

# Incident Assessment

|             |   |
|-------------|---|
| Incident ID | CIV0372                                       |
| Location    | Pyskunivs'ka St, Kharkiv, Kharkiv Oblast      |
| Coordinates | <a href="#">49.9935, 36.2235</a> <sup>1</sup> |
| Date        | 15/03/2022                                    |
| Time        | Unknown                                       |

## Description of the Events

On 15/03/2022 footage surfaced, showing what appears to be the cargo section of a 9M27k rocket embedded into a parking lot next to a shopping mall and a restaurant in the Zalopan' district of Kharkiv. The day of 15/03/2022 saw heavy shelling of multiple districts of Kharkiv. The general direction of origin of the cargo warhead was determined by analyzing the image of the cargo section. The location of launch origin is likely found in a 10-35 km arc pointing in the direction of areas north-east of Kharkiv. At the time, the control of these areas was contested by Ukrainian and Russian forces.

## Key Findings

- On 15/03/2022 at 19:58 CET/20:58 EET, an image was posted on Twitter of what appeared to be the cargo section of a cluster munition rocket embedded in a parking lot;
- The cargo section appears to be that of a 9M27K cluster munition rocket;
- The incident was geolocated to [49.9935, 36.2235](#)<sup>2</sup>;
- The impact location is a shopping area that includes a mall and a restaurant;
- The area that was affected by the submunitions of this rocket was not identified;
- Due to the date of posting, this incident must have taken place on or before 15/03/2022;
- On that date there were more impacts in the area, according to news reports;
- While the exact location of launch was not identified, it was possible to identify the general direction of origin.

## Description of Searches

The CIVHARM sheet lists three sources for this incident (Source 1, 2 & 3). These sources point to several images and a video of the incident within several Twitter posts.

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<sup>1</sup> <https://goo.gl/maps/5jeb3uBVYBkkkhoj6>

<sup>2</sup> <https://goo.gl/maps/5jeb3uBVYBkkkhoj6>

Further searches were conducted to find any more relevant footage of the incident. Search terms included the general location as well as the specific address.

## Background Summary of Significant Descriptive Content

### Media Reports

- [“During March 15, Kharkiv was shelled more than 50 times — Synegubov”](#)<sup>3</sup>;
- [“On the night of March 15, shelling ignited a shopping district in Kholodnohirskyi district of Kharkiv”](#)<sup>4</sup>;
- [“Russia ignoring the pact to use 'cluster bombs' on civilians? Monthly records show evidence of Ukrainian residents”](#)<sup>5</sup>.

### Other

- [On the situation in Kharkiv and the region as of March 16](#)<sup>6</sup>;
- [Telegram: On the situation in Kharkiv and the region as of March 16](#)<sup>7</sup>.

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<sup>3</sup> <https://suspilne.media/218081-protagom-15-berezna-harkiv-obstrilali-ponad-50-raziv-sinegubov/>

<sup>4</sup>

<https://2day.kh.ua/ua/kharkow/u-nich-na-15-bereznia-vid-obstriliv-spalakhnuv-torhovyy-kvartal-u-kholodnohirskomu-rayoni>

<sup>5</sup> <https://newtalk.tw/news/view/2022-04-25/744938>

<sup>6</sup> <https://www.facebook.com/watch?v=561563898234807>

<sup>7</sup> <https://t.me/synegubov/2652>

## Analysis of Examinable Content



Source 1.

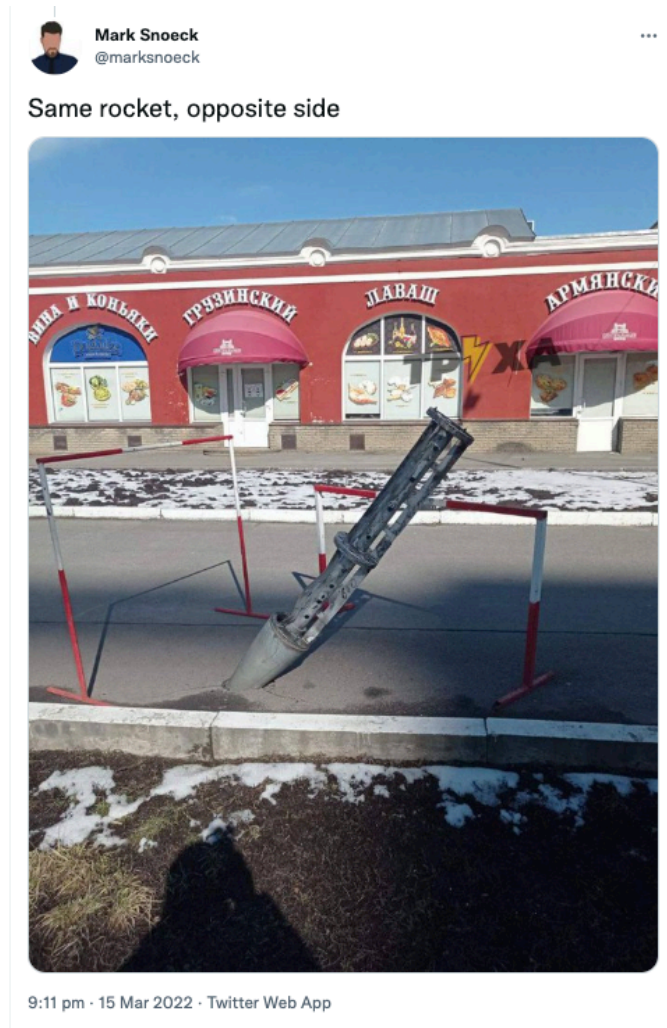
**Source 1:** A [Twitter post](#)<sup>8</sup> containing two images (S1I1 and S1I2).

**Posted:** 15/03/2022 at 21:11 CET/ 22:11 EET.

The post shows what appears to be a cargo section of a rocket sticking out of the ground next to a parking lot of a shopping mall. The source also includes the following coordinates: [49.9935.36.2233](#)<sup>9</sup>.

<sup>8</sup> <https://twitter.com/marksnoeck/status/1503826296773746694>

<sup>9</sup> <https://maps.app.goo.gl/NKV7ftiAgEtATX566>



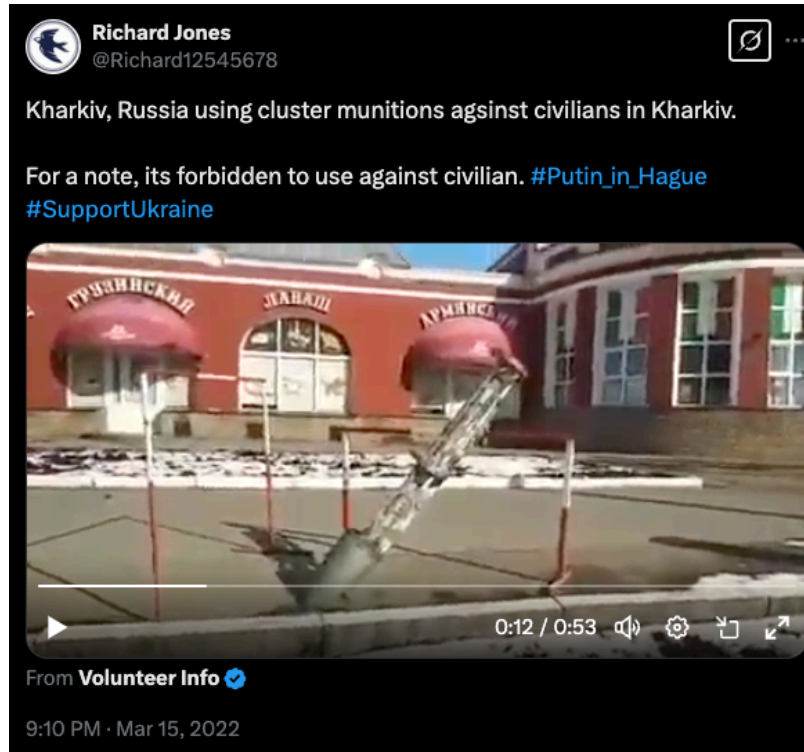
*Source 2.*

**Source 2:** A [Twitter post](#)<sup>10</sup> containing an image (S2I1) of a lodged cargo section.

**Posted:** 15/03/2022 at 21:11 CET/22:11 EET.

The post shows the same cargo section as S1I1, but from a different angle. In the background you can see a restaurant.

<sup>10</sup> <https://twitter.com/marksnock/status/1503826301668450312>



Source 3.

**Source 3:** [A video](#)<sup>11</sup> (S3V1) posted on Twitter, containing footage of what appears to be a cargo section of a rocket.

**Posted:** 15/03/2022 at 20:10 CET / 21:10 EET

The post contains a 53 second video of the same cargo section as S1I1&S2I1. In the background you can see the same restaurant as in S2I1.

**Step 1:** S1I1 shows a building with quite specific features in the background. The same building can be seen at the coordinates provided in S1 by checking it on [Google Maps](#)<sup>12</sup>.

**Step 2:** S2I1 shows a restaurant in the background, again with specific features. The same restaurant was visible on [Google Street View](#)<sup>13</sup>.

**Step 3:** A reverse image search was conducted to find the earliest available copy of S1I1 to determine the time of this specific attack. It was not possible to determine the exact time of the attack. The picture that was used in S1I1 was posted on the same day, but at an earlier time. This [post](#)<sup>14</sup> was found through a [blog](#)<sup>15</sup>.

<sup>11</sup> <https://twitter.com/Richard12545678/status/1503810976277315586>

<sup>12</sup> <https://goo.gl/maps/qST5wxgiLJ4XJvYa8>

<sup>13</sup> <https://goo.gl/maps/1JNFfrB5soF9vaB7>

<sup>14</sup> [https://twitter.com/maria\\_avdv/status/1503807907577712648/photo/2](https://twitter.com/maria_avdv/status/1503807907577712648/photo/2)

<sup>15</sup> <https://newtalk.tw/news/view/2022-04-25/744938>

## Questions to Investigate

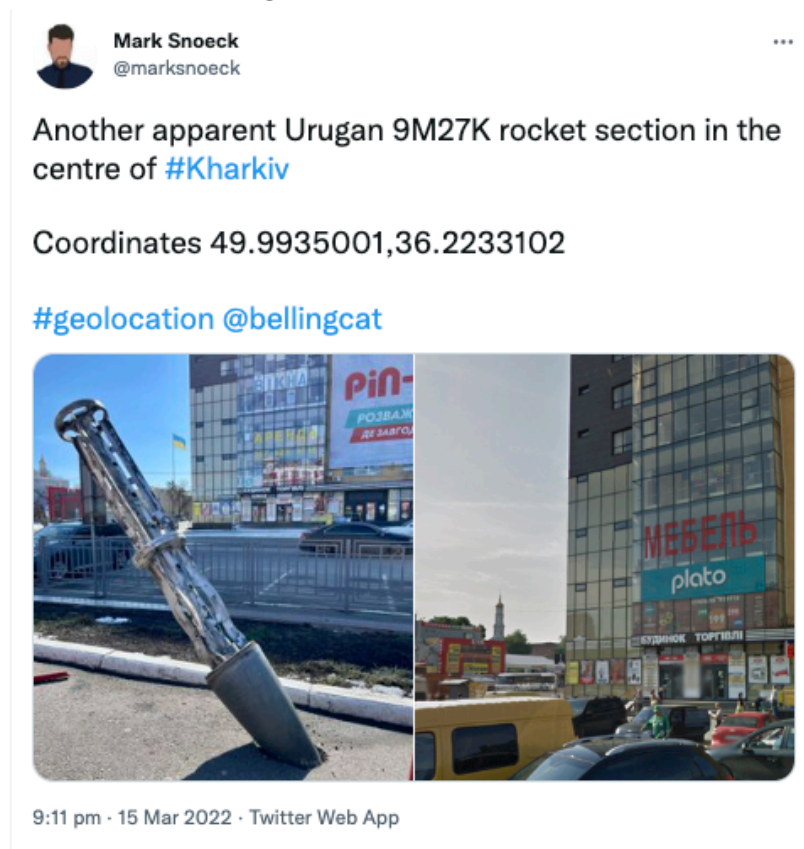
### Where Was the Incident?

S1I1 was posted on Twitter along on 15/03/2022 at 9:11 CET/10:11 EET with the following caption:

“Another apparent Urugan 9M27K rocket section in the centre of #Kharkiv  
Coordinates 49.9935,36.2233”

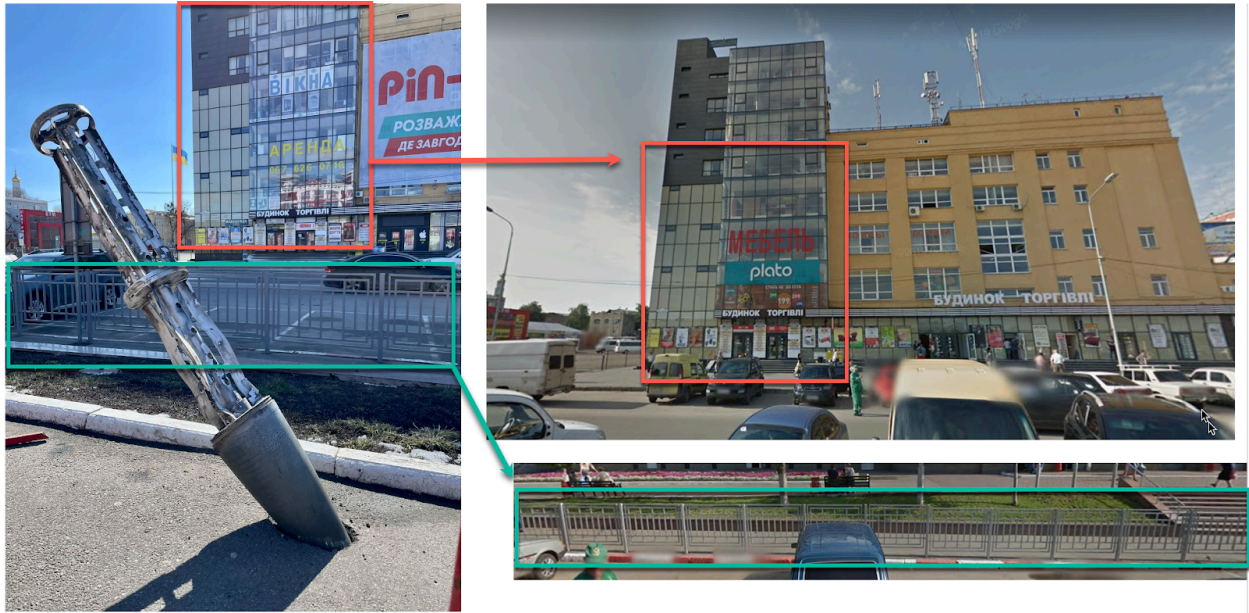
The coordinates in the caption helped geolocate the incident. However, the investigator determined that the actual location of the incident was Pyskunivs’ka St, Kharkiv at [49.9936, 36.2235](#)<sup>16</sup>.

The location was identified with Google Street View.



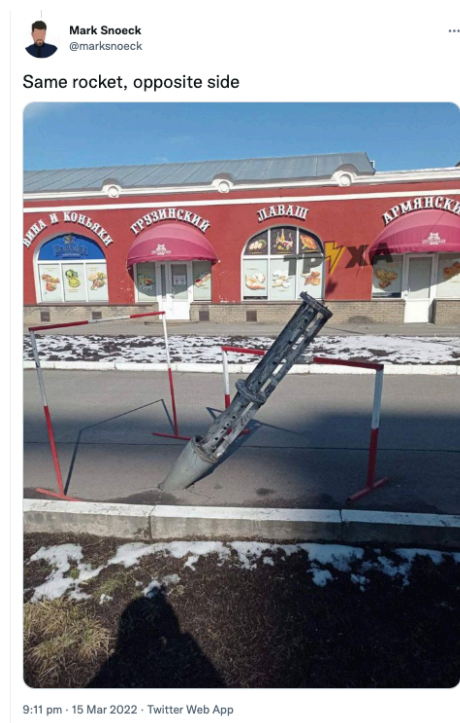
*Left: An image (S1I1) of what appears to be a 9M27K cargo section with what seems to be a commercial building in the background. Right: A comparison image (S1I2) with Street View done by the person who posted Source 1 on Twitter.*

<sup>16</sup> <https://maps.app.goo.gl/pAnbxv7TcwCNMGwz6>



*Left: S1I1, shows matching features of the building in the back, highlighted in the red square. There is also a fence visible just behind the cargo section, highlighted in the green square. Right: These features as seen in Street View images.*

S2I1 was posted on Twitter on 15/03/2022 at 9:11 CET/10:11 EET by the same user, along with the following caption: “Same rocket, opposite side” .



*A picture of the cargo section with the restaurant in the background.*



*Left: S2I1. Right: Close-up from Google Street View, showing the same restaurant.*

## When Was the Incident?

The earliest identified [post](#)<sup>17</sup> depicting this incident is the tweet shown below, which was posted on 15/03/2022 at 19:58 CET/20:58 EET. The invasion of Ukraine began on 24/02/2022, making it extremely unlikely that this incident took place before that date. A reverse image search of S1I1 revealed no other images of the same cargo section or location before 15/03/2022. Based on this information, the investigator determined that the incident likely occurred on 15/03/2022.

<sup>17</sup> [https://twitter.com/maria\\_avdv/status/1503807907577712648/photo/2](https://twitter.com/maria_avdv/status/1503807907577712648/photo/2)



*A tweet showing the munition fragment embedded on the pavement shared on 15/03/2022 at 19:58 CET/20:58 EET.*

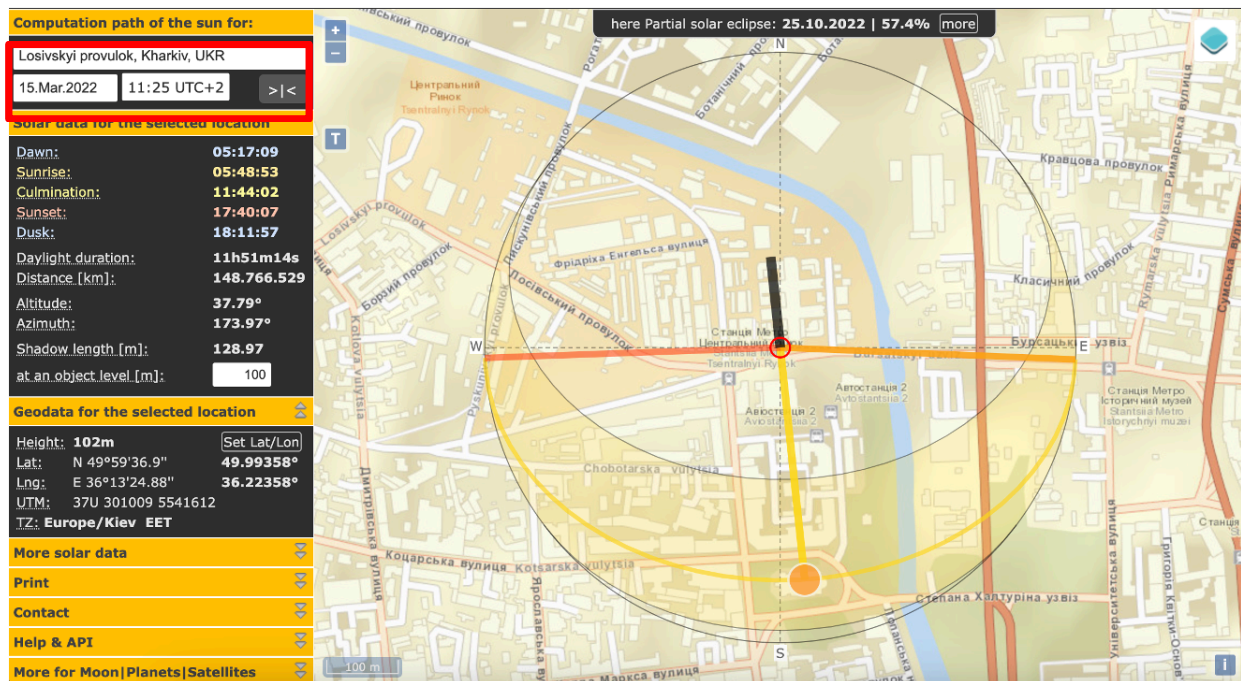
## Time

The time of the incident could not be established exactly. No footage of the impact was obtained and all other source imagery was recorded after the fact. Using a still from S3V1 and [Suncalc.org](http://suncalc.org/)<sup>18</sup>, which is a website that allows you to estimate when an image was recorded based on the position of shadows, the investigator is able to estimate that the image was taken at approximately 11:25 EET.



*Still from S3V1. The arrow indicates the direction of the shadow cast by the cargo section.*

<sup>18</sup> <http://suncalc.org/>



By using [SunCalc](http://suncalc.org/)<sup>19</sup>, the investigator estimated that S3V1 was recorded around 11:25 EET.

## What Kind of Munition Was Used?

The munition seen appears to be a cargo section for an Uragan 9M27K rocket, a surface-to-surface cluster munition rocket with a payload of cluster submunitions.

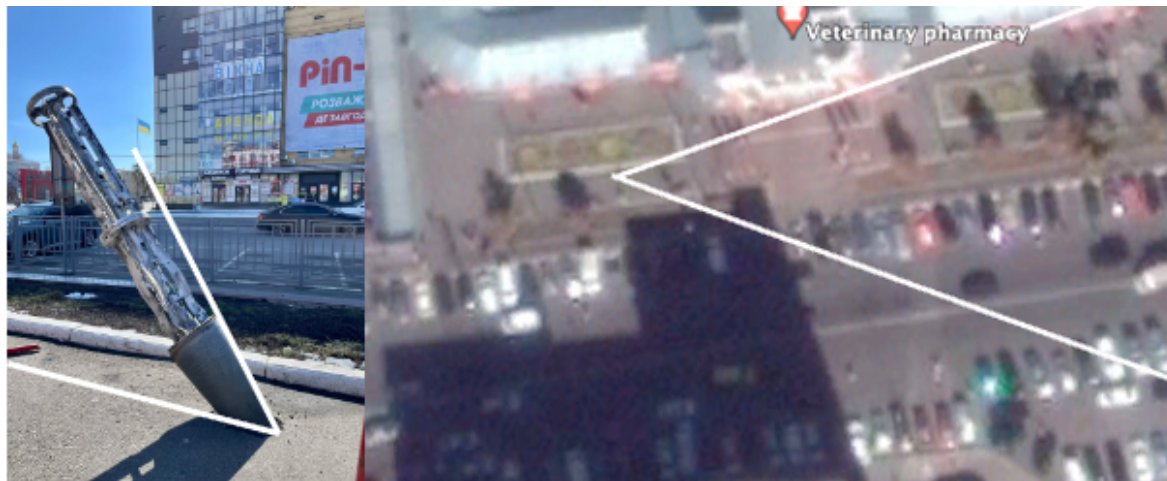
<sup>19</sup> <http://suncalc.org/>



Left: S1I1. Right: Uragan 9M27K reference photos and identifiers (Twitter: [Mark Hiznay](https://twitter.com/MarkHiznay)<sup>20</sup>)

## Is There Any Evidence of the Direction the Munition Came from?

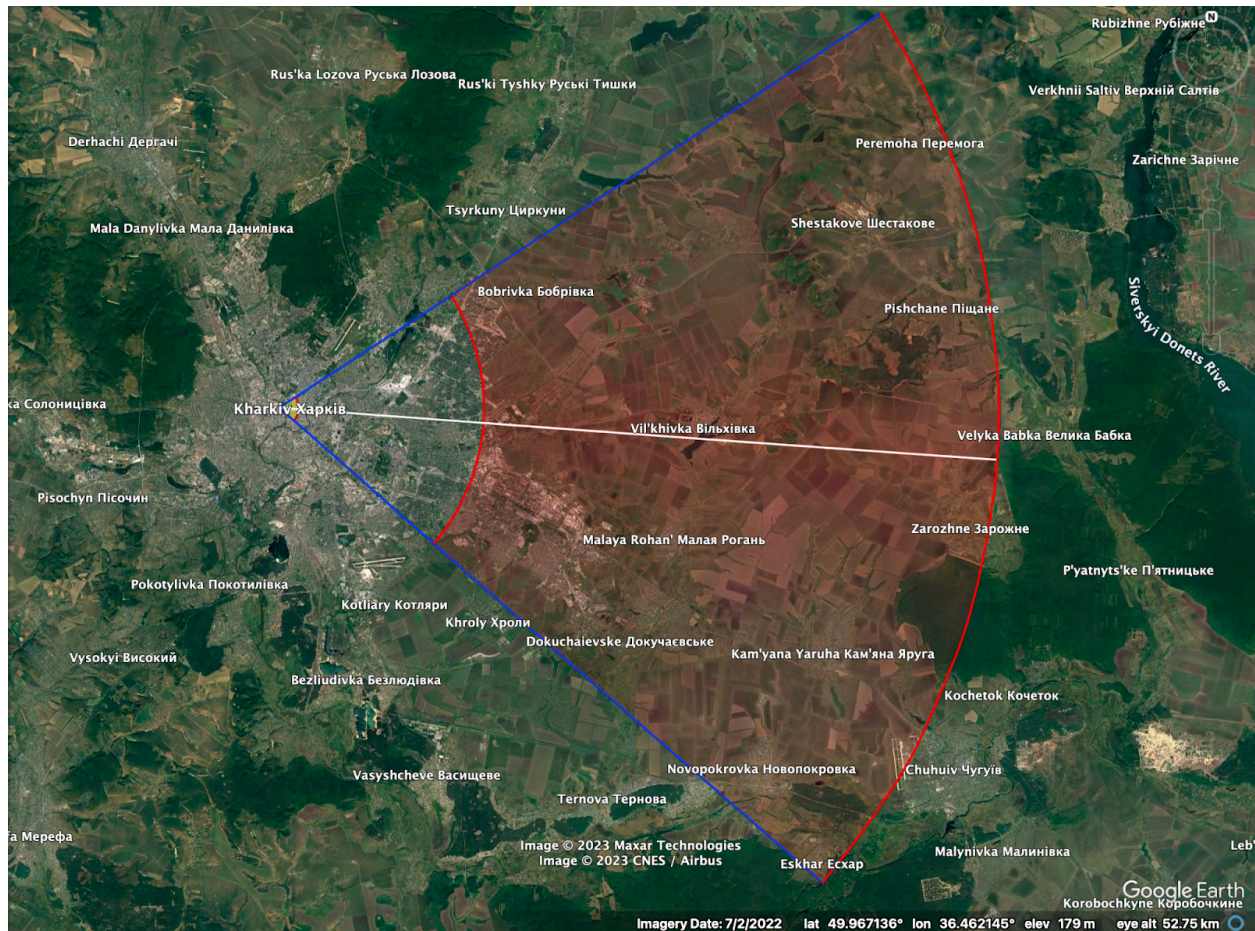
The general direction of origin was assessed as being 94 degrees from north, based on the observed angle of impact. While the exact direction of origin was not possible to establish with certainty, the image was clear enough to provide a good indicator of the likely direction of origin.



Left: Assessment of the angle of origin using S1I1. Right: Representation of the same angle in satellite imagery from 26/09/2017 (Credit: Google Earth Pro/Maxar Technologies).

<sup>20</sup> <https://twitter.com/MarkHiznay/media>

The 9M27k rocket is fired from a BM 27 system which, according to [Army Recognition](#)<sup>21</sup>, has a range of 10 to 35 km. When combined with the arc of direction of origin and a standardised arc of 73.4 degrees, this gives an area of origin within which this 9M27K was likely fired.

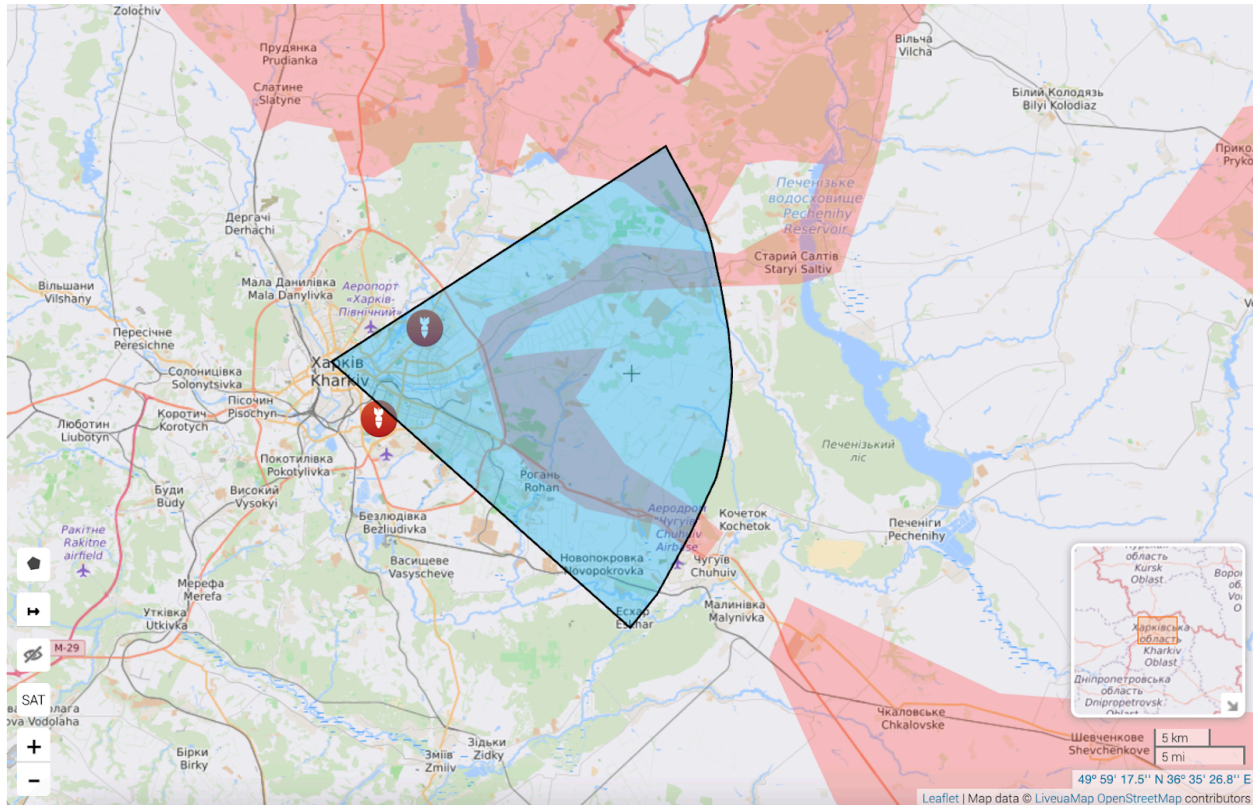


*Satellite image from Google Earth Pro, center of arc in blue, and 10 km to 35 km arcs plotted in red  
(credit: Google/Landsat/Copernicus)*

The 10 km - 35 km arcs can be compared to a map of areas which were reported to be under Russian control for the period starting on 15/03/2022, which is the earliest reported date of the incident. It should be noted that the areas of control within the graphic below should be regarded as rough estimates.

<sup>21</sup>

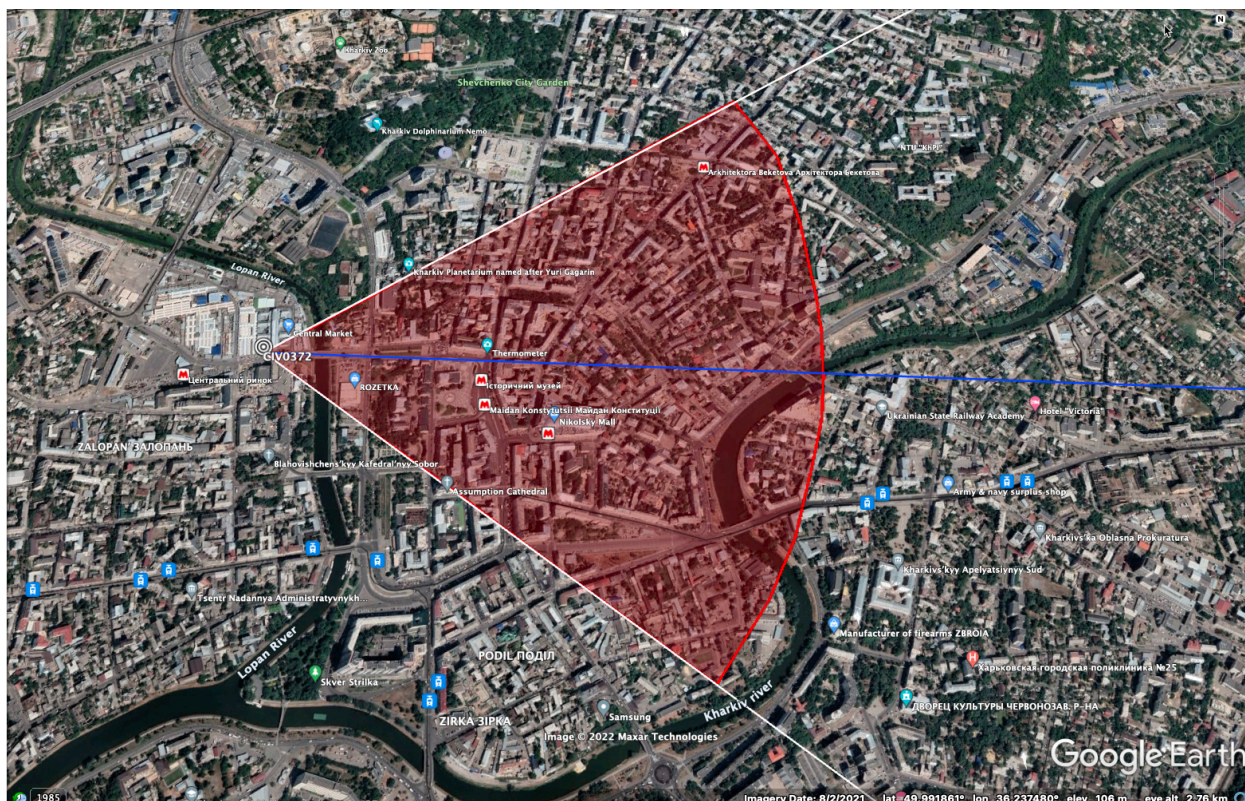
[https://www.armyrecognition.com/russia\\_russian\\_army\\_vehicles\\_system\\_artillery\\_uk/bm-27\\_9p140\\_uragan\\_9k57\\_220mm\\_mlrs\\_multiple\\_launch\\_rocket\\_system\\_technical\\_data\\_sheet\\_specifications.html](https://www.armyrecognition.com/russia_russian_army_vehicles_system_artillery_uk/bm-27_9p140_uragan_9k57_220mm_mlrs_multiple_launch_rocket_system_technical_data_sheet_specifications.html)



Map of areas which were reported to be under Russian control on 15/03/2022. Source: [Liveuamap](https://liveuamap.com/en/time/14.03.2022).<sup>22</sup>

Advice from an expert indicated that the 9M27K cargo section could land up to 1 km away from the area impacted by the submunitions. Plotting an arc with this range results in the area that was possibly affected by the strike.

<sup>22</sup> <https://liveuamap.com/en/time/14.03.2022>



*Satellite imagery taken from Google Earth Pro, with a 1.5 km arc indicating possible area in which the submunitions impacted (Credit: Google/Maxar Technologies).*

## **Are There Any Indications of What the Location Was Being Used for?**

The location where the cargo section landed is a parking lot of a shopping mall in a shopping area.

The possible area of impact of the submunitions is partly occupied by a shopping area. The area is residential and features public transport stations.

## **Were There Military Structures, Installations or Other Assets in the Area?**

No military structures, installations or other assets were identified in the area.

## **Timeline of the Incident**

A 9M27K cargo section impacted into the ground near a shopping mall and restaurant in Kharkiv. The incident likely occurred on 15/03/2022.

Online searches, including social media and Telegram could not find an earlier post of this impact than 19:58 CET/20:58EET. Analysis of the shadow seen in S3V1 determined that the

video recorded around 10:25 CET/11:25 EET. However, it was not possible to determine what the exact time of the attack was.

## Statements from Parties of the Conflict

### Ukraine

- [Message](#)<sup>23</sup> from the official Facebook account “[Олег Синегубов](#)”<sup>24</sup> (*In English*: Oleg Synegubov) on the situation in Kharkiv from March 16, 2022.
- [Message](#)<sup>25</sup> from the official Telegram account “Головне управління ДСНС України у Харківській області” (*In English*: Main Department of the State Emergency Service of Ukraine in Kharkiv region) about the situation in Kharkiv from March 16, 2022.

### Russia

- Kremlin’s spokesperson Dmitry Peskov [denies cluster munitions use](#)<sup>26</sup> in Ukraine.

## Conclusion

On 15/03/2022, footage surfaced showing what appears to be a 9M27k cargo section embedded in a parking lot next to a shopping mall and a restaurant in the Zalopan’ district of Kharkiv. It is unknown what its intended target was. The area in which the cargo section landed, and in which its submunitions were likely dispersed, contains a mix of residential and commercial buildings.

Although open sources demonstrate that Kharkiv was under bombardment at this time, it was not possible to identify where exactly the submunitions from this cluster munition impacted. Furthermore, the exact location of the launch site could not be established.

## Further Action

- Obtain and compare satellite imagery for dates 24/02/2022 - 15/03/2022.
- Conduct further research to identify impact footage and location.

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<sup>23</sup> <https://www.facebook.com/watch?v=561563898234807>

<sup>24</sup> [https://www.facebook.com/synegubov.official?\\_\\_tn\\_\\_=-UC](https://www.facebook.com/synegubov.official?__tn__=-UC)

<sup>25</sup> [https://t.me/DSNS\\_Kharkiv/1372](https://t.me/DSNS_Kharkiv/1372)

<sup>26</sup> <https://www.gazeta.ru/politics/2022/03/01/14589073.shtml>