

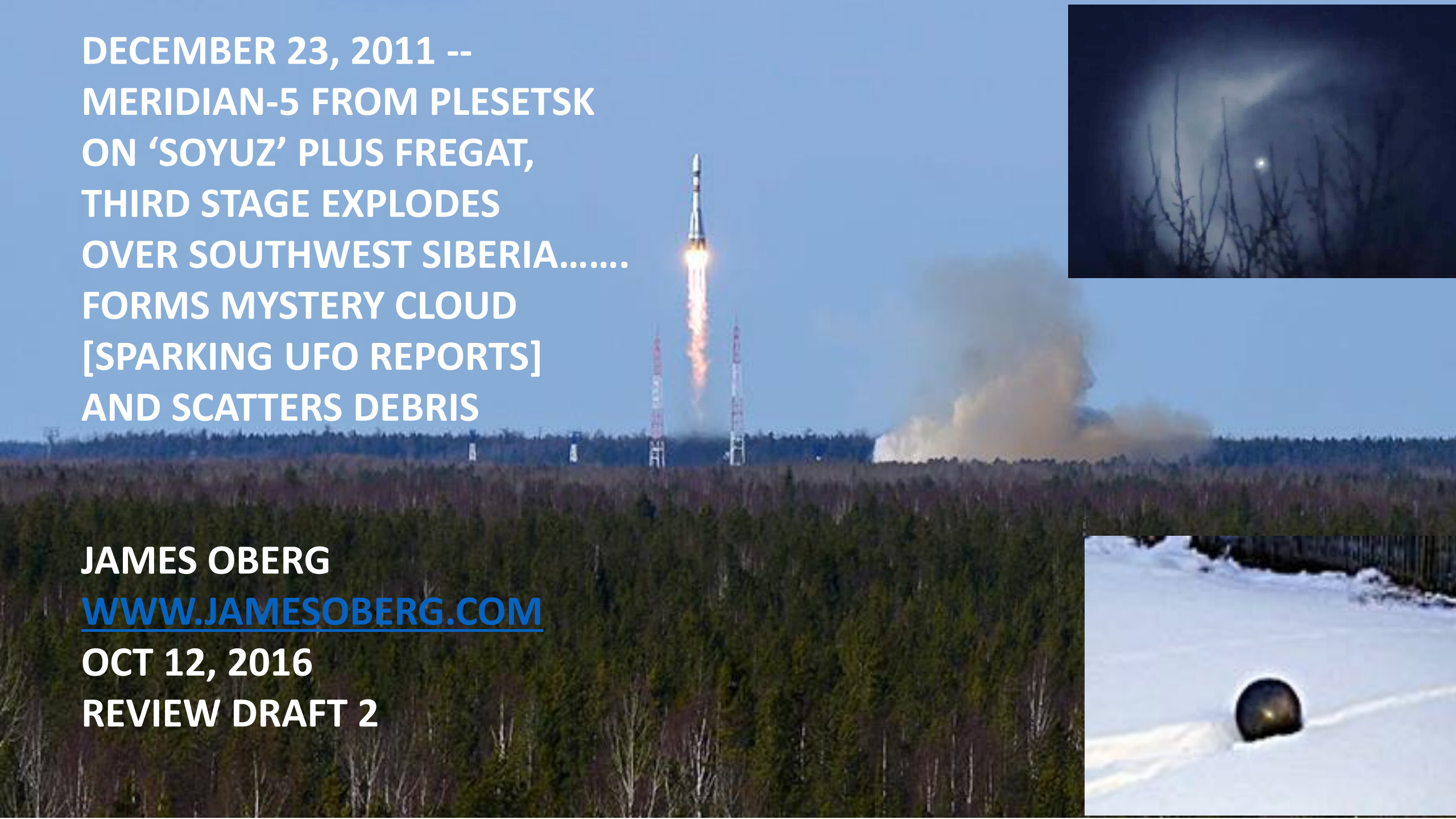
DECEMBER 23, 2011 --
MERIDIAN-5 FROM PLESETSK
ON 'SOYUZ' PLUS FREGAT,
THIRD STAGE EXPLODES
OVER SOUTHWEST SIBERIA.....
FORMS MYSTERY CLOUD
[SPARKING UFO REPORTS]
AND SCATTERS DEBRIS

JAMES OBERG

WWW.JAMESOBERG.COM

OCT 12, 2016

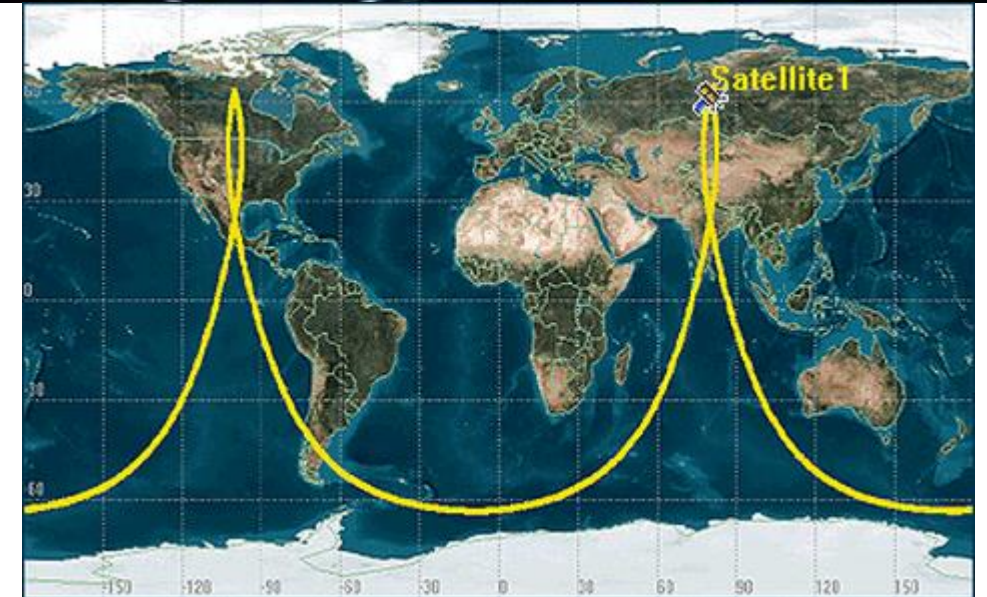
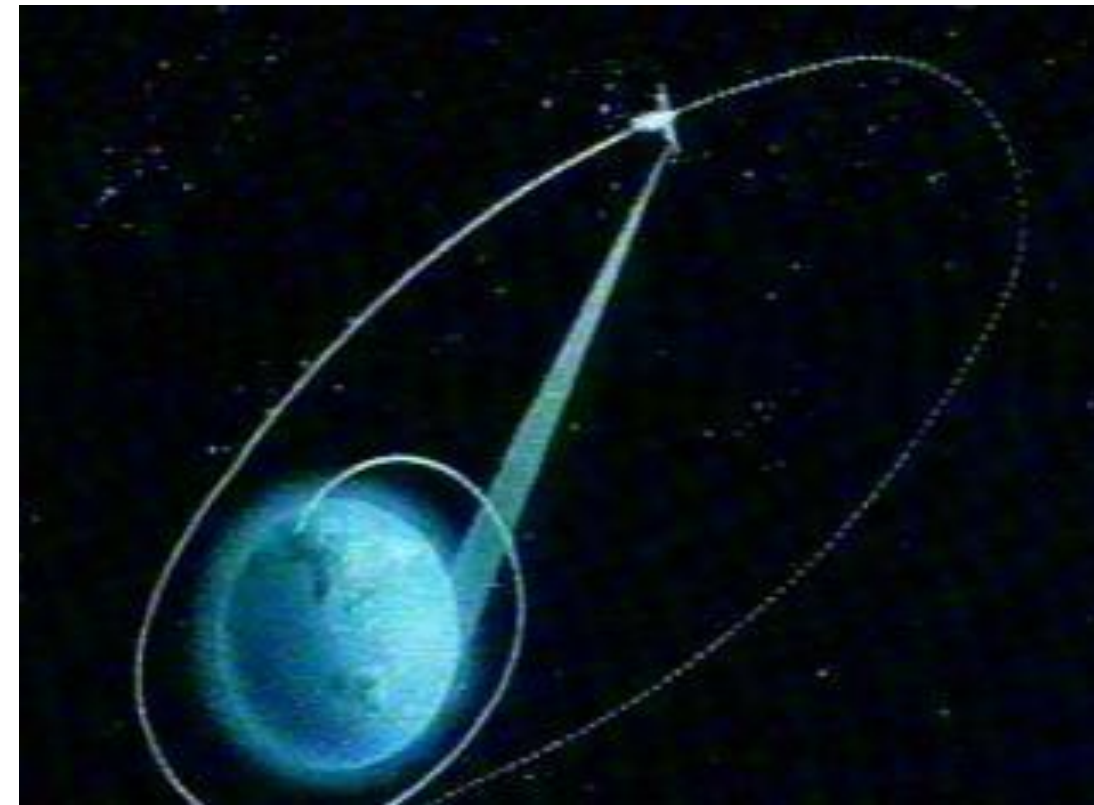
REVIEW DRAFT 2



Target orbit, mission

Meridian series of dual-purpose satellites is intended to connect marine and ice-reconnaissance air crews on missions in the Northern Sea Route region with land-based stations, and to expand the satellite telecommunications network in the northern regions of Siberia and Russia's Far East.

Meridian satellites, developed and manufactured by the Reshetnev Information Satellite Systems (Reshetnev-ISS), based in Krasnoyarsk, will be deployed to replace three telecommunications systems, the Molina-3, Molina-1 and Parus systems.





The object of
attention

Meridian-5
payload

'Fregat' stage

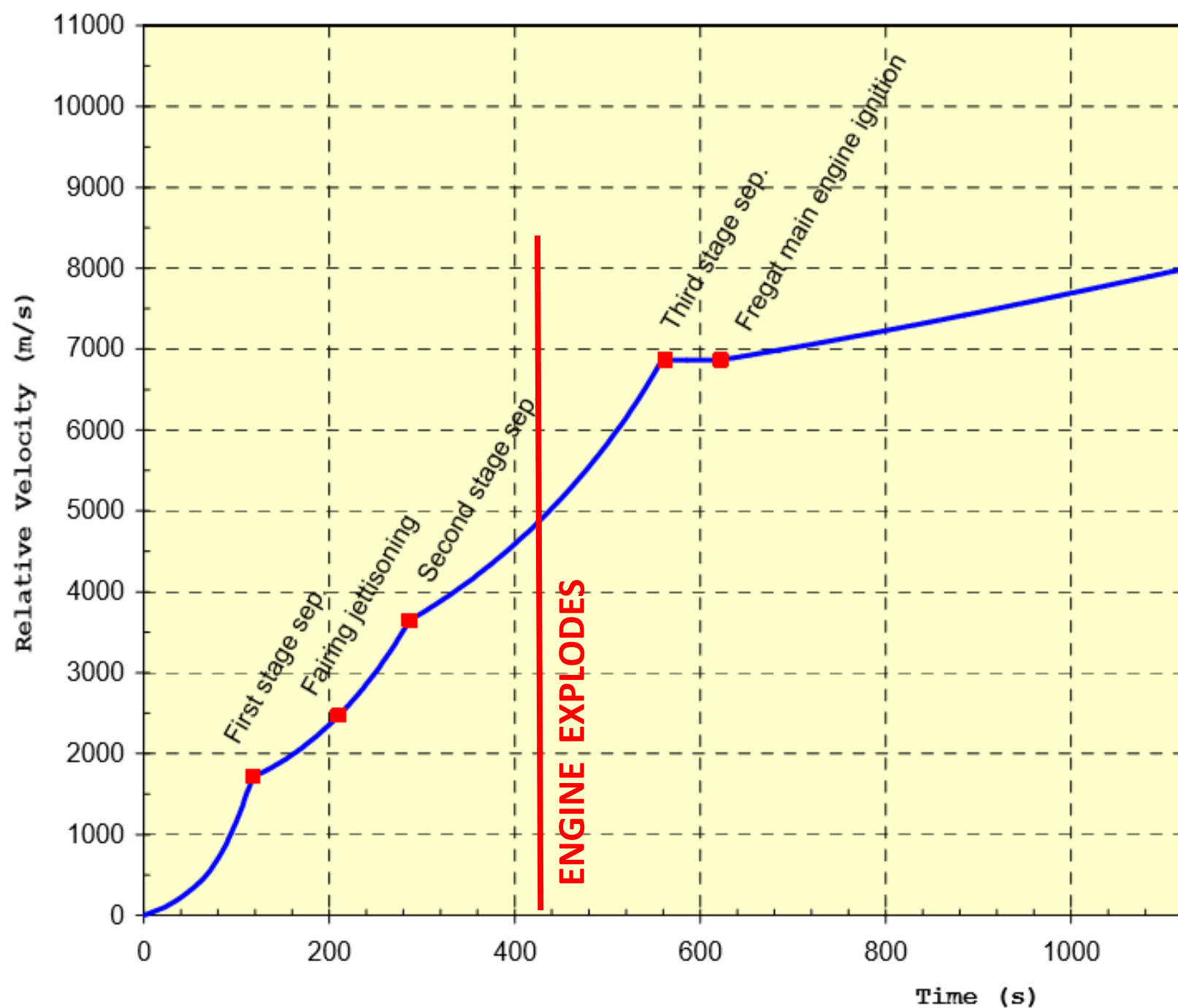
Standard 'Soyuz'
third stage

Launch plan

- According to the planned flight profile, first three stages of the vehicle would release the Fregat along with its payload on a ballistic trajectory around ten minutes after the liftoff. About 1640 km downrange.
- The Fregat would then [09:48 met] fire its engine for 13 seconds to enter an initial 203-kilometer parking orbit with an inclination 62.8 degrees toward the Equator.
- The first two satellites were launched on Soyuz-2-1a Fregat boosters, afterwards the improved Soyuz-2-1a Fregat-M took over. The fifth satellite was an exception, which used a Soyuz-2-1b Fregat-M booster inherited from another program. Launch site was the Plesetsk cosmodrome.

Estimated timeline of events

- All dates Dec 23, 2011
- Tyumen region sunset 1040 UTC
- Meridian-5 launch from Plesetsk 1208 UTC
- Airliner video of ascent begins 1213 UTC
- Airliner video of ascent ends 1215 UTC
- Third stage propulsive catastrophe 1215 UTC
- Observations in Urals/Tyumen locations 1216-1220 UTC
- Fireballs over Novosibirsk “1214” quoted, must be too early
- Debris impact SE of Novosibirsk uncertain
- Launch announced 1250 UTC
- Failure announced 1323 UTC



SITUATION EXACTLY
AT THE MOMENT OF
BOOSTER FAILURE

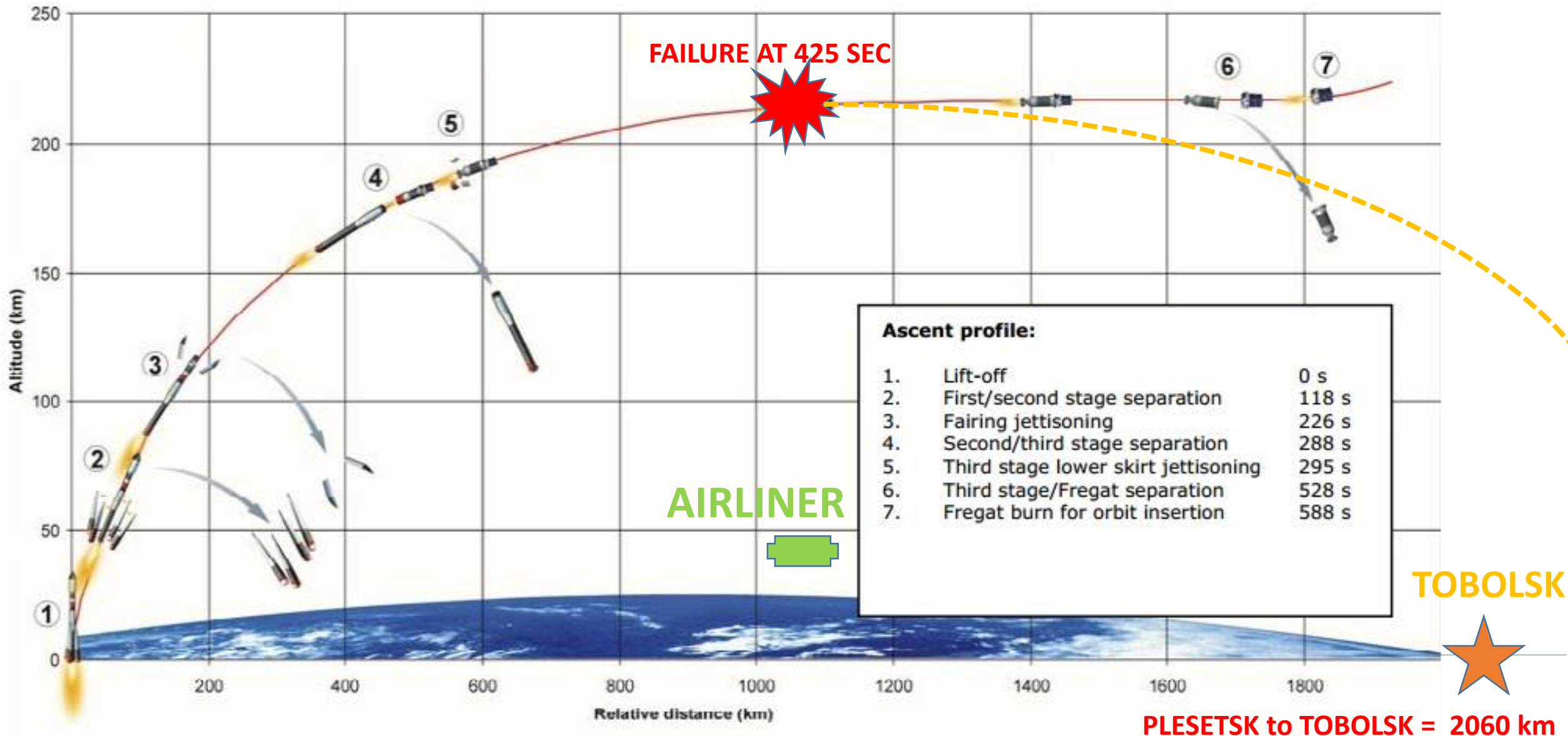
At 425 sec into flight,
altitude 180 km,
velocity 5050 m/sec,
range 1050 km

[http://www.arianespace.com/
wp-content/uploads/2015/09/
Soyuz-Users-Manual-March-2012.pdf](http://www.arianespace.com/wp-content/uploads/2015/09/Soyuz-Users-Manual-March-2012.pdf)

Anomaly event location, observation zones



Soyuz/Fregat ascent profile



Target of this report:

- Collect eyewitness reports and video/photographic records of the final minutes of the abortive flight.
- Unique illumination conditions [ground in darkness, sun below horizon BUT still in line-of-sight with objects of interest].
- Investigate how third stage propulsion failure and vehicle breakup annunciated visually to ground observers.
- **Assess practicality of reverse-manifestation of similar reports for other spacecraft observations to hypothetically characterize initiating onboard events in absence of official disclosure.**
- At Dec 23, 2011 1208 to 1218 UTC the ISS was over North America and not in position to allow serendipitous crew observation of the event.

Interfax reports 'Meridian-5' launch, then failure

- Russia launches communications satellite - Space Forces
MOSCOW. Dec 23, 2011 1250 GMT (Interfax-AVN) - Russia launched a communications satellite on Friday, the Space Forces said. The Meridian satellite was carried to orbit by a Soyuz-2 rocket in what was the 10th Soyuz-2 mission to start from the Plesetsk spaceport in the Arkhangelsk region, Space Forces spokesman Col. Alexei Zolotukhin told Interfax-AVN. Space Forces commander Lt. Gen. Oleg Ostapenko oversaw the liftoff of the Soyuz-2.16 with Meridian, which occurred at 1208 GMT.
- [failure occurred at 1215 GMT]
- Meridian satellite fails to reach planned orbit - source
MOSCOW. Dec 23, 2011 1323 GMT (Interfax-AVN) - The Meridian military communication satellite launched from Plesetsk, Arkhangelsk region, on Friday has failed to reach the planned orbit, a source in the space industry has told Interfax-AVN. "According to preliminary reports, there was a failure in the third stage of the Soyuz-2 launch vehicle. Hence, the satellite could not be placed in orbit," the source said.

REPORT BY ANATOLY ZAK

Analysis of available telemetry on the fuel line pressure before the entrance to the engine's injection system indicated a possible wall bulging of the combustion chamber No. 1, leading to its burn through and a catastrophic fuel leak. (RD-0124 engine has four combustion chambers).

The engine of the third stage fired as planned 288 seconds after liftoff and the Fregat upper stage started transmitting telemetry to NPO Lavochkin. Everything looked normal until the 425th second in flight, when the signal from Fregat suddenly weakened.

Available telemetry showed that in just five seconds, Fregat's gyroscopic sensors exceeded the maximum allowable deviation of 40 degrees from its prescribed attitude, indicating tumbling of the vehicle, likely resulting from an onboard explosion.

Analysis established that the pressure in the fuel line leading to the engine fell really quickly: first collapsing to 10 percent of nominal amount in just 0.5 second and then reaching an absolute zero in just 0.1 second.

<http://www.russianspaceweb.com/meridian5.html>

ГИБЕЛЬ «МЕРИДИАНА»



Russian graphic on 'loss of Meridian', with point 4 saying "region of fall of fragments of rocket and satellite Meridian"

THE OBSERVATIONS

- LAUNCH SITE IMAGERY
- PETROZAVODSK DISTANT VIEW OF ZIG-ZAGGED PLUME
- UNIDENTIFIED AIRLINER OVER PERM REGION
- FIRST CLOUD SIGHTINGS FROM URAL REGION
- DISSIPATING CLOUD SIGHTINGS FROM TYUMEN REGION
- FRONT ROW SEAT TO CLOUD FADE AND EARLY FIREBALLS
- NOVOSIBIRSK VIDEOS OF LATE FIREBALLS

Illumination conditions critical to visibility

[local time past sunset, but solar depression angle more important]

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8

Dusk launch observed from Petrozavodsk

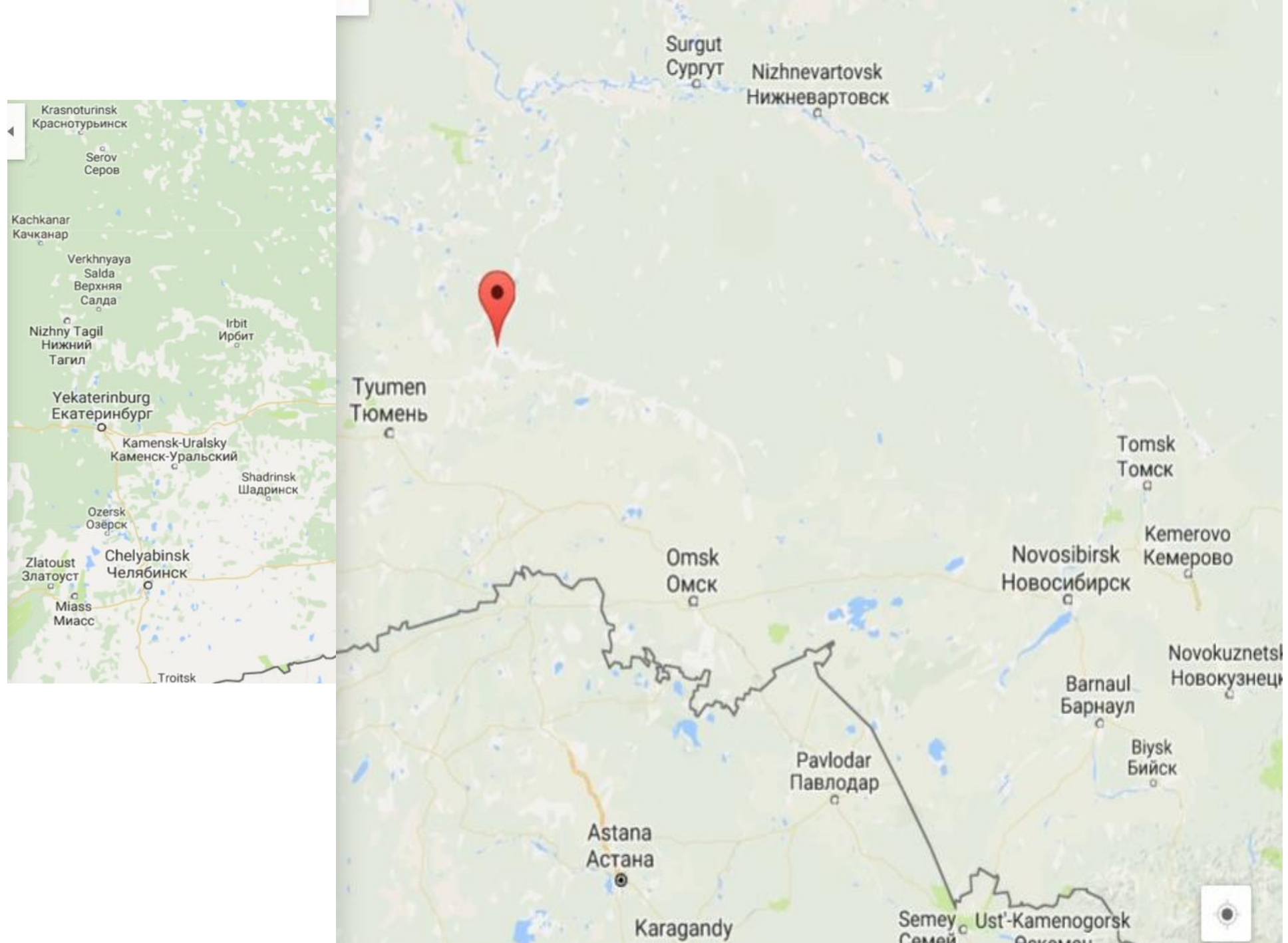


<http://www.astronomy.ru/forum/index.php?action=dlattach;topic=18118.0;attach=363477;image>

At website www.astronomy.ru/forum/index.php/topic,18118.1120.html

Map – fireball sightings

[in work]



AIRLINER VIDEO at 32,000 ft



<https://www.youtube.com/watch?v=ClkizsWAAdc>

ЗАПУСК РАКЕТЫ СО СПУТНИКОМ "МЕРИДИАН" НА БОРТУ



MERIDIAN LAUNCH CAPTURED FROM AIRLINER

Video 01:26 [flight time ~300 sec]

**FLIGHT TIME CAN BE
DETERMINED BY THE
OBVIOUS SECOND
STAGE SHUTDOWN
EVENT [CONFIRMED BY
PLUME SPREADING AT
KARMAN VACUUM
BOUNDARY AT 100 KM]**

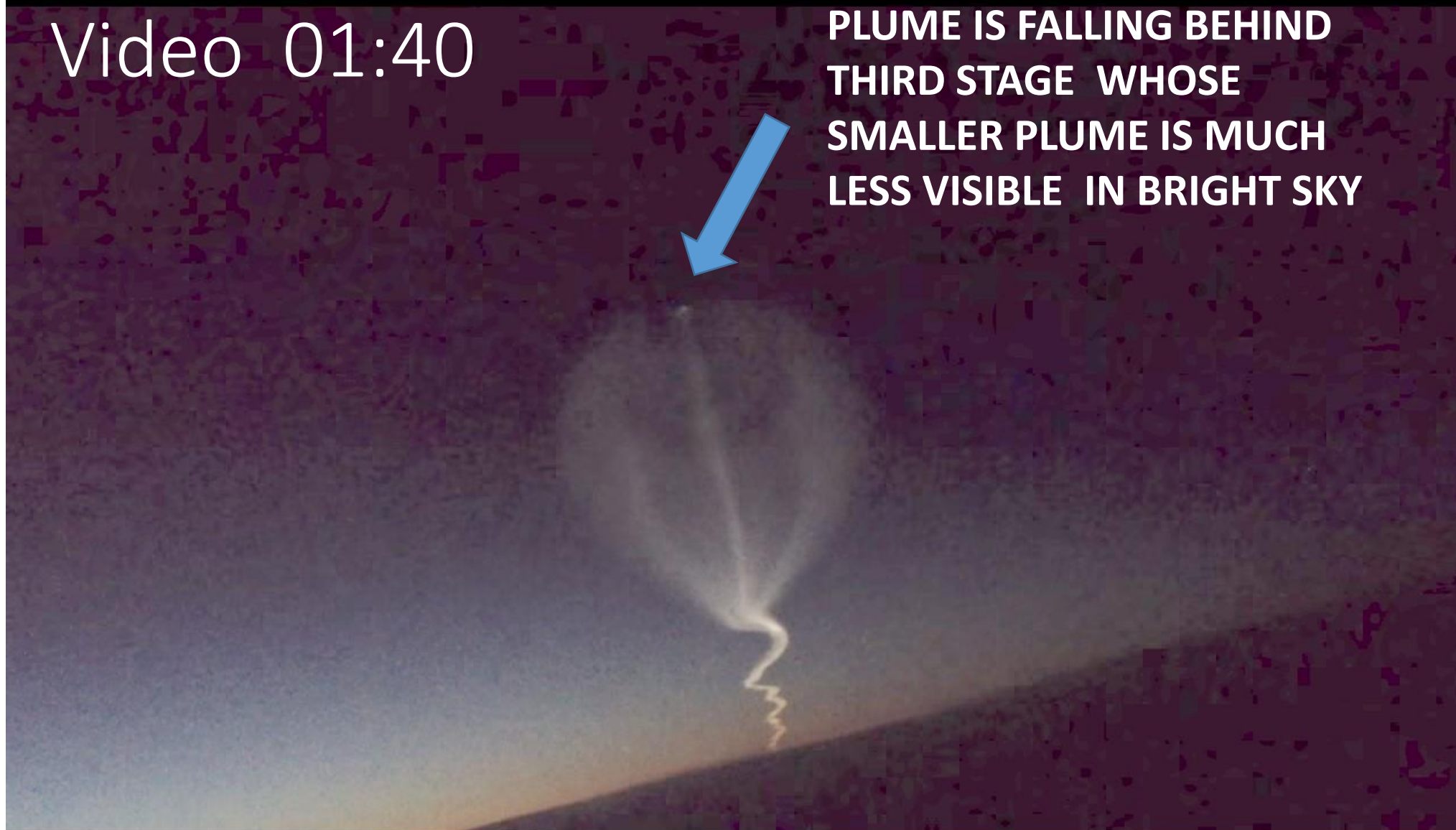


<https://www.youtube.com/watch?v=ClkizsWAAdc>

Video 01:40

NOTE SECOND STAGE

**PLUME IS FALLING BEHIND
THIRD STAGE WHOSE
SMALLER PLUME IS MUCH
LESS VISIBLE IN BRIGHT SKY**



Video 1:53 [overbrightening shows stage-3 plume]

ЗАПУСК РАКЕТЫ СО СПУТНИКОМ "МЕРИДИАН" НА БОРТУ



ЗАПУСК РАКЕТЫ СО СПУТНИКОМ "МЕРИДИАН" НА БОРТУ

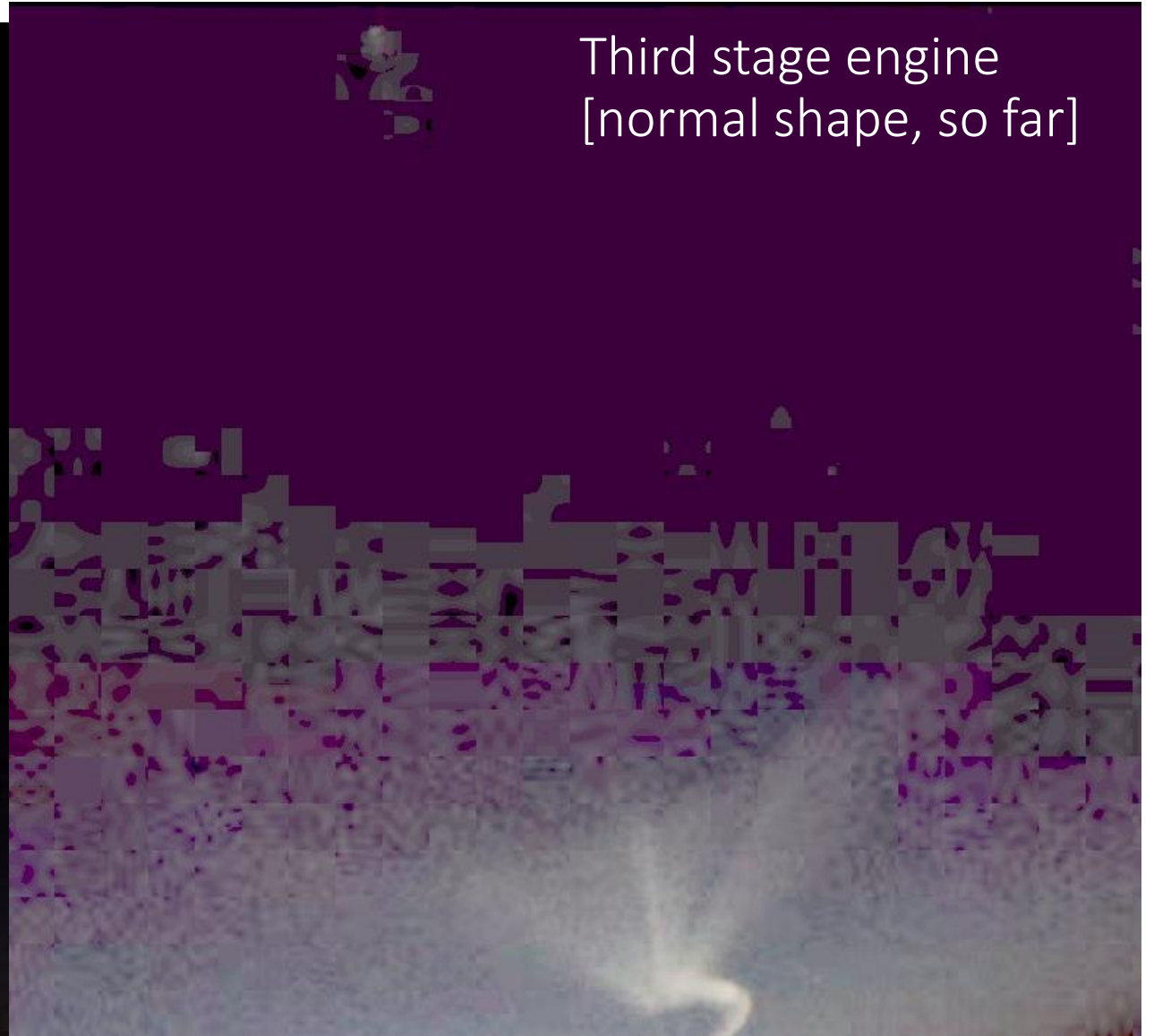
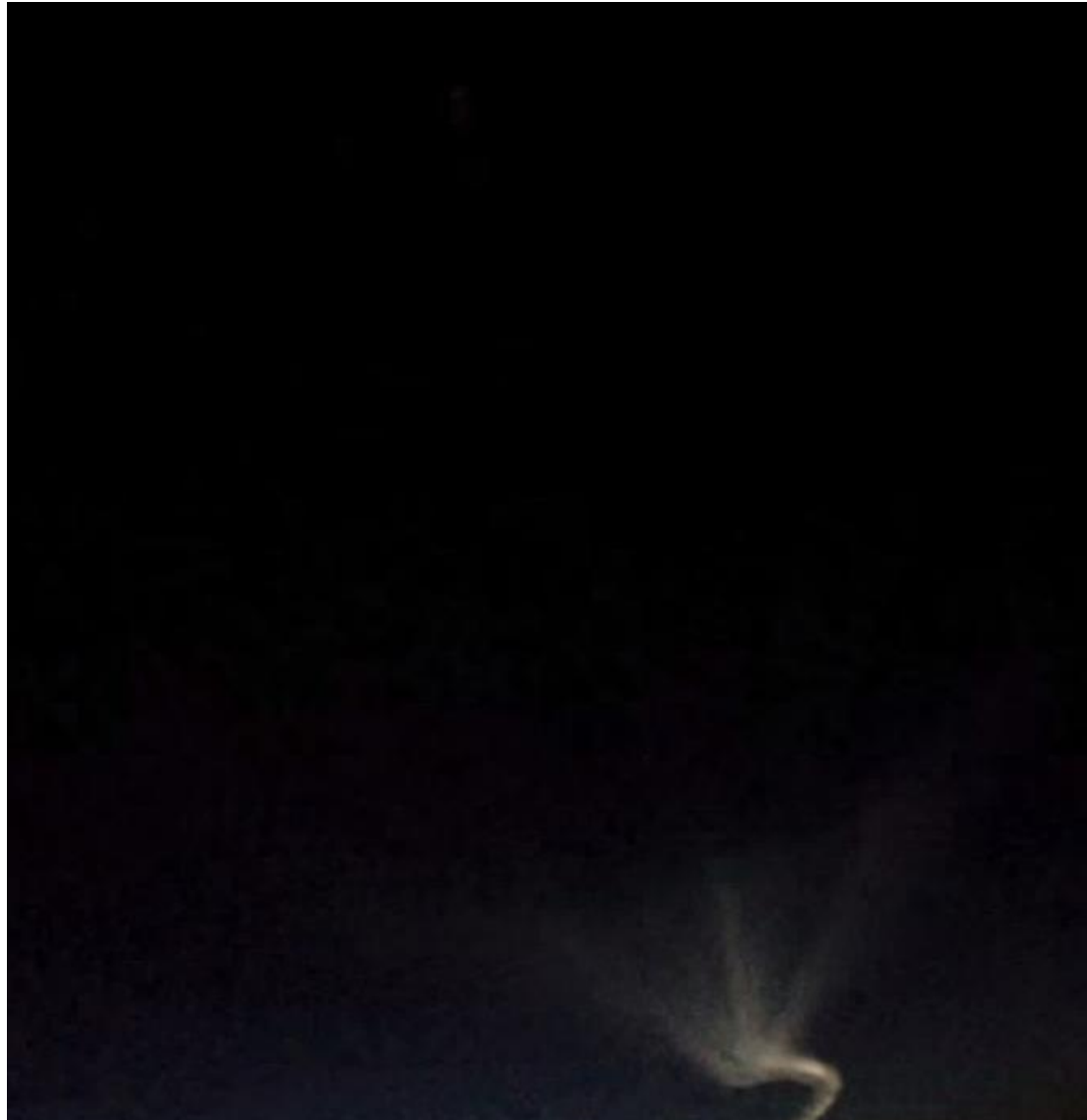


2:01

overbrightened



2:31 [4:05 flight time, 20 sec prior to failure]
end of video – overbright reveals third stage plume



Viewer comments

- [Ilya Matorin](#) -- Это не воздух уплотняется. Это так разлетается струя газов, которые выпускают ракетные двигатели. На этом этапе ракета летит уже в почти безвоздушном пространстве. *It's not a contrail. This is how the stream of gases that the rocket engines produce, separate. At this stage, the rocket already is flying in near vacuum.*
- [Bakhtiyar Hapiz](#) -- Я живу в Казахстане, видел 2 раза точно, 3 раз видел вот точно такой же как этот, а те два будто бы летели не вверх а на право. *I live in Kazakhstan, I've twice seen a point and thrice seen this here one, and they both seemed to fly upwards to the right.*
- [Денис Дорн](#) -- я тоже заснял этот запуск ракеты. *I also shot this rocket launch.*
- [My Shon](#) -- о стоп это точно то день ты снимал я ходил в этот день на брейк 2011 и в такой дате я его видел. *Exactly that day you filmed, that day I went on break in 2011 and I saw it.*
- [Кот Анатолий](#) -- Это у нас сейчас такие лётчики? *Не знают как выглядит полёт ракеты вне атмосферы? These are the kind of pilots we have now? Who don't know what the flight rockets outside the atmosphere looks like?*

AIRLINER SUMMARY

- **Запуск ракеты со спутником “Меридиан” на борту**
- **LAUNCH OF ROCKET WITH SATELLITE ‘MERIDIAN-5’ ON BOARD**
- <https://www.youtube.com/watch?v=ClkizsWAAdc>
- **Uploaded on Dec 24, 2011 // length 2:38 // 51,373 views**
- Posted by “Канал пользователя dems124” [only post ever made]
- съемка велась из кабины самолета на эшелоне полёта 320
- **filming was carried out from cockpit of plane on flight level 320 [32,000 ft]**
- Camcorder holder stopped recording for unknown reason, possibly because plume had faded – it had not risen too high for out-of-window visibility.
- Lost opportunity for recording, or simply observing for verbal description, of the engine explosion itself – by 20 seconds!
- Can we track down the airliner, see if mentioned in local papers?
- **?Aeroflot, Sibir Airlines, Russia Airlines, Utair and Transaero Airlines.**



<https://www.youtube.com/watch?v=TANopfLNKE>

Track on
the map

Multiple objects were observed

- From the start of the observation sequence, eyewitnesses' attention was drawn to the circular cloudlike mass with bright white blob in the center.
- On some very dark sky videos with stabilized camera, a small white dot appears below and behind the cloud moving with same speed and direction.
- It is usually too dim to show up on screen-grab [but see Zaytsevo video] yet can be visible when video is playing.
- Several posted comments indicate other investigators noted it also.
- Assuming explosion and third stage tumble [indicated by the tight spiral inside the larger expanding cloud], it is plausible that the Fregat/Meridian unit broke free of the third stage as it was venting and thrusting violently.
- Entry fireball videos from the Novosibirsk region DO clearly show a second fireball below and behind the main object as it disintegrates.
- The precise identity and status of the main object and its companion[s] are a fascinating subject for further analysis.

Weird misty cloud crosses sky [left to right]



Sites with videos/reports [uptrack to downtrack]

- Chelyabinsk
- Tryokhgorniy
- Miass
- Kamensk-Uralsk
- Kasli
- Snezhinsk
- Ozyorsk

- Tobolsk 58 n, 68 e gmt + 6? Sunset 1038 gmt
- Tyumen
- Zaytsevo ["Zaikovo"]
- Yarovoye

- Several videos with location not specified
- Reports: Omsk, Surgut, Uchaly, Yemanzhelinsk, Argayashcho

Challenges to analysis of videotape evidence

- Videos are often copied and recopied across youtube and rutube and elsewhere, with very little reliable data on original source.
- Contacting person of origin is rarely possible but worth the effort.
- Even stated locations can be estimates, or wrong guesses by secondary users. So seeking and recognizing internal clues is important.
- While exact date is often given, exact time is rare, and even then, is usually 'local time' which isn't helpful without knowing time zone.
- Azimuth/elevation to object of interest is rarely provided, making secondary assessment of this by geography or structures critical [best of all, occasional presence of celestial sphere markers such as recognizable stars, or the moon].
- Assessment of object angular motion and angular size variation is frustrated by random zooming by the original operator.
- Videos RARELY begin when object first appears [awesome exception is some dashcam videos where the entire clip can be edited before posting]. And they usually stop when visual object vanishes, even though overbrightening 'dark sky' could show more.

As the pieces of the booster and satellite travelled downrange at 180 km and dropping, how long would they have remained in sunlight?

Problem: Solve for XS.

Given $CR = CX = \text{earth radius}$

and $\angle PXT = \theta$ [sun depression angle]

Notice similar triangles, so

and $\angle PXT = \angle XQS = \angle PCX = \angle CRS$

Taking triangle CRS,

$\cos \angle PCS = CR / CS$

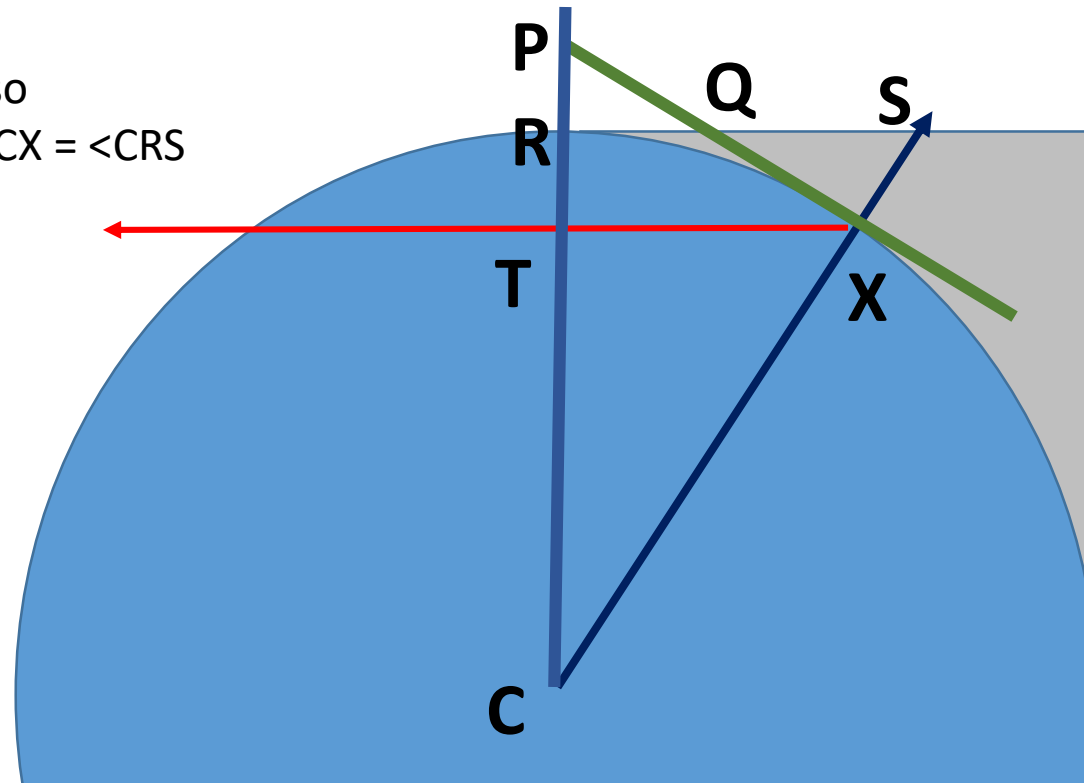
Hence

$CS = CR / \cos \theta$

So $XS =$

Radius $\times (1/\cos \theta - 1)$

Radius = 6371 km



TYPICAL 'SHADOW HEIGHT'
[Meridian-5 was at <180 km]

SNEZHINSK	6.2	38
TYUMEN	9.2	82
YAROVOYE	14.2	197

ATMOSPHERIC REFRACTION
WILL CREATE SOME SPILLOVER
SPREAD OF SUNLIGHT, LOERING
THE ILLUMINATED ZONE SOMEWHAT.

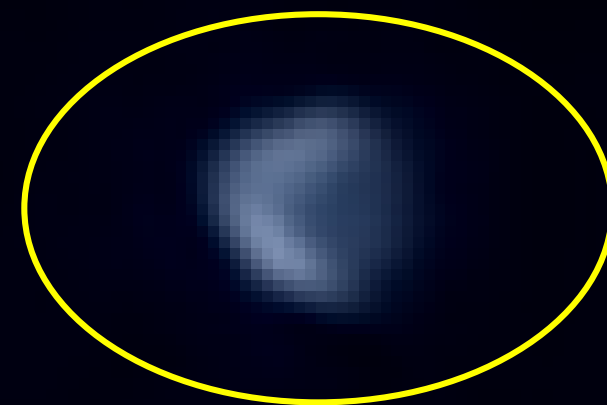
Падение спутника Меридиан, Челябинск.



Uploaded on Dec 24, 2011

OlegEstet -- 10,652 views

Chelyabinsk
dashcam



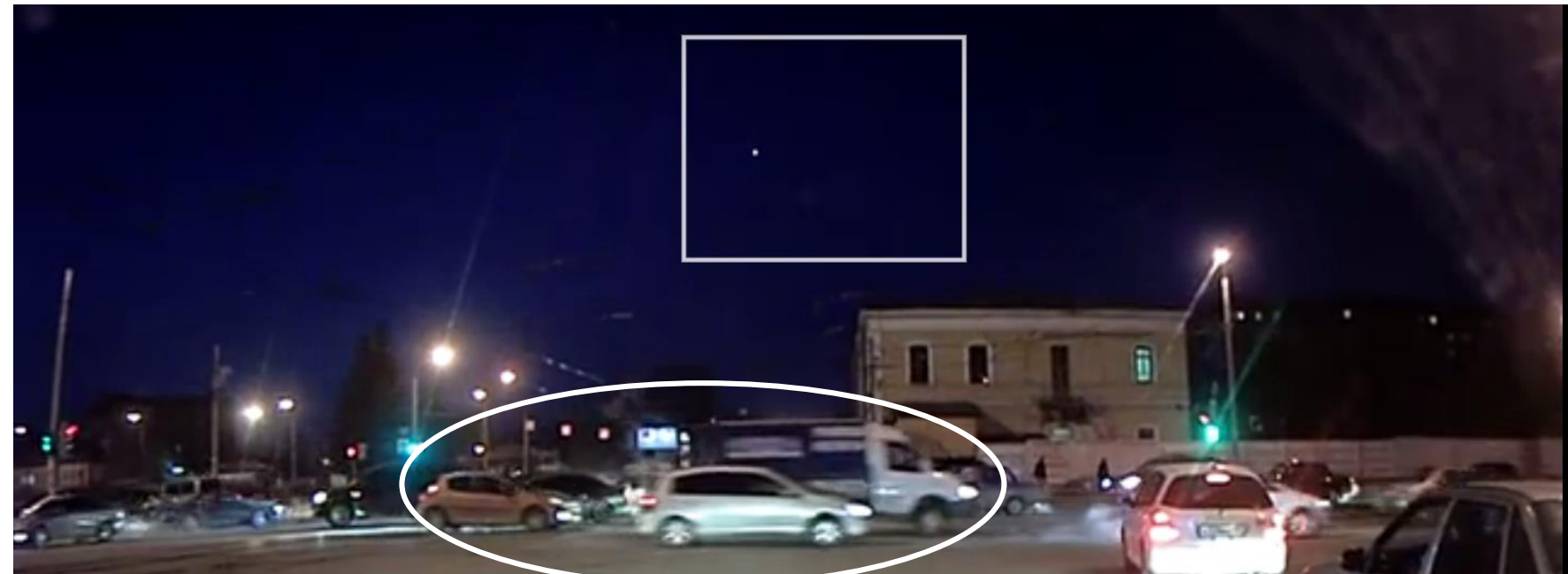
▶ ▶| 🔊 0:29 / 2:45

<https://www.youtube.com/watch?v=KsFhgQWpDnQ>



“OlegEstet” [joined youtube = May 5, 2010] started his dashcam video upload five seconds before the abrupt appearance of white blob [see motion of passing cars]. He continued in that direction 70 seconds as blob moved towards the right and expanded.

He provided no ‘time hack’ [a feature of most dashcams] and did not identify the road he was on.



Locational clues in the video?

02:00 into video, an illuminated monument (?) in a park....



IN WORK

<https://www.youtube.com/watch?v=KsFhgQWpDnQ>



“UFO in
Trekhgorniy”

нло Трехгорный



Варфоломей Батьк

Uploaded on Dec 23, 2011

61,289 views

Неопознанный объект, который растворился в небе.

<https://www.youtube.com/watch?v=P6L8QwUKJMw&feature=youtu.be>

НЛО с ореолом.mp4



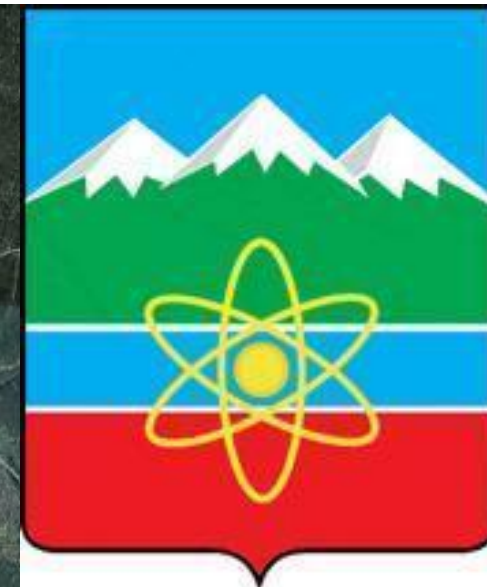
CAN THIS VIDEO
TELL WHAT
DIRECTION THE
OBJECT WAS
SEEN IN?



0:00 / 1:49

<https://www.youtube.com/watch?v=J8ro1prTMns>





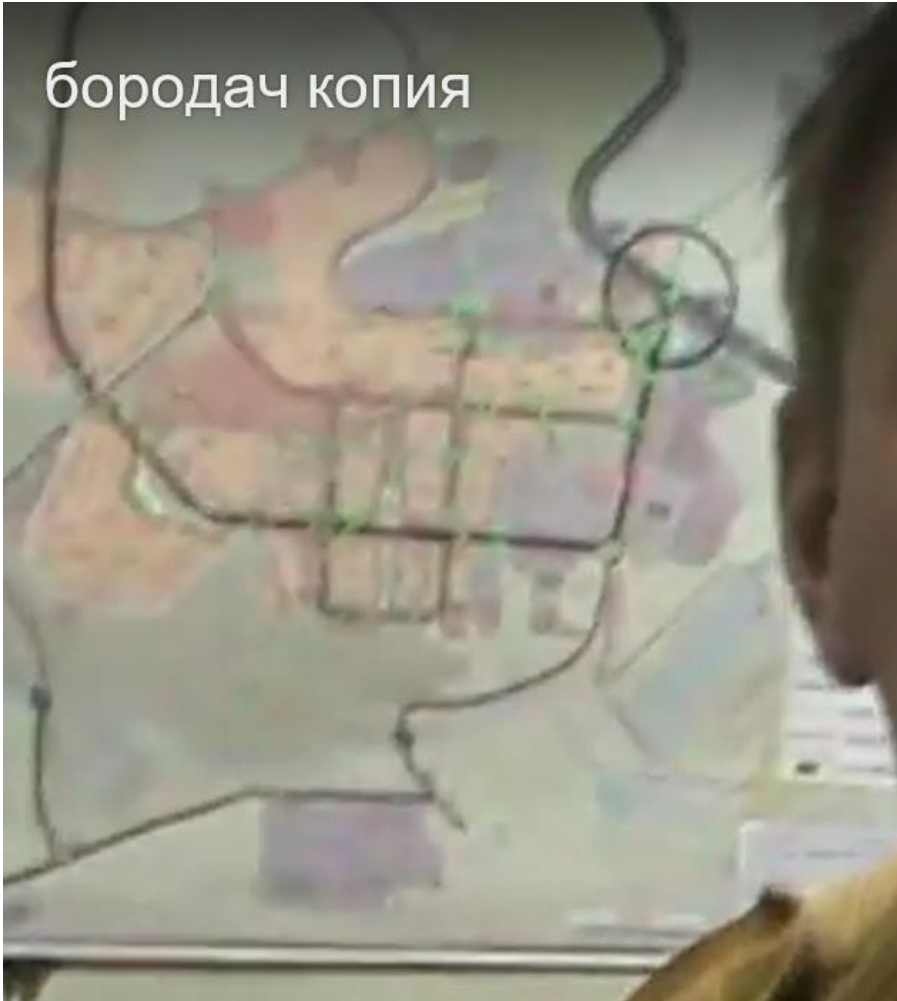
54°48'00.0"N 58°27'00.0"E

Tryokhgorniy

Where was the video made from, and what direction was it facing?

“Closed City” – so Google map “Street View” not available

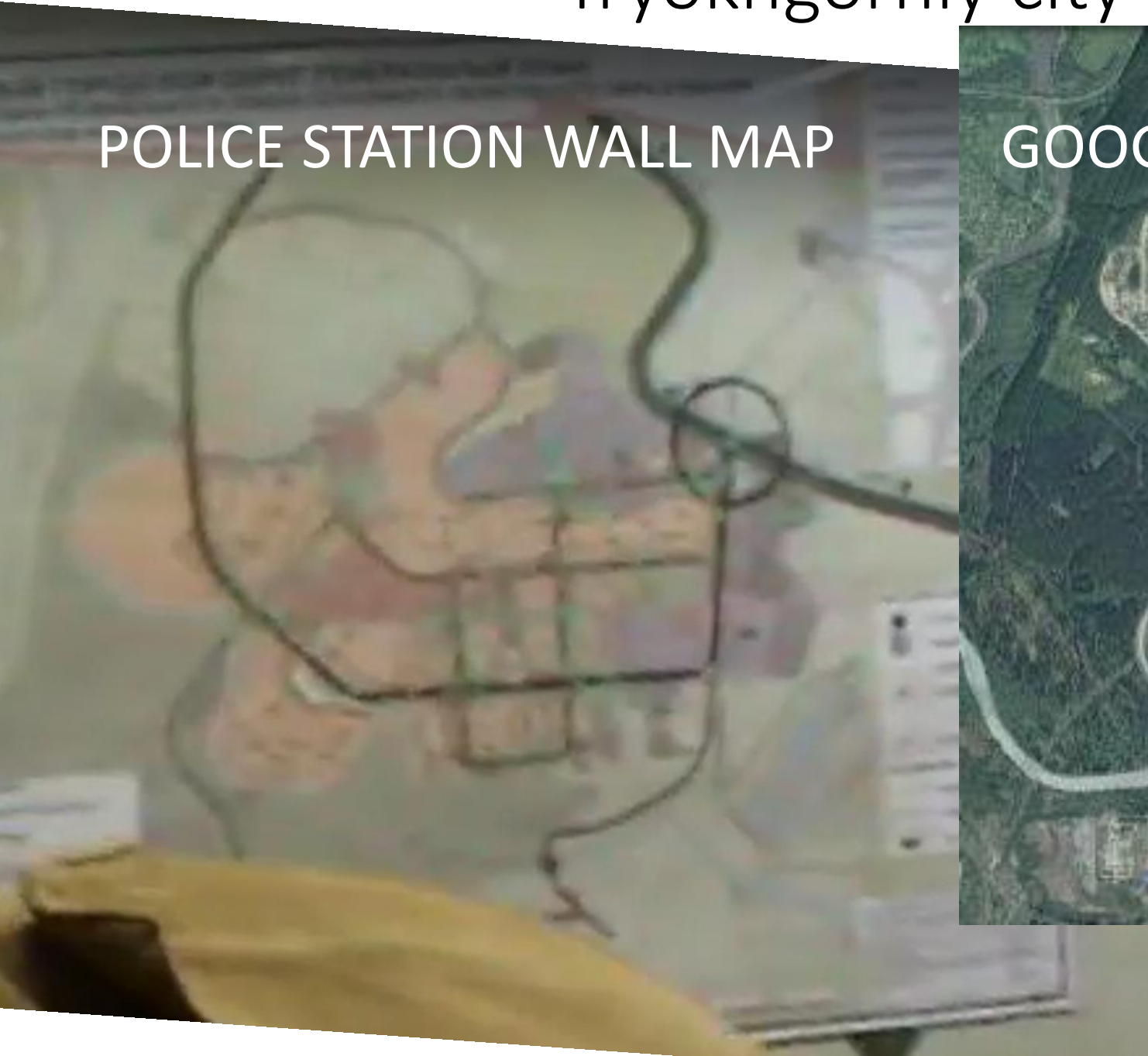
The poster of the 'UFO video' was Barfolomey Batyk [Барфоломей Батък], who posted a handful of other local sequences, including a bizarre interview with a drunk driver in the local police station. On the wall was a map of the city center, which allowed verification that Batyk really WAS in Tryohkgorniy so the scenes were reliably located.



<https://www.youtube.com/watch?v=1-gyXTxmM-Y>

Tryokhgorniy city central district

POLICE STATION WALL MAP



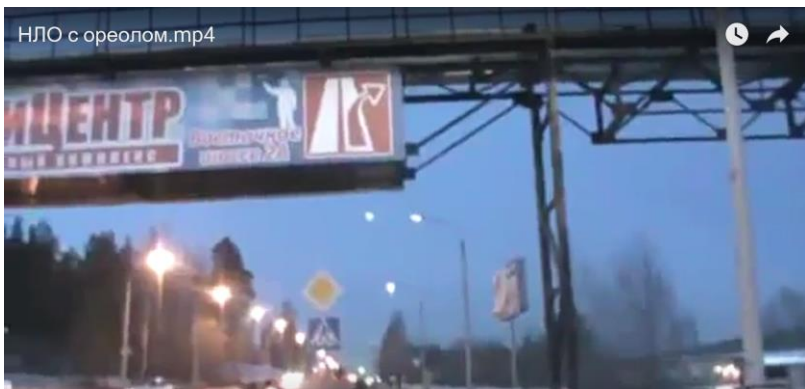
GOOGLE-EARTH OVERHEAD PHOTO



VALIDATES MERIDIAN-5 VIDEO LOCATION

Tryokhgorniy

Search major roads for any and all highway-spanning sign structures similar to one shown in video, relying on shadow cast on road to determine full shape



SHADOW SUGGESTS SIGN HANGING
DOWN FROM TRANSVERSE GIRDERS



One of two *possible* candidates
located – road azimuths are
000 & 008 deg [mostly north].

SIGN [“- CENTER”] INDICATES IMMEDIATE
RIGHT TURN INTO COMMERCIAL FACILITY [THIS?]



VIEWERS' COMMENTS

- Олег Вишняков -- я с отцом тоже наблюдал непонятные объеты над городом что именно это никто не знает а гадать бесполезно **[I watched with my father, baffling objects over the city that no one knows, but guessing is useless]**
- Виктория Жильцова -- Видела тоже самое в Миассе. Только оно в скоре исчезло но осталось тучка в виде спирали, которая сама вскоре быстро исчезла! **[I saw the same thing in Miass. Only it quickly disappeared but left a spiral-form cloud, which itself disappeared pretty quickly!]**
- Valeriy Tyomniy -- Это и в Тюмени было, а также в Каменс-Уральском. Насчет спутника наиболее вероятно, так как скорее всего спутник тупо летал по орбите очень близко к Земле, поэтому его и видели с разных точек Земного шара. **[This was in Tyumen and in Kamensk-Uralsky. As for the satellite, most likely, it was likely imprudently flying in an orbit very close to the Earth, that's why it is seen from different points on the globe.]**

More youtube comments on Tryokhgorniy

- ХаНТНаХ -- Идентичная х-ня была над челябинском!!!! мы как раз в машине ехали домой. было уже темно. я зафоткал но фотки УГ получились([Identical X-thingie was over Chelyabinsk !!!! We were just in the car driving home. It was already dark. I snapped photos but they didn't turn out [sad]]
- Сергей Лебедев -- В городе Омске такая же фигня летала в тот же день, в центре города! [In the city of Omsk, the same garbage flew the very same day, in the city center!]
- Background on "Secret City" Tryokhgorniy -- As a result of consolidation of Rosatom's nuclear weapons activities, the Instrumentation Factory appears to be one of two remaining sites (along with the Elektrokhimpribor Combine) where Russia carries out assembly & disassembly of warheads.



падение спутника



Канал пользователя vasgannn

Uploaded on Dec 23, 2011 10,628 views

нло в Миассе

THE FALL OF A SATELLITE

MIASS and vicinity

<https://www.youtube.com/watch?v=Lm5gCvX7mjU>

And <https://www.youtube.com/watch?v=Lm5gCvX7mjU#>

...and more comments

- Bennytrue == я в Сургуте его видел тож 23 дек в ~ 18:20
[I saw it in Surgut also December 23 at about 18:20]
- Эдуард Шарипов == Я то же явление снимал в Учалах (южнее Миаса в 100 км) около 6-ти часов вечера. Объект двигался с северо-запада. На телефон записал, но скинуть не получается.
[I watched the same phenomenon in Uchaly (100 km south of Miass) about 6 o'clock in the evening. The object was moving from the northwest. I got it on my phone, but wasn't able to record it]

23.12.2011. News report, regional summary Падение спутника "Меридиан" Очевидцы Fall of satellite 'Meridian' eyewitnesses



- <https://www.youtube.com/watch?v=VPcZ4GTG9q4>
- And <https://www.youtube.com/watch?v=VPcZ4GTG9q4>

By Ansiivan
19,880 views

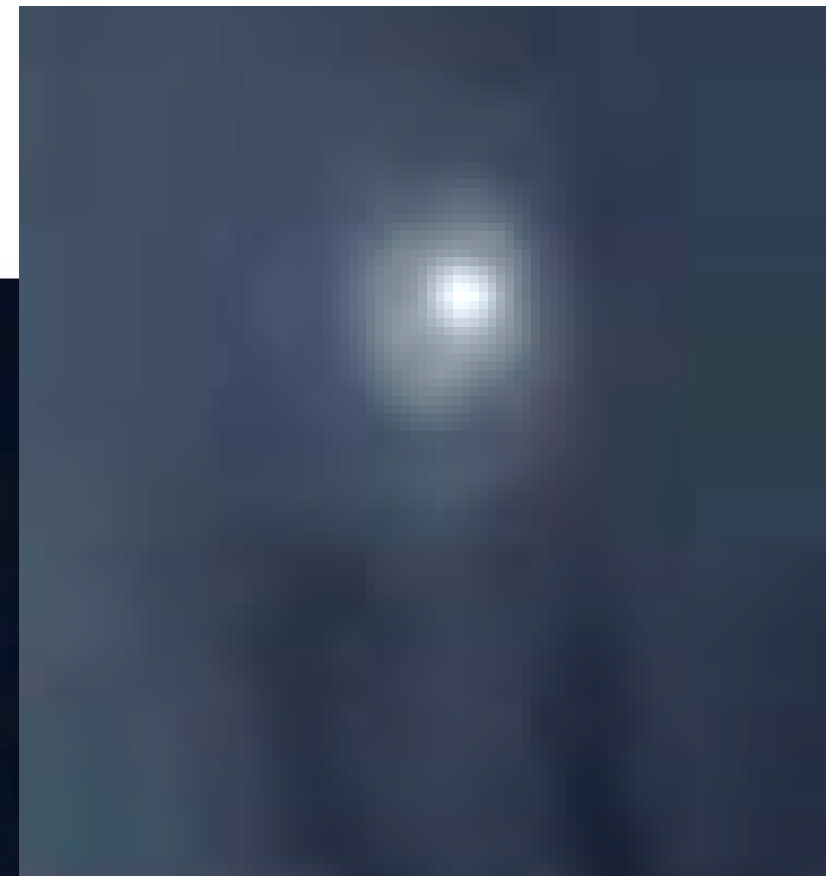
<https://www.youtube.com/watch?v=VPcZ4GTG9q4> comments

- Rosshhik -- Мда что то не похоже правда на спутник, как всегда чушь заставляет нас правительство хавать
Hmm something doesn't seem to be true on the satellite, as always the government offers us drivel.
- PRO_FV -- видео - подделка. записи любителей вмонтированы отдельно. то, что летело по небу, не имеет отношения к упавшему в дом шару.
The video was fake. The recordings of amateurs are assembled separately. The thing that flew across the sky has no relation to sphere that fell on the house.
- Bulbanak Sever -- Это самая настоящая ракета. Я служил в той части с которой был этот запуск и видел как ракеты выглядят в полёте. Так что верьте или нет, но это правда.
This is a real rocket. I served in the unit with which was this launch, and saw how the rocket looked in flight. So believe it or not, but it's true.

Residents of Chelyabinsk region saw a “lunar” UFO in the sky

Жители Челябинской области увидели в небе «лунный НЛО»

http://www.dostup1.ru/society/society_35670.html 26 декабря 2011 года, 13:16



http://www.dostup1.ru/netcat_files/Image/2011/12/26/nlo_23_12_chelyabinsk.jpg



Posted Dec 26 by
[Канал пользователя
Yakutka74](#)
[only posting ever]

ONE COMMENT
[Кефир Альдегиды](#)

ложь, это не спутник
LIE, THIS WAS NO SATELLITE

Падение спутника Меридиан, Челябинск, 23.12.11 г. в 18:17

<https://www.youtube.com/watch?v=eoI0AJGZbXk>

UFO, CHELYABINSK 23.12.2011

Great views of
the viewers too!!



НЛО, Челябинск 23.12.2011.mp4
[evin GUMa](#) Published on Mar 15, 2012 190 views

<https://www.youtube.com/watch?v=ltrQH34SKOQ>

And

<https://www.youtube.com/watch?v=GO8oxalDToS>



More views of viewers [apparently facing north]



3:23 into video – stable zoom into central blob

[left] image as recorded

[right] brightness enhanced



Dark sky image, brightened, suggests faded cloud



Viewer recounts detailed observations GET TRANSCRIPT!!

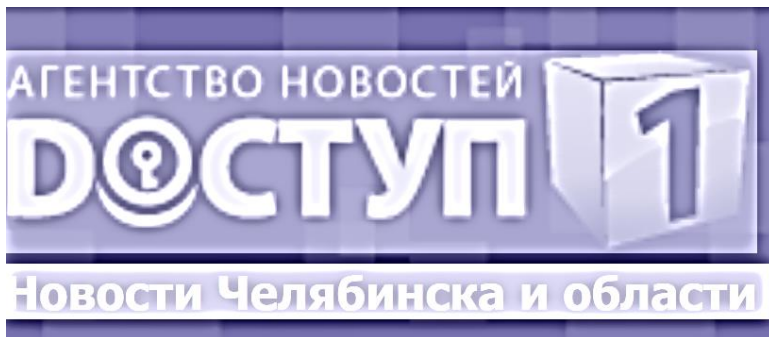
<https://www.youtube.com/watch?v=ltrQH34SKOQ>

НЛО, Челябинск 23.12.2011.mp4



No information on
photo source, no
follow-up stories, no
reader comments

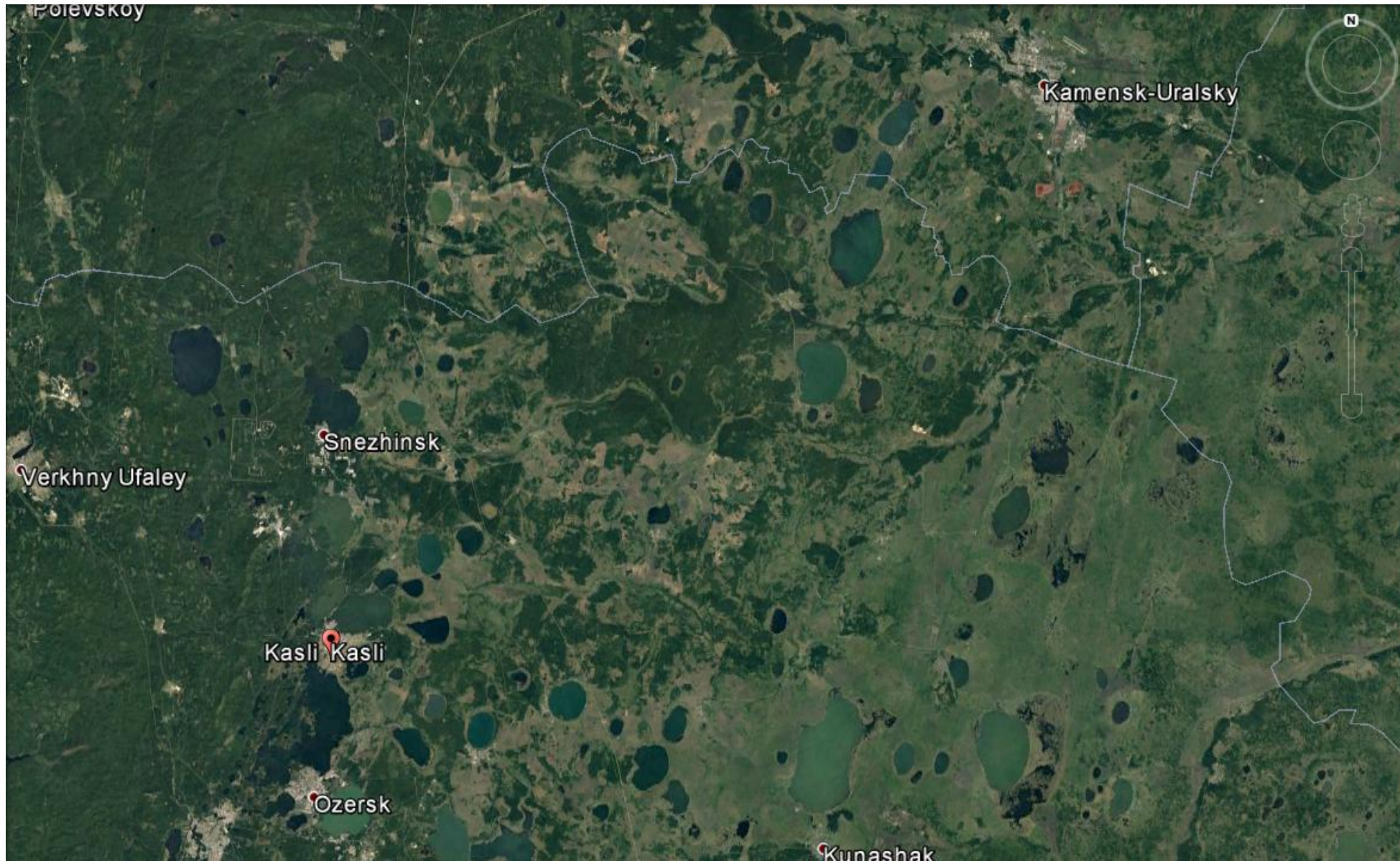
**DOSTUP ["ACCESS"]
NEWS AGENCY**
CHELYABINSK CITY &
REGIONAL NEWS



http://www.dostup1.ru/netcat_files/Image/2011/12/26/NLO.jpg



Kasli, Ozyorsk, Snezhinsk, and Kamensk-Uralskiy



KASLI, CHELYABINSK REGION



<https://youtu.be/GEJqFEXzjMw>

“НЛО” in Chelyabinsk region, Kasli city

- Uploaded by '[1441016](#)' [only upload] on Dec 23, 2011, 8,005 views
- Челябинская область, г. Касли. 23.12.2011 года около 18 часов на небе в течение нескольких минут наблюдалось быстрое движение светящихся объектов. **About 6:00 pm there was a rapid movement of luminous objects for a few minutes in the sky.**
- [Ansiivan](#) -- Часто потому что ракеты из Плесецка, я хотел понаблюдать сегодня но погода не дола. **Often because of rockets from Plesetsk, I wanted to watch today but the weather didn't cooperate.**

UFO OVER KAMENSK-URALSK



НЛО НАД КАМЕНСКОМ-УРАЛЬСКИМ
23.12.2011

[Канал пользователя alexk2145](#)

Uploaded on Dec 23, 2011

9,491 views

SAME VIDEO IS ALSO
ELSEWHERE LABELED
'CHELYABINSK REGION'

Kenguru1234 == "Это падение
спутника. Тоже его видела."

"It's the fall of a satellite. I saw it too."

<https://www.youtube.com/watch?v=0uoceyX-EPg>



The UFO was observed in territory of all Chelyabinsk area. The object had the spherical form, a bright red shade and silently flied at height about 100 metres.



56.085 N, 60.7314 E

Time 12:13 UTC,
Sunset 11:24 UTC
Sun az 236.2,
el -06.2

UFO - a fiery sphere over the city of Snezhinsk,
Russia on December 24, 2011.



myunhauzen74

https://www.youtube.com/watch?v=V__jjZ0gMzA

Snezhinsk comments

- Pastorkin - походу Шаровая молния, но Нло видел в районе леса на Феоктистова, который в сторону горы Лысой идет, 3 тарелки белого цвета
Like ball lightning, but I saw the UFO in the area of the forest at Feoktistova, which in the direction of Lysiy Mountain goes, 3 saucers of white color.
- Delrick Bellator -- Откуда у этого "спутника" идеальная круглая форма, и облако, которым оно покрыто - что это? Нам мазы дешевые кидают, а мы верим!
From where did this "satellite" get its ideal round shape, and the cloud which covered it - what was it? They throw cheap excuses at us and we believe them!

Article by Дарья Поникарова [Darya Panikarova]

- «Над городом были замечены светящиеся сферы, которые летели небыстро и параллельно местности. Объекты, явно не похожие на самолеты и другую планирующую технику, возникли моментально над озером, а затем отправились в неизвестном направлении», – пишут очевидцы из Озерска.
- “Glowing spheres have been seen over the city, that flew slowly and parallel to the ground. The objects, explicitly not related to aircraft and other flying devices, swooped momentarily over the lake [Lake Irtyash, north of the city], and then set off in an unknown direction,” wrote eyewitnesses from Ozyorsk [55.75° 60.72E, adjacent to Kyshtym]

EVENING LAKESHORE VIEW IN OZYORSK [ONLINE STOCK IMAGE]

Until 1994, it was known
as **Chelyabinsk-65**. See
<http://kukly-bratc.ru/?p=3570>



Eyewitness accounts in Ozyorsk [multiple objects]

- 26.12.2011 // **НЛО над Озёрском** // <http://lentachel.ru/news/2011/12/26/nlo-nad-ozerskom.html>
- Как сообщает сайт www.ozersk74.ru, это было белое облако шаровидной формы с яркой точкой в центре шара. Предположительный размер яркой точки - 20 метров в диаметре, размер облака где-то в 10-15 раз больше яркого центра. Облако двигалось одновременно с ярким центром без отставания и завихрений по траектории движения.
- **According to www.ozersk74.ru, it was white cloud of spherical shape with a bright dot in the center of the ball. The estimated size of the bright point was 20 meters in diameter, the size of the cloud somewhere in the 10-15 times more than the bright center. The cloud move simultaneously with the bright center without reversal or wavering on the trajectory of motion.**

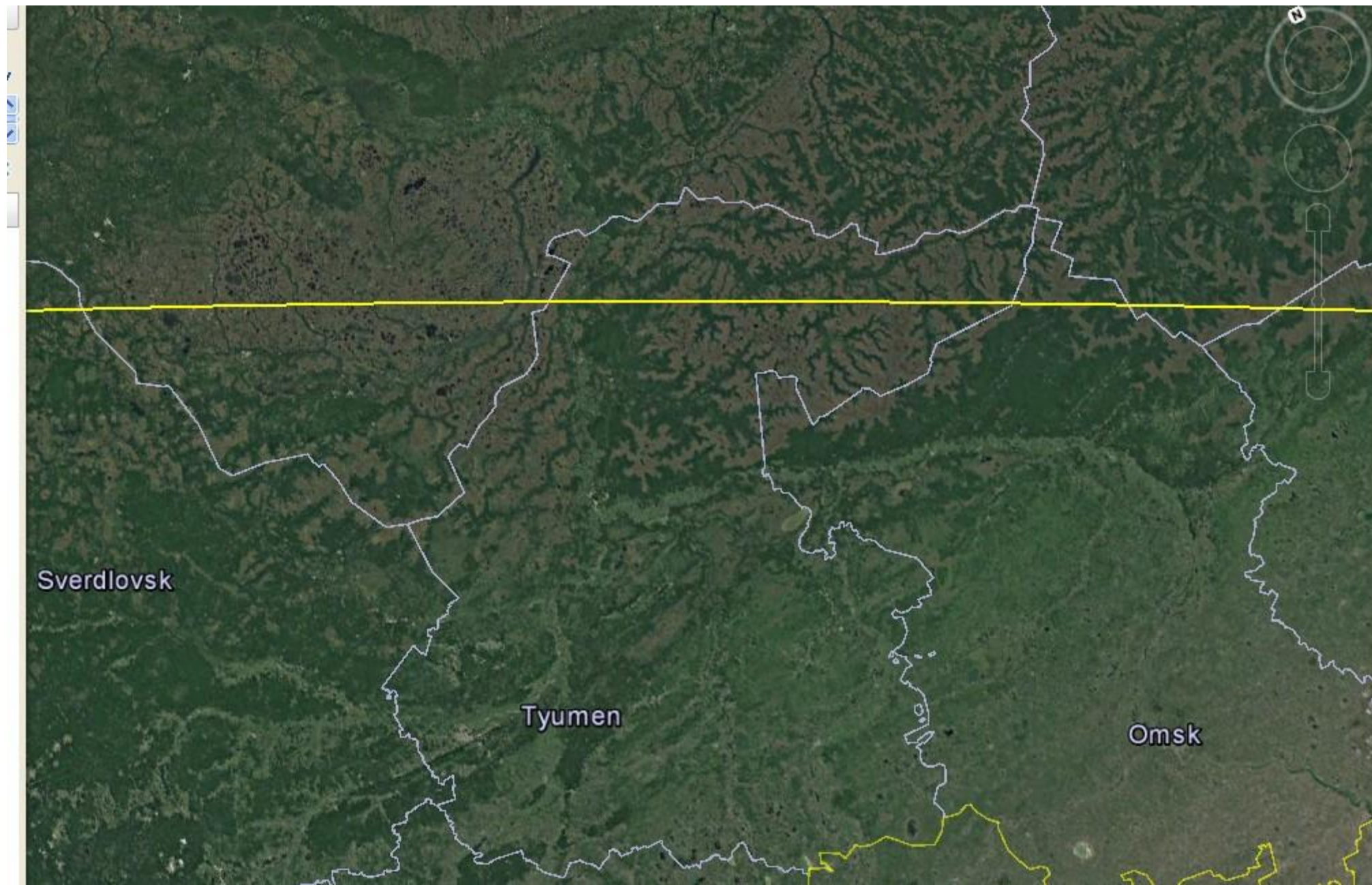
«Стали свидетелями появления в вечернем небе НЛО или чего-то очень похожего. Выглянув в окно (окно - в сторону строящегося дома Иртяшская, 13), увидели на небе движущийся объект. За ним - еще один, поменьше и плохо различимый, который, к тому же быстро пропал из виду (или угас). Успели сделать пару снимков на "мыльницу". На снимках наиболее видимый объект. Через 2-3 минуты объект пропал», - пишут на форуме местные жители.

- **"Became visible the emergence in the evening sky of a UFO or something very similar. Looking out the window (the window faced a construction building on Irtyashkaya 13), I saw in the sky a moving object. Behind it is another, smaller and poorly visible, which quickly disappeared (or was extinguished). I managed to take a couple of shots of the "dish". The pictures show the most visible object. After 2-3 minutes, the object disappeared," local residents wrote in the Forum.**
- «Объект летел от нас, вернее их было даже два, засняли один, но что интересно, на видео объектов не видно. Второй шар потом разделился на три, которые разлетелись в разные стороны», - пишет еще один пользователь Сети.
- **The object flew away, rather there were even two, I caught one, but Interestingly, on the video the objects are not visible. The second ball then split into three, which flew in different directions," another user writes on the network.**

More Ozyorsk comments [December 26]

- 20:30 -- Наблюдали то же самое, примерно в это же время в Еманжелинске, эта сфера летела очень низко над домами, и не говорите , что это спутник. **We observed the same thing at about the same time in Yemanzhelinsk, it was flying very low over houses, and do not say that it was a satellite.**
- 09:38 -- Я тоже видела, мы с детьми просто замерли от изумления, следили пока оно двигалось, как появилось не видели, ну и непонятно что это было, хотя было очень близко от нас... **I also saw it, me and my children just froze in amazement, we followed it while it was moving, how it showed up we didn't see, not understanding what it was, although it was very close to us.**
- 21:50 -- Тоже самое было и в Аргаяше, и тоже в 18-00-19-00. Появилось из не откуда и так же исчезло. **The same thing happened in Argayash, and also between 18:00 and 19:00. It showed up out of nowhere and disappeared the same way.**

TYUMEN, ZAYKOVA, TOBOLSK, YAROVOYE



Local Tobolsk photographer Ivan Sidorenko makes superb steady photo showing spiral heart of cloud



**В небе над Тобольском
пролетело НЛО?**

**Did UFO fly through
sky over Tobolsk?**

<http://www.kp.ru/daily/25809/2789215/>

Near Tyumen, an experienced astrophotographer gets good video of the spherical cloud dispersing, along with views of the smaller companion

Time 12:14 UTC,
Sunset 10:57 UTC
Sun az 240.5,
el -09.2



0:16 / 1:56



Запуск спутника Меридиан

[Launch of Meridian satellite]

kosmopoisk72@mail.ru



Vitaly Ugreninov



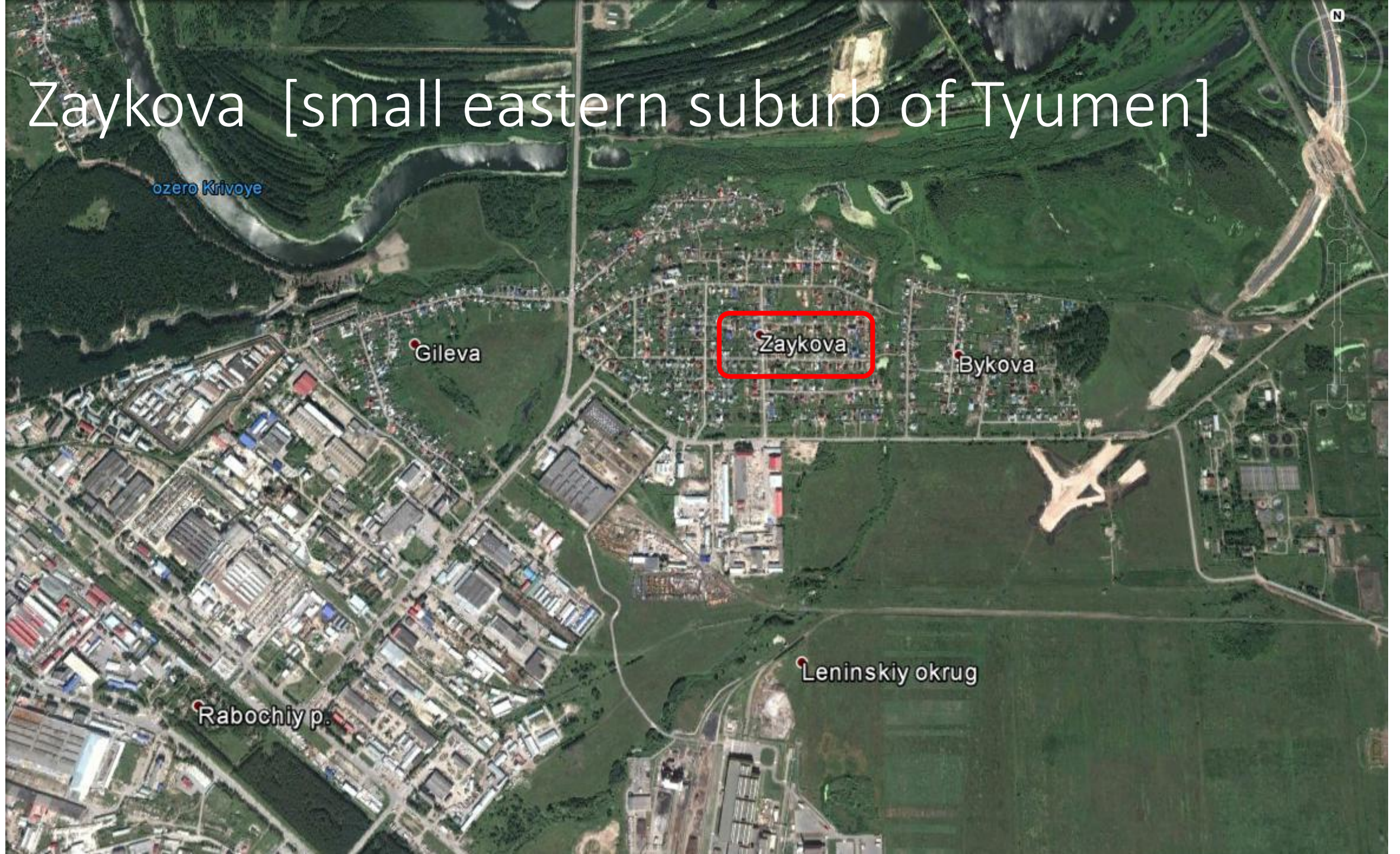
Subscribe

31

<https://www.youtube.com/watch?v=TS1EHFXbqN4>

663 views

Zaykova [small eastern suburb of Tyumen]



Запуск спутника Меридиан

Shows initial halo shoved behind, dissipating

вид из села Зайцево Тюм. области.

<https://www.youtube.com/watch?v=TS1EHFXbqN4>

SAME AS BELOW BUT OVERBRIGHTENED



IMAGES AT 10 SECOND INTERVALS



Email: OOPS, WRONG LOCATION! 57°07'27.5"N 65°40'09.6"E 57.124303, 65.669323

нет, это рядом с Тюменью. Только не Зайцево, а Зайково. Видимо кто-то перепутал)))

No, it's right next to Tyumen. Only not Zaikovo but Zaytsevo. Apparently someone messed up)))

TRAILING COMPANION HOLDING POSITION



Zaytsevo video shows companion object, same direction and speed as cloud

UFO Russia December 23, 2011



LOCATION UNKNOWN



1:16 / 1:17

https://www.youtube.com/watch?v=RdbCO4f5_xM





LOCATION
UNKNOWN

Halo cloud almost gone,
then white dot fades and
vanishes, gone for last
five seconds of video --
entering Earth's shadow?

<https://youtu.be/XqaUqfUWAeU?t=17>

Mute



0:12 / 1:02

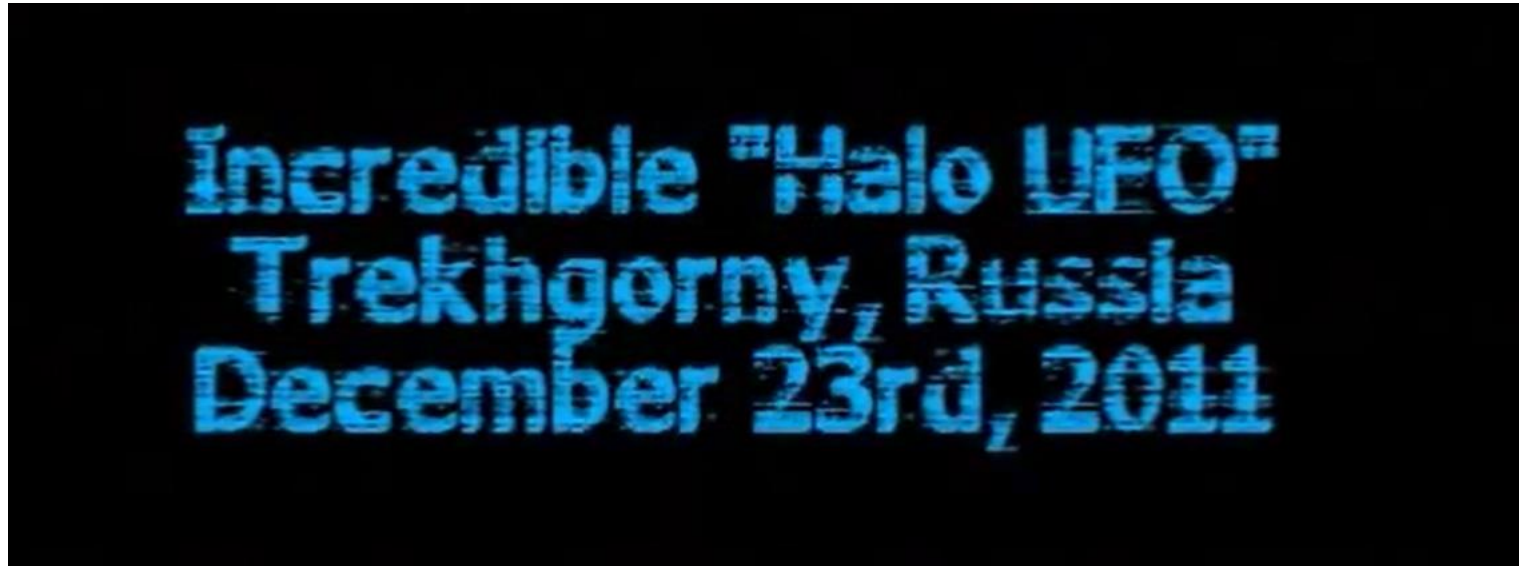
UFO Global Reporting Center



YouTube



Witness descriptions



- <https://youtu.be/6ilNmgsclcg?t=53>

RUSSIAN AMATEUR ASTRONOMY DISCUSSION GROUP

<http://www.astronomy.ru/forum/index.php/topic,18118.1120.html>

Jimson [23.12.2011 [20:36:34]] Наблюдал из Тюмени. Большая эффектная медуза на практически чёрном небе! И внезапно погасла, когда была уже на востоке. Ещё подумал - вышел на орбиту наверное. А оно то оказалось... И потом сильно удивился, когда сказали, что упал под Тобольском, так как явно ушёл восточнее.

I observed from Tyumen. Big spectacular jellyfish on a practically black sky! And suddenly it blinks out, when it was already in the east. It still occurred to me – it probably went away into orbit. But it turned out ... And then I was greatly surprised when told that it fell near Tobol'sk, just as it was clearly going away more eastwards.

Александр Каплинский == Сургут - в зоне видимости, и, возможно, этот наблюдатель как раз и увидел момент аварии третьей ступени РН... У нас же в этот момент было облачно, так что увидеть ракету не получилось бы. А сейчас уже ясно...

Surgut is in visual range, and possibly this observer just saw the moment of the rocket booster third stage accident. Here at this point it was cloudy, so we would fail to see the rocket. And now it is already clear

Photos by "Granat" 23.12.2011 [21:53:26]

<http://www.astronomy.ru/forum/index.php/topic,18118.1120.html>

Если бы не работа, уже давно бы написал отчёт... Но пришлось сразу после наблюдения идти на работу, а потом уже заняться отчётом...

If not for work, I would have long ago written a report ... But I had to go to work immediately after the observations, and then to do the report.

Погода в Яровом в этот раз оказалась исключительно благоприятной для наблюдений. В северной стороне небо было ясное. *Weather in Yarovoye this time has been extremely favorable for observation. In the northern side the sky was clear.*

Пуск «Союз-2» со спутником «Меридиан» наблюдали на северной окраине г.Яровое. *The launch of "Soyuz-2" Meridian satellite was observed on the northern outskirts of Yarovoye.*

Яровое [52.9206N 78.5828E] Far to the SE of Tyumen, south of the impact point.

Фотосъёмка: Canon EOS 1000D, «Зенитар-М» 1.7/50, F/2.0.

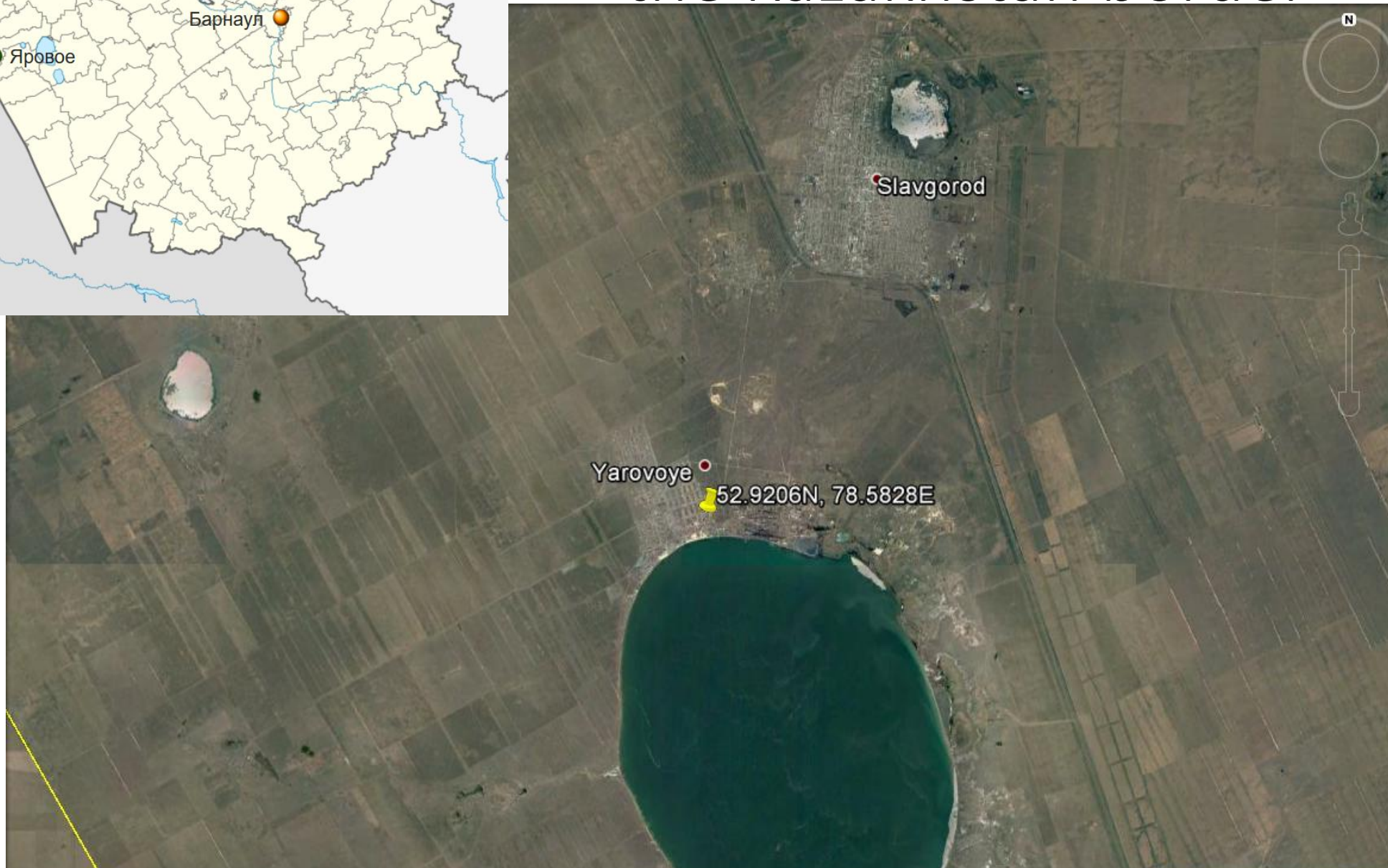
Обработка: только уменьшение размера снимков. EXIF-данные сохранены. В названии каждого снимка указано время съёмки (UTC+7h. или Мск+3ч.)

Часы фотоаппарата спешат на 4с.

Фото 9044: ISO1600, выдержка 5с. На всех последующих снимках ISO800.

Фото 1945-9053: выдержка 3с.

Яровое, Altay Region, on the Kazakhstan border



Yarovoye's front row seat

Time 12:15 UTC, Sunset 10:32 UTC
Sun az 249.9, el -14.2
Earth shadow extends ~197 km UP
Fireballs begin about 120 km



Photos by “Granat” 23.12.2011 [21:53:26]

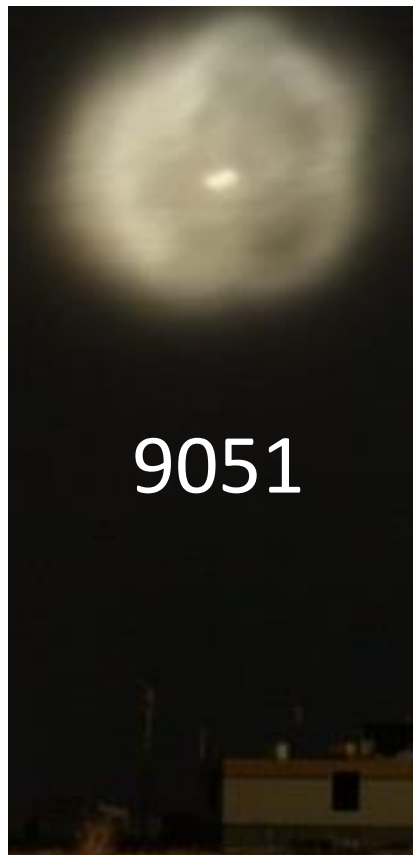
IMG_9047_Meridian_191616.jpg
(71.6 КБ, 800x532)

CLOUD MOVING UPWARDS AND SLIGHTLY LEFT-TO-RIGHT



Far south of
Novosibirsk
[Yarovoye]

**LOW LATERAL ANGULAR RATE =
NEAR HEAD-ON APPROACH**



9051



9053

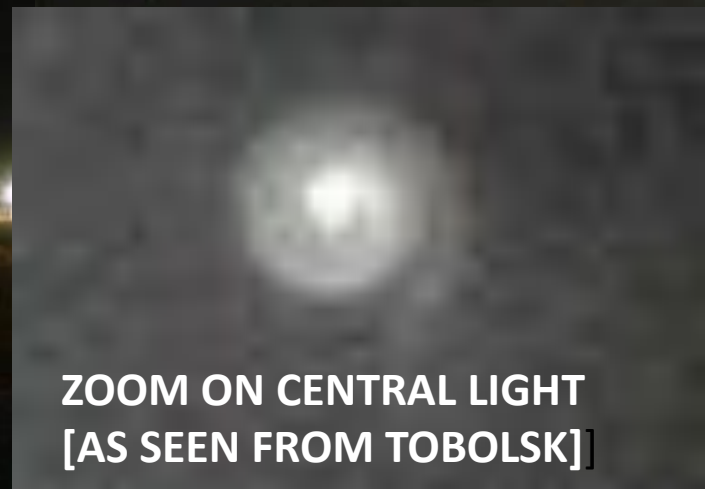


9054



**CENTRAL BLOB HAS
ALSO FADED OUT**

9055



**ZOOM ON CENTRAL LIGHT
[AS SEEN FROM TOBOLSK]**

**DOES THIS SEQUENCE SHOW CLOUD DISPERSAL
OR CLOUD DESCENDING INTO SHADOW??**

‘Granat’ then observed fireballs [one bright, one dim] – but failed to specify azimuths of cloud and fireballs



**HIGH LATERAL ANGULAR RATE =
FLIGHT ACROSS LINE-OF-SIGHT**



THESE MIGHT BE STARS
WE COULD IDENTIFY

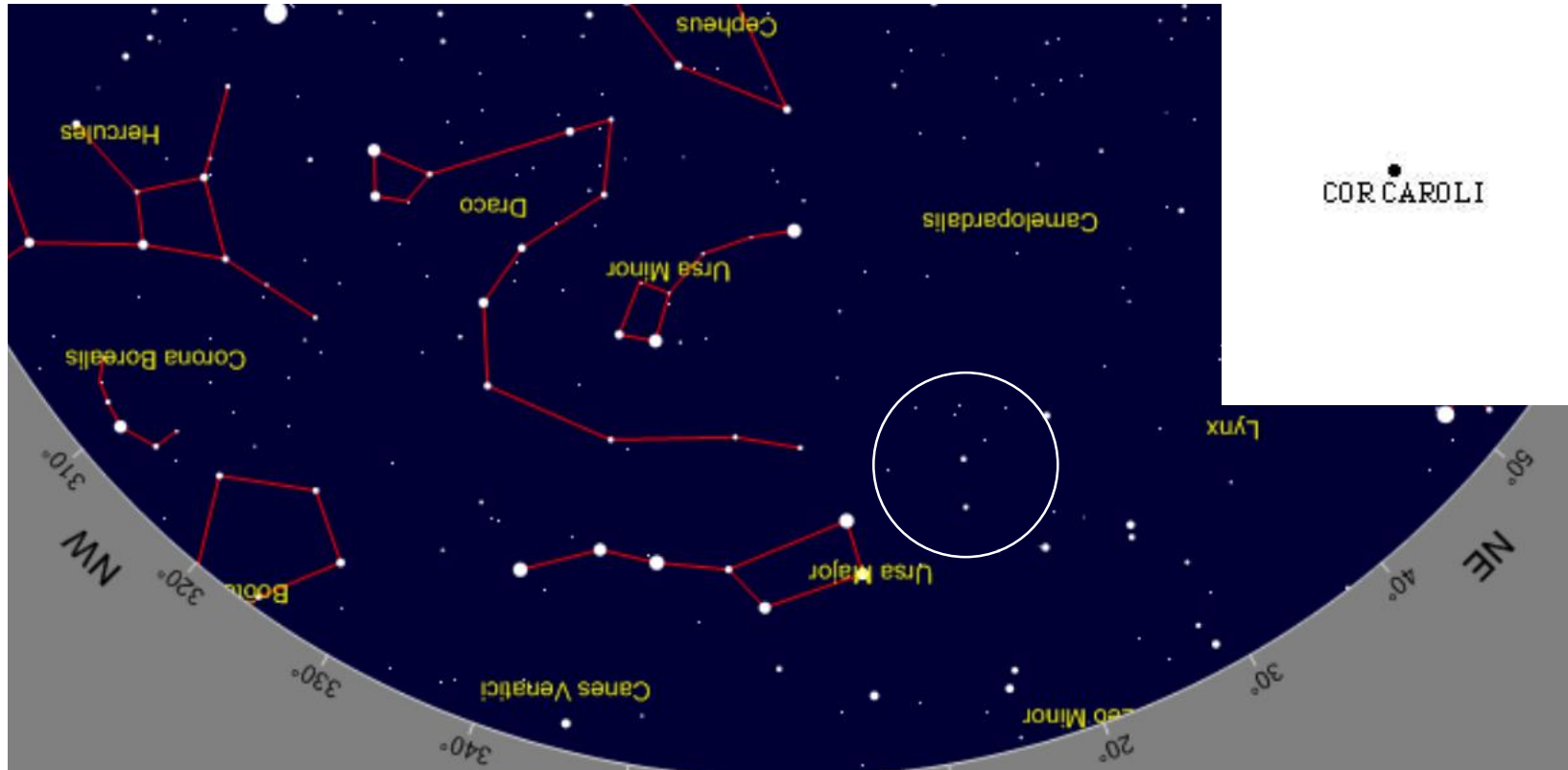
FIREBALLS NEARING HORIZON THROUGH SCATTERED CLOUDS

~1220 GMT 2011 DEC 23
[52.9206N 78.5828E]

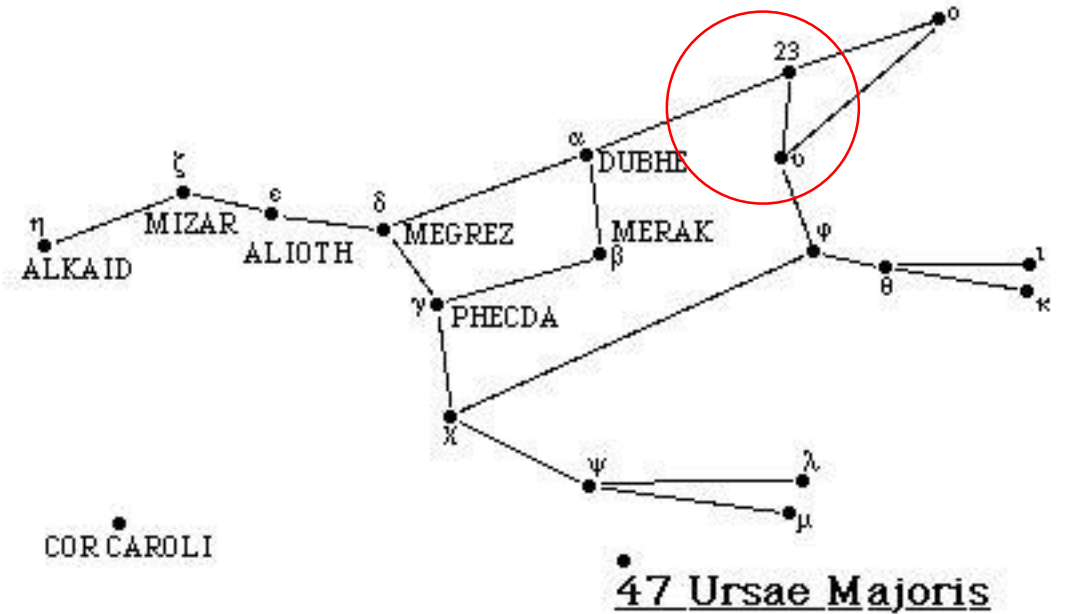
[http://www.astronomy.ru/forum/index
.php?topic=18118.1140](http://www.astronomy.ru/forum/index.php?topic=18118.1140)

Upsilon & Tau Ursae Majoris?

Well, it's a stretch – broken
clouds, uncertain direction...

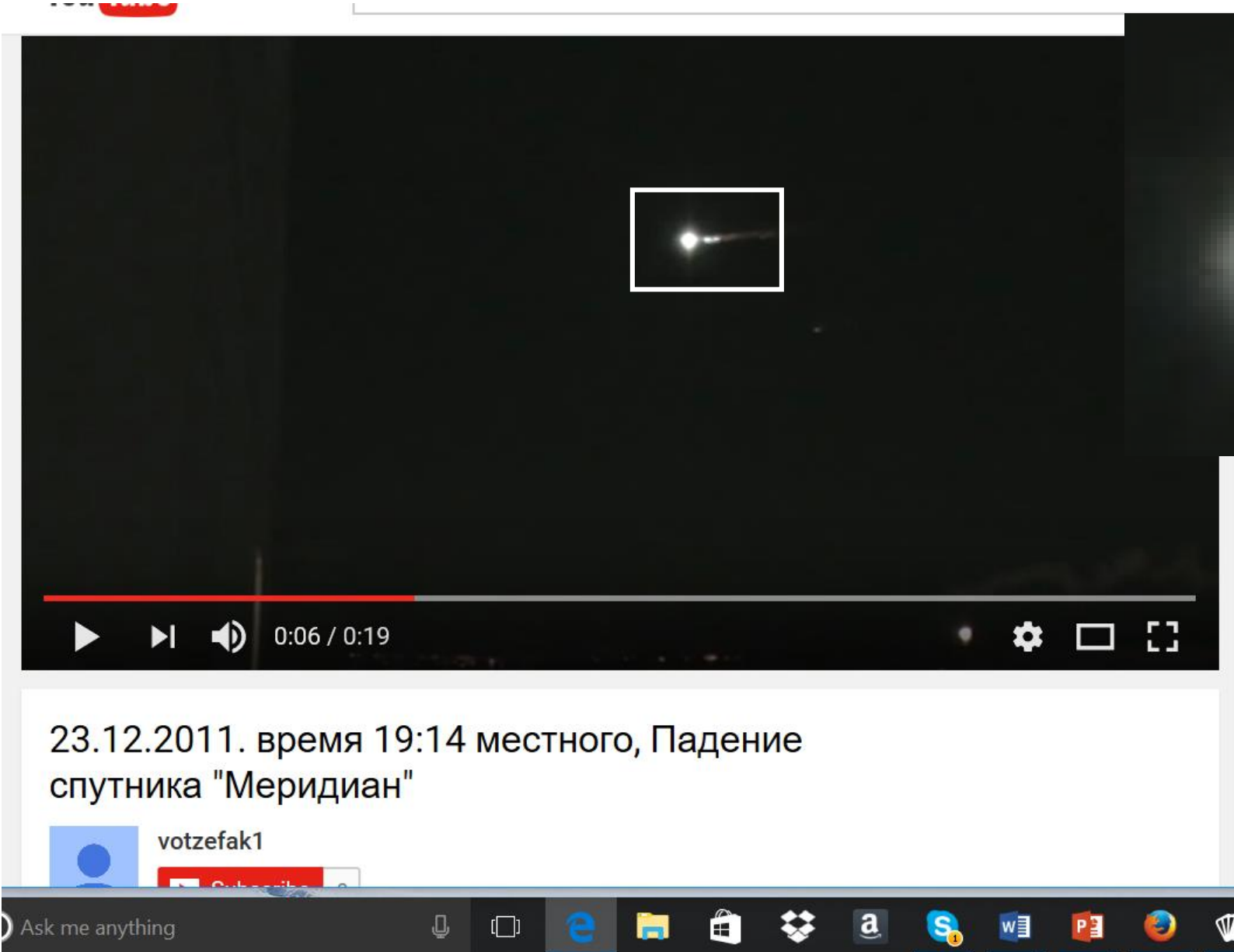


Ursa Major, the Great Bear (The Big Dipper)



FARTHER

- After descending across Urals and Tyumen Region, the Meridian objects entered the atmosphere south of Novosibirsk about two minutes later.



FIREBALLS OVER NOVOSIBIRSK

Time 19:14 local

Uploaded on Dec 23, 2011

https://www.youtube.com/watch?v=T3_lq040zVI#ws

MAIN OBJECT AND COMPANION BOTH FRAGMENTING



<https://www.youtube.com/watch?v=5AG5T9uzgMY>

BRIEF INTERNATIONAL NEWS STORY

[wrong location]

Russia satellite accident

Communications satellite came down over Siberian town of Tobolsk, the Ria Novosti news agency reported



Спутником "Меридиан" по ул.Космонавтов.

РОССИЯ 24

Обломок спутника пробил крышу

В Пакистане в результате теракта погибли 6 человек, 18 ранены

▶ ▶▶ 0:18 / 2:00

Владивосток

-19°

Ясно, без осадков



Still from
video of
two bright
fireballs
[VIDEO
NOT
FOUND]

<https://www.youtube.com/watch?v=yYYbBrDRXww>

Western observers....

- Bob Christy, as usual, is on the case: crash probably in Altai region or even further downrange, not in Tobolsk.
<http://www.zarya.info/Gallimaufry/Meridian5drop.php> *Edit: Looks like the site of the fallout is at 54.372559 N, 81.865196 E.*
- Rough calculations suggest the planned stage 3 orbit was around 50 x 200 km, and actual was -2200 x 200, or about 0.9 km/s too low (+/- 0.2 km/s or so)

-

FIREBALL SIGHTINGS

- Novosibirsk
- https://www.youtube.com/watch?v=T3_Iq040zVI#ws
- http://www.disclose.tv/action/viewvideo/85451/Russia_s_Meridian_satellite_falls_in_Siberia/
- According to Interfax, "debris of Meridian satellite were found in Ordynsky district of Novosibirsk territory" (Ordynskoye is located at 54.37N, 81.9E). Vagaytsevo (place of roof-through debris) is at N542149E815239
- <https://youtu.be/GEJqFEXzjMw>

GROUND DEBRIS



Hunters and deputies search for fragments of 'Meridian' in Novosibirsk region

Komsomolskaya Pravda Novosibirsk 26 Dec 2011:

<http://www.kp.ru/25810.5/2789716/>



**КОМСОМОЛЬСКАЯ
ПРАВДА**



 **Новосибирск**

Переключиться на другой регион



РАД
Комс



ПОЛИТИКА

ОБЩЕСТВО

ЭКОНОМИКА

В МИРЕ

ЗВЕЗДЫ

ЗД



26 ДЕК.
2011

ПРОИСШЕСТВИЯ

НОВОСТИ 24

Виктория МИНАЕВА, Вадим АЛЕКСЕЕВ

Остатки «Меридиана» в Новосибирской области ищут охотники и депутаты



<http://www.nsk.kp.ru/f/12/image/18/23/3232318.jpg>

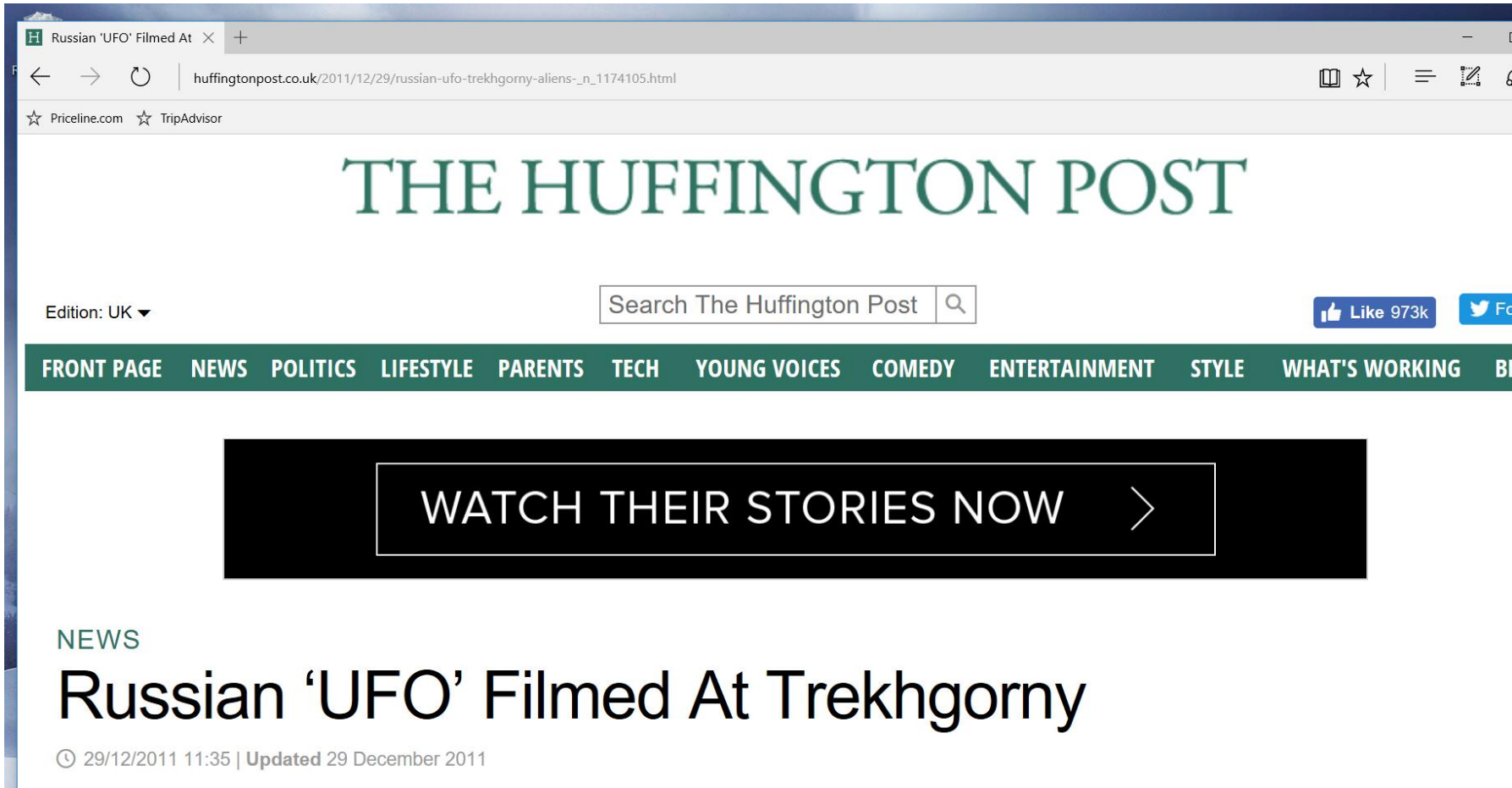
Fragmenty sputnika "Meridian" probili kryshu jilogo doma
[fragments of Meridian satellite hit roof of dwelling]

- <https://www.youtube.com/watch?v=vPNMID9o2QQ>

Western press reports of UFO sightings and landing

- 1
- 2
- 3
- 4
- 5
- 6

WESTERN NEWS MEDIA NOTICES “UFO REPORT”



The screenshot shows a web browser window with the URL huffingtonpost.co.uk/2011/12/29/russian-ufo-trekhgorny-aliens-_n_1174105.html. The page features the 'THE HUFFINGTON POST' logo at the top. Below the logo, there is a search bar and a navigation menu with categories like FRONT PAGE, NEWS, POLITICS, LIFESTYLE, PARENTS, TECH, YOUNG VOICES, COMEDY, ENTERTAINMENT, STYLE, WHAT'S WORKING, and BL. A large black banner with the text 'WATCH THEIR STORIES NOW' and a right arrow is prominently displayed. Below the banner, the word 'NEWS' is visible, followed by the article title 'Russian 'UFO' Filmed At Trekhgorny'. The article's timestamp is '29/12/2011 11:35 | Updated 29 December 2011'.

Russian 'UFO' Filmed At Trekhgorny

29/12/2011 11:35 | Updated 29 December 2011

http://www.huffingtonpost.co.uk/2011/12/29/russian-ufo-trekhgorny-aliens-_n_1174105.html

Russian 'UFO' Filmed At Trekhgorny

An unidentified flying object that appears to have its own cloud has been filmed hovering over the town of Trekhgorny, Russia. The sighting, which was filmed by three separate people on December 23, features a silver object in the centre of a cloudy orb, travelling at some speed.



銀河連邦フォーラム

メイン マイ ページ メンバー 写真 動画 フォーラム グループ ブログ チャット イベント

すべての動画 マイビデオ お気に入り

+ 追加



UFO creates cloud and shocks city in Russia, 23 December 2011

12 月 26, 2011 の 4:11am に古谷 茂さんが追加しました。

動画の表示

銀河連邦フォーラム へようこそ

サイン アップ

またはサイン イン

UFO creates cloud and shocks city in Russia, 23 Decemb... ⌚ ➡

チャットにサイン イン

Ufo version

- Dec 24, 2011 -- Michael Cohen [m.cohen@allnewsweb.com]

A cloud emitting UFO has brought an entire Russian city to a standstill, overshadowing Christmas and New Year celebrations and leaving residents perplexed and seeking answers from local politicians.

- The event took place yesterday in the southern city of Trekhgorny, located in the Chelyabinsk region near Russia's border with Khazakstan.
- Reports are filtering in claiming that nervous community leaders have already relayed messages to Moscow's Science Ministry asking for clarification as to the nature of the UFO witnessed and filmed.
- The event is significant in that Trekhgorny, created under Soviet rule, is a closed city and non-residents are forbidden entry unless in possession of a formal invitation from friends or family, approved by local authorities.

Cohen [continued]

Trekhgorny's status as a closed city is due to the fact that its main industry is the production of nuclear reactors. Consequently some are suggesting that it is possible that alien technology might be currently being reversed engineered in its midst. Ample research has been done on the topic of the high incidence of UFO and alien activity in the vicinity of nuclear reactors. Strong evidence suggests that aliens are extremely concerned with human plans to make use of nuclear energy in space.

Numerous witnesses to UFOs have described these craft's cloud making capabilities. It has also been noted that the use of these "clouds" for the purpose of camouflage by visiting aliens is particularly common in instances where the UFO is seen near military or nuclear facilities.

Some commentators are suggesting that with this very public showing, aliens are sending a very clear message to Moscow regarding their concerns. Alien activity in Russia reached a peak in 2011. Strong evidence suggests that Russia is in communion with a number of alien races and although UFO bases exist in Siberia, relations between Russia and these visitors are shaky.

Space Weather & Energy Driven Evolutionary Change

The Celestial Deluge &
Arrival of Cosmic Fire

another

News of the Imbalance

Best of the Blog - Orbs, UAP & UFC Traffic

http://www.susanrennison.co.uk/Best_oftheblog_UAP_traffic4.php

Comment: Please excuse the terrible Google translation. This image clearly shows a plasma spiral that occur when two clumps of oppositely charged plasma collide, similar can be seen in the cosmos on a much greater scale. However, this example is quite unusual as it is surrounded by sheath or plasma double layer, so it implies the spiral is highly charged. (But, I will admit, it also looks like the astronomers' favourite "bow shock".) This is a strange article because the Russians are also upset about the latest failed rocket launch, but quite frankly, besides the huge increase in cosmic dust that we were told to expect back in 2003, there seems to be a very heavy traffic of plasma objects in our skies. Planet Earth is becoming a high energy plasma environment, every day it is becoming more and more obvious. This is our new reality.

UFO creates cloud and shocks city in Russia, 23 December 2011

YouTube, 23rd December 2011

Apparently, there are lots of videos, because it sounds like this UAP decided to float over a busy city in rush hour.

5 Witness, UFO, Mysterious Lights in The Sky, Russia, Dec 23,

YouTube, 23rd December 2011

Seriously, find videos of satellite debris re-entry, there is NO comparison...

UFO Sighting Daily – filed by Scott Waring

http://www.ufosightingsdaily.com/2011_12_01_archive.html
5 Angles, UFO, Mysterious UFOs in The Sky, Russia, Dec 23 2011



Date of sighting: Dec 23, 2011

Location of sighting: Russia

Posted by **Scott Waring** at 9:40 PM No comments:

UNKNOWN COUNTRY: “A true unknown.”

WHITLEY STRIEBER'S
DREAMLAND
JOURNEYS TO THE
EXTREME EDGE
UPDATED EVERY SATURDAY

Currently on Dreamland
AMAZING Show on
Preparing for the Afterlife
and a Witnessed OBE!

THE
EXPERIENCE
WITH JEREMY VAENI

Currently on The Experience
Deep Into High Strangeness

UNKNOWN COUNTRY
newsletter
FREE

Building a Great NEW
Unknowncountry

out there . . .

stories from the edge

Like 6 Share Tweet G+1 0

f t Twitter Print +

UFO creates cloud over Russian city.

Friday, December 23, 2011

This one is quite strange. It's moving too fast to be a celestial object and it certainly isn't a plane. A true unknown.



0:00 / 1:50 YouTube

<http://www.unknowncountry.com/out-there/ufo-creates-cloud-over-russian-city#comments>

Strange UFO Russia Chelyabinsk

UFO UNIVERSE

Earth was believed to be the center of the universe

GIANT SERPENT Quetzalcoatl Return?

Alien Attack Human

Amorphous UFO's

ANGELS Flying in The Sky Caught Tape

Astronaut Women Saw UFO in Space

Bright Luminous Object Close Encounter

Fallen Sky Angel or Being of Light

Flying Humanoids UFO

Giant ALIEN In Office Building

GIANT SERPENT Quetzalcoatl Return?

Magnetic Portal MEXICO HAARP?

Massive UFO 300 Small Ships

Meteorite UFO Russian UFO Shoots Down

Mission in Space Object's UFO

Orange Flying Disc UFO

Sighting UFO Flying Night Vision

Sky Serpent UFO Mothership Releasing Spheres

Strange Entity Captured Army

Strange UFO Russia Chelyabinsk

UFO Strange UFO Russia Chelyabinsk Before Hit the meteorite

Chelyabinsk, Russia 23 December 2011 are a sequence of a few sightings of objects in the sky are very strange objects in form.

This object is floating around the city walk four hours flew over the city, perhaps directed and maintaining controlled flight height also practically the whole town watched.

A spectacular UFO bright sphere center

Chelyabinsk, Russia is a hot spot now know what

happened, the meteorite that fell maybe this mysterious UFO was trying to explain or communicate or give a warning that a meteor would fall trying to communicate.

The object has its own light clearly shows the UFO clear and bright other intelligences still appear be trying to tell us that something will occur in Chelyabinsk, Russia

Besides the flight along very erratic as they seem clouds around ie they float but the most incredible is his conventional propulsion nothing that drives a motor or a machine to drive it.

Chelyabinsk, Russia 23 December 2011

These UFOs are strange indeed for breaking all convention, all man-made.

Uploaded on Dec 26, 2011

A very intriguing video of UFO sighting in Russia painted on Youtube. Real? Apparently so, but we will collect opinions and research about new videos of this case. A sighting as important as this should have many witnesses, many filming. The video is impressive and worth to be seen and commented. I count on you all. What do you think?

390 views

3 likes

0 comments



STANDARD TRYOKHGORNIY VIDEO



UFO AMAZING SHIPS CLOSE TO THE GROUND
RUSSIA DECEMBER 2011

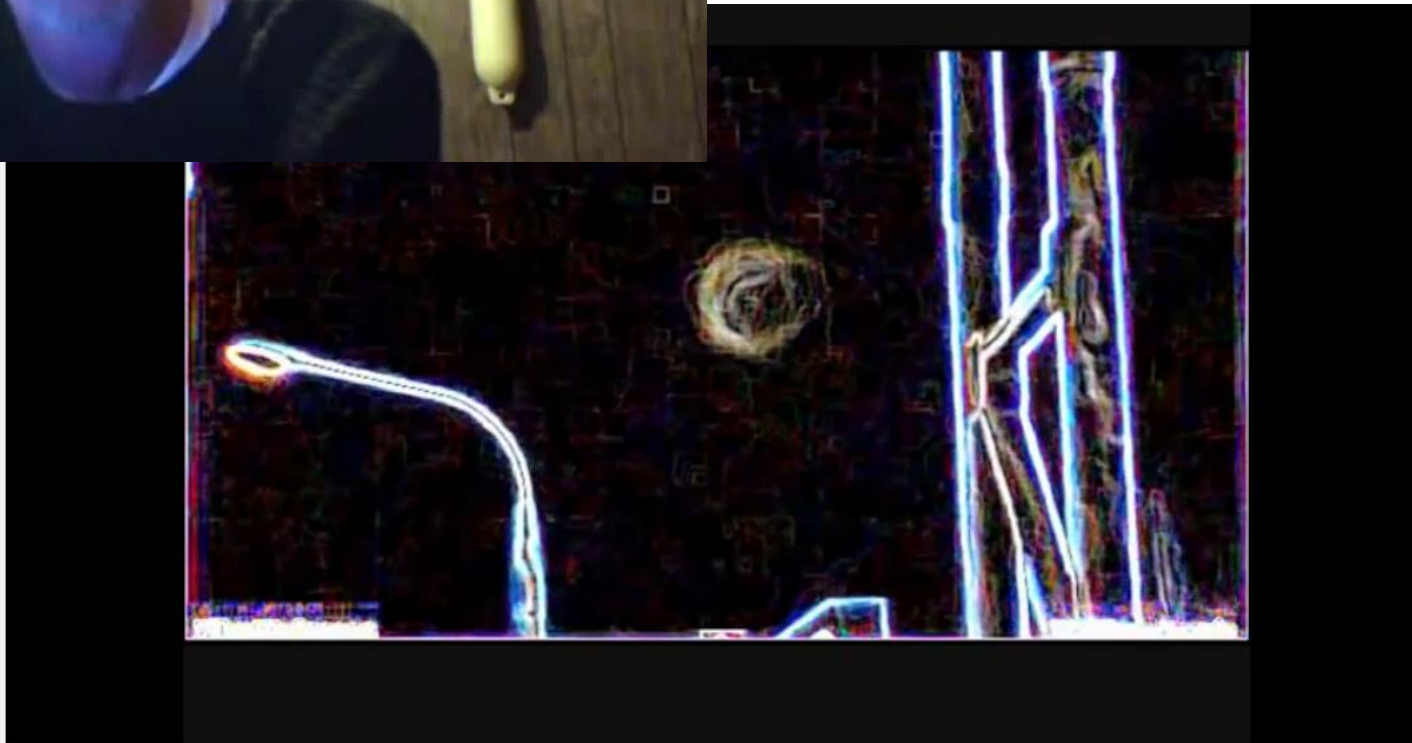


aliew yakamy

<https://youtu.be/PcZosQykF9Q?t=133>



The usual crackpot theories



RUSSIAN "CLOUD" UFO ANALYSIS: December 22, 2011 Multiple
Witness Videos



OurUFOandETcontinuum

Uploaded on Dec 24, 2011

Incredible and well documented sightings are few and far between. On December 23, 2011, a strange airborne anomaly appeared over the streets of one Russian city and was captured by five independent videographers. This video attempts to apply digital enhancements to better understand the nature of this "object." As always, please comment with your polite and intelligence insights.

<https://www.youtube.com/watch?v=9TT09wyM7xk>

Arguments in the 'comments'

- Espen K. Antonsen -- This is similar to what is told in the BIBLE when Moses lead his people to the promised land. Their where guided by a cloud at daytime and a light at nighttime. This cloud had both. Cloud with a light emitter. Could be a multidimensional cloaking device, alien lifeform, angle or a new weather phenomenon (firecloud)
- Walter Wray Jr.-- Looks to me like charged particles in the atmosphere surrounding the object, and the contrast edge detection enhancements show lines of force or magnetic anomalies moving or flowing around it.
- QuackersJackers -- swamp gas woo hoooo! nah just kidding this was very strange indeed. I am so glad more than one caught this. Russia is a hot spot. I think the truth will be revealed from there.
- Firstname_Lastname == -- this is a failed missile. as was the norway spiral.
- Eternally Conscious = @braindeaddoug a failed rocket doesn't move steadily and horizontally at speeds of a highway vehicle. it would be erratic and gravity would take effect.

Discussion

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Followup – Accident report told nothing about sequence of events

- **Loss Of Russian Military Satellite Caused By Engine Failure - Roskosmos Head**
- Moscow [*Interfax*](#) in Russian 1012 GMT 31 Jan 12
- Voronezh, 31 January: The break-up of the combustion chamber of the third stage of the Soyuz-2.1B carrier rocket led to the accident in which the Meridian military satellite was lost in December, the head of [Federal Space Agency] Roskosmos Vladimir Popovkin said at a meeting in Voronezh.
- "The cause of this accident is the disintegration of the third-stage engine due to the loss of integrity of the fire wall of the combustion chamber," Popovkin said.
- He recalled that the Meridian satellite had been launched aboard a Soyuz-2.1B carrier rocket with a Fregat booster from Plesetsk [on 23 December 2011]. "The flight was terminated after 426 seconds with an emergency shutdown of the third-stage engine," Popovkin said.
- [At 1006 gmt Interfax quoted Popovkin as saying that Roskosmos would no longer use the three remaining engines from the same batch of 10 engines.]

Followup – fragments found all summer

- Farms in Ordynskiy Rayon (Novosibirsk Oblast) are postponing their sowing campaign for a completely different reason -- radioactive fragments scattered all over the area following a failed launch of a Meridian satellite last year.
- According to [this 14 May report](#) by state-owned Novosibirsk GTRK TV from Novosibirsk (1,700 miles east of Moscow), farmers are refusing to work the fields until all the dangerous scrap is cleared. Some of them have accidentally driven their farm vehicles over sharp pieces of metal, damaging the tires. The report says the farm is also considering a lawsuit against the Russian Federal Space Agency to demand compensation for the disrupted sowing campaign and for workers being exposed to the possibly radioactive fragments of the satellite.

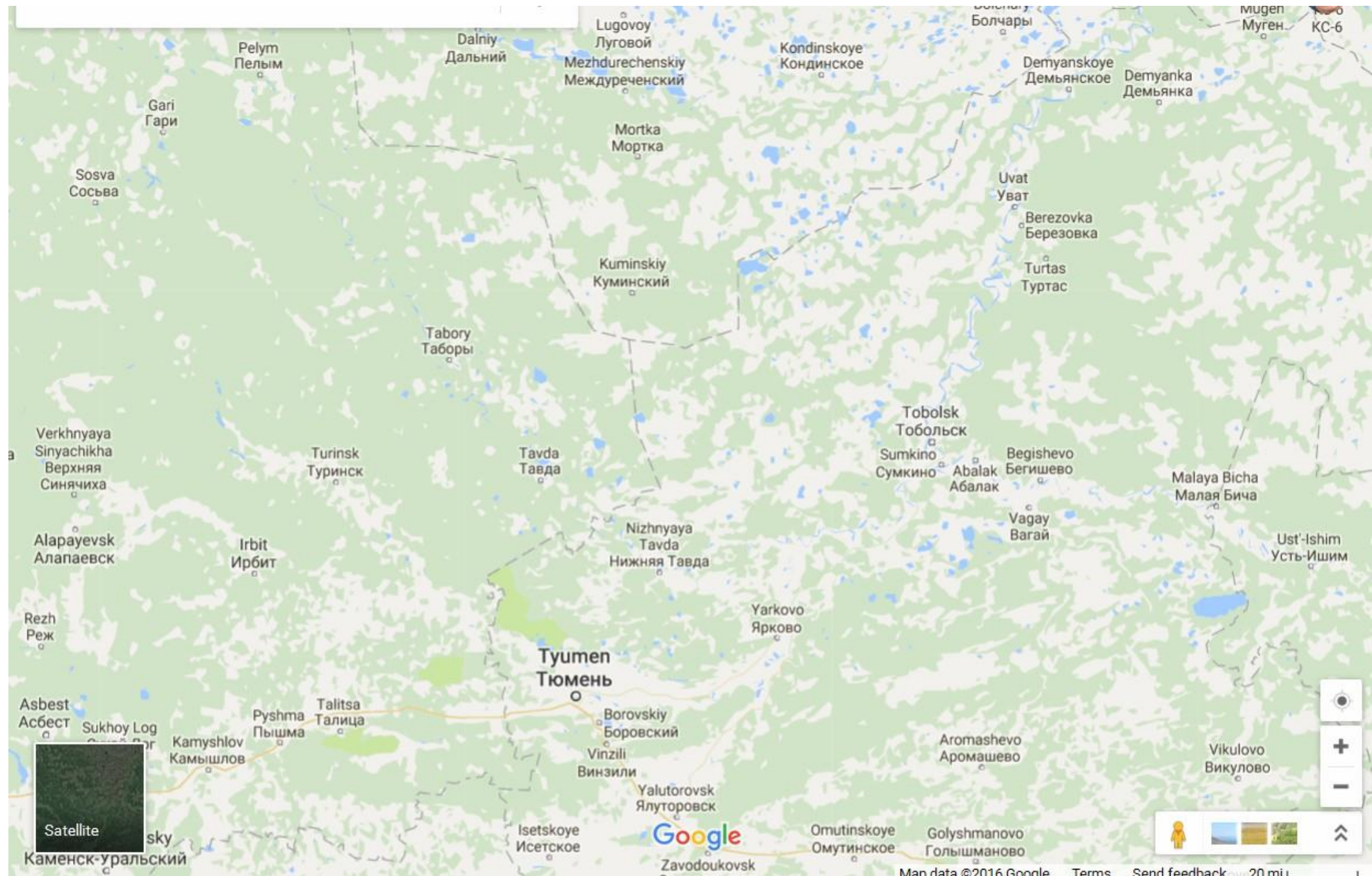
Followup – Eleven months later, success

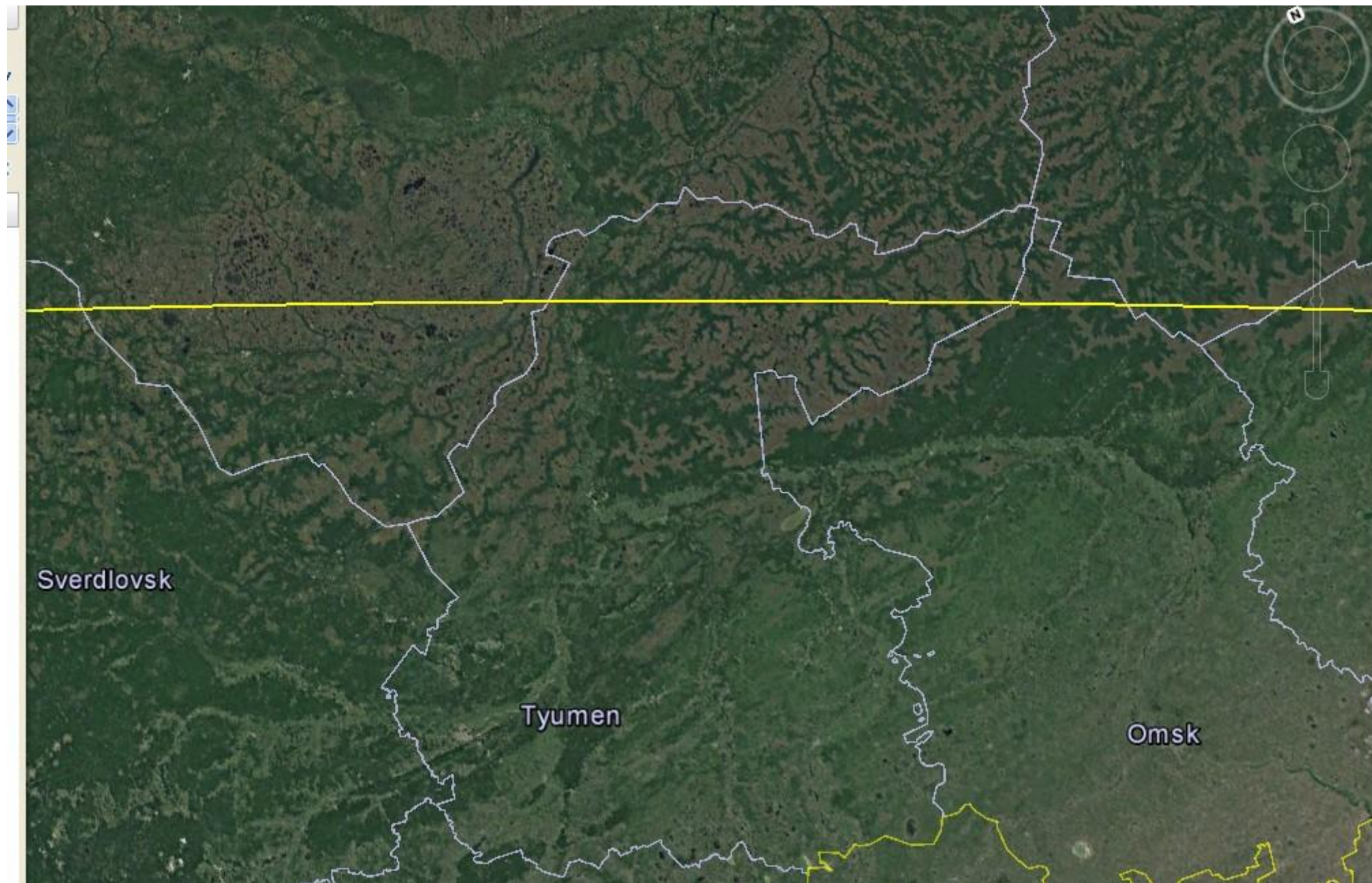
- PLESETSK (Arkhangelsk Region). Nov 14 (Interfax-AVN)
- An orbital assembly comprising a Frigate upper stage and a telecommunications satellite separated from the Soyuz-2.1a booster rocket at 3:51 p.m. Moscow time and reached a low earth orbit, an Interfax correspondent reported from the Plesetsk cosmodrome.
- "The launch of the booster rocket from Plesetsk at 3:42 p.m. Moscow time went smoothly," Russian Aerospace Defense Forces spokesman Col. Alexei Zolotukhin told Interfax-AVN.

CONCLUSION

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- 3
- 4
- 5
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Spare maps

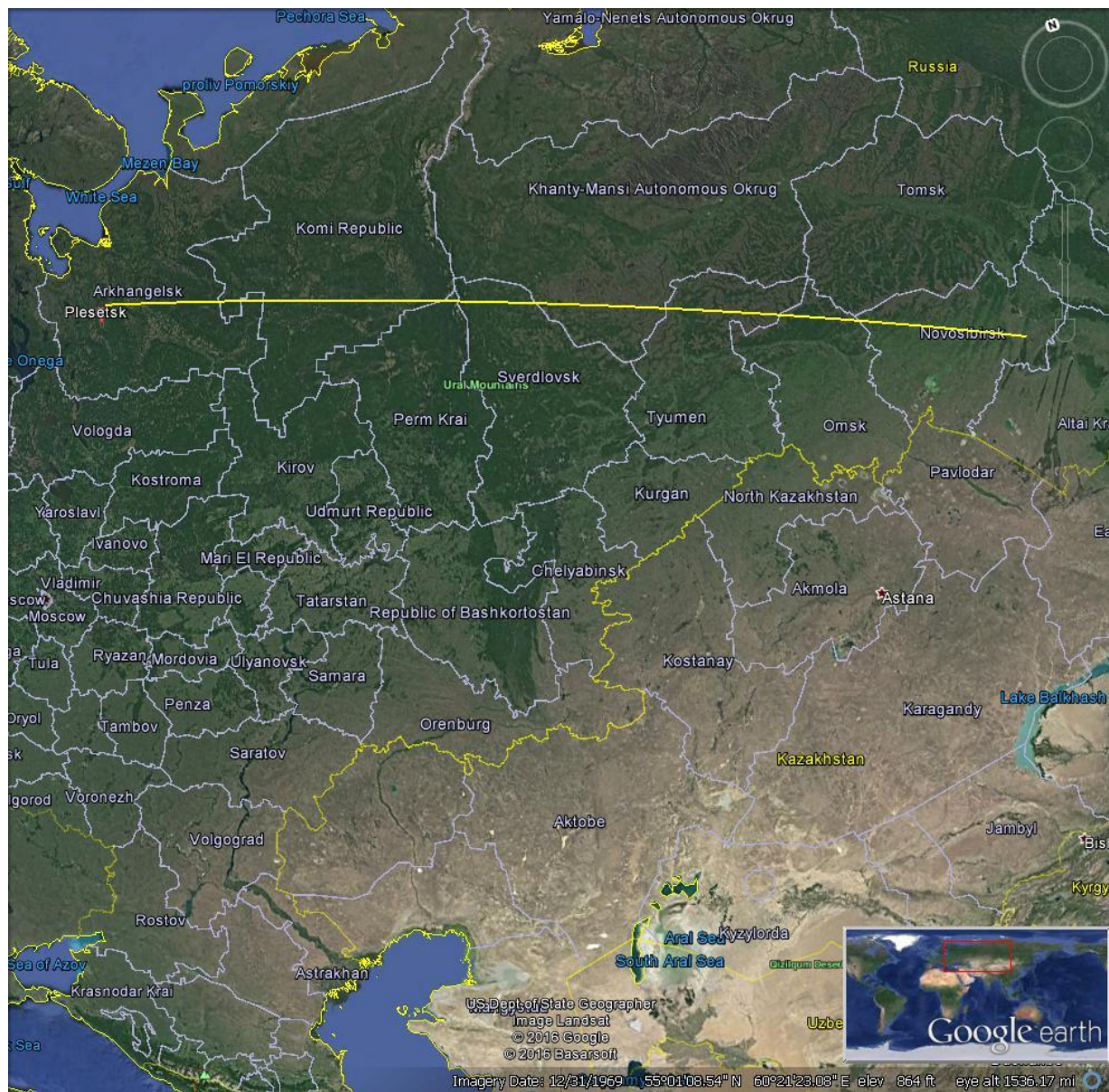


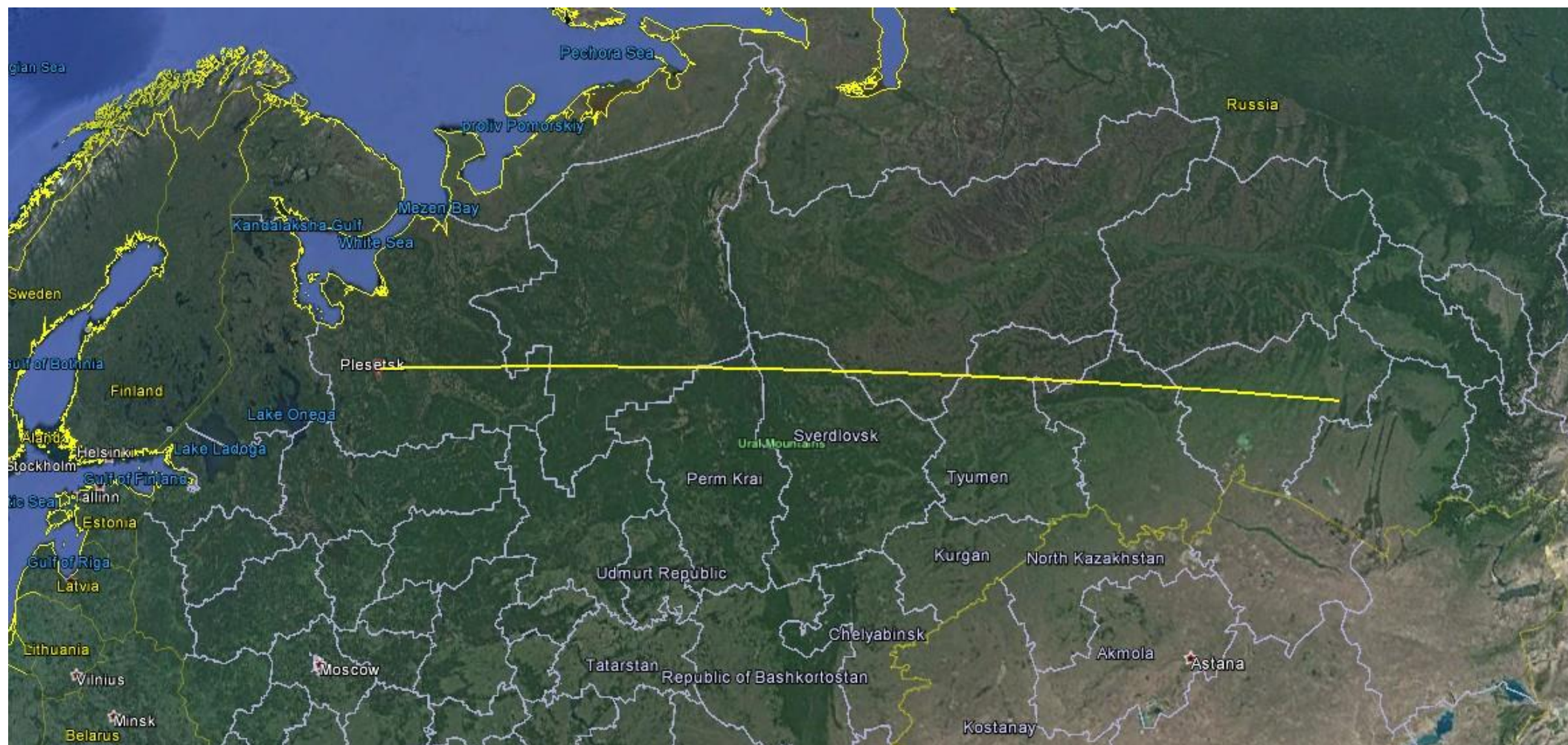




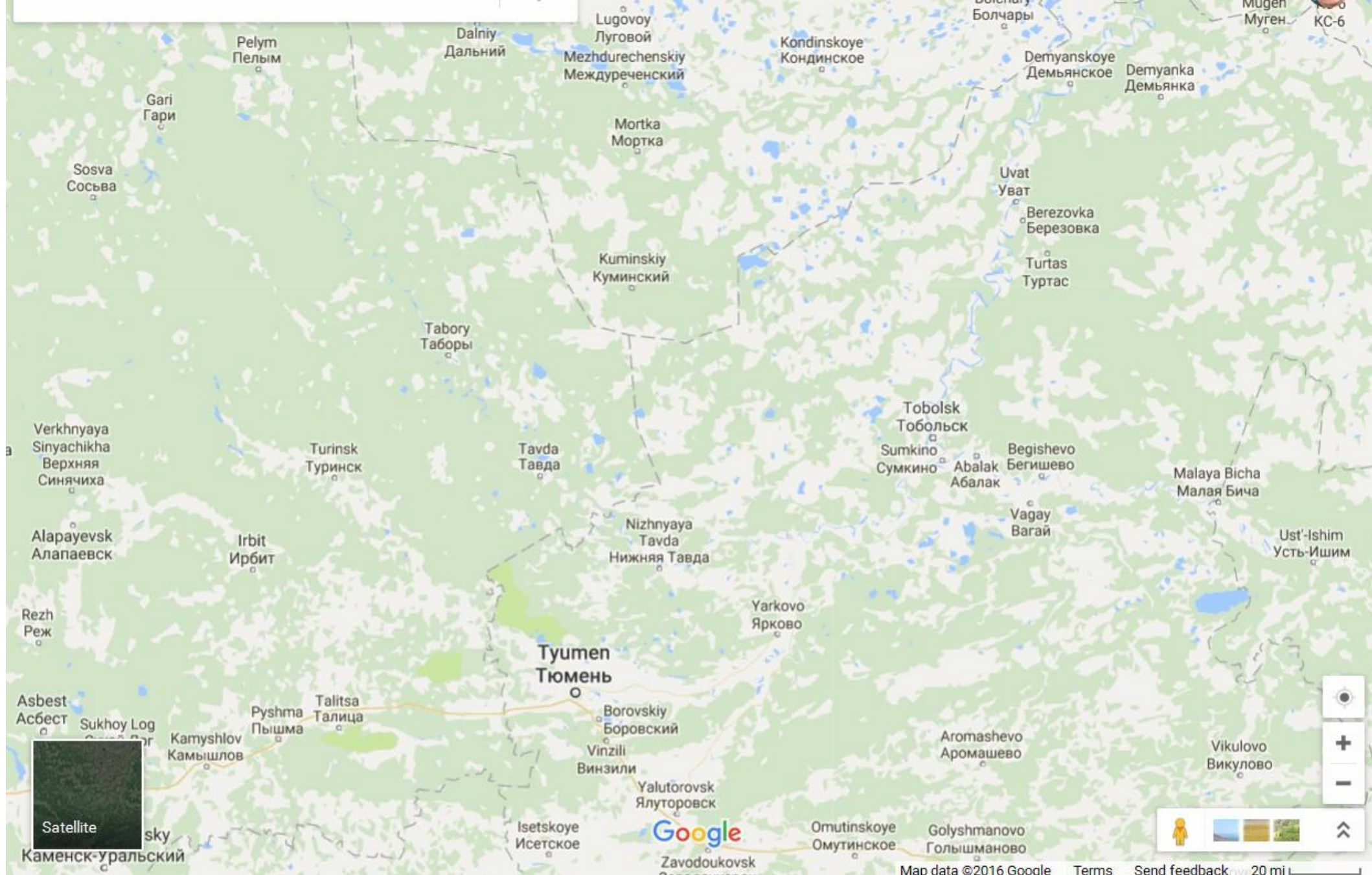
US Dept of State Geographer
Image Landsat
© 2016 Google

Imagery Date: 12/31/1969 56°59'33.08"N 68°41'11.82"E elev 318 ft eye alt 545.85 mi

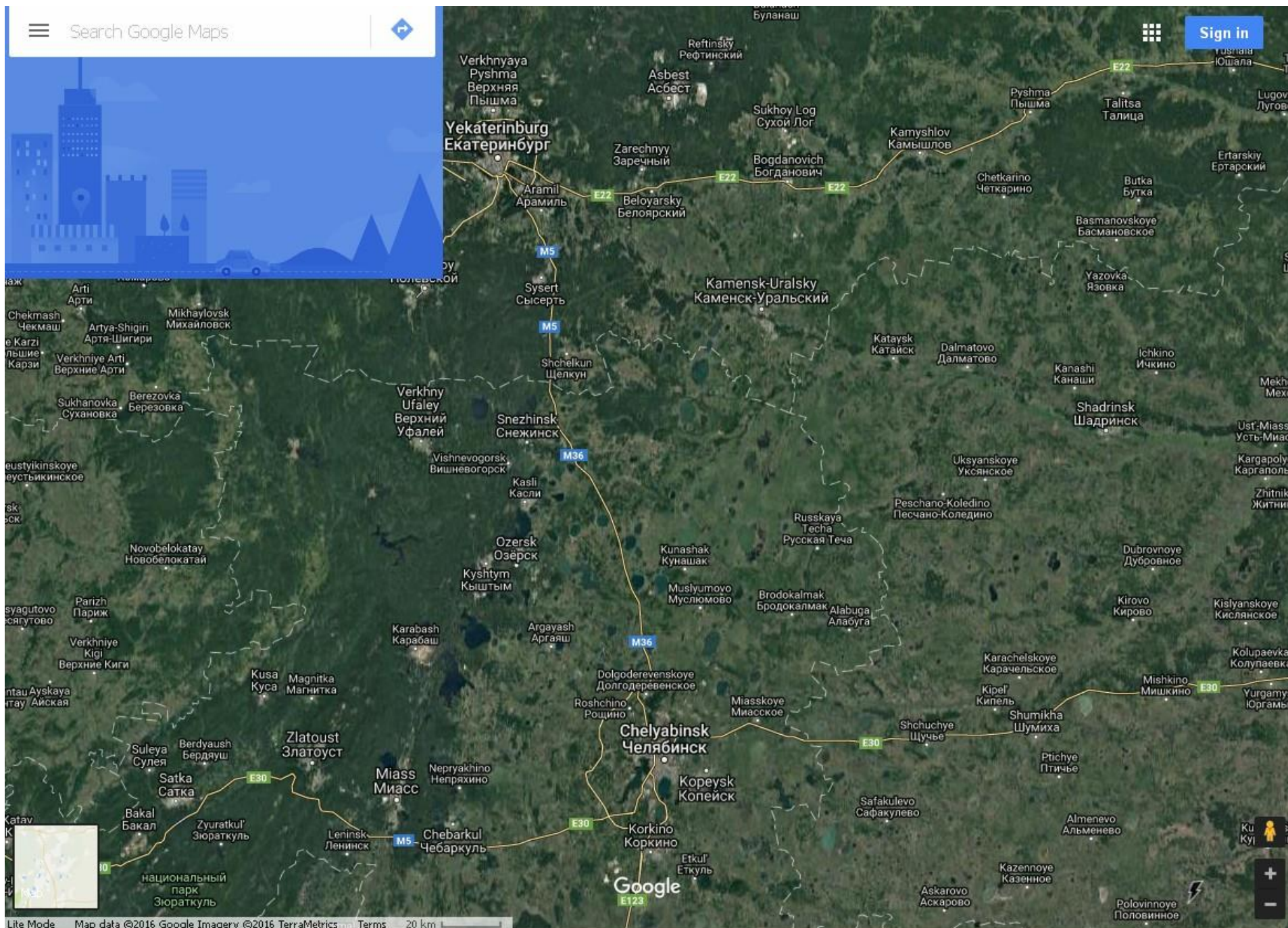


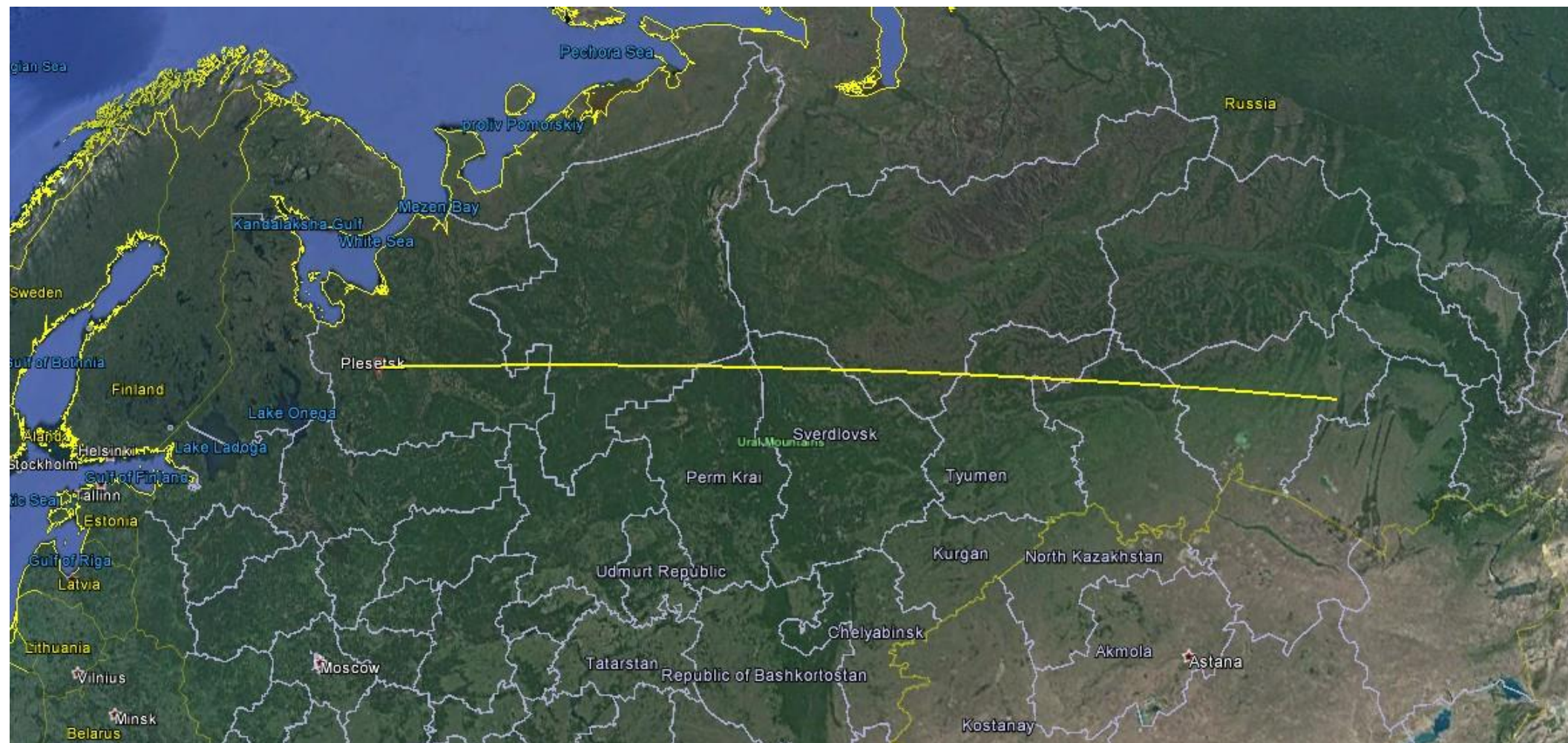


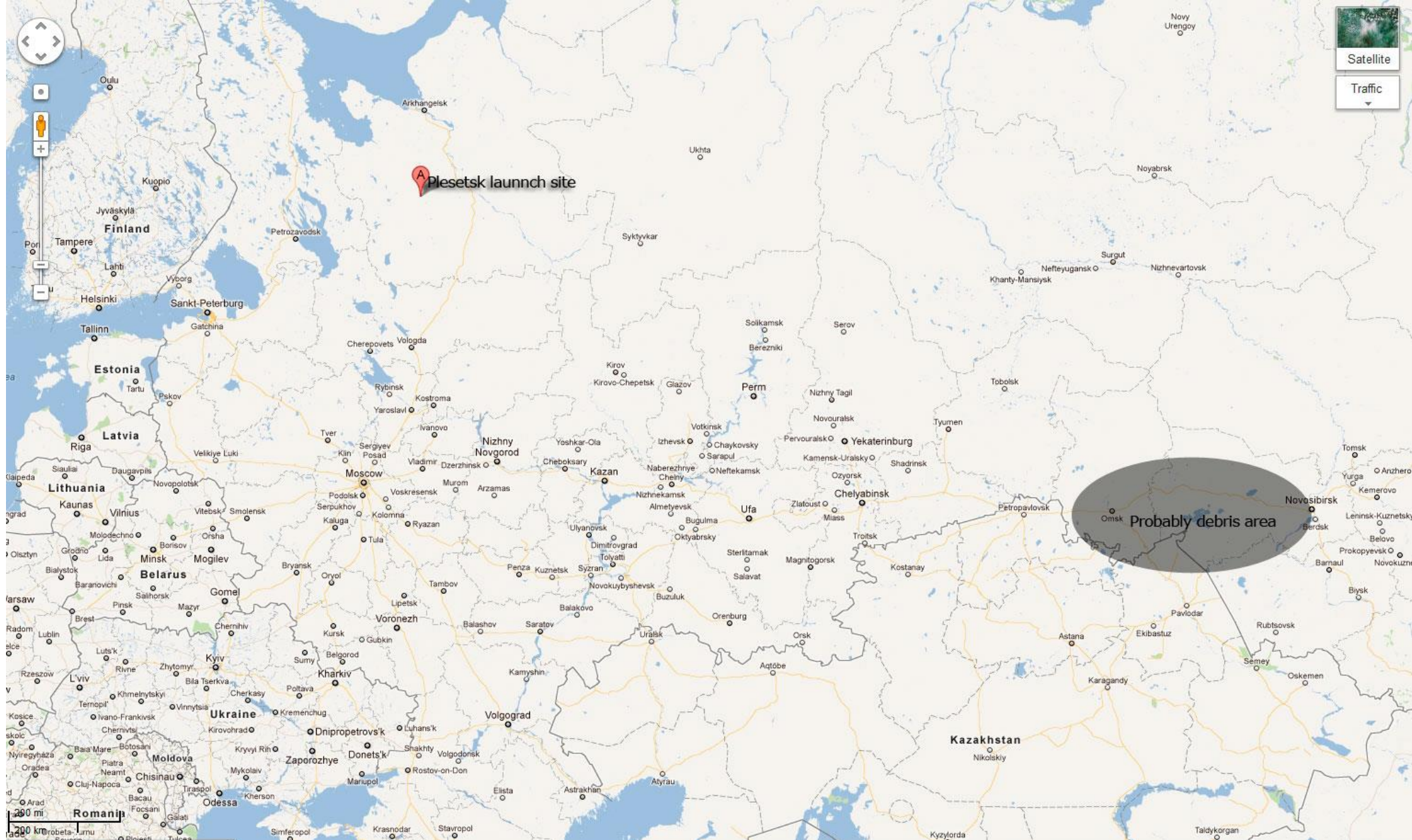




kasli







Follow-up others

different LAUNCH

UFO нло. Новосибирск 28.01.2011. ufo

<https://www.youtube.com/watch?v=phTtgSn8qL8>

Comma cloud

Uncertain location, low quality.... LeroArt



