# **Incident Assessment**

Incident ID	CIV1907
Location	197 Klochkivska Street, Kharkiv, 61000
Coordinates	<u>50.0163, 36.2128</u> <sup>1</sup>
Date	28/02/2022
Time	After 06:20 EET and before 13:28 EET (possibly 12:48 EET)

## **Description of the Events**

In the afternoon of 28/02/2022, what appears to have been a cluster munition attack took place on several districts of Kharkiv. Among those was an attack on 197 Klochkivska Street, where what appears to be the rocket motor of a 9M55K rocket impacted the roof of a residential block of flats. The earliest identified upload of images of the impact near the location of the incident was posted on 28/02/2022 at 13:28 EET (Source 3<sup>2</sup>).

## **Key Findings**

- On 28/02/2022, several videos and images were posted depicting the top floor of the building hit by what could be munition remnants or a projectile (further "the Incident").
- The Incident was geolocated to 50.0163, 36.2128, which corresponds to the address: 197 Klochkivska Street in the city of Kharkiv, Ukraine, 61000.
- The rocket fragments of the Incident appear to be part of the rocket motor of a 9M55K rocket.
- No military objects were identified in the possible area of impact of submunitions, however, the Ivan Kozhedub National Air Force University was identified just over 1 km away from the impact.
- The exact area of impact of the submunitions was not identified.
- The exact location of the launch was not identified, although the impact indicates that the projectile was moving in a generally westerly direction.
- It is possible this incident is connected to CIV0463; CIV0082; CIV0119.

<sup>&</sup>lt;sup>1</sup> https://maps.app.goo.gl/twV29SR4zCVt9wvk6

<sup>&</sup>lt;sup>2</sup> https://z-p42.www.instagram.com/stories/highlights/17877026555711838/

<sup>&</sup>lt;sup>3</sup> https://maps.app.goo.gl/twV29SR4zCVt9wvk6

# **Description of Searches**

The CIVHARM sheet lists one more source for this Incident. It's a video depicting the moment of strike on the top of the building taken by what appears to be a dashcam (further - "Source 2 Video 1"4). It should be noted that the original Telegram channel which posted this video changed its name, although Archive.org was able to collect a copy of the video. The post can still be seen in the renamed Telegram channel <a href="here">here</a>.

Searches for more information on the Incident, including more pictures, videos, etc., of the possible strike were conducted for the day of 28/02/2022 in the area near Klochkivska Street in the city of Kharkiv in three languages: English, Ukrainian and Russian. These searches led to dozens of media reports from all over the world, as well as footage of this Incident on Youtube and Instagram recorded by eyewitnesses of the Incident.

# **Background Summary of Significant Descriptive Content**

### **Media Reports**

- Washington Post<sup>6</sup> general report on attacks in Kharkiv on 28/02/2022, as well as a video detailing rocket remnant embedded in the ground on Klochkivska Street and in a playground in a park nearby;
- <u>Al Jazeera</u><sup>7</sup> general report on attacks in Kharkiv on 28/02/2022;
- The Guardian<sup>8</sup> general report on attacks in Kharkiv on 28/02/2022, as well as an image of the rocket remnant embedded in the ground on Klochkivska Street;
- <u>Kharkiv Today</u><sup>9</sup> general report on attacks in Kharkiv on 28/02/2022, mentions this Incident;
- Current Time<sup>10</sup> mentions aftermath of the attack on Kharkiv on 28/02/2022;
- <u>24TV</u><sup>11</sup> news report about the incident in Kharkiv on 28/02/2022, containing images and videos of incidents which took place near 197 Klochkivska Street.

## **NGO Reports**

• HRW<sup>12</sup> - report mentions Klochkivska Street;

https://www.theguardian.com/world/2022/feb/28/ukraine-several-killed-by-russian-rocket-strikes-in-civilian-areas-of-kharkiv

<sup>4</sup> https://web.archive.org/web/20220613231815/https://t.me/hueviykharkov/47046

<sup>&</sup>lt;sup>5</sup> https://t.me/huyovy\_kharkiv/47046

<sup>&</sup>lt;sup>6</sup> https://www.washingtonpost.com/world/2022/02/28/kharkiv-rockets-shelling-russia-ukraine-war/

<sup>7</sup>https://www.aljazeera.com/news/2022/2/28/ukraine-reports-dozens-killed-in-kharkiv-rocket-strikes#:

<sup>~:</sup>text=At%20least%2011%20people%20have,Kharkiv%2C%20according%20to%20Ukrainian%20official s

<sup>&</sup>lt;sup>9</sup> https://2day.kh.ua/ru/kharkow/gde-v-kharkove-popali-pod-obstrel-doma

<sup>&</sup>lt;sup>10</sup>https://www.currenttime.tv/a/kharkov-obstrel-iz-gradov/31728322.html

<sup>11</sup> https://24tv.ua/ru/obstrely-harkova-28-02-2022-glavnye-novosti-za-segodnja\_n1884294

<sup>&</sup>lt;sup>12</sup> https://www.hrw.org/news/2022/03/04/ukraine-cluster-munitions-launched-kharkiv-neighborhoods

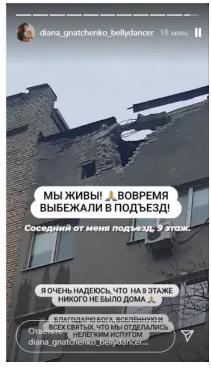
• <u>Atlantic Council</u><sup>13</sup> - mapped attack on 28/02/2022 in Kharkiv, including the Incident on Klochkivska Street.

#### Other

- <u>ISW</u><sup>14</sup> report on events in Ukraine on 28/02/2022, mentioning Kharkiv being impacted by the use of Multiple Launch Rocket System (MLRS) by Russian forces;
- <u>Wikipedia page</u><sup>15</sup> an overview of shelling of Kharkiv with cluster munition on 28/02/2022.

# **Analysis of Examinable Content**

• <u>Source 1</u><sup>16</sup>: A Newsroom media report posted on 28/02/2022 at 14:01 EET, which contains a brief mention of the top of the building being hit and a reference to an Instagram user's image (Source 1, Image 1 - S1I1) depicting the damaged building.



*S1I1* depicting the damaged building.

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https://www.atlanticcouncil.org/blogs/new-atlanticist/mapped-russias-shelling-of-civilians-in-kharkiv/14 and the control of the control of

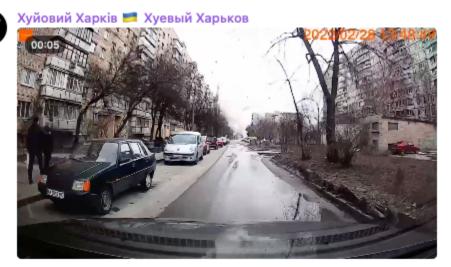
https://www.understandingwar.org/backgrounder/russian-offensive-campaign-assessment-february-28-2022

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https://uk.wikipedia.org/wiki/%D0%9E%D0%B1%D1%81%D1%82%D1%80%D1%96%D0%BB\_%D0%A 5%D0%B0%D1%80%D0%BA%D0%BE%D0%B2%D0%B0\_%D0%BA%D0%B0%D1%81%D0%B5%D1%8 2%D0%BD%D0%B8%D0%BC%D0%B8\_%D0%B1%D0%BE%D1%94%D0%BF%D1%80%D0%B8%D0%BF%D0%B0%D0%BC%D0%B8\_(28\_%D0%BB%D1%8E%D1%82%D0%BE%D0%B3% D0%BE\_2022)

https://www.newsroom.kh.ua/news/v-harkove-na-klochkovskoy-upali-reaktivnye-snaryady-est-ranenye

• Source 2<sup>17</sup>: A Telegram video (S2V1) posted on 28/02/2022 at 16:25 EET. The video shows the moment of strike of the top of the high rise apartment building.



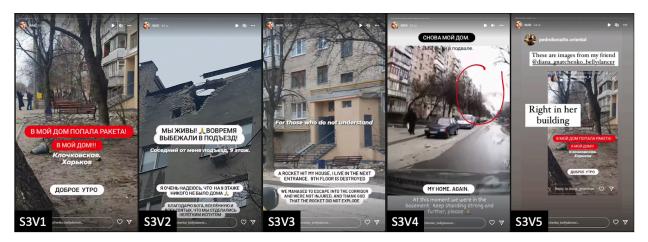
Один из сегодняшних прилётов в Харькове, в результате которого пострадали люди

A still from S2V1.

- Source 3<sup>18</sup>: An Instagram story posted on 28/02/2022-01/03/2022. The post depicts 5 relevant videos showing the building on Klochkivska Street. Three videos (S3V1, S3V2, S3V3) contain captions indicating they were taken by a person who claims she is a resident of this building on Klochkivska Street. The fourth video (S3V4) is a repost of the video mentioned in Source 2 accompanied by text: "My home. Again. At this moment we were in the basement. Keep standing strong and further, please." The fifth video (S3V5) notes that the original content creator is from @diana\_gnatchenko\_bellydancer, who posted this reel. Each of the videos was posted at a different time:
- S<sub>3</sub>V<sub>1</sub>: 1<sub>3</sub>:28 EET on 28/02/2022;
- S<sub>3</sub>V<sub>2</sub>: 1<sub>3</sub>:36 EET on 28/02/2022;
- S3V3: 20:34 EET on 28/02/2022;
- S<sub>3</sub>V<sub>4</sub>: 00:26 EET on 01/03/2022.

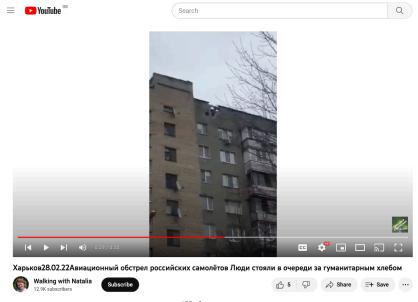
<sup>17</sup> https://t.me/huyovy\_kharkiv/47046

<sup>&</sup>lt;sup>18</sup> https://z-p42.www.instagram.com/stories/highlights/17877026555711838/



Relevant clips from Instagram story, with content codes added.

• Source 4<sup>19</sup>: A Youtube video consisting of several stitched episodes of the attack on 197 Klochkivska Street. Video was posted on 28/02/2022 at 14:28 EET. The video shows the aftermath of a strike which is described in CIVoo82, as well as the aftermath of the strike to the top of the apartment building.



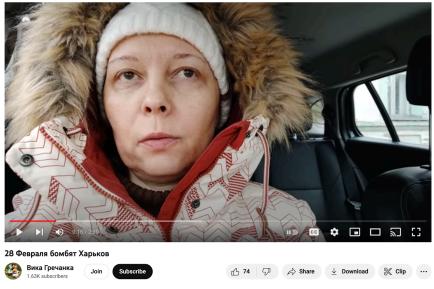
A still from S4V1.

• Source 5<sup>20</sup>: A Youtube video of a Kharkiv resident describing their eyewitness account of the moment of the strike to the top of the building, posted on 28/02/2022 at 15:13 EET.

<sup>19</sup> 

https://www.youtube.com/watch?v=kdVcjkFJNiE&list=PLZJwmRcfGAh9IwF52iKEC2qoutwhFSPOV&index=137

<sup>&</sup>lt;sup>20</sup> https://www.youtube.com/watch?v=phSveDFdeiU



A still from S5V1.

# **Questions to Investigate**

#### Where Was the Incident?

The location of the Incident was geolocated by a peer researcher to the following coordinates: 50.0159, 36.2126<sup>21</sup>. These coordinates correspond to the address: 197 Klochkivska Street, Kharkiv, 61000.



A still from S3V1 taken at 00:04. The text accompanying the video mentions the location and translates to English as follows: "My house was hit by a rocket! My house!!! Klochkovskaya, Kharkov. Good morning."

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<sup>&</sup>lt;sup>21</sup> https://maps.app.goo.gl/3iBeZqtPCwFaWkedA

Images and videos of the building on 197 Klochkivska Street correspond to the image of the building provided by the Google maps Street View image.



Left: <u>Google Maps street view</u><sup>22</sup> of the building indicating a join between two walls - one colored gray and one with beige bricks (marked with blue rectangle), as well as a satellite dish on the top left window (marked with green rectangle) and an air conditioner on the right top window (marked with orange rectangle). Centre: A still from S4V1 at 00:29 containing the same objects. Right: A still from S3V3 at 00:01 containing the same objects.



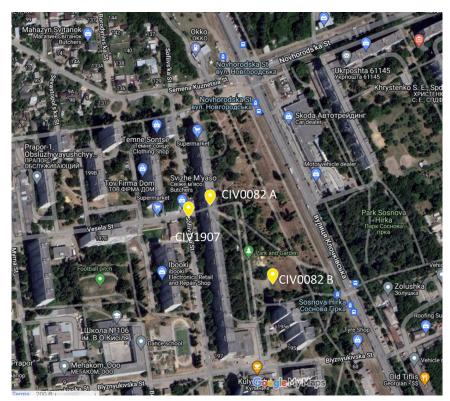
Left: A still from S2V1 at 00:09 depicting an apartment building on the right (marked with green rectangle), followed by a tree (red rectangle) and a lower building with blue door and windows (orange rectangle), followed by another lower building with gray doors and windows (blue rectangle), and a high-rise apartment building in the background (yellow rectangle), as well as another high rise apartment building across the street (purple triangle); Right: Google Maps street view<sup>23</sup> containing the same objects.

The map of cluster munition attacks in Kharkiv, published by the Atlantic Council (as mentioned above in section "NGO reports"), provides three geolocations of impacts in the vicinity of 197 Klochkivska Street. Two of them correspond to the CIVoo82 incident. Another one corresponds to the location of the <u>S2V1</u><sup>24</sup>.

<sup>&</sup>lt;sup>22</sup> https://maps.app.goo.gl/F7nK8HvzhgspGmhaA

<sup>&</sup>lt;sup>23</sup> https://maps.app.goo.gl/t4vL8yYbBmqnkL5r6

<sup>&</sup>lt;sup>24</sup> https://t.me/huyovy kharkiv/47046



Map (zoomed in to 197 Klochkivska Street and cropped) of cluster munition attacks in Kharkiv on 28/02/2022 published by the <u>Atlantic Council</u><sup>25</sup>.

The geolocation of the Incident was slightly adjusted to the actual place of the impact: 50.0163, 36.2128<sup>26</sup>.

#### When Was the Incident?

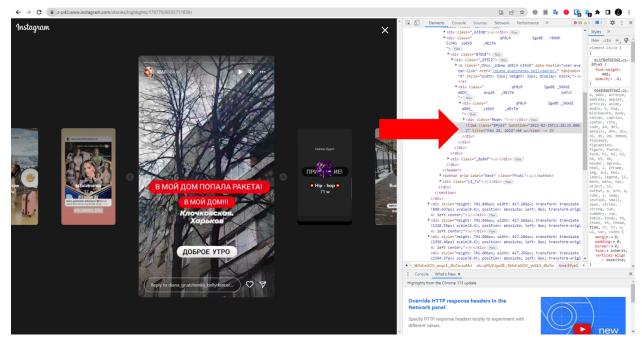
According to <u>SunCalc</u><sup>27</sup>, in this location the sun rose at 06:20 and set at 17:15 - a range in which the Incident clearly falls within. Other techniques to determine the exact time, such as shadow analysis, were not possible due to the cloudy conditions.

In order to assess the earliest time of the incident, the elements within Source 3 were examined. This examination demonstrated that  $S_3V_1$  was posted at 13:28 EET on 28/02/2022. This is therefore the latest possible time this event could have occurred.

<sup>25</sup> 

https://www.atlanticcouncil.org/blogs/new-atlanticist/mapped-russias-shelling-of-civilians-in-kharkiv/ https://maps.app.goo.gl/k1UfhEk5b6eBWEm9A

<sup>&</sup>lt;sup>27</sup> https://www.suncalc.org/



The time at which S3V1 was posted is indicated by the red arrow. The time shown is in UTC, as indicated by the "Z".

However, S2V1, which depicts the moment of the strike, indicates the time and date on a dashcam timestamp which shows 13:48 EET 28/02/2022. This is unlikely to be correct as it is after the time of the first Instagram post. Possibilities to explain this may be that the dashcam shows a later incident that impacted at almost exactly the same location, or that its time is set incorrectly, possibly due to daylight savings time, which is practiced by Ukraine. Of the two possibilities, the former appears unlikely, while the latter is not uncommon. If this is indeed the case, the dashcam indicates that this event took place at 12:48 EET on 28/02/2022.

When these details are taken into account, it appears that the Incident took place on 28/02/2022 at a time after 06:20 EET and before 13:28 EET, and possibly at 12:48 EET, if the timestamp seen in S2V1 is indeed inaccurate by an hour.

#### What Kind of Munition Was Used?

S<sub>3</sub>V<sub>1</sub> depicts what appears to be the cone of a rocket motor at the base of the building which was impacted. The conical end part of the rocket motor depicted in S<sub>3</sub>V<sub>1</sub> matches that of a 9M<sub>55</sub>K rocket motor.



Left: A still from S3V1 taken at 00:00 depicting a conical object which appears to match those seen on 9M55K rockets. Right: A reference card<sup>28</sup> from the official Twitter page of the Human Rights Watch Associate Arms Director.

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

There is no footage showing the projectile at the moment of impact or an image depicting the embedded munition remnant which hit the building. Therefore, it is not possible to estimate the exact direction of where the munition came from. S2V1, which shows the result of the moment of impact, indicates that the projectile was moving in a generally western direction.

However, at 01:58 os S5V1 an eyewitness of the attack describes what she saw. Transcript is as follows:

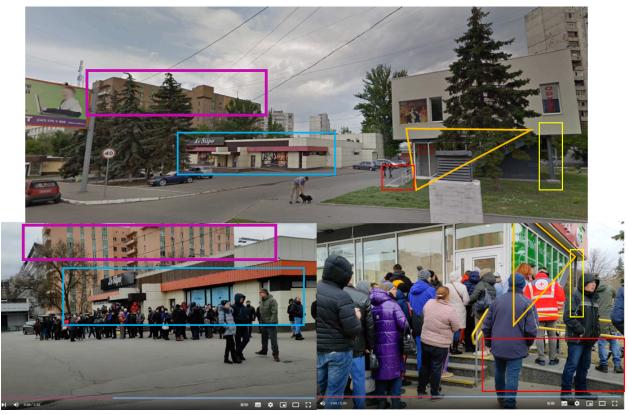
- Бомбят сейчас жилые районы, там где живут люди. Ракета эта полетела в дом, зацепила крышу.
- Это то, что при нас было.
- Это то что возле аптеки мимо нас пролетело.
- И на нашем районе приземлилась.

#### Thus translates into English as:

- They are now bombing residential areas, where people live. This rocket flew into the house, hooked on the roof.
- This is what we saw.
- This is what flew past us near the pharmacy store.
- And landed in our neighborhood.

<sup>&</sup>lt;sup>28</sup> https://twitter.com/MarkHiznay/status/1496719886009126912?s=20&t=YjisQbzlIfzMFdp\_ozOoKw

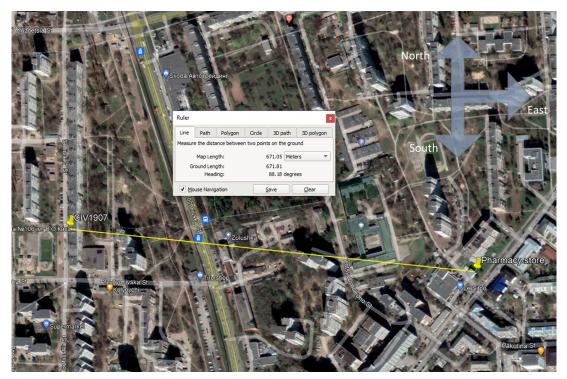
The location of the eyewitness is geolocated at <u>50.0163</u>, <u>36.2217</u><sup>29</sup>, which corresponds to the address: Kosmichna St, 23A, Kharkiv, Kharkiv Oblast, Ukraine, 61145.



Top: Google Maps street view<sup>30</sup> of the address Kosmichna St, 23A, Kharkiv, Kharkiv Oblast, Ukraine, 61145, depicting an apartment building on left side in the background (pink rectangle), followed by what appears to be a supermarket "Le Silpo" (blue rectangle), as well as a lower building on the right side with a pole (yellow rectangle), a triangular-shaped window (orange triangle), and a ramp at the entrance (red rectangle). Bottom Left: A still from S5V1 at 00:58 depicting the apartment building in the background (pink rectangle) followed by what appears to be a supermarket "Le Silpo" (blue rectangle). Bottom right: A still from S5V1 at 01:04 depicting the lower building with a pole (yellow rectangle), triangular-shaped window (orange triangle), and a ramp at the entrance (red rectangle).

<sup>&</sup>lt;sup>29</sup> https://maps.app.goo.gl/XvjSpbhHnnGdPqYP8

<sup>30</sup> https://maps.app.goo.gl/KgWwwKPGBzrrmcAQ8



Screenshot of Google earth Pro showing the distance of 671 meters (map lengths indicated in key) between the place where the witness in the Source 5 video who claimed she saw the rocket impacting the top of the building, and the location of the Incident (Credit: Google/Maxar Technologies).

Consequently, it appears that the rocket could have been travelling from the east. It is worth noting that the impact of the strike was on the western side of the building. As such it is likely that the rocket came from the area to the east of the city of Kharkiv.

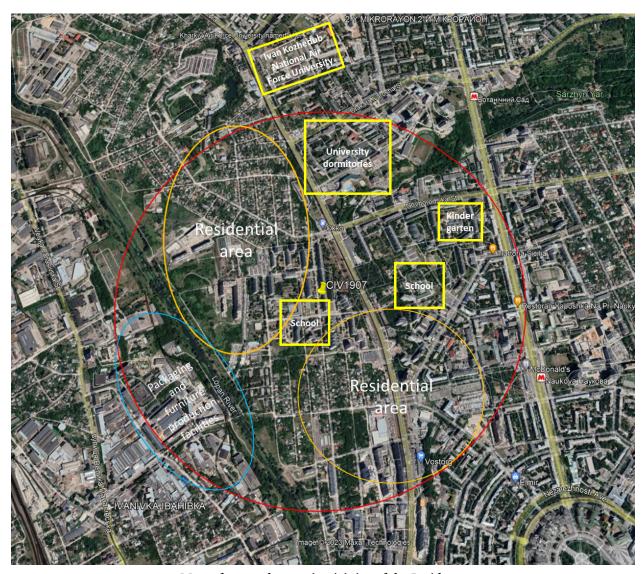
### Were There Military Structures, Installations or Other Assets in the Area?

No military objects were identified through open source research within the area of 1 km radius around both Incidents.

However, at the 1 km limit from the point of impact at the Incident lies the <u>Ivan Kozhedub</u> National Air Force University<sup>31</sup>, which is a university run by the Ukrainian MoD.

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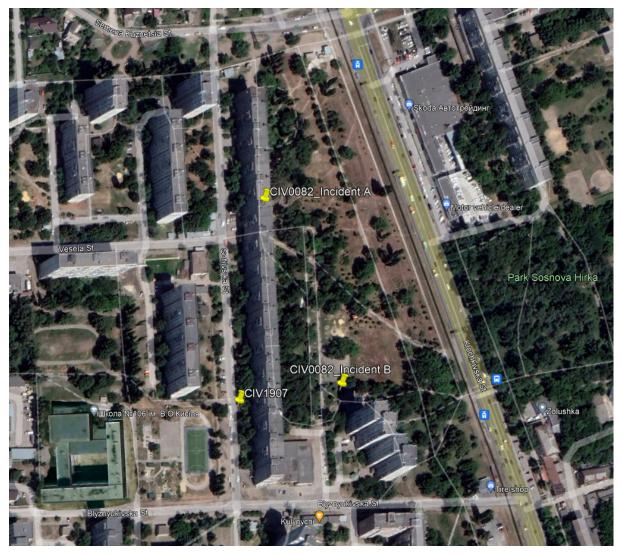
<sup>31</sup> https://www.hups.mil.gov.ua/



Map of general areas in vicinity of the Incident.

## **Any Other Relevant Information?**

Incident CIVoo82 in Bellingcat's Civilian Harm database may be connected to this Incident. CIVoo82 reports a shelling from MLRS "Smerch" that impacted two locations at the eastern side of the building on 197 Klochkivska Street around noon. At least one person was reported injured in this attack.



A screenshot of Google Earth Pro showing locations of incidents CIV0082\_A, CIV0082\_B and CIV1907 (Credit: Google/Maxar Technologies).

Incident CIVo119 in Bellingcat's Civilian Harm database also may be connected to this event. In this incident a burnt-out vehicle is seen in a Telegram post<sup>32</sup> containing what are claimed to be human remains. The post states that this was caused by a shelling from "Smerch", and the video was posted on 28/02/2022, the same date CIVo082 occurred. The weather is consistent with what is seen in other content from this date.

The vehicle is completely burnt-out and so any damage which could have been caused by fragmentation is not visible. No impact or fragmentation marks are visible on either the tarmac or grass. This incident could be geolocated to the south-eastern corner of the <u>National Air Force University</u><sup>33</sup>, approximately 1 km away from the points of impact.

<sup>32</sup> https://t.me/Tsaplienko/1319

<sup>33</sup> https://www.hups.mil.gov.ua/



Left: Building marked as the "<u>Faculty of Information and Technical Systems</u>"<sup>34</sup> as seen on Google Street View. Right: burnt-out car as seen in CIVo119 with what appears to be a matching building in the background.

Additionally, CIV0083, in which a cluster munition attack hit a residential area, likely occurred at 12:46 EET, 62 minutes before the time indicated on the dashcam depicting the impact in S2V1, approximately 2.5 km to the north-east. If the time on S2V1 is indeed an hour late due to not setting the daylight saving time on the camera, then CIV0083 and CIV1907 occurred within two minutes of each other. On the same day CIV0463, in which a cargo section impacted next to a healthcare facility, indicated a direction of origin directly over CIV0083. These two incidents align closely with CIV1907.

<sup>34</sup> 

 $https://www.google.com/maps/place/Korpus+V,+Fakul%CA%B9tet+Informatsiynykh+I+Tekhnichnykh+System/@50.0267713,36.2037398,638m/data=!3m1!1e3!4m9!1m2!2m1!1z0KDQldCcoJ7QndCiINCeoJHQo9CSoJwsIGtoYXJraXY!3m5!1s0x4127a1ac49835327:0x6e6c869c9d8693bf!8m2!3d50.0267715!4d36.2083351!16s%2Fg%2F11g213r6f\_$ 



Map showing CIV1907, CIV0463 and CIV0083 (indicated by the cluster of pins) in relation to each other (Credit: Google/Maxar Technologies).

## **Timeline of the Incident**

27/02/2022: Fighting occurred inside the city limits of Kharkiv, but, according to the Kharkiv Regional Governor, Russian forces were repelled by 12:00 EET that day:

- Governor of Kharkiv post on Facebook<sup>35</sup>;
- The Guardian<sup>36</sup>;
- <u>CNN</u><sup>37</sup>.

28/02/2022: According to various sources mentioned below, shellings of Kharkiv started in the early hours of the morning and were carried out periodically during the day causing casualties and damages:

• CNN<sup>38</sup>;

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https://www.facebook.com/synegubov.oleg/posts/pfbidoNwGd5Bxe4UkM7cKja8jdd1F8TPKcwovhAMF9Hsmx5byJLPaynrZuniEVqTWjW84Gl

<sup>36</sup> https://www.theguardian.com/world/2022/feb/27/kharkiv-fighting-russia-ukraine-invasion

 $https://www.cnn.com/europe/live-news/ukraine-russia-news-02-27-22/h\_b78f64afe6aabdcea47f11a27f22906e$ 

<sup>38</sup> https://www.cnn.com/2022/02/28/europe/ukraine-russia-invasion-monday-intl-hnk/index.html

- NYTimes<sup>39</sup>;
- Reuters<sup>40</sup>

CIV1907 took place on 197 Klochkivska Street in the city of Kharkiv after 06:20 EET and before 13:28 EET, and possibly at 12:48 EET, if the timestamp seen in S2V1 is indeed inaccurate by an hour.

### Statements from Parties of the Conflict

#### Ukraine

• President of Ukraine in his <u>daily address on the war</u><sup>41</sup> mentions attacks on Kharkiv but not specifically this incident.

#### Russia

• Kremlin spokesperson Dmitry Peskov <u>denies</u> use of cluster munitions in Ukraine.<sup>42</sup>

### Conclusion

An attack on 197 Klochkivska Street took place after 06:20 EET and before 13:28 EET, and possibly at 12:48 EET. No information about victims of this particular Incident seems to be available. It appears that the conical part of the rocket motor is from a 9M55K rocket, indicating that this was from a cluster munition attack. No military structures, installations or other assets were identified within 1 km radius of the location of the Incident, however the Ivan Kozhedub National Air Force University was identified just outside this radius.

#### **Further Action**

Notably, CIVo463 occurred on the same day approximately 400 meters away north-east from 197 Klochkivska Street. The timing of this event should be analyzed as CIVo463 was a cargo section landing in a street and so may be connected to the rocket motors impacting as part of this Incident or CIVoo82. Further analysis is merited on the relationship between the attack on Novhorods'ka Street and Klochkivska Street as they likely occurred at similar times.

<sup>39</sup> https://www.nytimes.com/2022/02/28/world/europe/russia-ukraine-war-kharkiv.html

 $<sup>^{40}</sup>https://www.reuters.com/world/dozens-killed-rocket-strikes-ukrainian-city-kharkiv-says-ukrainian-official-2022-02-28$ 

https://www.president.gov.ua/news/zlo-ozbroyene-raketami-bombami-j-artileriyeyu-treba-zupiniti-7325

<sup>&</sup>lt;sup>42</sup> https://www.gazeta.ru/politics/2022/03/01/14589073.shtml