



StrewnLAB Meteor Bulletin — St. Louis, Missouri

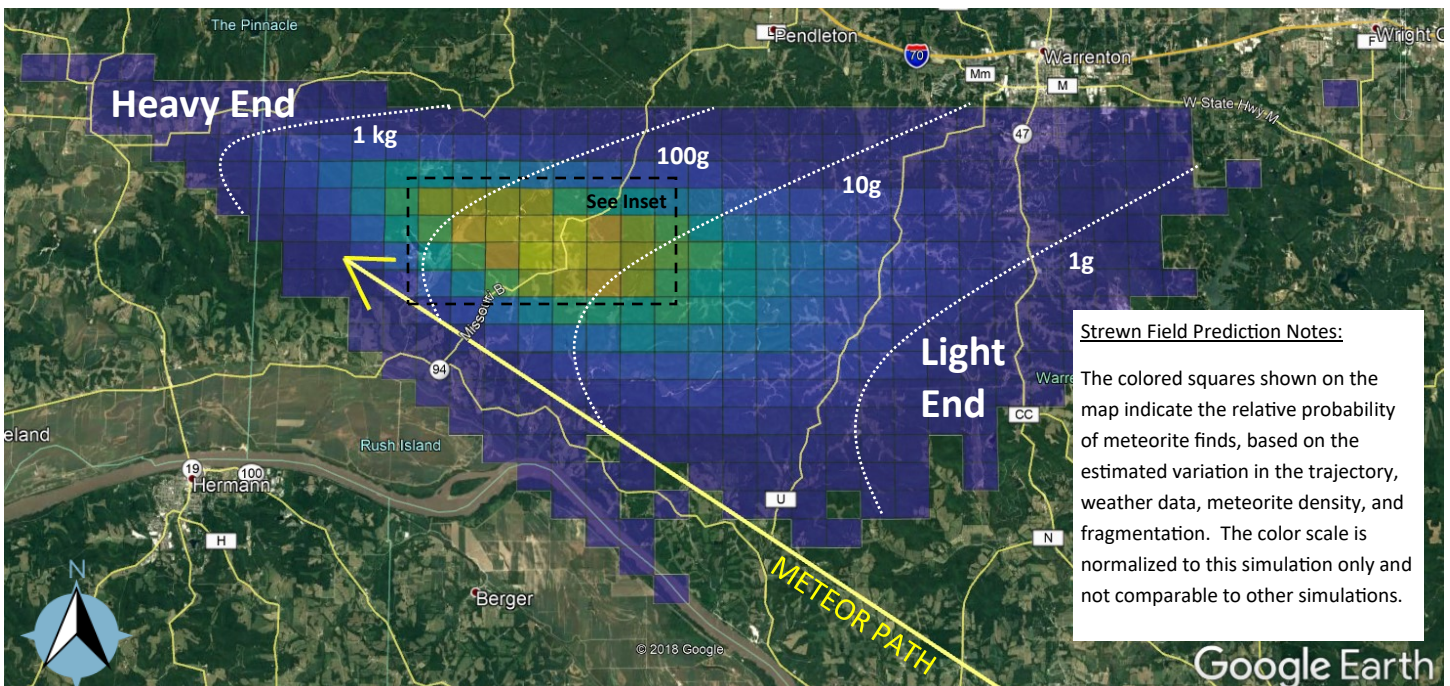
Version 1.1 | Released November 16, 2019 04:35 UTC

Trajectory Data:

Date/Time UTC	11/12/2019 02:51:45
Local Date/Time (-6.0)	11/11/2019 08:51:45 PM CST
Reference Location	38.7636°N 91.3857°W
Reference Altitude	16.4 km
Estimated Energy/Mass	0.0028 kt / 100 kg
Bearing (Heading)	303.66° ± 0.5° NW
Incidence Angle	38° ± 2° from vertical
Entry Speed	15.3 ± 0.5 km/s

Strewn Field Prediction Data:

Simulation Date/Time	11/15/2019 20:00 UTC
Simulation Engineer	Jim Goodall
Trajectory Data Source(s)	St. Louis EarthCam Video AMS Albany Video Willard High School Video Columbia Video
Weather Data Source	IGRA Weather Balloon Data
Simulation Type	Monte Carlo, Unknown Meteoroid
Simulation Data Count	320 scenarios / 100,007 fragments



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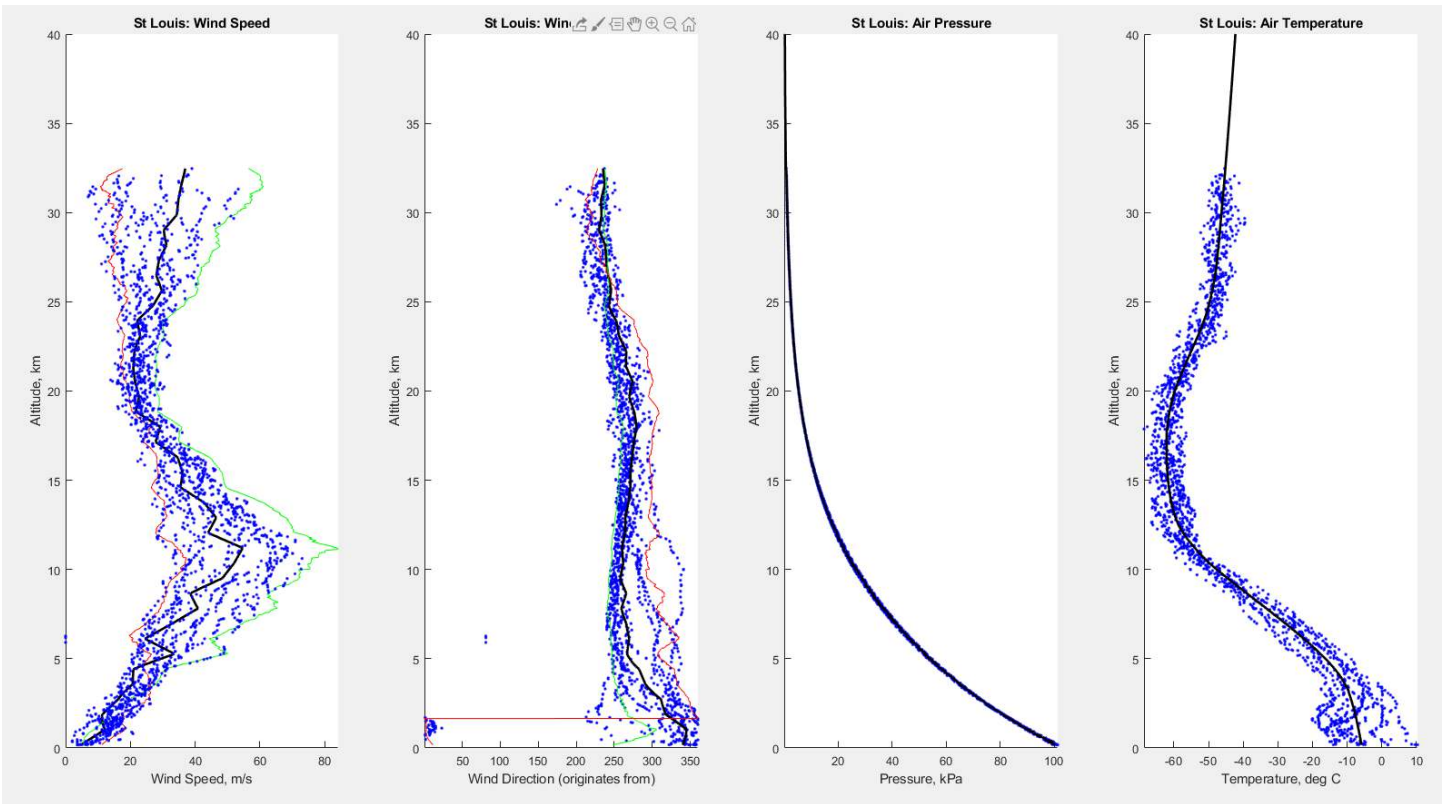


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Weather Data Summary:

Windspeed variation included: 1.5σ



Version Log:

Date	Version	Change Notes	Author(s)
11/13/2019	1	Trajectory determined from multiple camera sources, crosschecked with NASA trajectory, and further verified by Doppler radar. Confidence level is high, there are meteorites on the ground.	Jim Goodall
11/16/2019	1.1	Further simulation provided a better resolution map. Notes added. No trajectory changes.	Jim Goodall

References:

Branch, Pat (2019, November 12). Provided Doppler Radar Data Analysis. Facebook Messenger conversation.

AMS Event 5566-2019. American Meteor Society. C2019. https://fireball.amsmeteors.org/members/imo_view/event/2019/5566.

IGRA Radiosonde Database. c2019. National Centers for Environment Information, National Oceanic and Atmospheric Administration. <https://www.ncdc.noaa.gov/data-access/weather-balloon/integrated-global-radiosonde-archive>.

NASA All-Sky Fireball Network Report. c2019. Huntsville, (AL): Meteoroid Environment Office, NASA Marshall Space Flight Center; [accessed 2019 Nov 12]. <https://fireballs.ndc.nasa.gov/skyfalls/events/20191112-025148?fbclid=IwAR0fCJtb-2tKhNtXqIVHLEn2aQs1yVILZR5AVT2wsutTjaFMvMDDTpkACDI>.

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