

**Table of ceasefire violations as of 14 October 2018<sup>1</sup>**

SMM position	Event location	Means	No.	Observation	Description	Weapon	Date, time
SMM camera in Chermalyk (government-controlled, 31km NE of Mariupol)	3-5km SSE	Recorded	6	Projectile	WSW to ENE	N/K	12-Oct, 22:29
	3-5km S	Recorded	15	Projectile	WSW to ENE	N/K	12-Oct, 22:30
	3-5km S	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 22:30
	3-5km S	Recorded	12	Projectile	WSW to ENE	N/K	12-Oct, 22:31
	3-5km S	Recorded	8	Projectile	WSW to ENE	N/K	12-Oct, 22:32
	3-5km S	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 22:32
	3-5km S	Recorded	4	Projectile	WSW to ENE	N/K	12-Oct, 22:33
	3-5km SSE	Recorded	1	Projectile	ENE to WSW	N/K	12-Oct, 22:38
	3-5km SSE	Recorded	5	Projectile	NNW to SSE	N/K	12-Oct, 23:02
	3-5km SSE	Recorded	3	Muzzle flash		N/K	12-Oct, 23:02
	3-5km SSE	Recorded	8	Projectile	ENE to WSW	N/K	12-Oct, 23:07
	3-5km SE	Recorded	3	Projectile	NE to SW	N/K	12-Oct, 23:10
	3-5km S	Recorded	2	Projectile	WSW to ENE	N/K	13-Oct, 00:07
	3-5km SSE	Recorded	3	Projectile	WSW to ENE	N/K	13-Oct, 00:15
	3-5km S	Recorded	3	Projectile	WSW to ENE	N/K	13-Oct, 00:17
	3-5km S	Recorded	1	Muzzle flash		N/K	13-Oct, 00:17
	3-5km SSE	Recorded	2	Projectile	WSW to ENE	N/K	13-Oct, 00:18
	3-5km SSE	Recorded	5	Projectile	WSW to ENE	N/K	13-Oct, 00:20
	3-5km SSE	Recorded	6	Projectile	WSW to ENE	N/K	13-Oct, 00:21
	3-5km SSE	Recorded	2	Projectile	WSW to ENE	N/K	13-Oct, 00:22
	3-5km S	Recorded	1	Illumination flare	In vertical flight	N/K	13-Oct, 02:10
	3-5km SSE	Recorded	3	Projectile	WSW to ENE	N/K	13-Oct, 02:26
	3-5km SSE	Recorded	6	Projectile	WSW to ENE	N/K	13-Oct, 02:27
	3-5km SSE	Recorded	2	Projectile	WSW to ENE	N/K	13-Oct, 02:28
	3-5km SSE	Recorded	2	Projectile	WSW to ENE	N/K	13-Oct, 02:29
	3-5km SSE	Recorded	6	Projectile	WSW to ENE	N/K	13-Oct, 02:30
	3-5km SSE	Recorded	5	Projectile	WSW to ENE	N/K	13-Oct, 02:31
	3-5km SSE	Recorded	1	Muzzle flash		N/K	13-Oct, 02:31
	3-5km SSE	Recorded	6	Projectile	WSW to ENE	N/K	13-Oct, 02:32
	3-5km SSE	Recorded	4	Projectile	ENE to WSW	N/K	13-Oct, 02:37
3-5km S	Recorded	10	Projectile	WSW to ENE	N/K	13-Oct, 04:47	
3-5km S	Recorded	13	Projectile	WSW to ENE	N/K	13-Oct, 04:48	
3-5km SSE	Recorded	3	Projectile	WSW to ENE	N/K	13-Oct, 05:30	
3-5km SSE	Recorded	7	Projectile	WSW to ENE	N/K	13-Oct, 05:31	
3-5km SSE	Recorded	1	Projectile	WSW to ENE	N/K	13-Oct, 05:52	
3-5km SSE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 05:52	
SMM camera at Donetsk Filtration Station (15km N of Donetsk)	3-5km SSW	Recorded	2	Explosion	Undetermined	N/K	12-Oct, 19:14
	1-3km SSW	Recorded	3	Projectile	W to E	N/K	12-Oct, 20:10
	0.5-1km SSW	Recorded	1	Projectile	W to E	N/K	12-Oct, 20:10
	1-3km SSW	Recorded	2	Projectile	W to E	N/K	12-Oct, 20:26
	1-3km SSW	Recorded	1	Projectile	W to E	N/K	12-Oct, 20:34
	1-3km S	Recorded	3	Projectile	E to W	N/K	12-Oct, 22:19
	1-3km SSE	Recorded	1	Projectile	E to W	N/K	12-Oct, 22:30
	1-3km SSW	Recorded	1	Explosion	Impact	N/K	12-Oct, 23:55
	1-3km SSW	Recorded	2	Projectile	W to E	N/K	13-Oct, 00:09
	1-3km SSW	Recorded	1	Projectile	W to E	N/K	13-Oct, 00:19
	1-3km SSW	Recorded	1	Projectile	W to E	N/K	13-Oct, 00:25
	1-3km SSW	Recorded	1	Projectile	W to E	N/K	13-Oct, 00:44
	1-3km SSW	Recorded	1	Projectile	W to E	N/K	13-Oct, 00:45
	1-3km S	Recorded	1	Projectile	W to E	N/K	13-Oct, 00:57
	1-3km SSW	Recorded	1	Explosion	Impact	N/K	13-Oct, 01:44
1-3km SSW	Recorded	1	Illumination	In vertical flight	N/K	13-Oct, 03:17	

<sup>1</sup> 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.

				flare			
	1-3km SSW	Recorded	3	Projectile	W to E	N/K	13-Oct, 03:17
	1-3km SSW	Recorded	3	Projectile	W to E	N/K	13-Oct, 03:18
	1-3km SSW	Recorded	1	Projectile	W to E	N/K	13-Oct, 03:39
	1-3km SSW	Recorded	8	Projectile	W to E	N/K	13-Oct, 03:40
	1-3km SSW	Recorded	1	Projectile	W to E	N/K	13-Oct, 04:17
	1-3km SSW	Recorded	1	Projectile	W to E	N/K	13-Oct, 04:20
SMM camera 1.5km NE of Hnutove (government- controlled, 20km NE of Mariupol)	2-4km E	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 18:16
	2-4km E	Recorded	5	Projectile	N to S	N/K	12-Oct, 18:41
	2-4km E	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 18:42
	2-4km ENE	Recorded	3	Projectile	N to S	N/K	12-Oct, 19:51
	2-4km E	Recorded	12	Projectile	NW to SE	N/K	12-Oct, 20:26
	2-4km E	Recorded	4	Projectile	SW to NE	N/K	12-Oct, 20:27
	2-4km E	Recorded	9	Projectile	N to S	N/K	12-Oct, 20:30
	2-4km E	Recorded	1	Projectile	SW to NE	N/K	12-Oct, 20:30
	2-4km E	Recorded	7	Projectile	NNW to SSE	N/K	12-Oct, 20:31
	2-4km ESE	Recorded	1	Projectile	SW to NE	N/K	12-Oct, 20:31
	2-4km E	Recorded	7	Projectile	NW to SE	N/K	12-Oct, 20:33
	2-4km ESE	Recorded	5	Projectile	SW to NE	N/K	12-Oct, 20:41
	2-4km ESE	Recorded	2	Explosion	Undetermined	N/K	12-Oct, 20:48
	2-4km ESE	Recorded	5	Projectile	SW to NE	N/K	12-Oct, 20:48
	2-4km ESE	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 20:49
	2-4km ESE	Recorded	8	Projectile	SW to NE	N/K	12-Oct, 20:49
	2-4km E	Recorded	1	Projectile	SW to NE	N/K	12-Oct, 20:50
	2-4km E	Recorded	4	Projectile	SW to NE	N/K	12-Oct, 20:51
	2-4km ESE	Recorded	2	Explosion	Undetermined	N/K	12-Oct, 20:48
	2-4km ESE	Recorded	5	Projectile	SW to NE	N/K	12-Oct, 20:48
	2-4km ESE	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 20:49
	2-4km ESE	Recorded	8	Projectile	SW to NE	N/K	12-Oct, 20:49
	2-4km E	Recorded	1	Projectile	SW to NE	N/K	12-Oct, 20:50
	2-4km E	Recorded	4	Projectile	SW to NE	N/K	12-Oct, 20:51
	2-4km ESE	Recorded	2	Explosion	Undetermined	N/K	12-Oct, 20:48
	2-4km ESE	Recorded	5	Projectile	SW to NE	N/K	12-Oct, 20:48
	2-4km ESE	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 20:49
	2-4km ESE	Recorded	8	Projectile	SW to NE	N/K	12-Oct, 20:49
	2-4km E	Recorded	1	Projectile	SW to NE	N/K	12-Oct, 20:50
	2-4km E	Recorded	4	Projectile	SW to NE	N/K	12-Oct, 20:51
	2-4km E	Recorded	15	Projectile	NW to SE	N/K	12-Oct, 20:57
	2-4km E	Recorded	9	Projectile	SW to NE	N/K	12-Oct, 20:57
	2-4km E	Recorded	1	Projectile	SW to NE	N/K	12-Oct, 20:58
	2-4km ESE	Recorded	2	Explosion	Undetermined	N/K	12-Oct, 20:58
	2-4km E	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 21:00
	2-4km E	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 21:04
	2-4km E	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 21:06
	2-4km ESE	Recorded	10	Projectile	SW to NE	N/K	12-Oct, 21:07
	2-4km ESE	Recorded	2	Projectile	SW to NE	N/K	12-Oct, 21:08
	2-4km E	Recorded	11	Projectile	NW to SE	N/K	12-Oct, 21:09
2-4km ESE	Recorded	4	Projectile	SW to NE	N/K	12-Oct, 21:10	
2-4km ESE	Recorded	6	Projectile	SW to NE	N/K	12-Oct, 21:11	
2-4km ESE	Recorded	9	Projectile	SW to NE	N/K	12-Oct, 21:12	
2-4km ESE	Recorded	1	Projectile	SW to NE	N/K	12-Oct, 21:14	
2-4km ESE	Recorded	2	Projectile	SW to NE	N/K	12-Oct, 21:15	
2-4km ESE	Recorded	1	Projectile	SW to NE	N/K	12-Oct, 21:18	
2-4km E	Recorded	4	Projectile	E to W	N/K	12-Oct, 21:19	
2-4km E	Recorded	1	Explosion	Outgoing	N/K	12-Oct, 21:19	
2-4km E	Recorded	3	Projectile	SW to NE	N/K	12-Oct, 21:20	
2-4km E	Recorded	2	Projectile	SW to NE	N/K	12-Oct, 21:22	
2-4km E	Recorded	2	Projectile	SW to NE	N/K	12-Oct, 21:25	
2-4km E	Recorded	22	Projectile	SW to NE	N/K	12-Oct, 21:28	
2-4km E	Recorded	6	Projectile	SW to NE	N/K	12-Oct, 21:29	
2-4km E	Recorded	5	Projectile	SW to NE	N/K	12-Oct, 21:30	
2-4km E	Recorded	17	Projectile	NW to SE	N/K	12-Oct, 21:34	
2-4km E	Recorded	1	Projectile	SW to NE	N/K	12-Oct, 21:34	
2-4km E	Recorded	11	Projectile	SW to NE	N/K	12-Oct, 21:35	
2-4km E	Recorded	6	Projectile	NW to SE	N/K	12-Oct, 21:35	
2-4km E	Recorded	6	Projectile	SW to NE	N/K	12-Oct, 21:37	
2-4km E	Recorded	2	Projectile	NW to SE	N/K	12-Oct, 21:37	
2-4km E	Recorded	16	Projectile	SW to NE	N/K	12-Oct, 21:39	
2-4km E	Recorded	43	Projectile	SW to NE	N/K	12-Oct, 21:40	
2-4km E	Recorded	11	Projectile	NW to SE	N/K	12-Oct, 21:40	

	2-4km E	Recorded	4	Projectile	SW to NE	N/K	12-Oct, 21:43
	2-4km E	Recorded	23	Projectile	SW to NE	N/K	12-Oct, 21:44
	2-4km E	Recorded	5	Projectile	NW to SE	N/K	12-Oct, 21:44
	2-4km E	Recorded	4	Projectile	SW to NE	N/K	12-Oct, 21:45
	2-4km E	Recorded	5	Projectile	SW to NE	N/K	12-Oct, 21:47
	2-4km E	Recorded	2	Projectile	NW to SE	N/K	12-Oct, 21:47
	2-4km E	Recorded	3	Projectile	NW to SE	N/K	12-Oct, 21:48
	2-4km E	Recorded	2	Projectile	SW to NE	N/K	12-Oct, 21:49
	2-4km E	Recorded	12	Projectile	SW to NE	N/K	12-Oct, 21:50
	2-4km E	Recorded	10	Projectile	SW to NE	N/K	12-Oct, 21:51
	2-4km E	Recorded	3	Projectile	SW to NE	N/K	12-Oct, 21:52
	2-4km E	Recorded	1	Projectile	SW to NE	N/K	12-Oct, 21:53
	2-4km E	Recorded	9	Projectile	N to S	N/K	12-Oct, 21:53
	2-4km E	Recorded	9	Projectile	NW to SE	N/K	12-Oct, 21:54
	2-4km E	Recorded	5	Projectile	NW to SE	N/K	12-Oct, 21:58
	2-4km E	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 21:58
	2-4km E	Recorded	6	Projectile	SW to NE	N/K	12-Oct, 21:59
	2-4km E	Recorded	15	Projectile	NW to SE	N/K	12-Oct, 22:00
	2-4km E	Recorded	8	Projectile	SW to NE	N/K	12-Oct, 22:00
	2-4km E	Recorded	2	Projectile	NNW to SSE	N/K	12-Oct, 22:01
	2-4km E	Recorded	7	Projectile	SW to NE	N/K	12-Oct, 22:01
	2-4km ENE	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 22:01
	2-4km E	Recorded	2	Projectile	NW to SE	N/K	12-Oct, 22:02
	2-4km E	Recorded	1	Explosion	Impact	N/K	12-Oct, 22:02
	2-4km E	Recorded	5	Projectile	SW to NE	N/K	12-Oct, 22:05
	2-4km E	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 22:05
	2-4km E	Recorded	8	Projectile	SW to NE	N/K	12-Oct, 22:06
	2-4km E	Recorded	5	Projectile	SW to NE	N/K	12-Oct, 22:07
	2-4km E	Recorded	12	Projectile	SW to NE	N/K	12-Oct, 22:08
	2-4km E	Recorded	6	Projectile	SW to NE	N/K	12-Oct, 22:12
	2-4km E	Recorded	2	Explosion	Undetermined	N/K	12-Oct, 22:12
	2-4km E	Recorded	7	Projectile	SW to NE	N/K	12-Oct, 22:13
	2-4km E	Recorded	5	Projectile	SW to NE	N/K	12-Oct, 22:14
	2-4km E	Recorded	2	Projectile	SW to NE	N/K	12-Oct, 22:15
	2-4km E	Recorded	4	Projectile	SW to NE	N/K	12-Oct, 22:16
	2-4km E	Recorded	5	Projectile	SW to NE	N/K	12-Oct, 22:18
	2-4km E	Recorded	27	Projectile	NW to SE	N/K	12-Oct, 22:18
	2-4km E	Recorded	9	Projectile	SW to NE	N/K	12-Oct, 22:19
	2-4km E	Recorded	11	Projectile	SW to NE	N/K	12-Oct, 22:20
	2-4km E	Recorded	7	Projectile	SW to NE	N/K	12-Oct, 22:21
	2-4km E	Recorded	3	Projectile	NW to SE	N/K	12-Oct, 22:28
	2-4km E	Recorded	8	Projectile	NW to SE	N/K	12-Oct, 22:29
	2-4km E	Recorded	25	Projectile	SW to NE	N/K	12-Oct, 22:29
	2-4km E	Recorded	50	Projectile	SW to NE	N/K	12-Oct, 22:30
	2-4km E	Recorded	15	Projectile	NW to SE	N/K	12-Oct, 22:30
	2-4km E	Recorded	5	Projectile	NW to SE	N/K	12-Oct, 22:31
	2-4km E	Recorded	24	Projectile	SW to NE	N/K	12-Oct, 22:31
	2-4km E	Recorded	4	Projectile	NW to SE	N/K	12-Oct, 22:32
	2-4km E	Recorded	41	Projectile	SW to NE	N/K	12-Oct, 22:32
	2-4km E	Recorded	3	Projectile	NW to SE	N/K	12-Oct, 22:33
	2-4km E	Recorded	6	Projectile	SW to NE	N/K	12-Oct, 22:33
	2-4km E	Recorded	6	Projectile	SW to NE	N/K	12-Oct, 22:36
	2-4km E	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 22:36
	2-4km E	Recorded	2	Projectile	NW to SE	N/K	12-Oct, 22:37
	2-4km E	Recorded	1	Projectile	SW to NE	N/K	12-Oct, 22:37
	2-4km E	Recorded	1	Projectile	SW to NE	N/K	12-Oct, 22:40
	2-4km E	Recorded	13	Projectile	SW to NE	N/K	12-Oct, 22:41
	2-3km E	Recorded	1	Projectile	NW to SE	N/K	12-Oct, 22:41
	2-4km E	Recorded	4	Projectile	SW to NE	N/K	12-Oct, 22:43
	2-4km E	Recorded	5	Projectile	NW to SE	N/K	12-Oct, 22:43
	2-4km E	Recorded	5	Projectile	SW to NE	N/K	12-Oct, 22:45
	2-4km E	Recorded	2	Projectile	SW to NE	N/K	12-Oct, 22:45
	2-4km E	Recorded	4	Projectile	SW to NE	N/K	12-Oct, 22:46
	2-4km E	Recorded	7	Projectile	SW to NE	N/K	12-Oct, 22:47

	2-4km E	Recorded	4	Projectile	SW to NE	N/K	12-Oct, 22:57
	2-4km E	Recorded	38	Projectile	NW to SE	N/K	12-Oct, 23:02
	2-4km E	Recorded	3	Projectile	NW to SE	N/K	12-Oct, 23:10
	2-4km E	Recorded	5	Projectile	NW to SE	N/K	12-Oct, 23:27
	2-4km E	Recorded	3	Projectile	SW to NE	N/K	12-Oct, 23:29
	2-4km E	Recorded	2	Projectile	SW to NE	N/K	12-Oct, 23:30
	2-4km E	Recorded	2	Projectile	NW to SE	N/K	12-Oct, 23:50
	2-4km E	Recorded	2	Projectile	SW to NE	N/K	13-Oct, 00:06
	2-4km E	Recorded	2	Projectile	NW to SE	N/K	13-Oct, 00:06
	2-4km E	Recorded	8	Projectile	NW to SE	N/K	13-Oct, 00:09
	2-4km E	Recorded	8	Projectile	SW to NE	N/K	13-Oct, 00:23
	2-4km E	Recorded	11	Projectile	SW to NE	N/K	13-Oct, 00:24
	2-4km E	Recorded	7	Projectile	NW to SE	N/K	13-Oct, 00:45
	2-4km E	Recorded	5	Projectile	SW to NE	N/K	13-Oct, 00:47
	2-4km E	Recorded	3	Projectile	SW to NE	N/K	13-Oct, 00:49
	2-4km E	Recorded	7	Projectile	SW to NE	N/K	13-Oct, 00:50
	2-4km E	Recorded	2	Projectile	SW to NE	N/K	13-Oct, 00:54
	2-4km E	Recorded	1	Projectile	SW to NE	N/K	13-Oct, 01:49
	2-4km E	Recorded	2	Projectile	SW to NE	N/K	13-Oct, 01:55
	2-4km E	Recorded	4	Projectile	SW to NE	N/K	13-Oct, 01:56
	2-4km E	Recorded	1	Projectile	NW to SE	N/K	13-Oct, 02:01
	2-4km ENE	Recorded	2	Projectile	NW to SE	N/K	13-Oct, 02:07
	2-4km ENE	Recorded	1	Projectile	NW to SE	N/K	13-Oct, 02:10
	2-4km ENE	Recorded	1	Explosion	Outgoing	N/K	13-Oct, 02:10
	2-4km ENE	Recorded	2	Projectile	NW to SE	N/K	13-Oct, 02:29
	2-4km ENE	Recorded	1	Projectile	NW to SE	N/K	13-Oct, 02:30
	2-4km ENE	Recorded	3	Projectile	NW to SE	N/K	13-Oct, 02:33
	2-4km E	Recorded	5	Projectile	NW to SE	N/K	13-Oct, 02:34
	2-4km E	Recorded	7	Explosion	Undetermined	N/K	13-Oct, 02:34
	2-4km E	Recorded	1	Projectile	SW to NE	N/K	13-Oct, 02:38
	2-4km E	Recorded	4	Projectile	SW to NE	N/K	13-Oct, 04:19
	2-4km E	Recorded	3	Projectile	NW to SE	N/K	13-Oct, 04:19
	2-4km E	Recorded	8	Projectile	SW to NE	N/K	13-Oct, 04:20
	2-4km ENE	Recorded	4	Projectile	SW to NE	N/K	13-Oct, 04:27
	2-4km E	Recorded	3	Projectile	NW to SE	N/K	13-Oct, 04:27
	2-4km ENE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 04:27
	2-4km E	Recorded	1	Projectile	SW to NE	N/K	13-Oct, 04:29
	2-4km E	Recorded	2	Projectile	NW to SE	N/K	13-Oct, 04:30
	2-4km E	Recorded	2	Projectile	NW to SE	N/K	13-Oct, 05:07
	2-4km E	Recorded	4	Projectile	SW to NE	N/K	13-Oct, 05:18
	2-4km E	Recorded	3	Projectile	In vertical flight	N/K	13-Oct, 17:47
	2-4km E	Recorded	3	Projectile	N to S	N/K	13-Oct, 17:48
	2-4km E	Recorded	1	Projectile	In vertical flight	N/K	13-Oct, 17:48
SMM camera in Kriakivka (government-controlled, 38km NW of Luhansk)	0.1-0.5km SSW	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 19:32
	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 22:55
	2-4km SSW	Recorded	1	Projectile	W to E	N/K	13-Oct, 03:20
	2-4km SSW	Recorded	3	Explosion	Undetermined	N/K	13-Oct, 03:20
SMM camera E of Lomakyne (government-controlled, 15km NE of Mariupol)	2-4km NE	Recorded	1	Projectile	NW to SE	N/K	12-Oct, 20:19
	2-4km NE	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 20:19
	2-4km NE	Recorded	1	Projectile	NW to SE	N/K	12-Oct, 20:52
	2-4km NE	Recorded	1	Projectile	NW to SE	N/K	12-Oct, 20:56
	2-4km NE	Recorded	1	Projectile	NW to SE	N/K	12-Oct, 20:57
	2-4km NE	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 21:00
	2-4km NE	Recorded	1	Muzzle flash	Undetermined	N/K	12-Oct, 21:24
	2-4km NE	Recorded	1	Projectile	SE to NW	N/K	12-Oct, 21:24
	2-4km NE	Recorded	1	Projectile	SE to NW	N/K	12-Oct, 21:36
	2-4km ENE	Recorded	1	Projectile	NW to SE	N/K	12-Oct, 21:38
	2-4km NE	Recorded	2	Projectile	SE to NW	N/K	12-Oct, 21:38
	2-4km NE	Recorded	10	Projectile	NW to SE	N/K	12-Oct, 21:41
	2-4km NE	Recorded	4	Projectile	NW to SE	N/K	12-Oct, 21:42
	2-4km NE	Recorded	1	Projectile	In vertical flight	N/K	12-Oct, 21:50
	2-4km NE	Recorded	1	Projectile	NW to SE	N/K	12-Oct, 21:51
2-4km NE	Recorded	3	Explosion	Undetermined	N/K	12-Oct, 21:53	

	2-4km NE	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 22:00
	2-4km NE	Recorded	1	Projectile	NW to SE	N/K	12-Oct, 22:00
	2-4km NE	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 22:01
	2-4km NE	Recorded	10	Explosion	Undetermined	N/K	12-Oct, 22:29
	2-4km NE	Recorded	13	Explosion	Undetermined	N/K	12-Oct, 22:30
	2-4km NE	Recorded	6	Projectile	NW to SE	N/K	12-Oct, 22:30
	2-4km NE	Recorded	10	Explosion	Undetermined	N/K	12-Oct, 22:31
	2-4km NE	Recorded	1	Projectile	NW to SE	N/K	12-Oct, 22:31
	2-4km NE	Recorded	9	Projectile	NW to SE	N/K	12-Oct, 22:32
	2-4km NE	Recorded	6	Explosion	Undetermined	N/K	12-Oct, 22:32
	2-4km NE	Recorded	1	Projectile	NW to SE	N/K	12-Oct, 22:33
	2-4km NE	Recorded	3	Explosion	Undetermined	N/K	12-Oct, 22:33
	2-4km NE	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 22:36
	2-4km NE	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 22:43
	2-4km NE	Recorded	2	Projectile	SE to NW	N/K	12-Oct, 23:07
	2-4km NE	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 23:07
	2-4km NE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 01:22
	2-4km NE	Recorded	4	Explosion	Undetermined	N/K	13-Oct, 01:26
	2-4km NE	Recorded	3	Projectile	NW to SE	N/K	13-Oct, 01:35
	2-4km NE	Recorded	3	Explosion	Airburst	N/K	13-Oct, 01:35
	2-4km NE	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 01:44
	2-4km ENE	Recorded	1	Illumination flare	In vertical flight	N/K	13-Oct, 02:10
	2-4km NE	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 02:32
	2-4km NE	Recorded	9	Projectile	NW to SE	N/K	13-Oct, 02:32
	2-4km NE	Recorded	1	Projectile	NW to SE	N/K	13-Oct, 04:16
	2-4km NE	Recorded	2	Muzzle flash		N/K	13-Oct, 04:17
	2-4km NE	Recorded	2	Projectile	NW to SE	N/K	13-Oct, 04:17
	2-4km NE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 04:17
	2-4km NE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 04:20
	2-4km NE	Recorded	3	Projectile	NW to SE	N/K	13-Oct, 04:21
	2-4km NE	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 04:22
	2-4km NE	Recorded	2	Projectile	NW to SE	N/K	13-Oct, 04:22
	2-4km NE	Recorded	4	Explosion	Undetermined	N/K	13-Oct, 04:46
	2-4km NE	Recorded	2	Projectile	NW to SE	N/K	13-Oct, 04:46
	2-4km NE	Recorded	1	Burst	NW to SE	N/K	13-Oct, 04:46
	2-4km NE	Recorded	6	Projectile	NW to SE	N/K	13-Oct, 04:47
	2-4km NE	Recorded	1	Burst	NW to SE	N/K	13-Oct, 04:47
	2-4km NE	Recorded	5	Projectile	NW to SE	N/K	13-Oct, 04:48
	2-4km NE	Recorded	1	Burst	NW to SE	N/K	13-Oct, 04:48
	2-4km NE	Recorded	2	Muzzle flash		N/K	13-Oct, 05:03
	2-4km NE	Recorded	4	Projectile	NW to SE	N/K	13-Oct, 05:03
	2-4km NE	Recorded	8	Projectile	NW to SE	N/K	13-Oct, 05:05
	2-4km NE	Recorded	4	Projectile	NW to SE	N/K	13-Oct, 05:12
	2-4km NE	Recorded	3	Explosion	Undetermined	N/K	13-Oct, 05:12
	2-4km NE	Recorded	2	Projectile	NW to SE	N/K	13-Oct, 05:30
	2-4km NE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 05:30
	2-4km NE	Recorded	1	Muzzle flash		N/K	13-Oct, 05:31
	2-4km NE	Recorded	2	Projectile	NW to SE	N/K	13-Oct, 05:31
	2-4km NE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 05:31
	2-4km NE	Recorded	1	Explosion	Airburst	N/K	13-Oct, 17:50
SMM camera at entry-exit checkpoint in Maiorsk (government-controlled, 45km NE of Donetsk)	2-4km E	Recorded	1	Illumination flare	In vertical flight	N/K	12-Oct, 22:59
	1-3km ENE	Recorded	2	Projectile	N to S	N/K	13-Oct, 04:18
SMM camera at entry-exit checkpoint in Marinka (government-controlled, 23km	2-4km N	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 19:05
	2-4km N	Recorded	2	Explosion	Undetermined	N/K	12-Oct, 19:18
	2-4km NNE	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 19:23
	1-2km NE	Recorded	9	Projectile	ESE to WNW	N/K	12-Oct, 20:36
	1-2km NE	Recorded	8	Projectile	ESE to WNW	N/K	12-Oct, 20:38
	1-2km NE	Recorded	2	Projectile	ESE to WNW	N/K	12-Oct, 20:39

SW of Donetsk)	1-2km NE	Recorded	8	Projectile	ESE to WNW	N/K	12-Oct, 21:18
	1-2km NE	Recorded	1	Illumination flare	In vertical flight	N/K	12-Oct, 22:22
	1-2km NE	Recorded	2	Illumination flare	In vertical flight	N/K	12-Oct, 22:23
	2-3km NE	Recorded	1	Illumination flare	In vertical flight	N/K	12-Oct, 22:26
	2-3km NE	Recorded	2	Illumination flare	In vertical flight	N/K	12-Oct, 22:27
	1-2km NE	Recorded	1	Projectile	W to E	N/K	12-Oct, 22:28
	1-2km NE	Recorded	1	Projectile	SE to NW	N/K	12-Oct, 22:34
	1-2km NE	Recorded	1	Projectile	W to E	N/K	12-Oct, 22:36
	1-2km NE	Recorded	2	Muzzle flash		N/K	12-Oct, 22:36
	1-2km N	Recorded	1	Projectile	W to E	N/K	12-Oct, 22:55
	1-2km N	Recorded	1	Explosion	Impact	N/K	12-Oct, 22:55
	2-3km NE	Recorded	1	Illumination flare	In vertical flight	N/K	12-Oct, 22:56
	2-3km NE	Recorded	1	Illumination flare	In vertical flight	N/K	12-Oct, 22:57
	1-2km NE	Recorded	1	Projectile	E to W	N/K	12-Oct, 22:58
	1-2km NE	Recorded	2	Explosion	Undetermined	N/K	12-Oct, 23:01
	2-3km NE	Recorded	2	Explosion	Undetermined	N/K	12-Oct, 23:03
	2-3km N	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 23:04
	2-3km NE	Recorded	1	Projectile	E to W	N/K	12-Oct, 23:05
	2-3km NE	Recorded	1	Projectile	SE to NW	N/K	12-Oct, 23:06
	1-2km NE	Recorded	2	Projectile	W to E	N/K	12-Oct, 23:08
1-2km NE	Recorded	3	Explosion	Undetermined	N/K	12-Oct, 23:08	
1-2km NE	Recorded	1	Explosion	Undetermined	N/K	12-Oct, 23:12	
1-2km NE	Recorded	2	Explosion	Undetermined	N/K	12-Oct, 23:14	
1-2km NE	Recorded	1	Projectile	W to E	N/K	12-Oct, 23:14	
1-2km NNE	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 00:02	
SMM camera at entry-exit checkpoint in Pyshevyk (government-controlled, 25km NE of Mariupol)	2-4km S	Recorded	1	Projectile	E to W	N/K	12-Oct, 19:23
	1-2km S	Recorded	7	Projectile	E to W	N/K	12-Oct, 21:50
	1-2km S	Recorded	14	Projectile	W to E	N/K	13-Oct, 04:46
SMM camera 1km SW of Shyrokyne (20km E of Mariupol)	1-2km S	Recorded	17	Projectile	W to E	N/K	13-Oct, 04:47
	1-3km NE	Recorded	1	Projectile	WNW to ESE	N/K	13-Oct, 02:06
SMM camera in Svitlodarsk (government-controlled, 57km NE of Donetsk)	1-3km NE	Recorded	1	Explosion	Impact	N/K	13-Oct, 02:06
	2-4km E	Recorded	6	Projectile	In vertical flight	N/K	12-Oct, 19:19
SMM camera in Zolote (government-controlled, 60km W of Luhansk)	2-4km E	Recorded	1	Projectile	S to N	N/K	12-Oct, 19:33
	3-5km E	Recorded	1	Projectile	WNW to ESE	N/K	12-Oct, 20:00
	1-3km E	Recorded	2	Projectile	SW to NE	N/K	12-Oct, 22:38
	1-3km ESE	Recorded	1	Projectile	NNW to SSE	N/K	12-Oct, 23:58
	3-5km E	Recorded	3	Projectile	S to N	N/K	13-Oct, 01:30
	3-5km E	Recorded	1	Projectile	In vertical flight	N/K	13-Oct, 01:30
	3-5km E	Recorded	7	Projectile	S to N	N/K	13-Oct, 01:31
	3-5km E	Recorded	3	Projectile	S to N	N/K	13-Oct, 01:48
	3-5km E	Recorded	7	Projectile	S to N	N/K	13-Oct, 02:00
	3-5km E	Recorded	13	Projectile	S to N	N/K	13-Oct, 02:01
	3-5km E	Recorded	4	Muzzle flash		N/K	13-Oct, 02:01
	3-5km E	Recorded	6	Projectile	S to N	N/K	13-Oct, 02:02
	3-5km E	Recorded	3	Projectile	S to N	N/K	13-Oct, 02:14
	3-5km E	Recorded	17	Projectile	In vertical flight	N/K	13-Oct, 04:23
	3-5km E	Recorded	2	Projectile	S to N	N/K	13-Oct, 04:23
3-5km E	Recorded	1	Projectile	WNW to ESE	N/K	13-Oct, 04:55	
SMM camera in Zolote (government-controlled, 60km W of Luhansk)	2-4km ESE	Recorded	6	Projectile	WNW to ESE (unable to assess whether inside or outside the disengagement)	N/K	12-Oct, 20:59

					area)		
	2-4km SE	Recorded	4	Projectile	NE to SW (unable to assess whether inside or outside the disengagement area)	N/K	12-Oct, 21:01
	2-4km ESE	Recorded	7	Projectile	NE to SW (unable to assess whether inside or outside the disengagement area)	N/K	12-Oct, 21:03
SE edge of Avdiivka (government-controlled, 17km N of Donetsk)	3-4km NE	Heard	35	Burst		Small arms	13-Oct, 10:15
	3-4km SE	Heard	1	Explosion	Undetermined	N/K	13-Oct, 11:08
1.9km NW of Debaltseve (non-government-controlled, 58kmNE of Donetsk)	4-5km N	Heard	3	Explosion	Undetermined	N/K	13-Oct, 11:54
	4-5km N	Heard	5	Burst		HMG	13-Oct, 11:55
	4-5km N	Heard	4	Explosion	Undetermined	N/K	13-Oct, 11:59
	4-5km N	Heard		Burst	Uncountable overlapping	HMG	13-Oct, 11:59
	4-5km N	Heard	3	Explosion	Undetermined	N/K	13-Oct, 12:06
	4-5km N	Heard	5	Explosion	Undetermined	N/K	13-Oct, 12:10
4.2km NW of Kalynivka (non-government-controlled, 55km NE of Donetsk)	4-5km N	Heard	3	Burst		HMG	13-Oct, 12:10
	3-4km NNE	Heard		Burst	Uncountable overlapping	Small arms	13-Oct, 09:52
	2-3km NNE	Heard		Burst	Uncountable overlapping	Small arms	13-Oct, 10:12
	5-7km N	Heard	1	Explosion	Undetermined	N/K	13-Oct, 10:35
	5-7km N	Heard	1	Explosion	Undetermined	N/K	13-Oct, 10:38
	5-7km N	Heard	1	Explosion	Undetermined	N/K	13-Oct, 10:40
1.8km N of Petrivske (non-government-controlled, 41km S of Donetsk)	5-7km N	Heard	1	Explosion	Undetermined	N/K	13-Oct, 10:43
	4-6km SE	Heard	1	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	13-Oct, 10:35
	4-6km SE	Heard	1	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	13-Oct, 10:37
	3-5km S	Heard	3	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	13-Oct, 10:38
	2-3km S	Heard	4	Burst	Assessed as outside the disengagement area	Small arms	13-Oct, 10:40
	3-5km SE	Heard	2	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	13-Oct, 10:40
	3-5km SE	Heard	1	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	13-Oct, 10:42
4-6km SE	Heard	1	Explosion	Undetermined	N/K	13-Oct, 10:48	

					(assessed as outside the disengagement area)		
	4-6km SE	Heard	1	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	13-Oct, 10:50
	4-6km SE	Heard	2	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	13-Oct, 10:52
1.1km NW of railway station in Yasynuvata (non-government-controlled, 16km NE of Donetsk)	1-2km SSW	Heard	5	Burst		Small arms	13-Oct, 10:13
	1-2km NNW	Heard		Shot and burst	Uncountable overlapping	Small arms	13-Oct, 10:15-10:17
	1-2km NNW	Heard		Burst	Uncountable overlapping	HMG	13-Oct, 10:15-10:17
	4km SSW	Heard	1	Explosion	Undetermined	N/K	13-Oct, 10:35
	3-5km SSW	Heard	1	Explosion	Undetermined	N/K	13-Oct, 11:37
2km SW of Pyshevyk (government-controlled, 25km NE of Mariupol)	1-3km SE	Heard	5	Explosion	Undetermined	N/K	13-Oct, 13:03-13:07
	3-4km SE	Saw	1	Other	Airburst	N/K	13-Oct, 13:03-13:07
1km NNW of Pyshevyk (government-controlled, 25km NE of Mariupol)	N/K NE	Heard	15	Shot		Small arms	13-Oct, 09:05-09:10
Svitlodarsk (government-controlled, 57km NE of Donetsk)	3-4km SE	Heard	6	Burst		Small arms	12-Oct, 23:28-23:33
	3-4km SE	Heard	4	Burst		Small arms	12-Oct, 23:40-23:44
	3-4km SE	Heard	4	Burst		Small arms	12-Oct, 23:46-23:50
	5-6km NE	Heard	1	Explosion	Undetermined	N/K	13-Nov, 07:07
	5-6km NE	Heard	2	Explosion	Undetermined	N/K	13-Nov, 07:15
	5-6km NE	Heard	7	Explosion	Undetermined	N/K	13-Nov, 07:22
	3-4km NE	Heard	10	Shot		Small arms	13-Nov, 07:40
	3-4km NE	Heard	3	Burst		Small arms	13-Nov, 07:47
	5-6km SE	Heard	30	Explosion	Undetermined	N/K	13-Nov, 10:30-10:40
	5-6km E	Heard	16	Explosion	Undetermined	N/K	13-Nov, 11:40-11:50
	5-6km E	Heard	6	Burst		HMG	13-Nov, 11:52
	5-6km SE	Heard	3	Explosion	Undetermined	N/K	13-Nov, 11:54
Vidrodzhennia (government-controlled 66km NE of Donetsk)	2-3km S	Heard	40	Explosion	Undetermined	N/K	13-Nov, 10:35-10:50
NE edge of Stanytsia Luhanska (government-controlled, 16km NE of Luhansk)	5-7km S	Heard	1	Explosion	Undetermined	N/K	12-Oct, 23:16
Toshkivka (government-controlled, 60km NW of Luhansk)	6-7km ESE	Heard	5	Explosion	Undetermined	N/K	13-Oct, 10:38-10:47
Zolote-4/Rodina	10-15km NW	Heard	3	Explosion	Undetermined	N/K	13-Oct, 10:35-



(government-controlled, 59km W of Luhansk)	0.5-1.5km NE	Heard	2	Shot	Undetermined	HMG	11:01 13-Oct, 10:35
S edge of Popasna (government-controlled, 69km W of Luhansk)	10-15km SSE	Heard	3	Explosion	Undetermined	N/K	13-Oct, 10:58-11:01
	4-6km S	Heard	6	Burst	Undetermined	HMG	13-Oct, 11:09-11:12
	10-15km S	Heard	3	Explosion	Undetermined	N/K	13-Oct, 11:13-11:14
Pervomaisk (non-government-controlled, 58km W of Luhansk)	3-5km NNE	Heard	45	Burst	Undetermined (unable to assess whether inside or outside the disengagement area)	HMG	13-Oct, 13:10-13:25
Pervomaisk (non-government-controlled, 58km W of Luhansk)	3-5km NNE	Heard	5	Explosion	Undetermined (unable to assess whether inside or outside the disengagement area)	N/K	13-Oct, 13:10-13:25
Popasna (government-controlled, 69km W of Luhansk)	4-7km ENE	Heard	3	Explosion	Undetermined	N/K	13-Oct, 13:14-13:18
	4-7km ENE	Heard	20	Burst	Undetermined	HMG	13-Oct, 13:14-13:18
Zolote-2/Karbonit (government-controlled, 62km W of Luhansk)	4-5km E	Heard	3	Explosion	Undetermined	N/K	13-Oct, 13:15
Kalynove-Borshchuvate (non-government-controlled, 61 W of Luhansk)	3-5km NW	Heard	6	Burst	Undetermined	HMG	13-Oct, 13:39-13:41
SMM camera in Berezove (government-controlled, 31km SW of Donetsk)	3-5km ESE	Recorded	4	Projectile	SW to NE	N/K	13-Oct, 22:18
SMM camera in Chermalyk (government-controlled, 31km NE of Mariupol)	2-4km SSE	Recorded	4	Projectile	WSW to ENE	N/K	13-Oct, 19:31
	2-4km SSE	Recorded	6	Projectile	WSW to ENE	N/K	13-Oct, 19:32
	2-4km SSE	Recorded	12	Projectile	WSW to ENE	N/K	13-Oct, 19:33
	2-4km SSE	Recorded	5	Projectile	ENE to WSW	N/K	13-Oct, 19:41
	2-4km SSE	Recorded	4	Explosion	Undetermined	N/K	13-Oct, 19:41
	2-4km SSE	Recorded	2	Projectile	ENE to WSW	N/K	13-Oct, 19:45
	2-4km SSE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 19:45
	2-4km SSE	Recorded	5	Projectile	WSW to ENE	N/K	13-Oct, 19:46
	2-4km S	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 19:46
	2-4km SSE	Recorded	3	Explosion	Undetermined	N/K	13-Oct, 19:47
	2-4km SSE	Recorded	3	Projectile	WSW to ENE	N/K	13-Oct, 19:48
	2-4km S	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 19:48
	2-4km SSE	Recorded	1	Projectile	NW to SE	N/K	13-Oct, 19:51
	2-4km SSE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 19:51
	2-4km SSE	Recorded	9	Projectile	WNW to ESE	N/K	13-Oct, 19:51
	2-4km SSE	Recorded	1	Projectile	ENE to WSW	N/K	13-Oct, 19:51
	2-4km SSE	Recorded	7	Explosion	Undetermined	N/K	13-Oct, 19:52
	2-4km SSE	Recorded	9	Projectile	WSW to ENE	N/K	13-Oct, 19:52
	2-4km SSE	Recorded	7	Projectile	ENE to WSW	N/K	13-Oct, 19:52
	2-4km SSE	Recorded	2	Projectile	ENE to WSW	N/K	13-Oct, 19:53
2-4km SSE	Recorded	7	Explosion	Undetermined	N/K	13-Oct, 19:53	
2-4km SSE	Recorded	17	Projectile	WSW to ENE	N/K	13-Oct, 19:53	
2-4km SSE	Recorded	1	Burst	ENE to WSW (approximately)	N/K	13-Oct, 19:53	

					20 rounds)		
	2-4km SE	Recorded	1	Projectile	ENE to WSW	N/K	13-Oct, 19:54
	2-4km SSE	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 19:54
	2-4km SSE	Recorded	1	Projectile	WNW to ESE	N/K	13-Oct, 19:54
	2-4km SE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 19:54
	2-4km SSE	Recorded	2	Projectile	WNW to ESE	N/K	13-Oct, 19:57
	2-4km SSE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 19:57
	2-4km S	Recorded	1	Projectile	In vertical flight	N/K	13-Oct, 19:57
	2-4km SSE	Recorded	12	Projectile	WSW to ENE	N/K	13-Oct, 19:58
	2-4km SSE	Recorded	1	Projectile	WSW to ENE	N/K	13-Oct, 20:55
	2-4km SSE	Recorded	2	Projectile	ENE to WSW	N/K	13-Oct, 21:00
	2-4km SSE	Recorded	5	Projectile	ENE to WSW	N/K	13-Oct, 21:18
	2-4km SSE	Recorded	2	Projectile	WSW to ENE	N/K	13-Oct, 21:37
	2-4km SSE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 21:37
	2-4km SSW	Recorded	3	Projectile	WSW to ENE	N/K	13-Oct, 21:38
	2-4km SSW	Recorded	6	Projectile	WSW to ENE	N/K	13-Oct, 22:23
	2-4km SSW	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 22:26
	2-4km SSW	Recorded	1	Projectile	WSW to ENE	N/K	13-Oct, 22:26
	2-4km SSW	Recorded	1	Projectile	ENE to WSW	N/K	13-Oct, 22:27
	2-4km SSW	Recorded	7	Explosion	Undetermined	N/K	13-Oct, 22:30
	2-4km S	Recorded	2	Projectile	WSW to ENE	N/K	13-Oct, 22:30
	2-4km SSW	Recorded	3	Explosion	Undetermined	N/K	13-Oct, 22:31
	2-4km SSW	Recorded	6	Explosion	Undetermined	N/K	13-Oct, 22:32
	2-4km SSW	Recorded	2	Projectile	WSW to ENE	N/K	13-Oct, 22:32
	2-4km SSW	Recorded	1	Muzzle flash		N/K	13-Oct, 22:32
	2-4km SSW	Recorded	5	Projectile	WSW to ENE	N/K	13-Oct, 22:33
	2-4km SSW	Recorded	3	Explosion	Undetermined	N/K	13-Oct, 22:33
	2-4km SSW	Recorded	13	Explosion	Undetermined	N/K	13-Oct, 22:34
	2-4km SSW	Recorded	1	Projectile	WSW to ENE	N/K	13-Oct, 22:34
	2-4km SSW	Recorded	3	Explosion	Undetermined	N/K	13-Oct, 22:35
	2-4km SSW	Recorded	2	Projectile	WSW to ENE	N/K	13-Oct, 22:35
	2-4km SSW	Recorded	1	Muzzle flash		N/K	13-Oct, 22:35
	2-4km SSW	Recorded	2	Projectile	ENE to WSW	N/K	13-Oct, 22:36
	2-4km SSW	Recorded	6	Explosion	Undetermined	N/K	13-Oct, 22:37
	2-4km SSW	Recorded	1	Projectile	ENE to WSW	N/K	13-Oct, 22:37
	2-4km S	Recorded	1	Projectile	WSW to ENE	N/K	13-Oct, 22:37
	2-4km SE	Recorded	1	Projectile	SSW to NNE	N/K	14-Oct, 00:48
	2-4km SE	Recorded	2	Projectile	SSW to NNE	N/K	14-Oct, 00:49
	2-4km SE	Recorded	1	Projectile	SSW to NNE	N/K	14-Oct, 00:50
	2-4km SE	Recorded	1	Projectile	SSW to NNE	N/K	14-Oct, 00:51
	2-4km SE	Recorded	2	Projectile	SSW to NNE	N/K	14-Oct, 00:52
	2-4km SE	Recorded	1	Projectile	SSW to NNE	N/K	14-Oct, 00:53
	2-4km SE	Recorded	1	Projectile	SSW to NNE	N/K	14-Oct, 00:54
	2-4km SE	Recorded	1	Projectile	SSW to NNE	N/K	14-Oct, 00:58
	2-4km SE	Recorded	2	Projectile	SSW to NNE	N/K	14-Oct, 01:27
	2-4km SE	Recorded	1	Projectile	SSW to NNE	N/K	14-Oct, 01:29
	2-4km SE	Recorded	2	Projectile	SSW to NNE	N/K	14-Oct, 01:32
	2-4km SE	Recorded	3	Projectile	NNE to SSW	N/K	14-Oct, 02:58
	2-4km SE	Recorded	1	Explosion	Undetermined	N/K	14-Oct, 03:08
	2-4km SE	Recorded	1	Projectile	NNE to SSW	N/K	14-Oct, 03:08
	2-4km SE	Recorded	8	Projectile	SSW to NNE	N/K	14-Oct, 03:18
	2-4km SE	Recorded	2	Projectile	SSW to NNE	N/K	14-Oct, 03:19
	2-4km SE	Recorded	3	Projectile	NNE to SSW	N/K	14-Oct, 03:20
	2-4km SE	Recorded	2	Projectile	NNE to SSW	N/K	14-Oct, 03:50
	2-4km SE	Recorded	1	Explosion	Undetermined	N/K	14-Oct, 03:50
	2-4km SE	Recorded	5	Projectile	NNE to SSW	N/K	14-Oct, 03:51
	2-4km SE	Recorded	4	Projectile	NNE to SSW	N/K	14-Oct, 04:26
	2-4km SE	Recorded	3	Projectile	SSW to NNE	N/K	14-Oct, 05:00
	2-4km SE	Recorded	3	Projectile	SSW to NNE	N/K	14-Oct, 05:01
	2-4km SE	Recorded	2	Projectile	SSW to NNE	N/K	14-Oct, 05:02
SMM camera at Donetsk Filtration Station (15km N of Donetsk)	1-2km SSW	Recorded	12	Projectile	W to E	N/K	13-Oct, 18:18
	1-2km SSW	Recorded	9	Projectile	W to E	N/K	13-Oct, 18:19
	1-2km S	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 18:22
	2-4km SSW	Recorded	2	Projectile	NW to SE	N/K	13-Oct, 19:15

	0.5-1km S	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 19:18
	0.5-1km SSE	Recorded	1	Projectile	NE to SW	N/K	13-Oct, 20:13
	1-3km SSW	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 20:15
	1-3km SSW	Recorded	1	Projectile	NW to SE	N/K	13-Oct, 20:17
	1-3km SSW	Recorded	1	Muzzle flash		N/K	13-Oct, 20:17
	0.5-1km SSW	Recorded	2	Projectile	SE to NW	N/K	13-Oct, 20:18
	0.5-1km SSW	Recorded	44	Explosion	Impact	N/K	13-Oct, 20:18
	0.5-1km SSW	Recorded	3	Projectile	SE to NW	N/K	13-Oct, 20:19
	0.5-1km SSW	Recorded	16	Explosion	Impact	N/K	13-Oct, 20:19
	0.5-1km SSW	Recorded	13	Muzzle flash		N/K	13-Oct, 20:19
	0.5-1km S	Recorded	3	Explosion	Undetermined	N/K	13-Oct, 20:20
	0.5-1km SSW	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 20:21
	0.5-1km S	Recorded	18	Explosion	Undetermined	N/K	13-Oct, 20:22
	0.5-1km S	Recorded	3	Explosion	Undetermined	N/K	13-Oct, 20:23
	0.5-1km S	Recorded	3	Explosion	Undetermined	N/K	13-Oct, 20:25
	0.5-1km S	Recorded	3	Explosion	Undetermined	N/K	13-Oct, 20:26
	0.5-1km S	Recorded	3	Explosion	Undetermined	N/K	13-Oct, 20:27
	0.5-1km SSW	Recorded	1	Projectile	NW to SE	N/K	13-Oct, 20:28
	0.5-1km SSW	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 20:28
	0.5-1km SSW	Recorded	4	Projectile	E to W	N/K	13-Oct, 20:29
	0.5-1km SSW	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 20:29
	0.5-1km S	Recorded	3	Explosion	Undetermined	N/K	13-Oct, 20:32
	0.5-1km S	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 20:33
	1-3km SSW	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 20:34
	0.5-1km SSW	Recorded	1	Projectile	NW to SE	N/K	13-Oct, 20:37
	0.5-1km SSW	Recorded	1	Projectile	NW to SE	N/K	13-Oct, 20:38
	0.5-1km SSW	Recorded	1	Projectile	NW to SE	N/K	13-Oct, 21:00
	0.5-1km SSW	Recorded	2	Projectile	NW to SE	N/K	13-Oct, 21:17
	0.5-1km SSW	Recorded	3	Projectile	NW to SE	N/K	13-Oct, 22:05
	1-3km SSW	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 22:08
	1-3km SSW	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 22:10
	1-3km SSW	Recorded	1	Explosion	Undetermined	N/K	14-Oct, 00:41
	1-3km S	Recorded	1	Explosion	Airburst	N/K	14-Oct, 00:41
SMM camera 1.5km NE of Hnutove (government- controlled, 20km NE of Mariupol)	2-4km E	Recorded	3	Projectile	In vertical flight	N/K	13-Oct, 17:47
	2-4km E	Recorded	3	Projectile	N to S	N/K	13-Oct, 17:48
	2-4km E	Recorded	1	Projectile	In vertical flight	N/K	13-Oct, 17:48
	2-4km E	Recorded	1	Explosion	Impact	N/K	13-Oct, 18:20
	3-5km E	Recorded	1	Projectile	In vertical flight	N/K	13-Oct, 18:59
	1-3km ENE	Recorded	4	Projectile	NW to SE	N/K	13-Oct, 19:06
	2-4km E	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 19:14
	2-4km ENE	Recorded	2	Projectile	S to N	N/K	13-Oct, 19:32
	2-4km ENE	Recorded	3	Projectile	N to S	N/K	13-Oct, 19:32
	2-4km ENE	Recorded	1	Muzzle flash		N/K	13-Oct, 19:54
	2-4km E	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 20:02
	2-4km E	Recorded	2	Projectile	N to S	N/K	13-Oct, 20:53
	2-4km E	Recorded	3	Projectile	N to S	N/K	13-Oct, 21:50
	2-4km ESE	Recorded	6	Projectile	S to N	N/K	13-Oct, 21:52
	2-4km ESE	Recorded	1	Projectile	S to N	N/K	13-Oct, 21:56
	2-4km ESE	Recorded	12	Projectile	S to N	N/K	13-Oct, 21:57
	2-4km ESE	Recorded	19	Projectile	S to N	N/K	13-Oct, 21:58
	2-4km ESE	Recorded	25	Projectile	S to N	N/K	13-Oct, 21:59
	2-4km ESE	Recorded	21	Projectile	S to N	N/K	13-Oct, 22:00
	2-4km ESE	Recorded	5	Projectile	S to N	N/K	13-Oct, 22:01
	2-4km ENE	Recorded	12	Projectile	S to N	N/K	13-Oct, 22:02
	2-4km ESE	Recorded	4	Projectile	S to N	N/K	13-Oct, 22:02
	2-4km ESE	Recorded	3	Projectile	S to N	N/K	13-Oct, 22:03
	2-4km ENE	Recorded	4	Projectile	N to S	N/K	13-Oct, 22:03
	2-4km ESE	Recorded	4	Projectile	N to S	N/K	13-Oct, 22:07
	2-4km ESE	Recorded	2	Projectile	S to N	N/K	13-Oct, 22:08
	2-4km ENE	Recorded	1	Projectile	N to S	N/K	13-Oct, 22:11
	2-4km ESE	Recorded	1	Projectile	S to N	N/K	13-Oct, 22:12
	2-4km E	Recorded	1	Projectile	S to N	N/K	13-Oct, 22:12
	2-4km E	Recorded	1	Projectile	N to S	N/K	13-Oct, 22:12
2-4km ENE	Recorded	3	Projectile	N to S	N/K	13-Oct, 22:13	

2-4km ESE	Recorded	2	Projectile	S to N	N/K	13-Oct, 22:13
2-4km ENE	Recorded	3	Projectile	N to S	N/K	13-Oct, 22:14
2-4km ESE	Recorded	2	Projectile	S to N	N/K	13-Oct, 22:14
2-4km ESE	Recorded	14	Projectile	S to N	N/K	13-Oct, 22:16
2-4km ESE	Recorded	12	Projectile	S to N	N/K	13-Oct, 22:17
2-4km ESE	Recorded	6	Projectile	S to N	N/K	13-Oct, 22:18
2-4km ESE	Recorded	1	Projectile	S to N	N/K	13-Oct, 22:19
2-4km ESE	Recorded	24	Projectile	S to N	N/K	13-Oct, 22:20
2-4km ESE	Recorded	17	Projectile	S to N	N/K	13-Oct, 22:22
2-4km ESE	Recorded	33	Projectile	S to N	N/K	13-Oct, 22:23
2-4km ESE	Recorded	10	Projectile	S to N	N/K	13-Oct, 22:24
2-4km ESE	Recorded	1	Projectile	S to N	N/K	13-Oct, 22:25
2-4km ESE	Recorded	4	Projectile	S to N	N/K	13-Oct, 22:26
2-4km ESE	Recorded	1	Explosion	Impact	N/K	13-Oct, 22:26
2-4km ESE	Recorded	1	Projectile	S to N	N/K	13-Oct, 22:27
2-4km ESE	Recorded	1	Projectile	S to N	N/K	13-Oct, 22:28
2-4km ESE	Recorded	2	Projectile	S to N	N/K	13-Oct, 22:30
2-4km ESE	Recorded	3	Explosion	Impact	N/K	13-Oct, 22:30
2-4km ENE	Recorded	7	Projectile	S to N	N/K	13-Oct, 22:30
2-4km ENE	Recorded	16	Projectile	N to S	N/K	13-Oct, 22:31
2-4km ESE	Recorded	2	Explosion	Impact	N/K	13-Oct, 22:31
2-4km ENE	Recorded	2	Projectile	S to N	N/K	13-Oct, 22:31
2-4km ESE	Recorded	3	Explosion	Impact	N/K	13-Oct, 22:32
2-4km ESE	Recorded	1	Projectile	S to N	N/K	13-Oct, 22:32
2-4km ENE	Recorded	6	Projectile	S to N	N/K	13-Oct, 22:33
2-4km ESE	Recorded	2	Projectile	N to S	N/K	13-Oct, 22:33
2-4km ESE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 22:33
2-4km ENE	Recorded	4	Projectile	S to N	N/K	13-Oct, 22:34
2-4km ESE	Recorded	3	Projectile	N to S	N/K	13-Oct, 22:34
2-4km ESE	Recorded	5	Explosion	Impact	N/K	13-Oct, 22:34
2-4km ESE	Recorded	3	Projectile	S to N	N/K	13-Oct, 22:35
2-4km ESE	Recorded	5	Explosion	Impact	N/K	13-Oct, 22:35
2-4km E	Recorded	3	Projectile	N to S	N/K	13-Oct, 22:36
2-4km ESE	Recorded	2	Projectile	S to N	N/K	13-Oct, 22:37
2-4km ESE	Recorded	4	Explosion	Impact	N/K	13-Oct, 22:37
2-4km ENE	Recorded	2	Projectile	S to N	N/K	13-Oct, 22:38
2-4km ESE	Recorded	2	Projectile	S to N	N/K	13-Oct, 22:41
2-4km ESE	Recorded	3	Projectile	S to N	N/K	13-Oct, 22:42
2-4km ESE	Recorded	1	Projectile	S to N	N/K	13-Oct, 22:43
2-4km ESE	Recorded	1	Projectile	S to N	N/K	13-Oct, 22:44
2-4km ESE	Recorded	1	Projectile	S to N	N/K	13-Oct, 22:46
2-4km ESE	Recorded	1	Explosion	Impact	N/K	13-Oct, 22:46
2-4km ESE	Recorded	1	Projectile	S to N	N/K	13-Oct, 22:47
2-4km ESE	Recorded	1	Explosion	Impact	N/K	13-Oct, 22:47
2-4km E	Recorded	2	Projectile	S to N	N/K	13-Oct, 22:48
2-4km E	Recorded	7	Projectile	S to N	N/K	13-Oct, 23:08
2-4km ESE	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 23:13
2-4km ESE	Recorded	1	Projectile	S to N	N/K	13-Oct, 23:13
2-4km ESE	Recorded	1	Projectile	S to N	N/K	13-Oct, 23:14
2-4km ESE	Recorded	1	Illumination flare	S to N	N/K	13-Oct, 23:14
2-4km E	Recorded	8	Projectile	N to S	N/K	13-Oct, 23:15
2-4km E	Recorded	7	Projectile	S to N	N/K	13-Oct, 23:15
2-4km E	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 23:15
2-4km E	Recorded	2	Projectile	S to N	N/K	13-Oct, 23:16
2-4km E	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 23:16
2-4km E	Recorded	4	Projectile	S to N	N/K	13-Oct, 23:17
2-4km E	Recorded	19	Explosion	Undetermined	N/K	13-Oct, 23:17
2-4km E	Recorded	29	Explosion	Undetermined	N/K	13-Oct, 23:18
2-4km E	Recorded	4	Projectile	S to N	N/K	13-Oct, 23:18
2-4km E	Recorded	1	Burst	S to N	N/K	13-Oct, 23:18
2-4km E	Recorded	10	Projectile	S to N	N/K	13-Oct, 23:19
2-4km E	Recorded	13	Projectile	N to S	N/K	13-Oct, 23:19
2-4km ESE	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 23:19

	2-4km E	Recorded	5	Projectile	S to N	N/K	13-Oct, 23:20
	2-4km E	Recorded	12	Projectile	N to S	N/K	13-Oct, 23:31
	2-4km E	Recorded	1	Muzzle flash		N/K	13-Oct, 23:31
	2-4km E	Recorded	13	Projectile	N to S	N/K	13-Oct, 23:39
	2-4km E	Recorded	6	Projectile	S to N	N/K	13-Oct, 23:39
	2-4km E	Recorded	3	Projectile	N to S	N/K	13-Oct, 23:40
	2-4km E	Recorded	3	Projectile	S to N	N/K	13-Oct, 23:40
	2-4km ESE	Recorded	2	Projectile	S to N	N/K	13-Oct, 23:49
	2-4km E	Recorded	2	Projectile	S to N	N/K	13-Oct, 23:50
	2-4km E	Recorded	2	Explosion	Impact	N/K	13-Oct, 23:50
	2-4km E	Recorded	2	Projectile	N to S	N/K	13-Oct, 23:51
	2-4km ESE	Recorded	1	Projectile	S to N	N/K	14-Oct, 00:03
	2-4km E	Recorded	1	Explosion	Undetermined	N/K	14-Oct, 00:05
	2-4km ESE	Recorded	15	Projectile	S to N	N/K	14-Oct, 00:10
	2-4km E	Recorded	6	Projectile	N to S	N/K	14-Oct, 00:29
	2-4km ESE	Recorded	1	Projectile	S to N	N/K	14-Oct, 00:46
	2-4km ENE	Recorded	16	Projectile	N to S	N/K	14-Oct, 00:55
	2-4km E	Recorded	12	Projectile	N to S	N/K	14-Oct, 00:56
	2-4km E	Recorded	7	Projectile	N to S	N/K	14-Oct, 01:14
	2-4km ESE	Recorded	3	Projectile	S to N	N/K	14-Oct, 01:53
	2-4km E	Recorded	3	Projectile	S to N	N/K	14-Oct, 01:55
	2-4km ESE	Recorded	3	Projectile	S to N	N/K	14-Oct, 01:58
	2-4km E	Recorded	10	Projectile	N to S	N/K	14-Oct, 02:03
	2-4km E	Recorded	3	Projectile	N to S	N/K	14-Oct, 02:04
	2-4km E	Recorded	10	Projectile	N to S	N/K	14-Oct, 02:05
	2-4km E	Recorded	2	Projectile	N to S	N/K	14-Oct, 02:16
	2-4km E	Recorded	10	Projectile	N to S	N/K	14-Oct, 02:17
	2-4km ESE	Recorded	3	Projectile	S to N	N/K	14-Oct, 02:20
	2-4km E	Recorded	1	Projectile	S to N	N/K	14-Oct, 02:22
	2-4km E	Recorded	6	Projectile	N to S	N/K	14-Oct, 02:46
	2-4km ESE	Recorded	10	Projectile	S to N	N/K	14-Oct, 03:23
	2-4km E	Recorded	10	Projectile	N to S	N/K	14-Oct, 03:36
	2-4km ENE	Recorded	6	Projectile	N to S	N/K	14-Oct, 03:53
	2-4km ENE	Recorded	3	Projectile	N to S	N/K	14-Oct, 03:54
	2-4km ENE	Recorded	4	Projectile	N to S	N/K	14-Oct, 03:56
	2-4km E	Recorded	5	Projectile	N to S	N/K	14-Oct, 04:10
	2-4km E	Recorded	4	Projectile	N to S	N/K	14-Oct, 04:11
	2-4km E	Recorded	6	Projectile	N to S	N/K	14-Oct, 04:13
	2-4km E	Recorded	7	Projectile	N to S	N/K	14-Oct, 04:17
	2-4km E	Recorded	1	Projectile	N to S	N/K	14-Oct, 04:18
	2-4km E	Recorded	11	Projectile	N to S	N/K	14-Oct, 04:23
	2-4km E	Recorded	1	Explosion	Undetermined	N/K	14-Oct, 04:39
	2-4km ESE	Recorded	1	Projectile	S to N	N/K	14-Oct, 04:51
	2-4km ENE	Recorded	1	Projectile	N to S	N/K	14-Oct, 05:31
	2-4km ENE	Recorded	1	Projectile	N to S	N/K	14-Oct, 05:32
	2-4km ENE	Recorded	2	Projectile	N to S	N/K	14-Oct, 05:33
	2-4km ENE	Recorded	2	Projectile	N to S	N/K	14-Oct, 05:35
SMM camera in Krasnohorivka (government-controlled, 21km W of Donetsk)	3-5km SSE	Recorded	3	Projectile	WSW to ENE	N/K	13-Oct, 22:01
	3-5km SSE	Recorded	5	Projectile	WSW to ENE	N/K	13-Oct, 22:02
	3-5km SSW	Recorded	1	Projectile	E to W	N/K	13-Oct, 22:02
	3-5km SSE	Recorded	9	Projectile	ENE to WSW	N/K	13-Oct, 22:03
	3-5km SSE	Recorded	6	Muzzle flash		N/K	13-Oct, 22:03
	3-5km SSE	Recorded	1	Projectile	W to E	N/K	13-Oct, 22:05
	3-5km SSE	Recorded	1	Muzzle flash		N/K	13-Oct, 22:05
	4-5km SE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 22:06
	3-5km SSE	Recorded	1	Projectile	NE to SW	N/K	13-Oct, 22:36
	3-5km SSE	Recorded	2	Projectile	NNE to SSW	N/K	13-Oct, 22:37
	3-5km SSE	Recorded	3	Projectile	SW to NE	N/K	13-Oct, 22:37
	3-5km SSE	Recorded	2	Projectile	E to W	N/K	13-Oct, 22:38
	2-4km SSE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 22:38
2-4km SSE	Recorded	1	Projectile	SW to NE	N/K	13-Oct, 22:38	
SMM camera in Kriakivka (government-	2-4km SW	Recorded	3	Projectile	ESE to WNW	N/K	13-Oct, 19:21
	3-5km SSW	Recorded	1	Projectile	In vertical flight	N/K	13-Oct, 20:32
	3-5km SSW	Recorded	6	Projectile	WNW to ESE	N/K	13-Oct, 20:33

controlled, 38km NW of Luhansk)	3-5km SSW	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 20:33
	3-5km SSW	Recorded	1	Projectile	ESE to WNW	N/K	13-Oct, 20:34
SMM camera E of Lomakyne (government-controlled, 15km NE of Mariupol)	2-4km NE	Recorded	1	Explosion	Airburst	N/K	13-Oct, 17:50
	2-4km NE	Recorded	1	Explosion	Impact	N/K	13-Oct, 18:20
	2-4km NE	Recorded	13	Projectile	NW to SE	N/K	13-Oct, 18:38
	2-4km NE	Recorded	18	Projectile	NW to SE	N/K	13-Oct, 18:39
	2-4km NE	Recorded	12	Projectile	NW to SE	N/K	13-Oct, 18:40
	2-4km NE	Recorded	3	Projectile	NW to SE	N/K	13-Oct, 18:41
	1-3km NE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 18:59
	2-4km NE	Recorded	4	Projectile	NW to SE	N/K	13-Oct, 19:06
	2-4km NE	Recorded	8	Projectile	W to E	N/K	13-Oct, 22:23
	2-4km NE	Recorded	3	Projectile	W to E	N/K	13-Oct, 22:24
	2-4km NE	Recorded	2	Projectile	W to E	N/K	13-Oct, 22:30
	2-4km NE	Recorded	3	Explosion	Undetermined	N/K	13-Oct, 22:30
	2-4km NE	Recorded	4	Muzzle flash		N/K	13-Oct, 22:31
	2-4km NE	Recorded	6	Projectile	W to E	N/K	13-Oct, 22:32
	2-4km NE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 22:32
	2-4km NE	Recorded	6	Projectile	W to E	N/K	13-Oct, 22:33
	2-4km NE	Recorded	3	Projectile	W to E	N/K	13-Oct, 22:34
	2-4km NE	Recorded	22	Explosion	Undetermined	N/K	13-Oct, 22:34
	2-4km NE	Recorded	2	Muzzle flash		N/K	13-Oct, 22:34
	2-4km NE	Recorded	8	Projectile	W to E	N/K	13-Oct, 22:35
	2-4km NE	Recorded	6	Explosion	Undetermined	N/K	13-Oct, 22:35
	2-4km NE	Recorded	8	Explosion	Undetermined	N/K	13-Oct, 22:37
	2-4km NE	Recorded	4	Explosion	Undetermined	N/K	13-Oct, 22:39
	2-4km NE	Recorded	1	Illumination flare	In vertical flight	N/K	13-Oct, 23:14
	2-4km NE	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 23:16
	2-4km NE	Recorded	7	Explosion	Undetermined	N/K	13-Oct, 23:17
	2-4km NE	Recorded	19	Explosion	Undetermined	N/K	13-Oct, 23:18
	2-4km NE	Recorded	5	Projectile	W to E	N/K	13-Oct, 23:18
2-4km NE	Recorded	1	Illumination flare	In vertical flight	N/K	14-Oct, 05:25	
SMM camera at entry-exit checkpoint in Maiorsk (government-controlled, 45km NE of Donetsk)	2-4km E	Recorded	1	Muzzle flash	S to N	N/K	13-Oct, 18:51
	2-4km E	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 19:14
	2-4km E	Recorded	2	Projectile	N to S	N/K	13-Oct, 19:14
	2-3km E	Recorded	14	Projectile	N to S	N/K	13-Oct, 20:46
	2-3km E	Recorded	14	Explosion	Airburst	N/K	13-Oct, 20:46
	2-3km E	Recorded	2	Projectile	S to N	N/K	13-Oct, 20:52
	2-3km E	Recorded	2	Projectile	N to S	N/K	13-Oct, 20:56
	1-2km E	Recorded	1	Illumination flare	In vertical flight	N/K	13-Oct, 20:57
	1-2km E	Recorded	1	Illumination flare	In vertical flight	N/K	13-Oct, 21:04
	2-4km NNE	Recorded	15	Projectile	E to W	N/K	13-Oct, 19:01
	2-4km NNE	Recorded	2	Projectile	E to W	N/K	13-Oct, 19:02
	2-4km NNE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 19:09
	2-4km N	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 19:19
	2-3km NNE	Recorded	1	Projectile	E to W	N/K	13-Oct, 20:09
	2-3km NNE	Recorded	1	Projectile	ESE to WNW	N/K	13-Oct, 20:10
	2-3km NNE	Recorded	4	Burst	In vertical flight	N/K	13-Oct, 20:44
	2-3km NNE	Recorded	3	Burst	In vertical flight	N/K	13-Oct, 20:45
	2-3km NNE	Recorded	2	Projectile	E to W	N/K	13-Oct, 20:45
	2-4km NNE	Recorded	1	Projectile	WSW to ENE	N/K	13-Oct, 21:50
	2-4km NNE	Recorded	4	Projectile	WSW to ENE	N/K	13-Oct, 21:51
	2-4km NNE	Recorded	1	Projectile	E to W	N/K	13-Oct, 21:59
	2-4km NNE	Recorded	1	Projectile	E to W	N/K	13-Oct, 22:07
	2-4km NNE	Recorded	1	Projectile	WSW to ENE	N/K	13-Oct, 22:07
	2-4km NNE	Recorded	7	Projectile	ESE to WNW	N/K	13-Oct, 22:17
	2-4km NNE	Recorded	1	Explosion	Outgoing	N/K	13-Oct, 23:53
	2-4km NNE	Recorded	10	Projectile	W to E	N/K	13-Oct, 23:53
	2-4km NNE	Recorded	8	Projectile	W to E	N/K	13-Oct, 23:54
	2-4km NNE	Recorded	1	Projectile	W to E	N/K	14-Oct, 00:56
2-4km NNE	Recorded	14	Projectile	W to E	N/K	14-Oct, 01:49	

	2-4km NNE	Recorded	3	Muzzle flash		N/K	14-Oct, 01:49
	2-4km NNE	Recorded	1	Projectile	E to W	N/K	14-Oct, 04:42
SMM camera at entry-exit checkpoint in Pyshchevyk (government-controlled, 25km NE of Mariupol)	2-4km SSE	Recorded	4	Projectile	SSE to NNW	N/K	13-Oct, 20:19
	2-4km SSE	Recorded	2	Projectile	E to W	N/K	13-Oct, 20:25
	2-4km SSE	Recorded	3	Projectile	W to E	N/K	13-Oct, 21:05
	2-4km S	Recorded	4	Projectile	W to E	N/K	13-Oct, 22:30
	2-4km S	Recorded	2	Explosion	Undetermined	N/K	13-Oct, 22:32
	2-4km S	Recorded	3	Projectile	W to E	N/K	13-Oct, 22:32
	2-4km S	Recorded	4	Explosion	Undetermined	N/K	13-Oct, 22:33
	2-4km S	Recorded	4	Projectile	W to E	N/K	13-Oct, 22:33
	2-4km S	Recorded	7	Explosion	Undetermined	N/K	13-Oct, 22:34
	2-4km S	Recorded	2	Projectile	W to E	N/K	13-Oct, 22:34
	2-4km S	Recorded	5	Explosion	Undetermined	N/K	13-Oct, 22:35
	2-4km S	Recorded	2	Projectile	W to E	N/K	13-Oct, 22:35
	2-4km SSE	Recorded	3	Projectile	E to W	N/K	13-Oct, 22:36
	2-4km S	Recorded	1	Explosion	Impact	N/K	13-Oct, 22:39
	2-4km S	Recorded	5	Projectile	W to E	N/K	14-Oct, 05:16
	2-4km S	Recorded	1	Explosion	Undetermined	N/K	14-Oct, 05:16
	2-4km S	Recorded	6	Projectile	N to S	N/K	14-Oct, 05:18
2-4km SSE	Recorded	6	Projectile	N to S	N/K	14-Oct, 05:19	
2-4km S	Recorded	1	Illumination flare	In vertical flight	N/K	14-Oct, 05:25	
SMM camera 1km SW of Shyrokyne (20km E of Mariupol)	2-4km N	Recorded	1	Projectile	SE to NW	N/K	13-Oct, 18:12
	2-4km N	Recorded	1	Muzzle flash		N/K	13-Oct, 18:12
	2-4km N	Recorded	1	Projectile	SE to NW	N/K	13-Oct, 18:16
	2-4km N	Recorded	1	Illumination flare	In vertical flight	N/K	13-Oct, 18:21
	2-4km N	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 18:23
SMM camera in Stanytsia Luhanska (government-controlled, 16km NE of Luhansk)	1-3km SW	Recorded	1	Projectile	NE to SW (unable to assess whether inside or outside the disengagement area)	N/K	13-Oct, 20:32
SMM camera in Svitlodarsk (government-controlled, 57km NE of Donetsk)	2-4km E	Recorded	3	Projectile	S to N	N/K	13-Oct, 19:05
	2-4km E	Recorded	13	Projectile	In vertical flight	N/K	13-Oct, 19:24
	2-4km ESE	Recorded	2	Projectile	In vertical flight	N/K	13-Oct, 19:28
	2-4km E	Recorded	3	Projectile	In vertical flight	N/K	13-Oct, 19:41
	3-4km SE	Recorded	1	Explosion	Undetermined	N/K	13-Oct, 22:37
	3-4km E	Recorded	12	Projectile	S to N	N/K	13-Oct, 23:26
	3-4km E	Recorded	3	Projectile	S to N	N/K	13-Oct, 23:47
	3-4km E	Recorded	2	Burst		N/K	14-Oct, 00:05
	3-4km E	Recorded	2	Explosion	Undetermined	N/K	14-Oct, 00:08
	3-4km E	Recorded	1	Projectile	S to N	N/K	14-Oct, 00:12
	3-4km E	Recorded	1	Projectile	N to S	N/K	14-Oct, 00:14
	3-4km E	Recorded	8	Projectile	S to N	N/K	14-Oct, 00:15
	3-4km E	Recorded	5	Projectile	S to N	N/K	14-Oct, 00:16
	3-4km E	Recorded	1	Projectile	N to S	N/K	14-Oct, 00:16
	3-4km E	Recorded	2	Projectile	N to S	N/K	14-Oct, 00:19
	3-4km E	Recorded	7	Projectile	S to N	N/K	14-Oct, 00:19
	3-4km E	Recorded	3	Projectile	S to N	N/K	14-Oct, 00:20
	3-4km E	Recorded	2	Projectile	N to S	N/K	14-Oct, 00:21
	3-4km SSE	Recorded	7	Projectile	S to N	N/K	14-Oct, 00:25
	3-4km E	Recorded	4	Projectile	S to N	N/K	14-Oct, 00:26
	3-4km SE	Recorded	2	Projectile	S to N	N/K	14-Oct, 01:06
	3-4km SE	Recorded	1	Projectile	N to S	N/K	14-Oct, 01:41
	3-4km SE	Recorded	3	Projectile	N to S	N/K	14-Oct, 01:43
	3-4km E	Recorded	3	Projectile	S to N	N/K	14-Oct, 02:08
	3-4km E	Recorded	2	Projectile	S to N	N/K	14-Oct, 02:49
3-4km E	Recorded	1	Projectile	S to N	N/K	14-Oct, 03:14	
Debaltseve (non-government-controlled, 58km	5-6km N	Heard		Shot	uncountable, overlapping	Small arms	14-Oct, 09:15-09:40
	5-6km N	Heard		Explosion	Undetermined	N/K	14-Oct, 09:15-

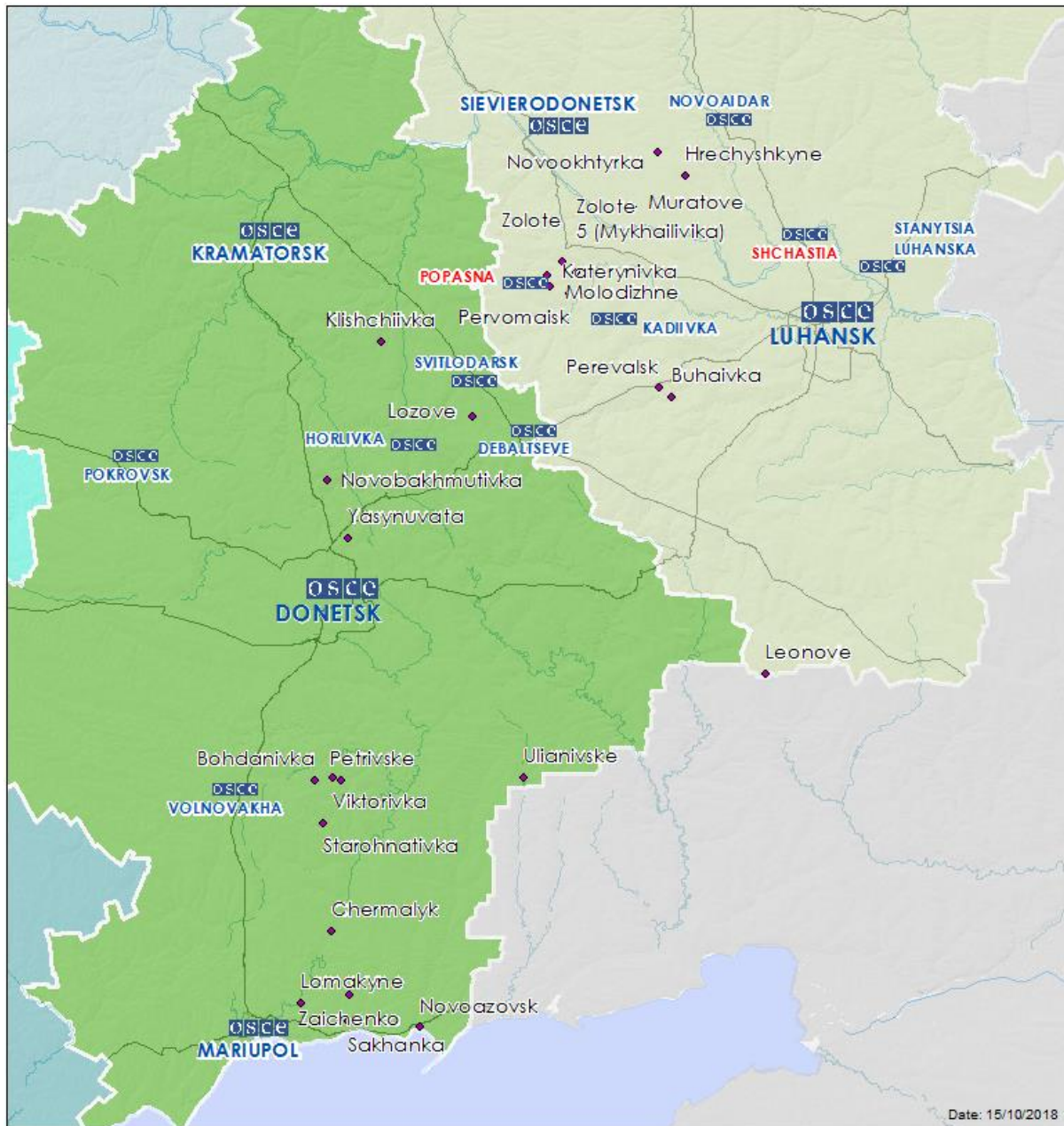
NE of Donetsk)					(uncountable, overlapping)		09:40
1.8km N of Petrivske (non-government-controlled, 41km S of Donetsk)	2-3km ENE	Heard	2	Shot	Assessed as outside the disengagement area	Small arms	14-Oct, 10:55
	2-3km ENE	Heard	1	Shot	Assessed as outside the disengagement area	Small arms	14-Oct, 11:57
1.1km NW of railway station in Yasynuvata (non-government-controlled, 16km NE of Donetsk)	1-2km S	Heard	7	Shot		Small arms	14-Oct, 10:48-10:55
Talakivka (government-controlled, 17km NE of Mariupol)	1-2km NE	Heard	1	Explosion	Outgoing	N/K	14-Oct, 09:13-09:16
	N/K E	Heard	4	Explosion	Undetermined		14-Oct, 09:13-09:16
	N/K E	Heard	5	Burst		Small arms	14-Oct, 09:40-09:53
	N/K E	Heard	7	Shot		Small arms	14-Oct, 09:40-09:53
	N/K E	Heard	9	Explosion	Undetermined	N/K	14-Oct, 09:40-09:53
1km NNW of Pyshchevyk (government-controlled, 25km NE of Mariupol)	N/K SSE	Heard	10	Explosion	Undetermined	N/K	14-Oct, 09:14-10:00
	N/K SSE	Heard	35	Shot		Small arms	14-Oct, 09:14-10:00
	N/K NNE	Heard	22	Shot		Small arms	14-Oct, 09:14-10:00
	N/K NNE	Heard	17	Shot		Small arms	14-Oct, 09:14-10:00
	N/K NNE	Heard	3	Explosion	Undetermined	N/K	14-Oct, 09:14-10:00
	N/K NNE	Heard	12	Burst		Small arms	14-Oct, 10:02-10:12
	N/K NE	Heard	19	Burst		Small arms	14-Oct, 10:02-10:12
	N/K NE	Heard	3	Explosion	Undetermined	N/K	14-Oct, 10:02-10:12
	N/K SSE	Heard	3	Explosion	Undetermined	N/K	14-Oct, 10:02-10:12
	N/K SSE	Heard	2	Explosion	Undetermined	N/K	14-Oct, 10:19
	N/K NNE	Heard	10	Shot		Small arms	14-Oct, 10:44-10:50
	N/K NE	Heard	11	Shot		Small arms	14-Oct, 10:56-11:00
	N/K NE	Heard	1	Burst		Small arms	14-Oct, 10:56-11:00
	N/K NE	Heard	1	Explosion	Undetermined	N/K	14-Oct, 10:56-11:00
	N/K SSE	Heard	2	Explosion	Undetermined	N/K	14-Oct, 10:56-11:00
N/K ESE	Heard	1	Explosion	Undetermined	N/K	14-Oct, 10:56-11:00	
2km SW of Pyshchevyk (government-controlled, 25km NE of Mariupol)	N/K NNE	Heard	2	Shot		Small arms	14-Oct, 10:45
	N/K NNE	Heard	5	Explosion	Undetermined	N/K	14-Oct, 11:00
	N/K E	Heard	6	Explosion	Undetermined	N/K	14-Oct, 11:00
	N/K E	Heard	2	Burst		Small arms	14-Oct, 11:00
	N/K SSE	Heard	2	Explosion	Undetermined	N/K	14-Oct, 11:37
N/K NNE	Heard	4	Explosion	Undetermined	N/K	14-Oct, 11:45	



	N/K NNE	Heard	16	Explosion	Undetermined	N/K	14-Oct, 12:00-12:25
	N/K NNE	Heard	7	Burst		Small arms	14-Oct, 12:00-12:25
	N/K NNE	Heard	20	Shot		Small arms	14-Oct, 12:00-12:25
Lomakyne (government-controlled, 15km NE of Mariupol)	1-2km NE	Heard	2	Explosion	Outgoing	N/K	14-Oct, 10:12-10:19
	N/K NE	Heard	2	Explosion	Undetermined	N/K	14-Oct, 10:12-10:19
	N/K NE	Heard	4	Burst		Small arms	14-Oct, 10:22-10:24
	N/K NE	Heard	13	Shot		Small arms	14-Oct, 10:22-10:24
2km SE of Lebedynske (government-controlled, 16km NE of Mariupol)	N/K NE	Heard	19	Shot		Small arms	14-Oct, 11:45-12:00
	N/K NE	Heard	1	Explosion	Undetermined	N/K	14-Oct, 11:45-12:00
	N/K NNE	Heard	1	Burst		Small arms	14-Oct, 11:45-12:00
	N/K NE	Heard	5	Shot		Small arms	14-Oct, 12:04-12:28
	N/K NE	Heard	9	Burst		Small arms	14-Oct, 12:04-12:28
	N/K ENE	Heard	7	Explosion	Undetermined	N/K	14-Oct, 12:04-12:28
	N/K ENE	Heard	3	Burst		HMG	14-Oct, 12:04-12:28
	N/K ENE	Heard	3	Burst		Small arms	14-Oct, 12:04-12:28
	N/K ENE	Heard	31	Shot		Small arms	14-Oct, 12:04-12:28
	N/K NNE	Heard	27	Shot		Small arms	14-Oct, 12:44-12:47
4km W of Chermalyk (government-controlled, 31km NE of Mariupol)	0.5km N	Heard and saw	9	Shot	Assessed as live-fire training	Small arms	14-Oct, 11:35-11:39
	0.5km N	Heard and saw	2	Burst	Assessed as live-fire training	Small arms	14-Oct, 11:35-11:39
Chermalyk (government-controlled, 31km NE of Mariupol)	N/K SE	Heard	67	Shot		Small arms	14-Oct, 12:07-12:29
	N/K SE	Heard	8	Burst		Small arms	14-Oct, 12:07-12:29
Horlivka (non-government-controlled, 39km NE of Donetsk)	3-5km SW	Heard	7	Explosion	Undetermined	N/K	13-Oct, 19:01
	3-5km SW	Heard	4	Explosion	Undetermined	N/K	13-Oct, 19:08
	3-5km SW	Heard	6	Explosion	Undetermined	N/K	13-Oct, 19:15
	3-5km SW	Heard	2	Explosion	Undetermined	N/K	13-Oct, 19:23
	3-4km NW	Heard	6	Explosion	Undetermined	N/K	14-Oct, 15:20
Svitlodarsk (government-controlled, 57km NE of Donetsk)	5-7km SE	Heard	25	Explosion	Undetermined	N/K	13-Oct, 18:50-19:00
	4-6km SE	Heard	2	Explosion	Undetermined	N/K	13-Oct, 19:15
	5-7km ESE	Heard	18	Burst		HMG	13-Oct, 19:20-19:22
	5-7km ESE	Heard	7	Explosion	Undetermined	N/K	13-Oct, 20:45-20:46
	5-7km ESE	Heard	26	Burst		HMG	13-Oct, 21:50-21:55
	4-6km SE	Heard	2	Explosion	Undetermined	N/K	13-Oct, 22:11
	4-6km WSW	Heard	3	Explosion	Undetermined	N/K	13-Oct, 23:23
	5-7km SE	Heard	8	Burst		HMG	13-Oct, 23:25-23:26
	4-5km W	Heard	10	Explosion	Undetermined	N/K	14-Oct, 09:25-09:28
	4-5km NW	Heard	5	Explosion	Undetermined	N/K	14-Oct, 11:20-11:25

	4-5km NW	Heard	8	Explosion	Undetermined	N/K	14-Oct, 11:30-11:55
	3-4km W	Heard	3	Explosion	Undetermined	N/K	14-Oct, 13:12-13:15
Kadiivka (formerly Stakhanov, non-government-controlled, 50km W of Luhansk)	10-15km NNW	Heard	4	Explosion	Undetermined	N/K	13-Oct, 18:29-18:35
	10-15km NNE	Heard	38	Explosion	Outgoing	Artillery (type N/K)	14-Oct, 09:51-10:25
	10-15km NNW	Heard	14	Explosion	Outgoing	Artillery (type N/K)	14-Oct, 13:52-14:25
E edge of Stanytsia Luhanska (government-controlled, 16km NE of Luhansk)	2-3km W	Heard	8	Shot		HMG	13-Oct, 18:35-18:38
N edge of Popasna (government-controlled, 69km W of Luhansk)	10-15km NE	Heard	28	Explosion	Undetermined	N/K	14-Oct, 09:30-09:48
E edge of Popasna (government-controlled, 69km W of Luhansk)	10-15km NE	Heard	24	Explosion	Undetermined	N/K	14-Oct, 09:58-10:32
	5-8km ENE	Heard	3	Explosion	Undetermined	N/K	14-Oct, 09:58-10:32
SE edge of Popasna (government-controlled, 69km W of Luhansk)	8-10km NE	Heard	7	Explosion	Undetermined	N/K	14-Oct, 10:34-11:00
	5-8km E	Heard	6	Explosion	Undetermined	N/K	14-Oct, 10:34-11:00
	8-10km NNE	Heard	4	Explosion	Undetermined	N/K	14-Oct, 10:34-11:00
	5-8km SW	Heard	3	Explosion	Undetermined	N/K	14-Oct, 10:34-11:00
	5-6km SSE	Heard	2	Explosion	Undetermined	N/K	14-Oct, 10:43-11:00
Irmino (non-government-controlled, 54km W of Luhansk)	8-13km NE	Heard	12	Explosion	Undetermined	N/K	14-Oct, 09:47-09:55
	8-13km NE	Heard	8	Explosion	Undetermined	N/K	14-Oct, 10:00-10:03
NE edge of Katerynivka (government-controlled, 64km W of Luhansk)	3-5km E	Heard	18	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	14-Oct, 10:10-10:27
W edge of Pervomaisk (non-government-controlled, 58km W of Luhansk)	6-7km NE	Heard	5	Explosion	Undetermined	N/K	14-Oct, 10:13-10:16
1.5km SW of Molodizhne (non-government-controlled, 63km W of Luhansk)	7-9km NE	Heard	4	Explosion	Undetermined (assessed as outside the disengagement area)	N/K	14-Oct, 10:25-10:34
	4-6km NE	Heard	12	Burst	Assessed as inside the disengagement area	HMG	14-Oct, 10:25-10:34

### Map of Donetsk and Luhansk regions<sup>2</sup>



<sup>2</sup> 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).