

# Universal Cam Network API

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IMC 2018  
August 30–September 2,  
Pezinok-Modra, Slovakia

Photo ©Harun Mehmedinovic



# Fireball Form

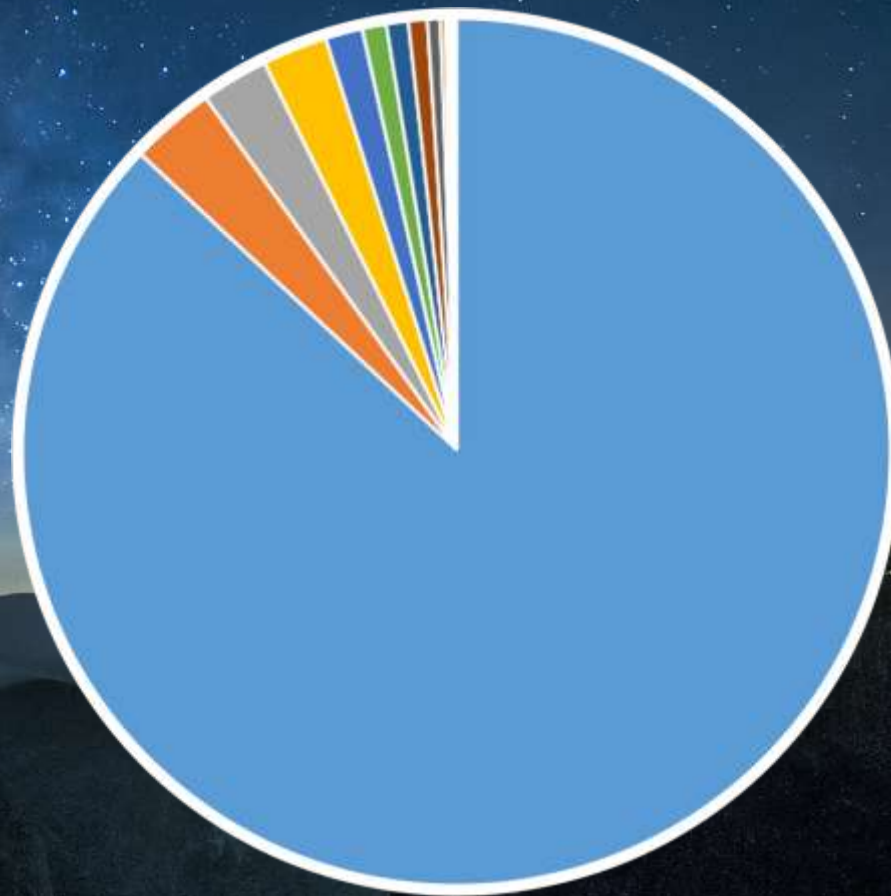
**146k**

fireball reports

**35k**

fireball events

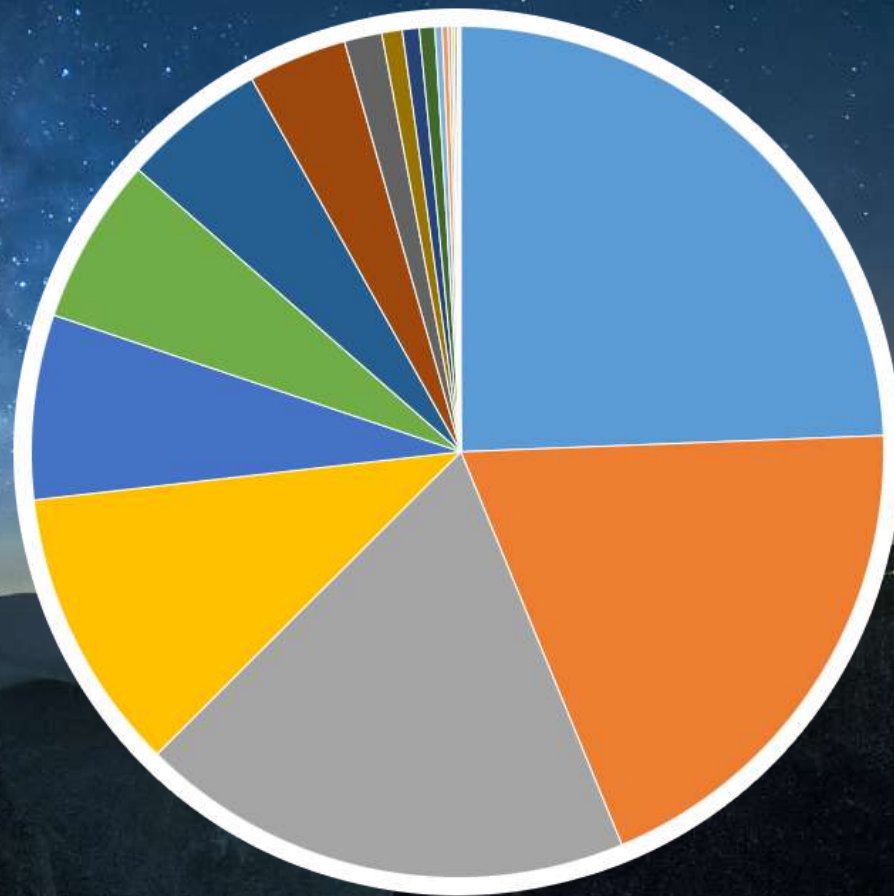
87% of the reports  
from the AMS Website





# Fireball Form

<b>IMO</b>	<b>4,603 reports</b>
<b>UKMON</b>	<b>3,667 reports</b>
<b>ReFoRme</b>	<b>3,532 reports</b>
<b>Vigie-Ciel</b>	<b>2,016 reports</b>
<b>Exoss</b>	<b>1,313 reports</b>
<b>Vallende Sterren Info</b>	<b>1,187 reports</b>
<b>Werkgroep Meteoren...</b>	<b>1,024 reports</b>
<b>...</b>	



All stats are available at:  
[http://fireballs.imo.net/members/imo\\_fireball\\_stats/](http://fireballs.imo.net/members/imo_fireball_stats/)

# Fireball Form

**27 organizations**

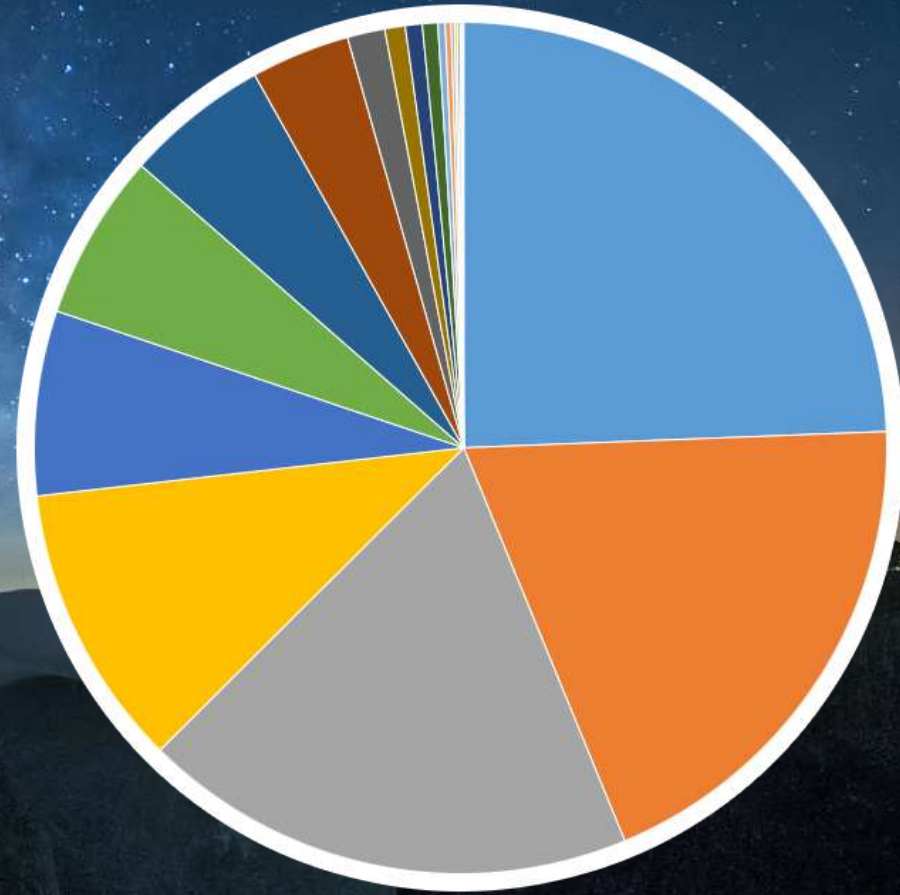
x36 languages = **972 versions of the form**

Largest Event: #2017-4299

**2045 reports** from Denmark,  
Austria, Czech Republic, Italy,  
Switzerland, France and Germany

All stats are available at:

[http://fireballs.imo.net/members/imo\\_fireball\\_stats/](http://fireballs.imo.net/members/imo_fireball_stats/)





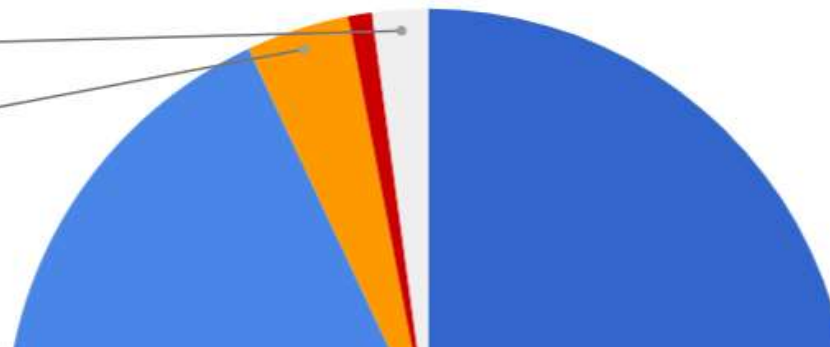
# Fireball Form

<b>Outstanding</b>	1014	54.05%
<b>Good</b>	731	38.97%
<b>Poor</b>	74	3.94%
<b>Awful</b>	17	0.91%
<b>No Evaluation</b>	40	2.13%
<b>TOTAL</b>	1876	100%

## Fireball Report Evaluation Summary

1876 survey answers  
since Sept. 2012

No Evaluation  
2.1%  
Poor  
3.9%



**Paul Roggemans** (...) The IMO Fireball database is rather a trash of erroneously reported data and cannot be used for any decent analyses. (...)

Like · Reply · 24w

Outstanding  
54.1%

# Fireball Form

692

fireball event  
related videos

771

fireball event  
related photos







Events in 2018 ▶

AMS received 20 n  
South-East Distri  
Northern Cape, E  
Central District, N  
Kweneng District  
around 16:52 UT.

D. Sound

3 yrs 15 hrs



20 Reports

- a - Barend S
- b - Marilise H
- c - Dhiraj S
- d - Christian G
- e - Nancy M
- f - Natalie W
- g - Hentia S
- h - Anonymous A
- i - Gerds B
- j - David Grant L
- k - Kyra R
- l - Deon W
- m - Diane W
- n - Michael C
- o - One M
- p - Desiree S
- q - Brian H
- r - Wayne d
- s - Marsha G
- t - Madeleine S



Exp.





## Küldje be tűzgömb észlelését!

Gyorsan haladó és fényes jelenséget látott az égen? Lehet, hogy egy tűzgömb volt. Küldje be észlelését!

Kérjük töltsse ki interaktív észlelőlapunkat! Kérjük igyekezzen mindent pontosan megadni. Az adatai fontosak számunkra, mert így értesülhetünk egy fontos eseményről, és Ön is hozzájárul a meteorokról gyűjtött tudományos ismeretek bővüléséhez. Az űrlap végén lehetősége lesz részletesen leírni a látványt és minden további részletet.

- **Kérjük ne küldjön be 30 másodpercnél hosszabb jelenségeket:** a tűzgömbök döntő többsége csak másodpercekig látható.
- **Kérjük ne küldjön be ismétlődő eseményeket:** tűzgömbök észlelése nagyon ritka, sokaknak csak egyszer adatik meg egy életben.
- **Kérjük ne küldjön be észlelést lassú, villogó, alakzatban repülő objektumokról:** a tűzgömb egy nagyon fényes hullócsillag.

Ha technikai jellegű gondja akad kérjük kattintson a "Segítség" linkre vagy használja az egyszerűbb űrlapot.

★ [Kezdés](#)

### Eventi in 2018 > 3124-2018

[KML](#)

Abbiamo ricevuto 125 resoconti su un Bolide visto su Istria, Primorje-Gorski Kotar County, Zadar County, Campania, Gespanschaft Lička-Senjska, Marche, Mozijske, Nova Gorica, Radovljica, Primorsko-goranska županija, Toscana, Toscana, Carintia, Emilia-Romagna, Istrarska županija, Lazio, Umbria, Logatec, Kärnten, Istria County e Ab alle Saturday, August 18th 2018 circa 18:56 UT.

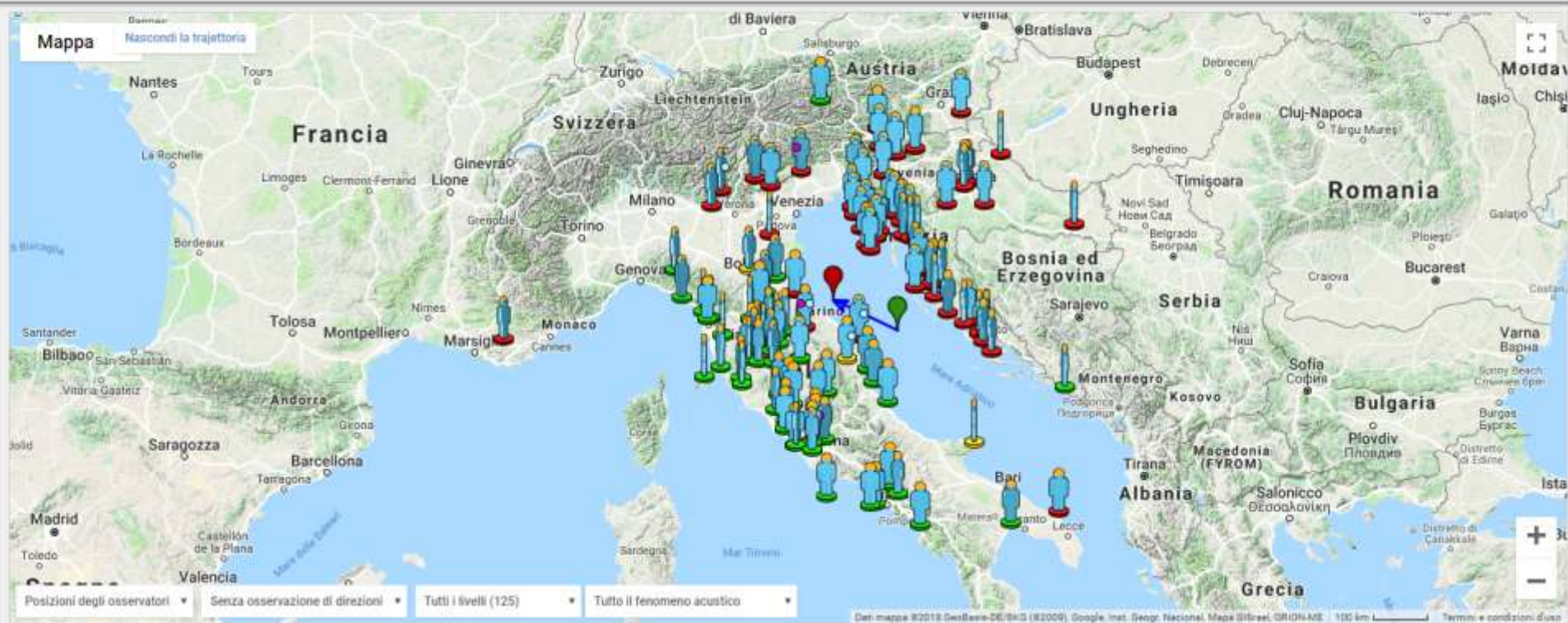
Per questo evento abbiamo ricevuto una fotografia.

⚠ La traiettoria mostrata sulla mappa e il file KML sono stati calcolati automaticamente sulla base di tutte le testimonianze e potrebbero non essere ottimizzati.



### 125 Resoconti di Testimone

aa - AlessioM	Livello 1
aa - DavidP	Livello 2
ab - WinD	Livello 1
ac - LuigiZ	Livello 2
ad - DarioZ	Livello 2
ae - MartinaL	Livello 1
af - KarloJ	Livello 3
ag - ZrinkaM	Livello 1
ah - tadejaK	Livello 1
ai - grauS	Livello 1
aj - BobbyN	Livello 3
ak - IgorM	Livello 2
al - AlfonsoD	Livello 2
am - YohanL	Livello 4
an - NicolaL	Livello 2
ao - MatejS	Livello 3
ap - ChristophP	Livello 2
aq - AdamK	Livello 2
ar - MarioA	Livello 1



### Legenda

### 1 Fotografia







[Events in 2018](#) ▸ 168-2018

AMS received 674 reports about a fireball seen on Wednesday, January 17th 2018 around 01:10 UT.

16 meteorites have been validated by AMS for this event.

[Visit the Event page](#)



## 16 Meteorites

55.92g	Deborah G	2018-01-20
37.00g	Larry A	2018-01-18
20.60g	Luke J	2018-01-18
20.00g	Darryl L	2018-01-18
17.50g	atkins I	2018-01-18
15.83g	Anthony L	2018-01-18
13.80g	T V	2018-01-19
12.60g	T V	2018-01-19
11.75g	Glenn B	2018-01-19
11.50g	T V	2018-01-19
10.43g	Anthony L	2018-01-27
6.50g	Laura D	2018-01-20
2.00g	Ron M	2018-01-26
0.30g	Esther L	2018-01-20
0.10g	Lisa M	2018-01-21
0.09g	Andrew L	2018-01-20





### Meteorite #30 - Event #168-2018

Found by **D. Grischke**  
 On **2018-01-20 (local)**  
 Location **42.453589° -83.856052°**  
 Weight **55.920g**

Finder Comments  
**My meteorite was confirmed on the day of the find through Cranbrook (email attached). I have been working with Michigan State University and their team at the Abrams Planetarium and they too have validated it's authenticity. We have everything documented.**

---

This meteorite has been validated by **Shannon Schmoll, PhD**  
*My meteorite was confirmed on the day of the find through Cranbrook (email attached). I have been working with Michigan State University and their team at the Abrams Planetarium and they too have validated it's authenticity. We have everything documented. You can contact the director, Dr. Shannon Schmoll at:*







But where are  
**YOUR DATA**  
about these events?

# Where are your

Videos

Still pictures

Calibration images

Multiple reduction records (dif. Methods)

Multiple trajectory solution

Radar images

KMZ files

Orbits (maybe... 😊)

Commentary (text)

News articles

Scientific articles

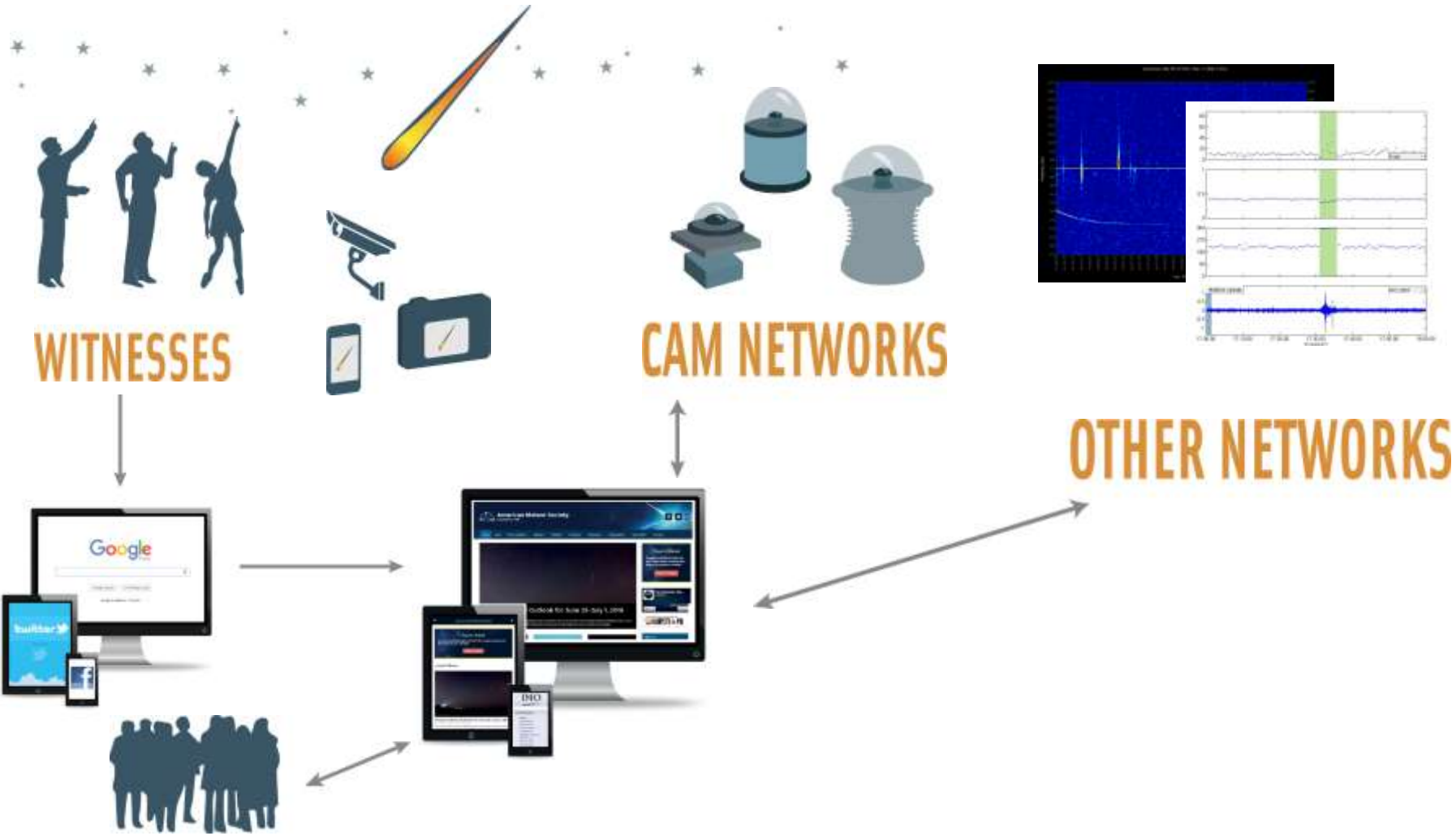
Strewnfield find coordinates

Picture of meteorites

Links to metbull classifications

...





## Events in 2018 ▶ 2065-2018



We received **214** reports about a fireball seen over **Noord-Brabant, Groningen, Noord-Holland, Zuid-Holland, Vlaanderen, Limburg, Grand Est, Île-de-France, Bayern, Overijssel, Gelderland, Utrecht, Bourgogne Franche-Comté, Nordrhein-Westfalen, Hauts-de-France, Hesse, Normandie, Baden-Württemberg, Drenthe, Rheinland-Pfalz** and **Hes** on **Saturday, June 16th 2018** around **21:09 UT**.

For this event, we received **3** photos.

### Camera Networks

A fireball event has been detected by **three** camera networks

- **FRIPON** - 3 cameras
- **CAMS Benelux** - 2 cameras
- **UKMON** - 1 camera

Date & Time: 2018-06-12 21:08:54 UT.

FRIPON 3 cameras  
European Cam Network

- FRFC04** - Reims, France
- FRRA09** - Maubeuge, France
- FRRA02** - Strasbourg, France

[▶ FRIPON Detection details](#)

**CAMS Benelux** 2 cameras  
European NASA Ames RC

**UKMON** 1 camera  
UKMON Cam Network

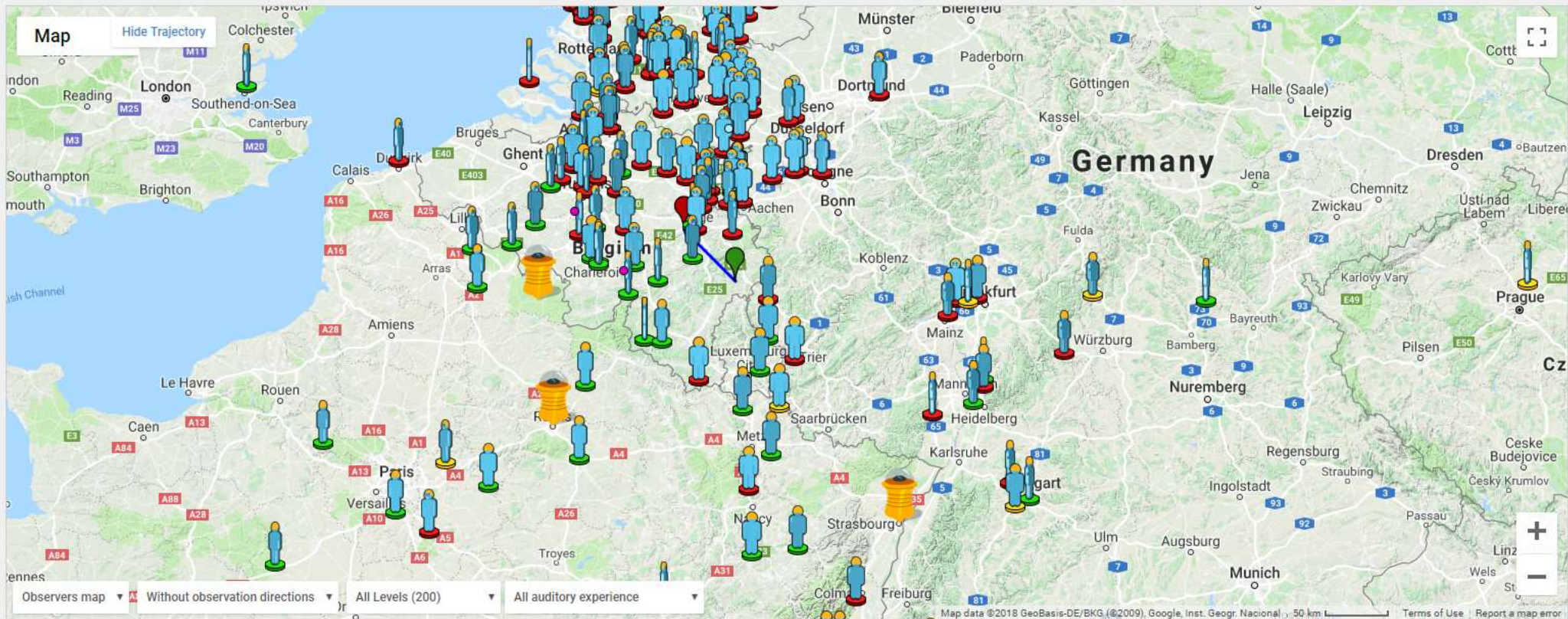
f 129

159

### 200/214 Witness Reports

[View all](#)

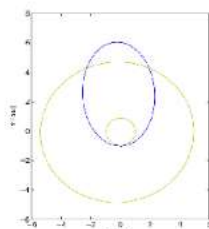
a - FB	Level 2
aa - GertieH	Level 1
ab - KristofD	Level 2
ac - FransN	Level 1
ad - VincentV	Level 2
ae - IrmaD	Level 1
af - BenteC	Level 1
ag - LisaL	Level 1
ah - MichelB	Level 2
ai - ChristK	Level 2



### Legend

### FRIPON detection detail - ©FRIPON

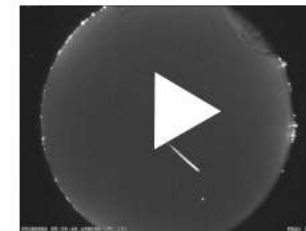
Start time	2018-06-18 21:09:30
Duration	1.74s
Height	119.17m ▶ 91.09m
Ground trajectory	45.469°, 5.560° ▶ 45.853°, 3.861°
Velocity	67.773km/s ▶ 70.155km/s
Zen. Angle	78.100° ▶ 79.341°
RA	3.113°
DEC	-4.165°
Constellation	Pisces
Traj. method	Borovicka
Orbit. method	traj_rad



Orbit obtained from this event  
© FRIPON



Cam FR01 - Maubeuge  
© FRIPON



Cam FR33 - Reims  
© FRIPON



A night landscape with a starry sky and a bright sun or moon on the horizon. The sky is dark blue with many stars and a faint Milky Way galaxy. The sun or moon is a bright yellow circle on the right side of the horizon. The foreground shows dark, silhouetted hills and a river winding through a valley.

**It needs to be**

**Automated**

**Easy**

**Customable**

**Platform independent**



# CAM UNI API vβ

## Getting Started

The CAM UNI API connects your camera network with the AMS/IMO Fireball database.

In order to be able to [Log a Fireball Event](#), you need to:

1. Obtain a unique `api_key`
2. [Register your network](#)
3. [Register your cameras](#)

CAM UNI API vβ

### Getting Started

- [GET /api\\_key](#)
- [GET /register\\_network](#)
- [GET /register\\_cam](#)
- [POST /register\\_cams](#)
- [POST /log\\_event](#)

## GET /api\_key

Using the CAM UNI API requires an API Key that is provided to AMS paid members or invited scientific organizations and individuals. `GET /api_key` allows you to generate an API Key based on your AMS credentials or to retrieve your forgotten API Key.

**Your API Key is personal and cannot be shared. The CAM UNI API activity is monitored. Any abuse of your API Key will result in banishment.**

[Try the Online Form for GET /api\\_key](#)

### Resource URL

```
https://www.amsmeteors.org/members/api/uni_cam_api/get_api_key
```

### Parameters

`email` and `pwd` are required only if you are **NOT** logged in to the AMS website yet.

Field	Type	Required	Description
<code>email</code>	Email	✓	Your email <i>* required if you aren't logged in to the AMS website</i>
<code>pwd</code>	String	✓	Your password <i>* required if you aren't logged in to the AMS website</i>
<code>format</code>	String		<ul style="list-style-type: none"> <li><code>txt</code> : TXT format</li> <li><code>json</code> : JSON or JSONP format</li> <li><code>results_only</code> : returns only the API_KEY as a string (default)</li> </ul> <p><b>Note:</b> JSONP is default if a callback is detected.</p>

Success (200)

[www.amsmeteors.org/members/cam\\_uni\\_api](https://www.amsmeteors.org/members/cam_uni_api)

Field	Sub_Field	Type	Description
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# API

- Get a key
- Register your cams
- Log your events

# API – Get a Key

`https://www.amsmeteors.org/members/api/  
uni_cam_api/get_api_key?email=your@email.com&pwd=P4ssw0rd`



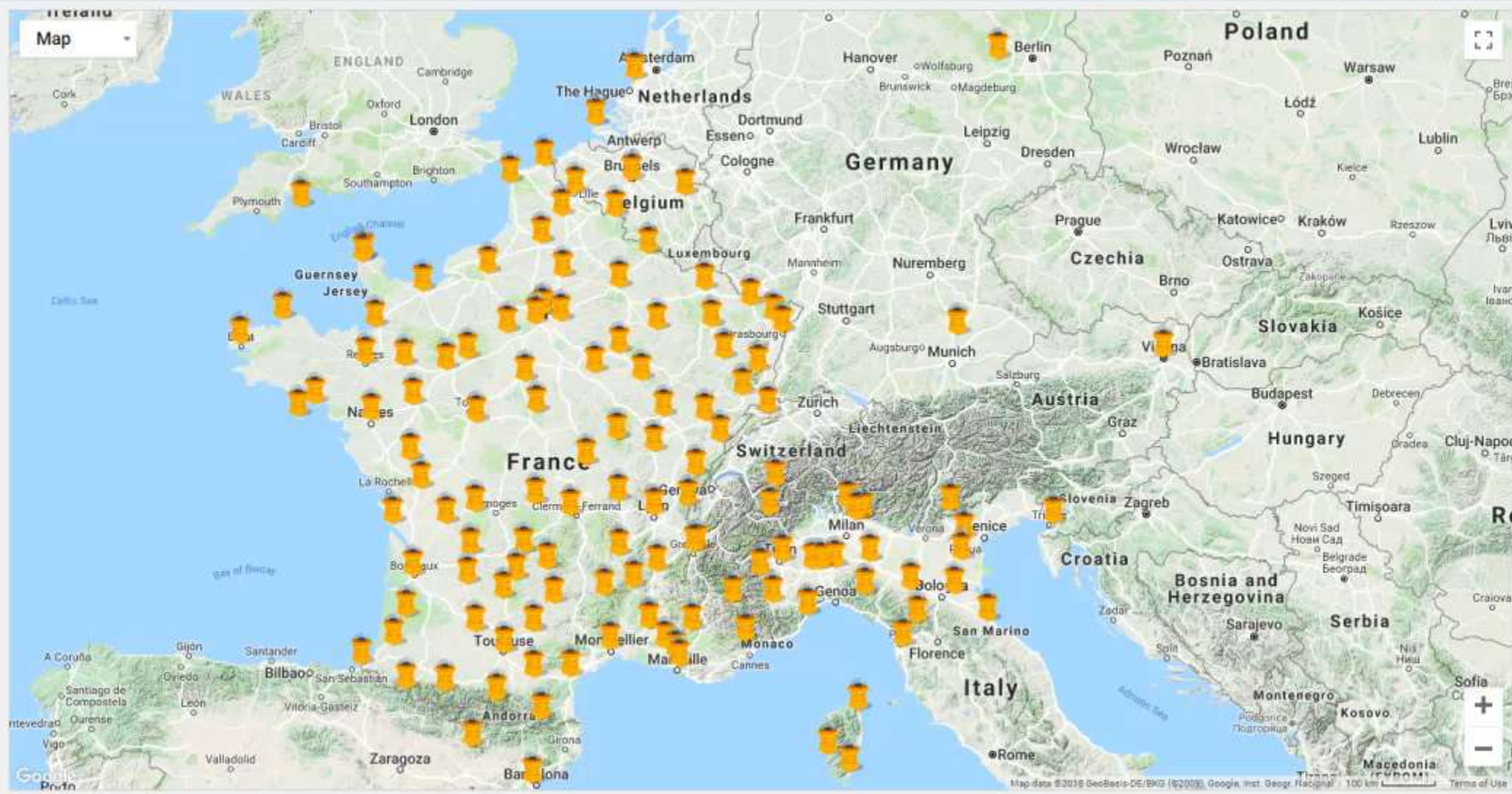
# API – Register your cams

FRLI12;43.29;5.36;3.73;Marseilles;France;  
SPPA12;43.25;-3.46;;Ramales de la Victoria;Spain;  
USMONK1;39.57;-76.61;;;US;



**Camera Networks**

-  **FRIPON** 140 cameras  
European Cam Network
-  **AMS** 23 cameras  
American Meteor Society Camera Network





# API – Log an Event



```
#!/usr/bin/python3

import requests

api_key = 'YOUR_API_KEY'
email = 'YOUR@EMAIL.COM'
url = "https://www.amsmeteors.org/members/api/uni_cam_api/log_event"

# Files to send
_files = {
'0' : open('detection1.jpg', 'rb'),
'1' : open('video1.avi', 'rb'),
'2' : open('detection2.jpg', 'rb')}

# Description of the media files
_media_desc = {
'media_desc[detection1.jpg][cam_id]' : 7,
'media_desc[detection1.jpg][desc]' : 'Description of the image',
'media_desc[video1.avi][cam_code]' : 'FR123',
'media_desc[detection2][cam_id]' : 4488
}
```







```
# The Data to send
_data = {
    'api_key': api_key,
    'email' : email,
    'format' : 'json',
    'start_time' : '2016-06-22 01:14:30.095',
    'duration' : 1.7431,
    'cam_network_id' : 2,
    'start_height': 119.172450435,
    'end_height': 91.0895546098,
    'lat_start': 45.4694626616,
    'lng_start': 5.560290071241,
    'lat_end': 45.8530898193, [...],
    'RA': 3.11267257917,
    'DEC': -4.16516875147,
    'constellation': 'Pisces',
    'traj_method': 'Borovicka',
    'orbit_method': 'traj_rad',
    'meteorite': 0 }

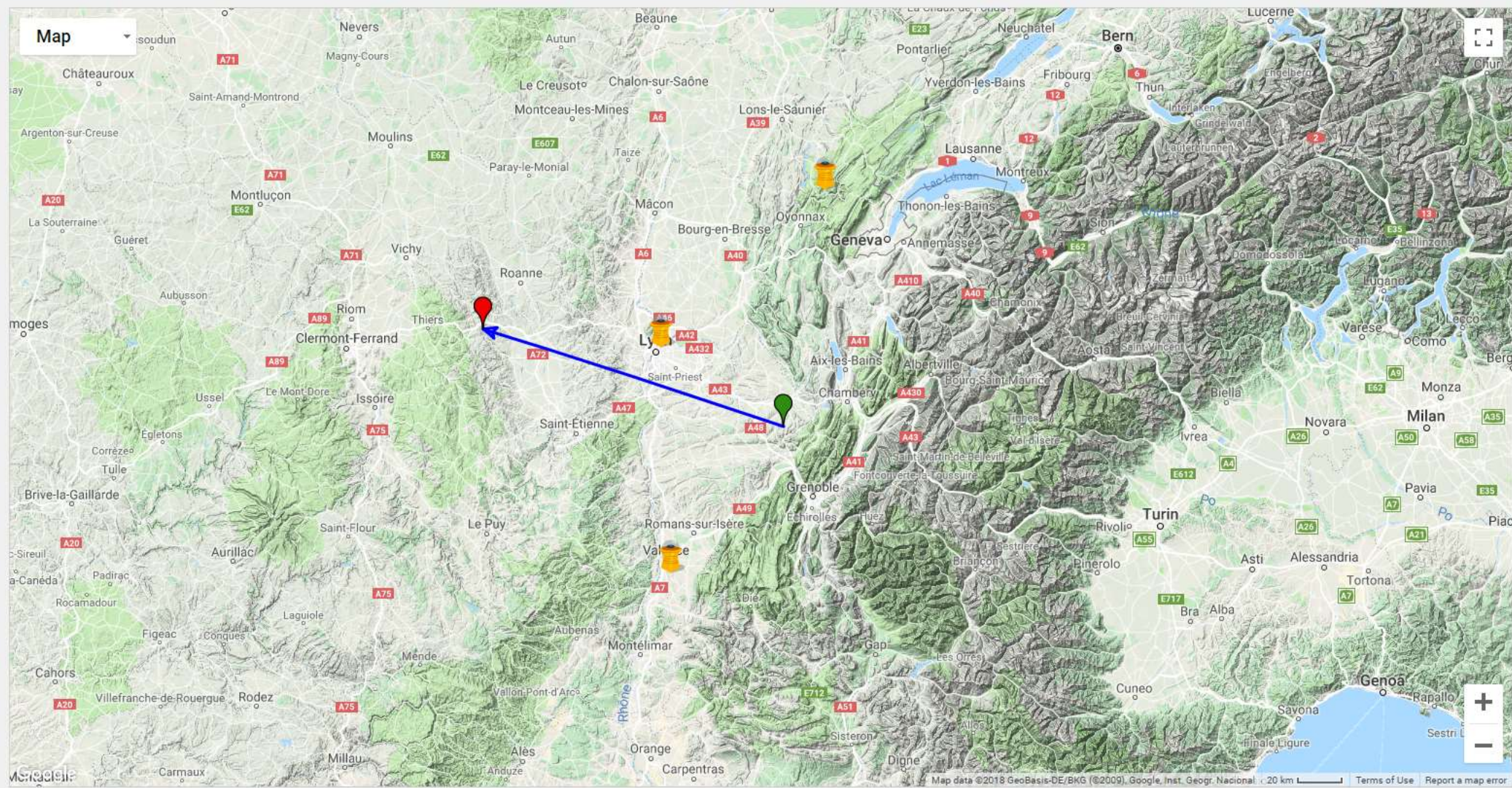
[...]
with requests.Session() as session:
    response = session.post(url, data= _data, files=_files)
print (response.text)
response.raw.close()
```



**Camera Networks**

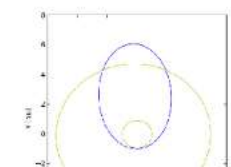
A fireball event has been detected by **one** camera network (**FRIPON** - 3 cameras) around **2016-06-22 01:14:30 UT**.

-  **FRIPON** 3 cameras  
European Cam Network
  -  **FRFC04** - SaintLupicin, France
  -  **FRRA09** - Beaumontlesvalence, France
  -  **FRRA02** - Lyon, France
- [FRIPON Detection details](#)



**FRIPON detection detail - ©FRIPON**

<b>Start time</b>	2016-06-22 01:14:30
<b>Duration</b>	1.74s
<b>Height</b>	119.17m → 91.09m
<b>Ground trajectory</b>	45.469°, 5.560° → 45.853°, 3.861°







**Visit and test**

**[www.amsmeteors.org/members/cam\\_uni\\_api](http://www.amsmeteors.org/members/cam_uni_api)**



**Don't be shy, share your data!**

- **for the scientific community**
- **for the general public**

**... and to get the recognition you deserve!**



WEB BROWSER



IP CHAIN



BROWSER HISTORY

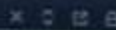


BOOKMARKS



FEEDS

NOTIFICATIONS



USING TCP CONNECTION

IP ROUTE:

192.168.1.1	192.168.1.1
192.168.1.2	192.168.1.2
192.168.1.3	192.168.1.3
192.168.1.4	192.168.1.4
192.168.1.5	192.168.1.5
192.168.1.6	192.168.1.6
192.168.1.7	192.168.1.7
192.168.1.8	192.168.1.8
192.168.1.9	192.168.1.9
192.168.1.10	192.168.1.10
192.168.1.11	192.168.1.11
192.168.1.12	192.168.1.12
192.168.1.13	192.168.1.13
192.168.1.14	192.168.1.14
192.168.1.15	192.168.1.15
192.168.1.16	192.168.1.16
192.168.1.17	192.168.1.17
192.168.1.18	192.168.1.18
192.168.1.19	192.168.1.19
192.168.1.20	192.168.1.20

A night sky over a canyon. The Milky Way galaxy is visible in the dark blue sky, with a bright meteor streaking across it. The sun is setting or rising on the horizon, casting a warm glow. The foreground shows dark, silhouetted canyon walls.

**Thank you**

[www.amsmeteors.org/members/cam\\_uni\\_api](http://www.amsmeteors.org/members/cam_uni_api)