AWESOME stories

RUSSIAN METEOR - 15 FEB 2013

A completely unexpected, unpredicted meteor strike occurred in Russia on the 15th of February, 2013. This image, by Svetlana Korzhova, depicts a view of the meteor's trail over Ekaterinburg. It landed in Chelyabinsk, injuring nearly a thousand people. Image license: CC BY-SA 3.0

Videos - recorded by vehicle dash-cams, surveillance cameras and personal observers - clearly show *what* happened. To learn *why* this fireball descended to Earth, let's listen-in to a Skype interview with Dr. Simon Green - from the Open University - who gives us some interesting facts:

> *The bright fireball is not the object burning, it's the ionising gases in the atmosphere.*
>
> *The rock is heated when it reaches the lower levels of the atmosphere from friction and the time lag of the sonic boom from the entry of the object suggests that the object entered the atmosphere at approximately 50 km above ground.*
>
> *The debris from the object would have reached the ground at a terminal velocity of around 200 miles per hour.* [Scientists have concluded that the meteor was traveling at 33,000 mph / 54,000 km/h when it entered Earth's atmosphere.]

Experts - such as Paul Chodas of NASA's Near-Earth Object Program Office - believe that space rocks, like the Russian meteor, cause damage on Earth about once a century:

> *We would expect an event of this magnitude to occur once every 100 years on average. When you have a fireball of this size we would expect a large number of meteorites to reach the surface and in this case there were probably some large ones.* (See NASA's "Asteroid and Comet Watch," updated February 15, 2013 at 7 PM PST.)

We must remember, however, that the universe follows its own rules, not expectations set in place by mankind.

Still ... there might be something to this once-in-a-century idea. The last meteor to reach Earth and cause damage - in 1908 - also landed in Russia, impacting the Siberian area of Tunguska. And ... *that* was roughly 100 years after the "great comet of 1811" (and 12) *also* passed over Russia.

All these things - including the reactions of people who experienced those terrifying moments on February 15th - call to mind a passage from Tolstoy's War and Peace:

> *Only looking up at the sky did Pierre* [one of the story's main characters] *cease to feel how sordid and humiliating were all mundane things compared with the heights to which his soul had just been raised ... Above the Prechistenka Boulevard, surrounded ... on all sides by stars but distinguished from them all by its nearness to the earth, its white light, and its long uplifted tail, shone the enormous and brilliant comet of 1812 - the comet which was said to portend all kinds of woes and the end of the world.*
>
> *In Pierre, however, that comet with its long luminous tail aroused no feeling of fear. On the contrary he gazed joyfully, his eyes moist with tears, at this bright comet which, having traveled in its orbit with inconceivable velocity through immeasurable space, seemed suddenly - like an arrow piercing the earth - to remain fixed in a chosen spot, vigorously holding its tail erect, shining and displaying its white light amid countless other scintillating stars. It seemed to Pierre that this comet fully responded to what was passing in his own softened and uplifted soul, now blossoming into a new life.* (*War and Peace*, by Leo Tolstoy, Book Eight (1811-12), Chapter XXII, at page 1140.)

Perhaps a "new life" will also spring-up after the meteorite's visit to Russia. And ... maybe that new life could take the form of peaceful cooperation, throughout the world, to build what Vladimir Lipunov (a Russian astrophysicist) requests:

> *... a system capable of destroying such super bombs falling on us from the skies ...*

If so, exploring space - the subject of this story - will take on a wholly new and highly beneficial meaning for all mankind.

See Alignments to State and Common Core standards for this story online at:
http://www.awesomestories.com/asset/AcademicAlignment/RUSSIAN-METEOR-15-FEB-2013-Exploring-Space-Images-from-NASA

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http://www.awesomestories.com/asset/AcademicActivities/RUSSIAN-METEOR-15-FEB-2013-Exploring-Space-Images-from-NASA

Media Stream

Meteorite Located at Lake Chebarkul

Photo of meteorite fragment by Denis Panteleev, online courtesy Wikimedia Commons.

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Russian Meteor - Exact Travel Path

Alex Ivanov has described this video as "Kamensk-Uralsky film." Online, courtesy Alex Ivanov and YouTube.

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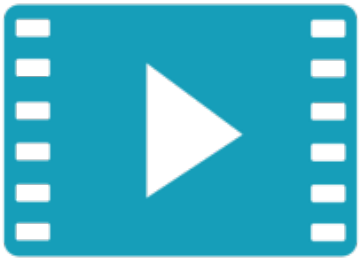

Russian Meteor - Explosion near Chelyabinsk

Video of the Russian meteor exploding over Chelyabinsk on 15 February 2013, uploaded by Alexander Bulanov, via YouTube.

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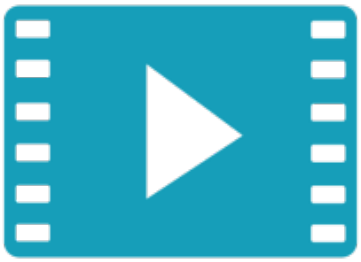

Russian Meteor - Shockwave Blast

Video by Gregori Chentsov, uploaded via YouTube.

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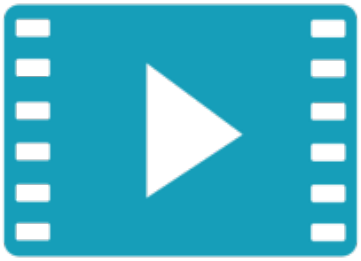

Russian Meteor - Likely Landing Site

Clip from 15 February 2013 BBC broadcast on the Russian meteor's likely contact with the Earth's surface. Copyright, BBC, all rights reserved. Clip provided here as fair use for educational purposes.

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