NE	Heard	1	Explosion	Undetermined	N/K	4-Nov, 08:54
	3-5km NE	Heard	1	Explosion	Undetermined	N/K	4-Nov, 08:58
	3-4km NE	Heard	3	Shot		Small arms	4-Nov, 08:58
	3-4km NE	Heard	7	Shot		Small arms	4-Nov, 09:00

	3-4km NE	Heard	2	Burst		Small arms	4-Nov, 09:02
	3-4km NE	Heard	1	Shot		Small arms	4-Nov, 09:02
	3-5km NE	Heard	1	Explosion	Undetermined	N/K	4-Nov, 09:05
	3-4km NE	Heard	12	Shot		Small arms	4-Nov, 09:05
	3-5km NE	Heard	1	Explosion	Undetermined	N/K	4-Nov, 09:07
	3-4km NE	Heard	2	Shot		Small arms	4-Nov, 09:07
	3-4km NE	Heard	3	Shot		Small arms	4-Nov, 09:08
	3-5km NE	Heard	1	Explosion	Undetermined	N/K	4-Nov, 09:13
	1-2km NE	Heard	1	Shot		Small arms	4-Nov, 09:14
	3-5km NE	Heard	3	Explosion	Undetermined	N/K	4-Nov, 09:15-09:19
	3-5km NE	Heard	1	Explosion	Undetermined	N/K	4-Nov, 09:20
	3-5km NE	Heard	9	Explosion	Undetermined	N/K	4-Nov, 09:20-09:25
	3-5km NE	Heard	4	Explosion	Undetermined	N/K	4-Nov, 09:32-09:36
	1-2km NNW	Heard	7	Burst		Small arms	4-Nov, 11:47
6km NW of Donetsk city centre	5-6km NW	Heard	1	Explosion	Undetermined	N/K	4-Nov, 10:46
1km NW of railway station in Yasynuvata (non-government-controlled, 16km NE of Donetsk)	1-2km NNE	Heard	1	Explosion	Undetermined	N/K	4-Nov, 09:02
	1-2km SW	Heard	1	Explosion	Undetermined	N/K	4-Nov, 09:04
	1-2km SW	Heard	1	Explosion	Undetermined	N/K	4-Nov, 09:05
	1-2km SW	Heard		Shot	Uncountable, overlapping	Small arms	4-Nov, 09:05
	1-2km SW	Heard	15	Explosion	Undetermined	N/K	4-Nov, 09:12-09:27
	3-5km SW	Heard	5	Explosion	Undetermined	N/K	4-Nov, 09:31-09:58
Railway station in Yasynuvata (non-government-controlled, 16km NE of Donetsk)	2-3km WSW	Heard	5	Burst		Small arms	4-Nov, 12:45-13:00
	2-3km WSW	Heard	4	Explosion	Undetermined	N/K	4-Nov, 12:45-13:00
1km NNW of entry-exit checkpoint in Pyshevyk (government-controlled, 25km NE of Mariupol)	3km ENE	Heard	2	Explosion	Undetermined	N/K	4-Nov, 09:33-09:36
	1.5km E	Heard	6	Burst	Outgoing	HMG	4-Nov, 09:36-09:40
	2km ENE	Heard	1	Explosion	Undetermined	N/K	4-Nov, 10:22
	N/K NW	Heard		Burst	Uncountable, overlapping	Small arms	4-Nov, 10:35
	2.5km E	Heard	2	Explosion	Undetermined	N/K	4-Nov, 10:45-10:46
	2km E	Heard	1	Explosion	Outgoing	N/K	4-Nov, 10:45-10:46
	N/K E	Heard	1	Explosion	Undetermined	N/K	4-Nov, 10:49-10:53
	N/K E	Heard		Burst	Uncountable, overlapping	Small arms	4-Nov, 10:49-10:53
	N/K E	Heard		Burst	Uncountable, overlapping	HMG	4-Nov, 10:49-10:53
N/K E	Heard		Burst	Uncountable, overlapping	AGL	4-Nov, 10:49-10:53	

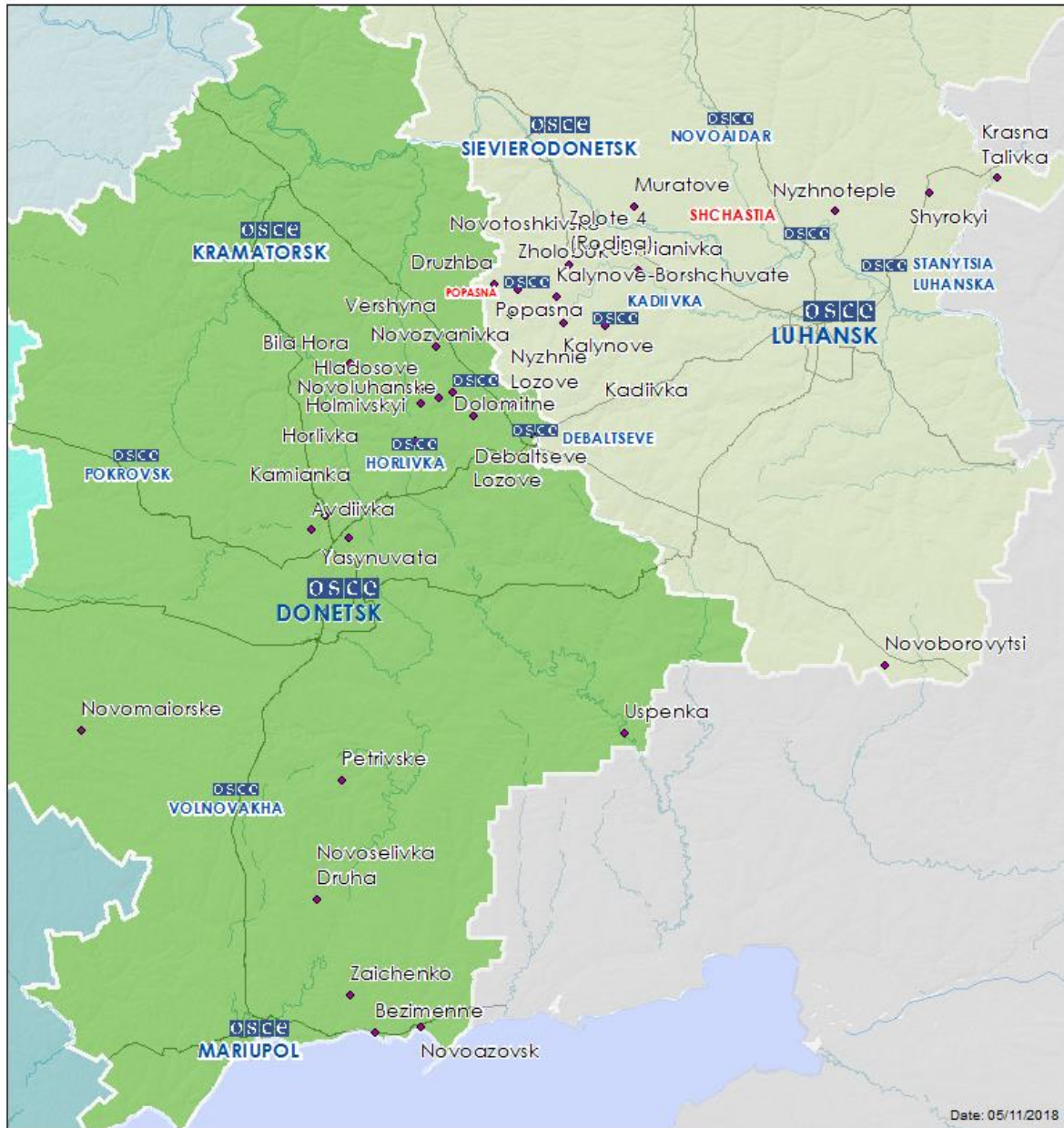
	N/K E	Heard		Explosion	Impact	AGL	4-Nov, 10:49-10:53
	2km ENE	Heard	1	Explosion	Outgoing	N/K	4-Nov, 10:55
	N/K ENE	Heard	1	Burst	Outgoing	IFV (BMP-2) cannon (30mm)	4-Nov, 10:55
	1.5km E	Heard	1	Explosion	Undetermined	N/K	4-Nov, 11:03
	2km ENE	Heard	1	Explosion	Outgoing	N/K	4-Nov, 11:11
Bezimenne (non-government-controlled, 30km E of Mariupol)	N/K W	Heard	3	Explosion	Undetermined	N/K	4-Nov, 12:00
E58 highway 2.5km SE of Lebedynske (government-controlled, 16km NE of Mariupol)	N/K N	Heard	3	Explosion	Undetermined	N/K	4-Nov, 12:08
2.5km SSE of Lomakyne (government-controlled, 15km NE of Mariupol)	N/K NNE	Heard	3	Explosion	Undetermined	N/K	4-Nov, 13:00
Svitlodarsk (government-controlled, 57km NE of Donetsk)	5-7km S	Heard	2	Explosion	Undetermined	N/K	3-Nov, 18:34
	3-4km S	Heard	8	Burst		HMG	3-Nov, 18:36
	5-7km S	Heard	4	Explosion	Undetermined	N/K	3-Nov, 18:37-18:39
	3-4km S	Heard	12	Burst		HMG	3-Nov, 18:46-18:49
	5-7km S	Heard	3	Explosion	Undetermined	N/K	3-Nov, 19:26-19:30
	5-7km S	Heard	1	Explosion	Undetermined	N/K	3-Nov, 20:09
	3-5km S	Heard	2	Burst		HMG	3-Nov, 20:09
	5-7km S	Heard	2	Explosion	Undetermined	N/K	3-Nov, 20:36
Horlivka (non-government-controlled, 39km NE of Donetsk)	4-6km SW	Heard	25	Explosion	Undetermined	Artillery (type N/K)	3-Nov, 18:12-18:20
	4-6km SW	Heard	30	Burst		HMG	3-Nov, 18:12-18:20
	4-6km SW	Heard	6	Explosion	Undetermined	Artillery (type N/K)	3-Nov, 18:25-18:30
	5-6km SW	Heard	30	Burst		HMG	3-Nov, 18:25-18:30
	4-6km SW	Heard	3	Explosion	Undetermined	N/K	3-Nov, 18:31-18:33
	4-6km SW	Heard	15	Burst		HMG	3-Nov, 18:31-18:33
	4-6km SW	Heard	6	Explosion	Undetermined	Artillery (type N/K)	3-Nov, 18:35-18:37
	4-6km SW	Heard	27	Burst		HMG	3-Nov, 18:35-18:37
	4-6km SW	Heard	15	Explosion	Undetermined	N/K	3-Nov, 18:38-18:48
	4-6km SW	Heard	3	Burst		HMG	3-Nov, 18:38-

							18:48
	4-6km SW	Heard	23	Burst	Airburst	Anti-aircraft gun (ZU-23, 23mm)	3-Nov, 18:55-19:02
	4-6km SW	Heard	3	Explosion	Undetermined	N/K	3-Nov, 18:55-19:02
	4-6km SW	Heard	5	Burst		HMG	3-Nov, 18:55-19:02
	4-6km SW	Heard	11	Burst		HMG	3-Nov, 19:05-19:07
	4-6km SW	Heard	5	Explosion	Undetermined	N/K	3-Nov, 19:44-19:47
	4-6km W	Heard	3	Burst		IFV (BMP-2) cannon (30mm)	3-Nov, 19:44-19:47
	4-6km SW	Heard	4	Burst		HMG	3-Nov, 19:44-19:47
	4-6km SW	Heard	3	Explosion	Undetermined	N/K	3-Nov, 21:02
	3-5km WNW	Heard	27	Explosion	Undetermined	N/K	4-Nov, 01:34-02:08
	3-5km WNW	Heard	17	Explosion	Undetermined	N/K	4-Nov, 02:11-02:52
	3-5km NW	Heard	5	Burst		HMG	4-Nov, 02:50
E edge of Kamianka (government-controlled, 20km N of Donetsk)	2-4km NNE	Heard	2	Explosion	Outgoing	N/K	4-Nov, 09:00
	2-4km SSW	Heard	2	Explosion	Outgoing	N/K	4-Nov, 09:05
	2-4km NNE	Heard	1	Explosion	Outgoing	N/K	4-Nov, 09:13
	2-4km SSW	Heard	2	Explosion	Outgoing	N/K	4-Nov, 09:13-09:15
	2km SSW	Heard	10	Burst		HMG	4-Nov, 09:13-09:15
	2-4km NNE	Heard	3	Explosion	Outgoing	N/K	4-Nov, 09:18
	2-4km SSW	Heard	1	Explosion	Impact	N/K	4-Nov, 09:21
	2-4km SSW	Heard	2	Explosion	Outgoing	N/K	4-Nov, 09:21
	2-4km SSW	Heard	4	Explosion	Undetermined	N/K	4-Nov, 09:23-09:26
	2-4km SSW	Heard	4	Explosion	Outgoing	N/K	4-Nov, 09:30-09:36
2-4km SSW	Heard	1	Explosion	Impact	N/K	4-Nov, 09:30-09:36	
Kadiivka (formerly Stakhanov, non-government-controlled, 50km W of Luhansk)	10-15km NNE	Heard	42	Explosion	Undetermined	N/K	4-Nov, 05:05-05:30
	10-15km NNW	Heard	67	Explosion	Undetermined	N/K	4-Nov, 16:23-17:16
Dachne (non-government-controlled, 47km W of Luhansk)	3-5km N	Heard	2	Explosion	Undetermined	N/K	4-Nov, 09:51-09:52
	2km NNW	Heard	3	Shot		Small arms	4-Nov, 09:58-10:09
	2km NNW	Heard	3	Burst		Small arms	4-Nov, 09:58-10:09
Muratove (government-controlled, 51km NW of Luhansk)	8-12km S	Heard	4	Explosion	Undetermined	N/K	4-Nov, 09:50-10:05
	8-12km S	Heard	4	Burst		N/K	4-Nov, 09:50
	4-10km SSE	Heard	12	Explosion	Undetermined	N/K	4-Nov, 10:30-10:45
	4-10km SSE	Heard	40	Burst		N/K	4-Nov, 10:30-10:45

N edge of Sentianivka (formerly Frunze, non-government-controlled, 44km W of Luhansk)	3-5km NW	Heard	102	Burst		HMG	4-Nov, 10:25-10:35
	3-5km NW	Heard	11	Explosion	Undetermined	N/K	4-Nov, 10:25-10:35
	2-3km N	Heard	2	Explosion	Undetermined	N/K	4-Nov, 10:25-10:35
Sentianivka (formerly Frunze, non-government-controlled, 44km W of Luhansk)	3-5km NW	Heard	35	Burst		Small arms	4-Nov, 10:50-11:20
	3-5km NW	Heard	48	Shot		Small arms	4-Nov, 10:50-11:20
	3-5km NW	Heard	19	Explosion	Undetermined	N/K	4-Nov, 10:50-11:20
	3-5km WNW	Heard	60	Explosion	Undetermined	N/K	4-Nov, 10:50-11:20
	3-5km NW	Heard	60	Burst		Small arms	4-Nov, 11:21-11:50
	3-5km NW	Heard	27	Shot		Small arms	4-Nov, 11:21-11:50
	3-5km NW	Heard	16	Explosion	Undetermined	N/K	4-Nov, 11:21-11:50
	3km WNW	Heard	50	Burst		Small arms	4-Nov, 11:21-11:50
	4-6km WNW	Heard	70	Explosion	Undetermined	N/K	4-Nov, 11:21-11:50
	3-5km NW	Heard	76	Burst		Small arms	4-Nov, 11:51-12:00
	3-5km NW	Heard	11	Shot		Small arms	4-Nov, 11:51-12:00
	3-5km NW	Heard	6	Explosion	Undetermined	N/K	4-Nov, 11:51-12:00
	4-6km WNW	Heard	38	Explosion	Undetermined	N/K	4-Nov, 12:10-12:50
Zolote (government-controlled, 60km W of Luhansk)	2-3km SW	Heard	20	Shot	Assessed as outside the disengagement area	Small arms	4-Nov, 10:35-10:42
	2-3km SW	Heard	10	Burst	Assessed as outside the disengagement area	HMG	4-Nov, 10:35-10:42
	2-3km SW	Heard	10	Shot	Assessed as outside the disengagement area	AGL	4-Nov, 10:35-10:42
Zolote-5/Mykhailivka (non-government-controlled, 58km W of Luhansk)	300-500m NW	Heard	6	Burst		Small arms	4-Nov, 10:43-10:50
	300-400m N	Heard	1	Explosion	Undetermined	N/K	4-Nov, 10:43-10:50
	1-2km N	Heard	7	Explosion	Undetermined	N/K	4-Nov, 11:06-11:10
250m S of Stanytsia Luhanska Bridge (15km NE of Luhansk)	500m NNW	Heard	15	Burst	Assessed as inside the disengagement area	Small arms	4-Nov, 10:55
1km SSE of Stanytsia Luhanska Bridge (15km NE of Luhansk)	1-2km NW	Heard	2	Burst	Assessed as inside the disengagement area	Small arms	4-Nov, 11:05
Kriakivka (government-controlled,	8-10km SE	Heard	4	Explosion	Undetermined	N/K	4-Nov, 11:30-11:35

38km NW of Luhansk)							
Raivka (non-government-controlled, 16km NW of Luhansk)	15-25km W	Heard	20	Explosion	Undetermined	N/K	4-Nov, 11:41-12:09
Pervomaisk (non-government-controlled, 58km W of Luhansk)	5-7km NNE	Heard	32	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	4-Nov, 11:25-12:05
	2-3km NNE	Heard	20	Burst	Assessed as inside the disengagement area	Small arms	4-Nov, 11:45-11:50
	1-2km NNE	Heard	4	Burst	Assessed as outside the disengagement area	Small arms	4-Nov, 12:39-12:42
	1-2km NNE	Heard	8	Shot	Assessed as outside the disengagement area	Small arms	4-Nov, 12:39-12:42
1.5km SW of Molodizhne (non-government-controlled, 63km NW of Luhansk)	1km SW	Heard	8	Burst		Small arms	4-Nov, 14:25-14:30

Map of Donetsk and Luhansk regions²



² The SMM is deployed to ten locations throughout Ukraine – Kherson, Odessa, Lviv, Ivano-Frankivsk, Kharkiv, Donetsk, Dnipro, Chernivtsi, Luhansk and Kyiv – as per Permanent Council Decision 1117 of 21 March 2014. This map of eastern Ukraine is meant for illustrative purposes and indicates locations mentioned in the report, as well as those where the SMM has offices (monitoring teams, patrol hubs, and forward patrol bases) in Donetsk and Luhansk regions. (In red: forward patrol bases from which SMM staff has temporarily relocated based on recommendations of security experts from participating States as well as SMM security considerations).