

The logo for the International Meteor Organization (IMO), featuring the letters 'IMO' in white on a dark blue background with a yellow swoosh underneath.

# BRAMS radio observations: activity of some recent major meteor showers

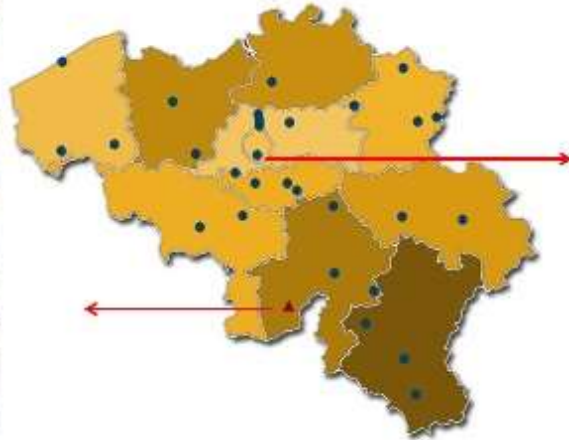
*Cis Verbeeck, Hervé Lamy, Stijn Calders,  
Cédric Tétard, Antonio Martínez Picar*



IMC 2018, Pezinok, Aug 30 – Sep 2, 2018

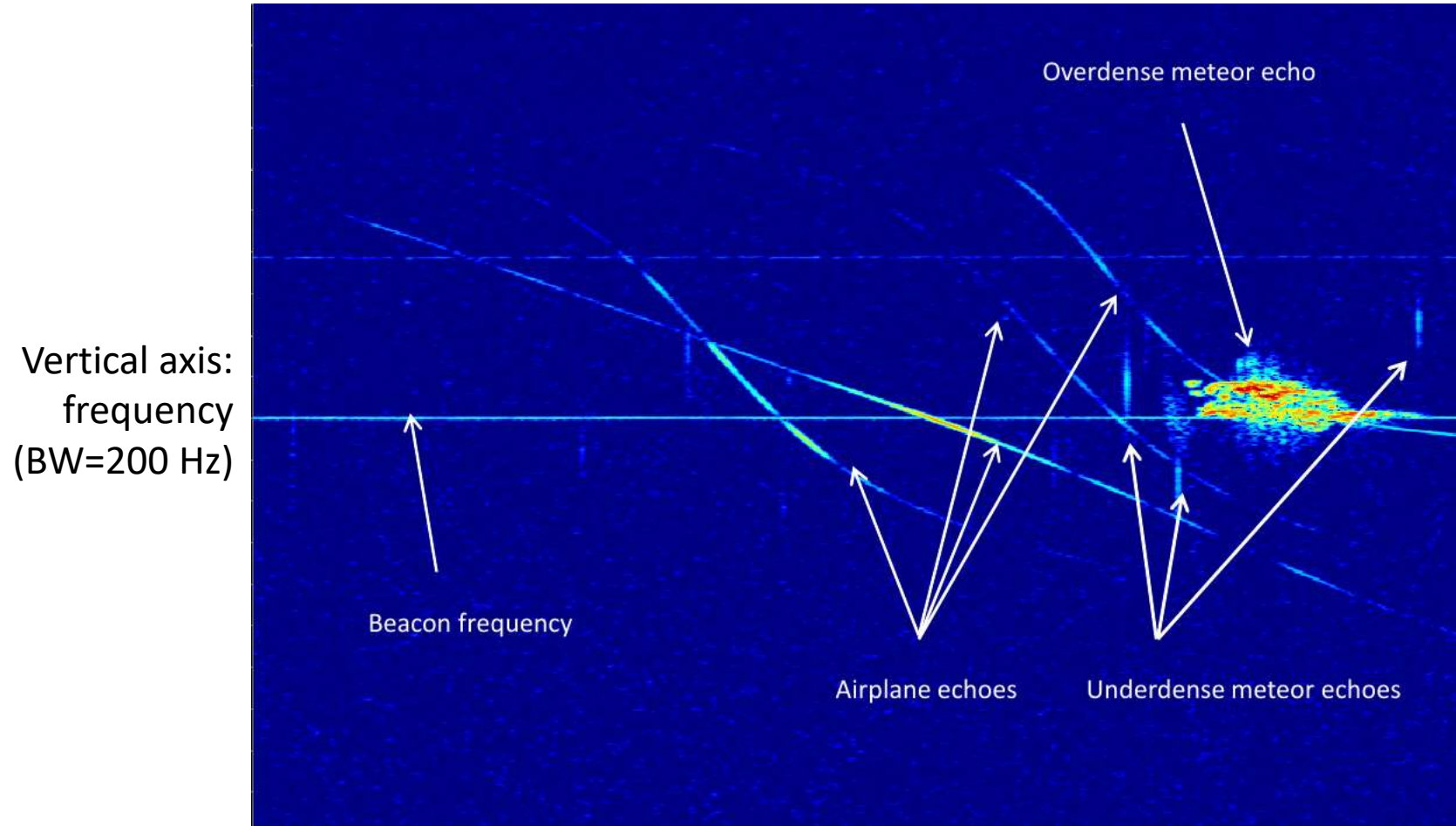


# BRAMS network



- One transmitter at Dourbes (left)
- Frequency: 49.970 MHz
- Power: 150 W
- 26 receiver stations in Belgium

# Spectrograms



Horizontal axis: time (duration = 5 minutes)

Radio Meteor Zoo — X  
Secure | <https://www.zooniverse.org/projects/zooviverse/radio-meteor-zoo>

PROJECTS ABOUT GET INVOLVED TALK BUILD A PROJECT NEWS SIGN IN REGISTER

RADIO METEOR ZOO ABOUT CLASSIFY TALK COLLECT PROJECT WEBSITE RESULTS

UPDATE: More detailed results of the Perseids 2017 are available in the [Results](#) section. These results will be presented next week during international conferences.

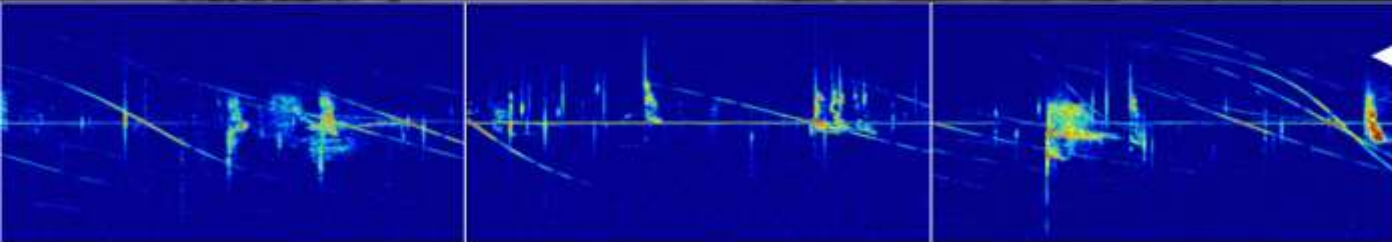
We have started uploading background data for the stations BEOTT and BEOVER.

For new users please visit the [FAQ](#) and the recently added Field Guide if you need help to analyze images.

Thank you for your constant support!

## Help us identify meteors in radio data

[Learn more](#) [Get started](#)



1 person is talking about **Radio Meteor Zoo** right now.

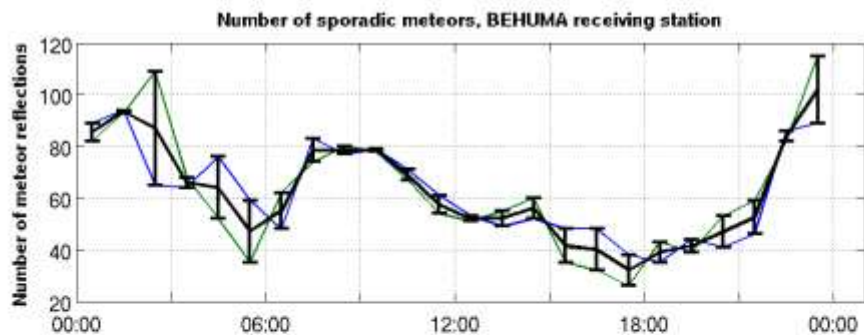
[Join in](#)

Windows taskbar: 1:41 PM 18-Sep-17

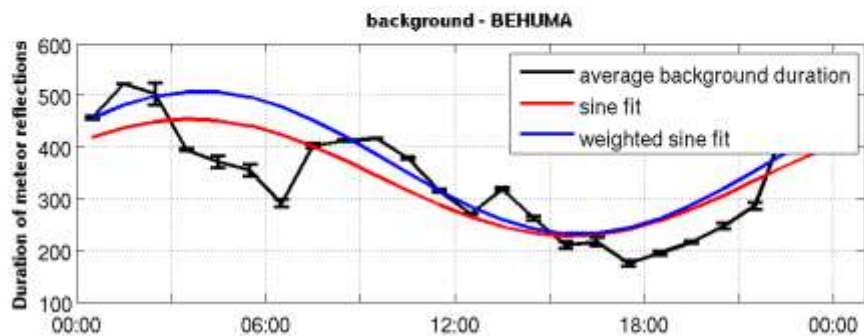
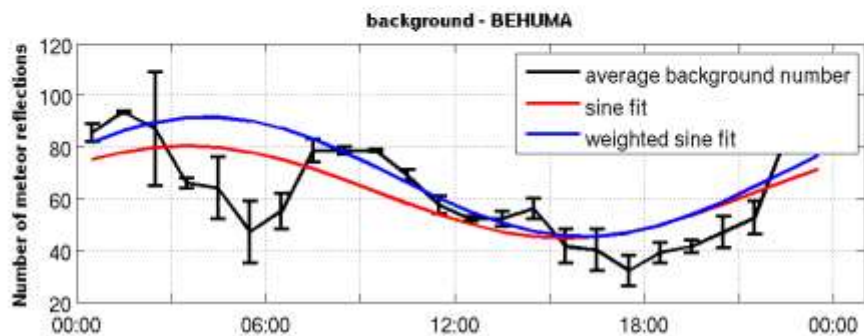
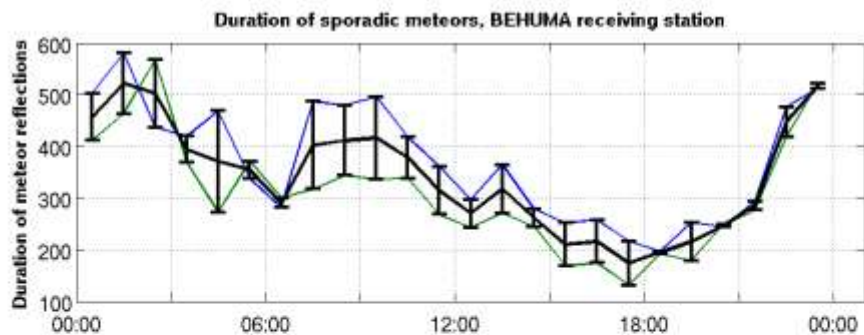
[www.radiometeorzoo.org](http://www.radiometeorzoo.org)

# Perseids 2018, Humain: sporadic background

Number of meteor reflections

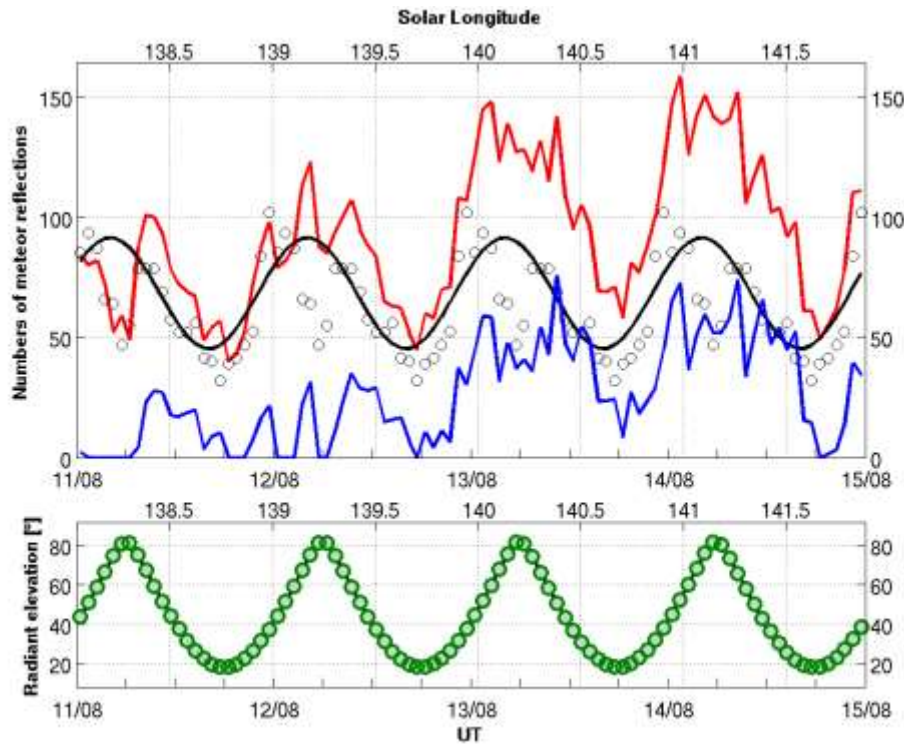


Total duration of meteor reflections

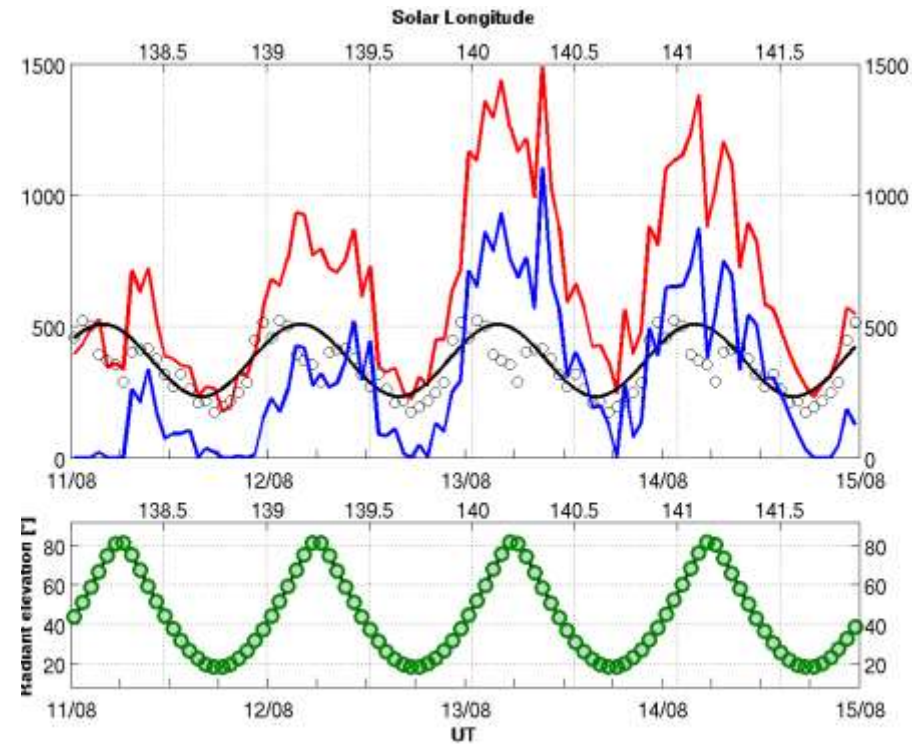


# Perseids 2018, Humain

Number of meteor reflections

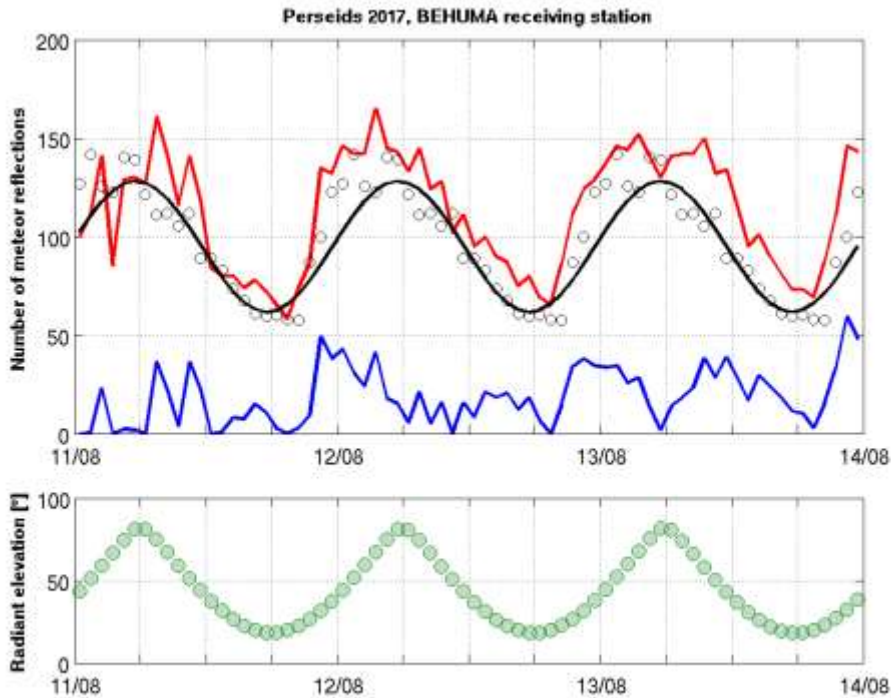


Total duration of meteor reflections

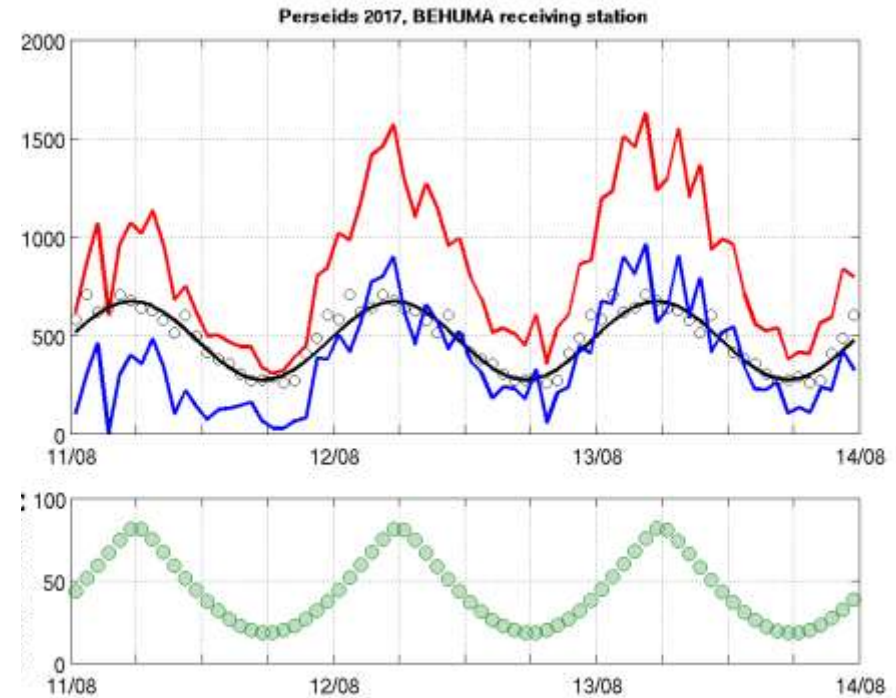


# Perseids 2017, Humain

Number of meteor reflections

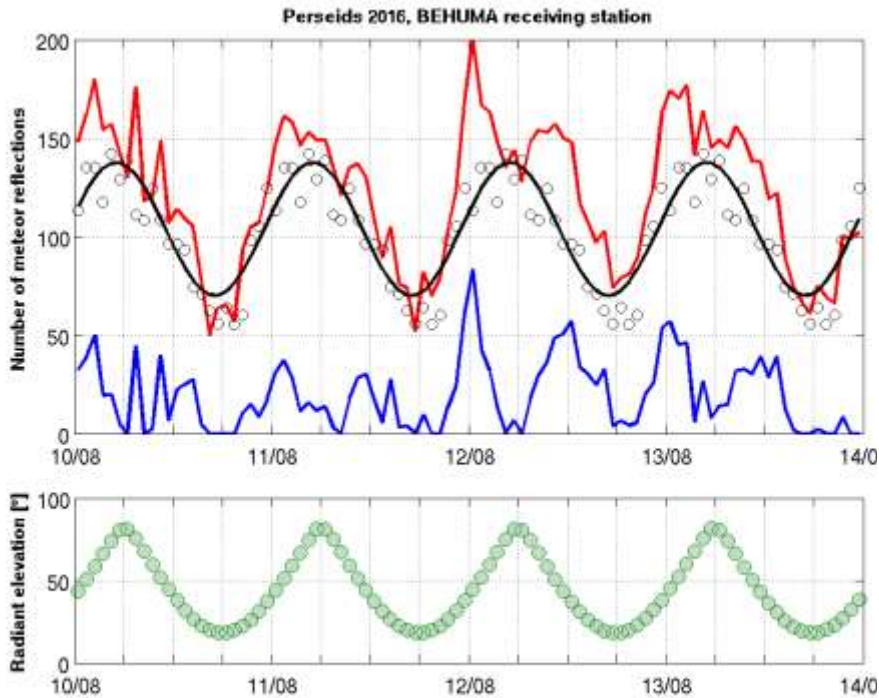


Total duration of meteor reflections

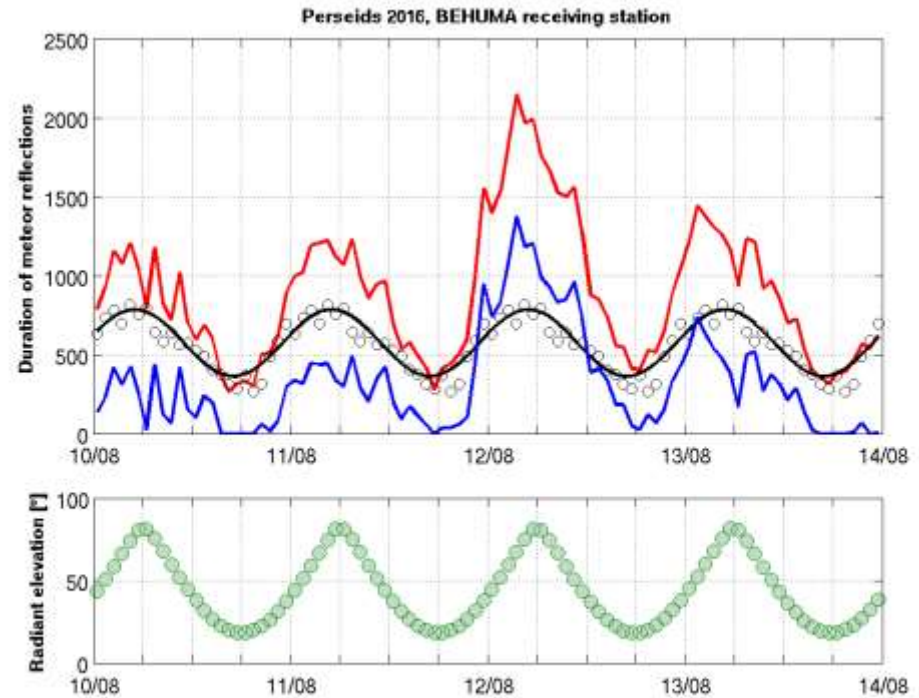


# Perseids 2016, Humain

Number of meteor reflections



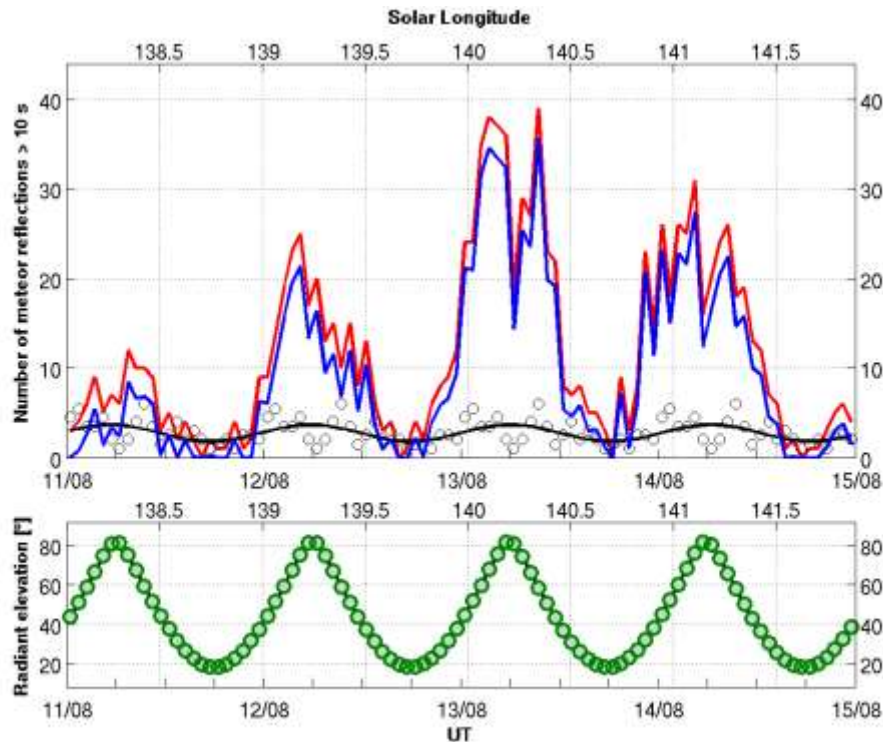
Total duration of meteor reflections



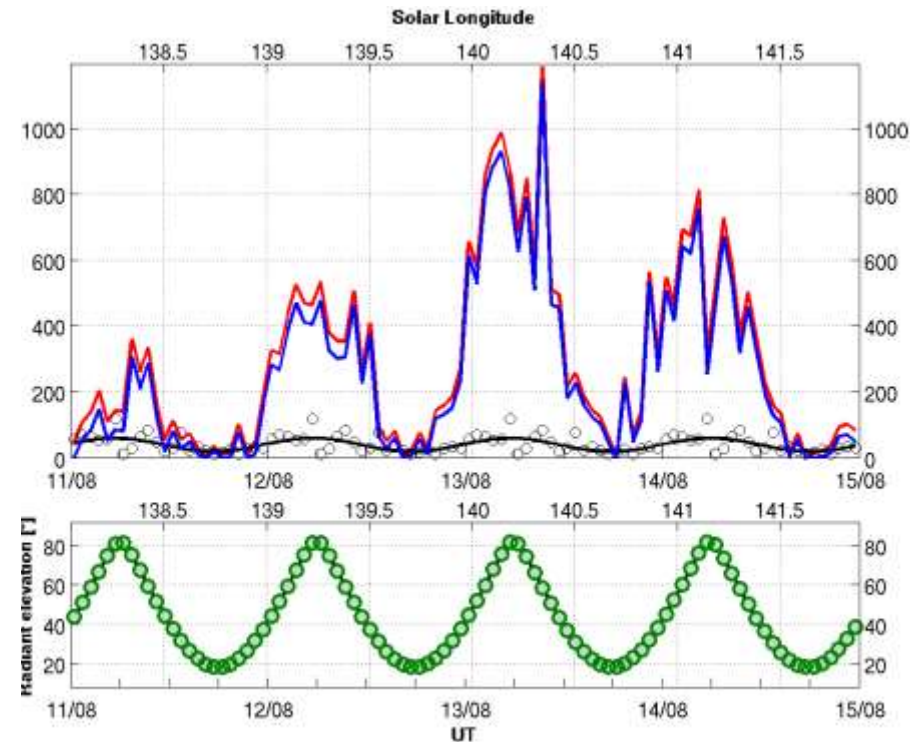


# Perseids 2018, Humain

Number of meteor reflections > 10 s

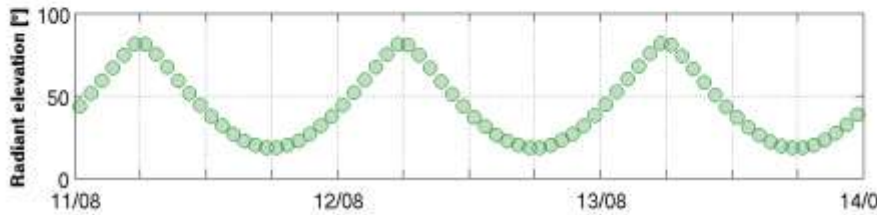
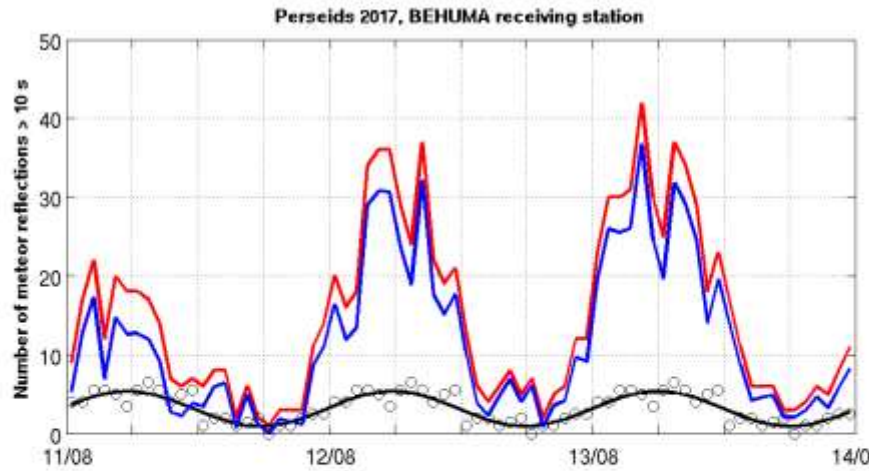


Total duration of meteor reflections > 10 s

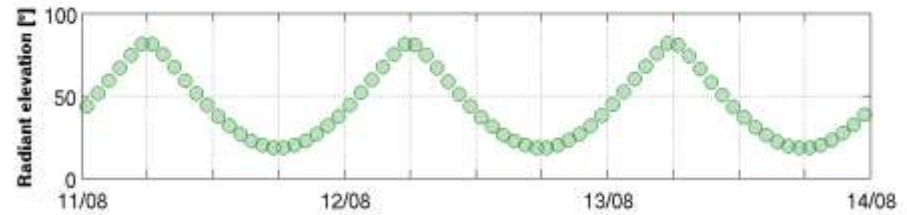
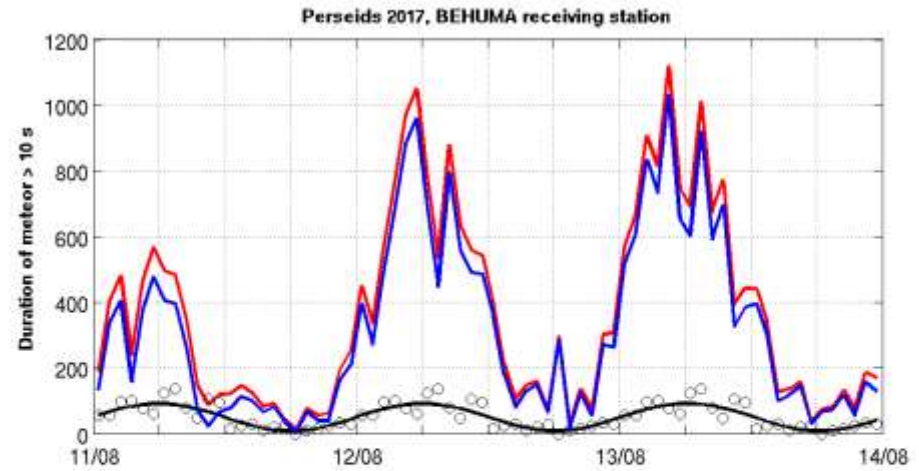


# Perseids 2017, Humain

Number of meteor reflections > 10 s

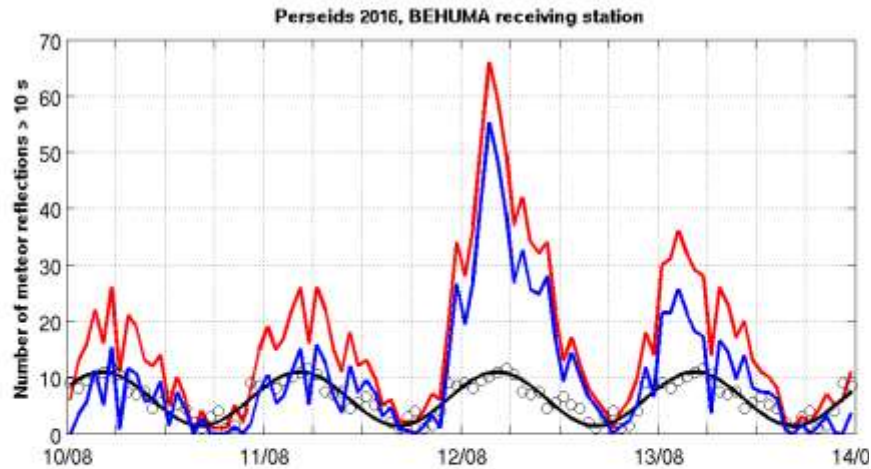


Total duration of meteor reflections > 10 s

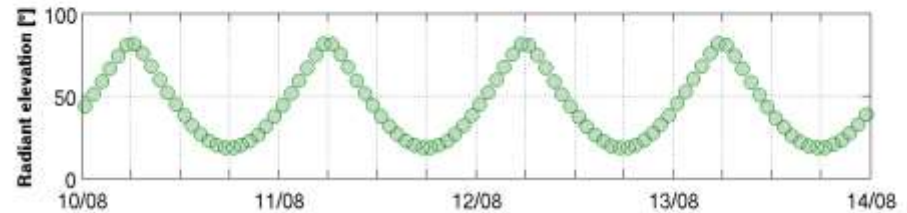
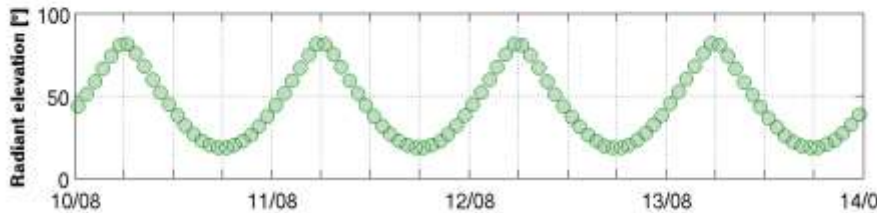
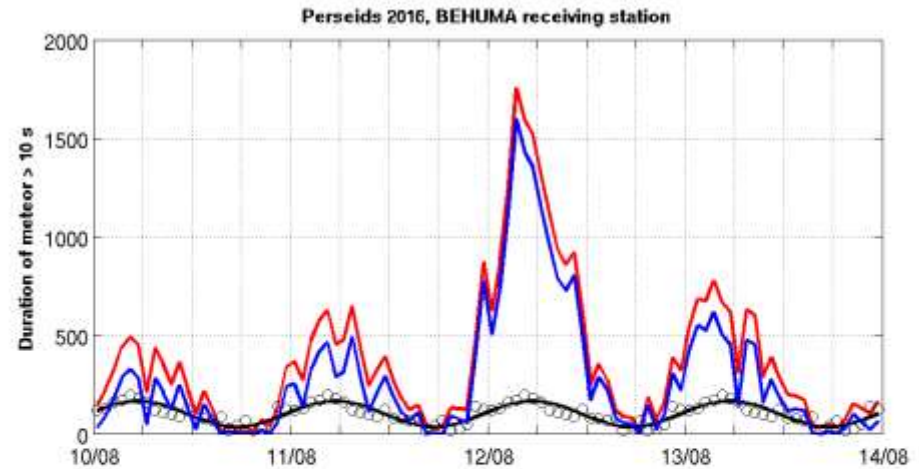


# Perseids 2016, Humain

Number of meteor reflections > 10 s

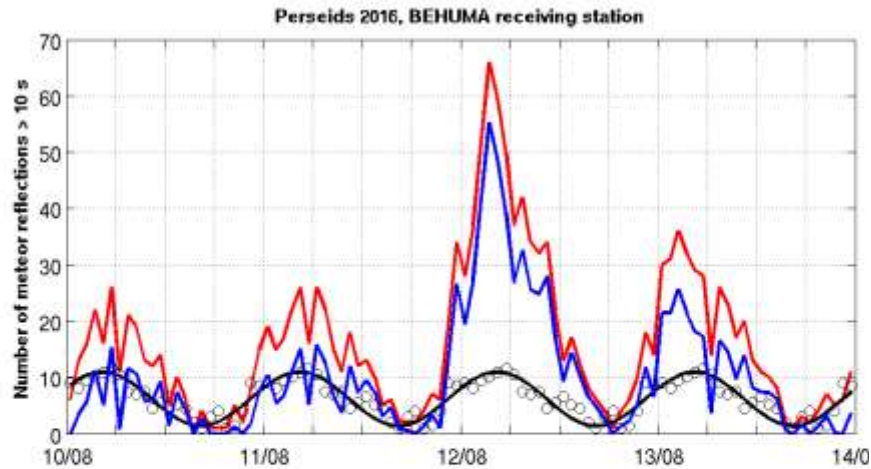


Total duration of meteor reflections > 10 s

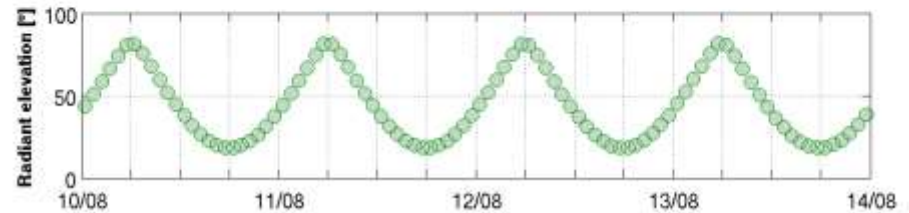
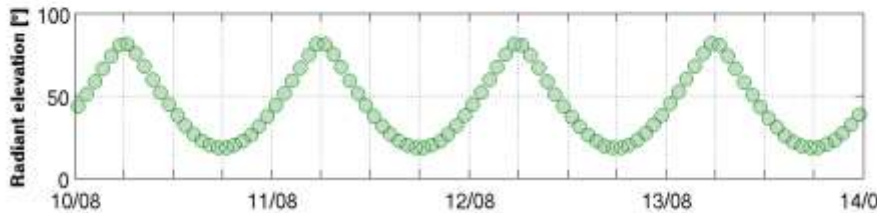
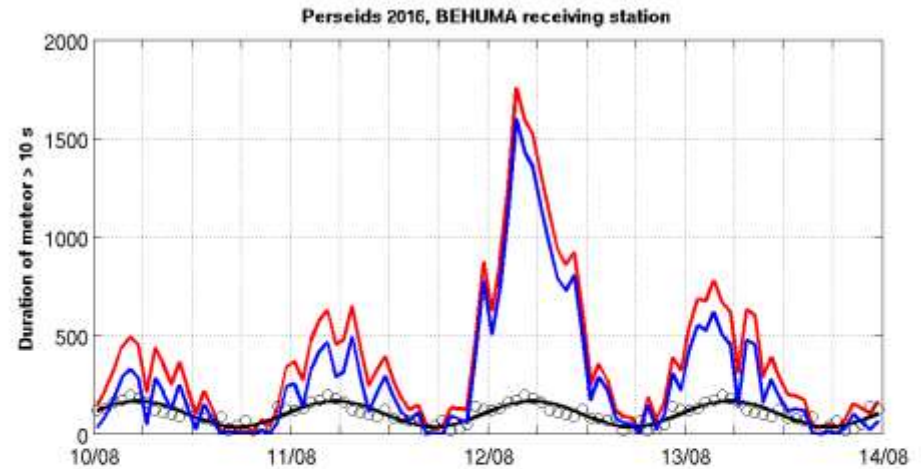


# Perseids 2016, Humain

Number of meteor reflections > 10 s

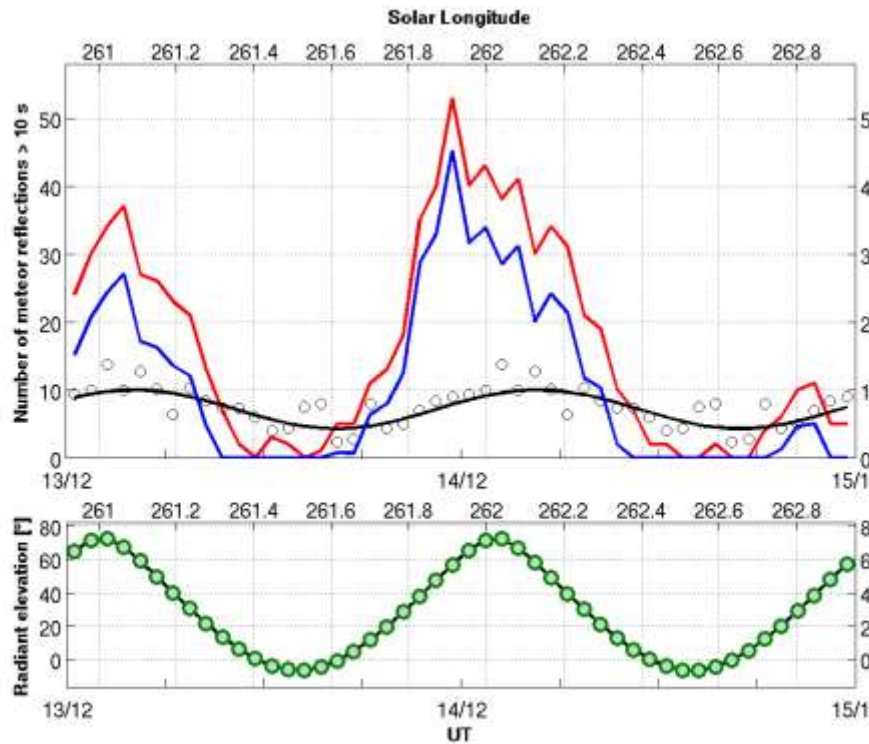


Total duration of meteor reflections > 10 s

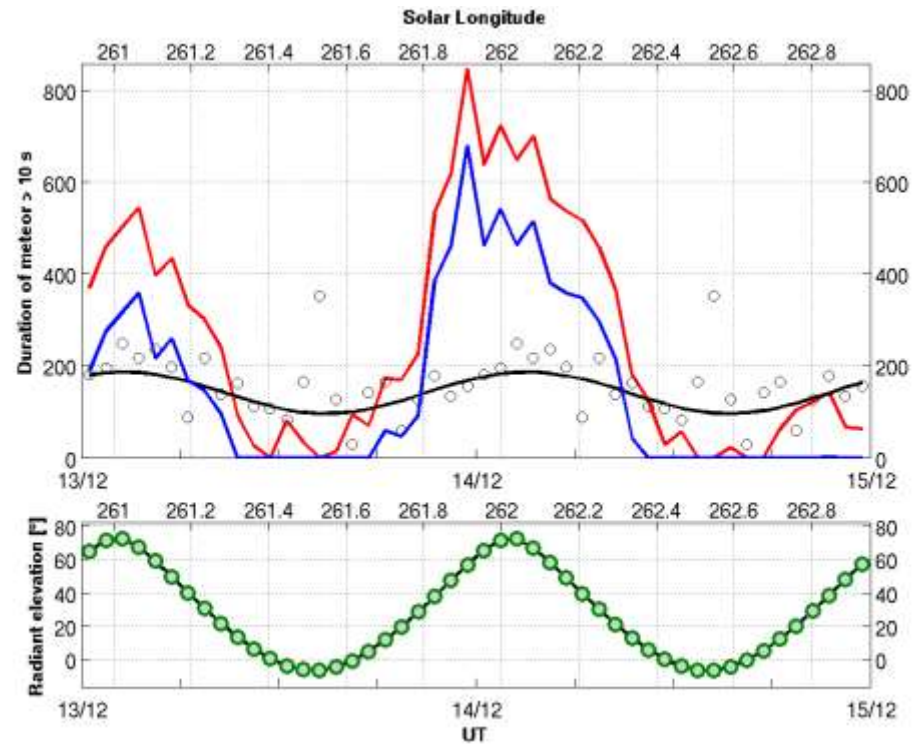


# Geminids 2017, Humain

Number of meteor reflections > 10 s

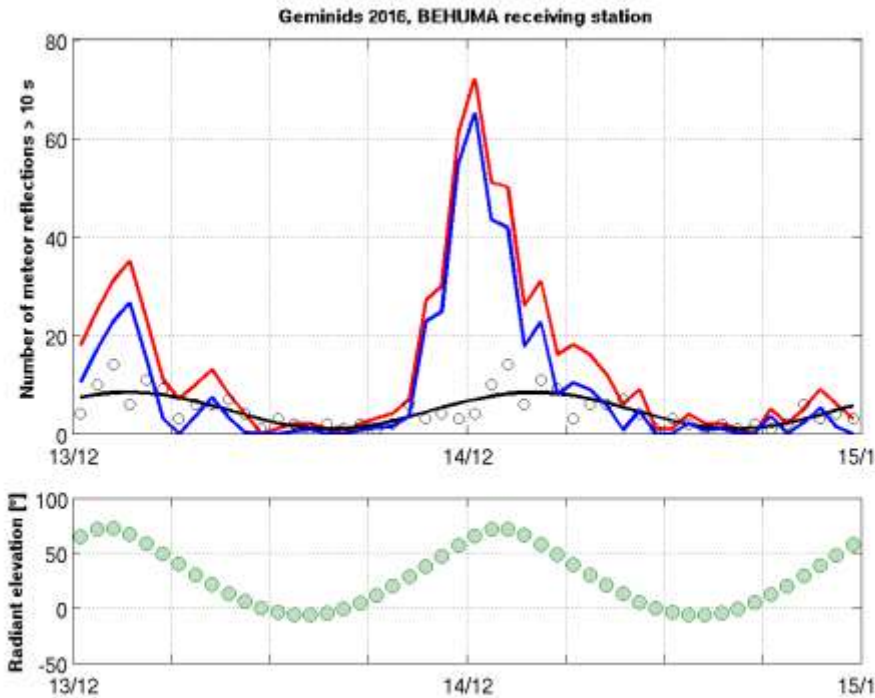


Total duration of meteor reflections > 10 s

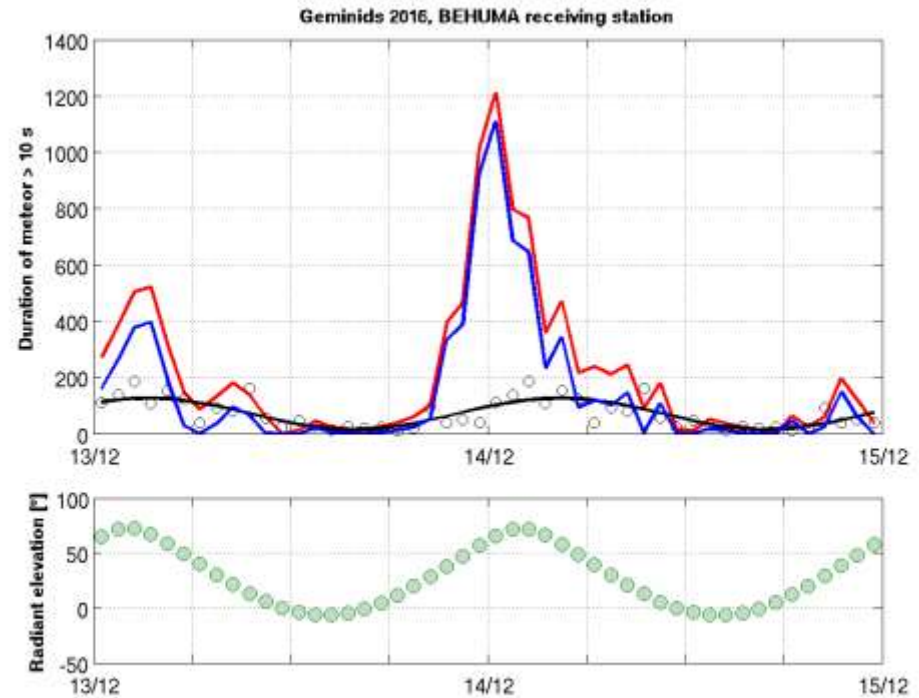


# Geminids 2016, Humain

Number of meteor reflections > 10 s

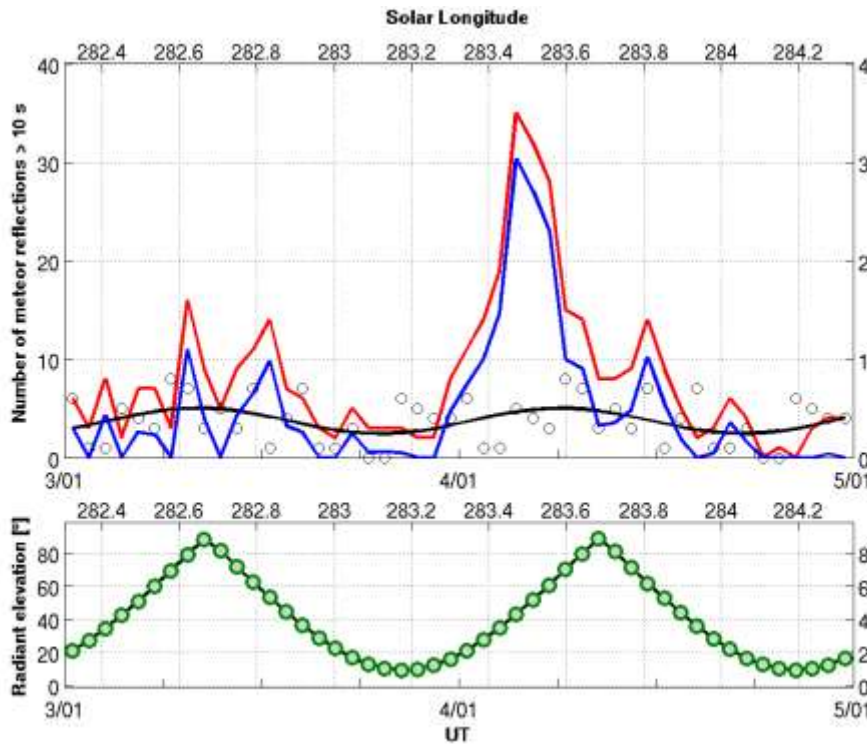


Total duration of meteor reflections > 10 s

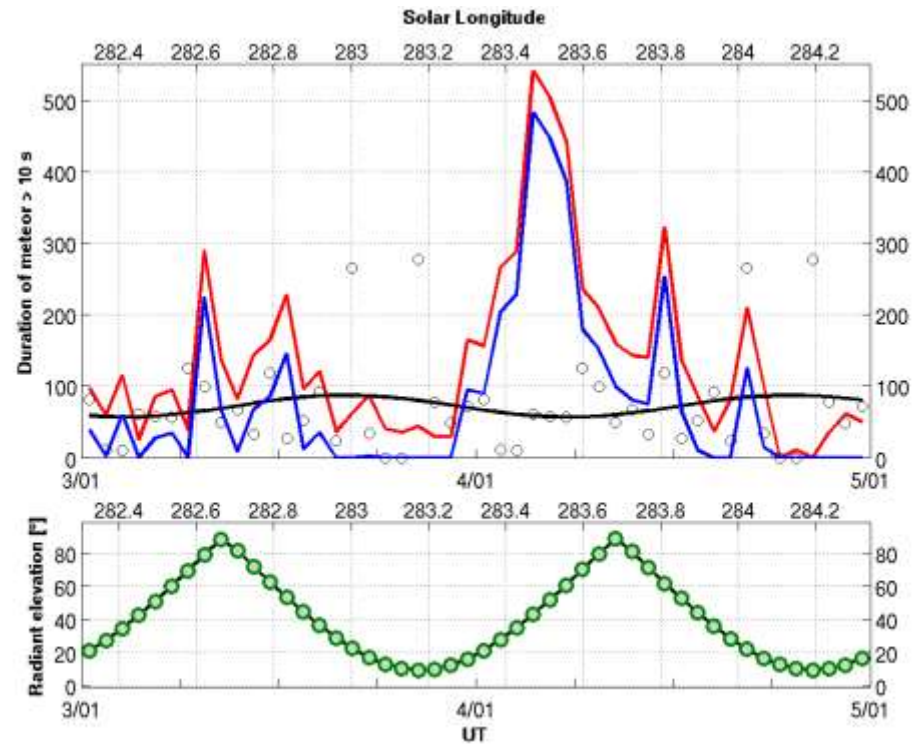


# Quadrantids 2018, Humain

Number of meteor reflections > 10 s

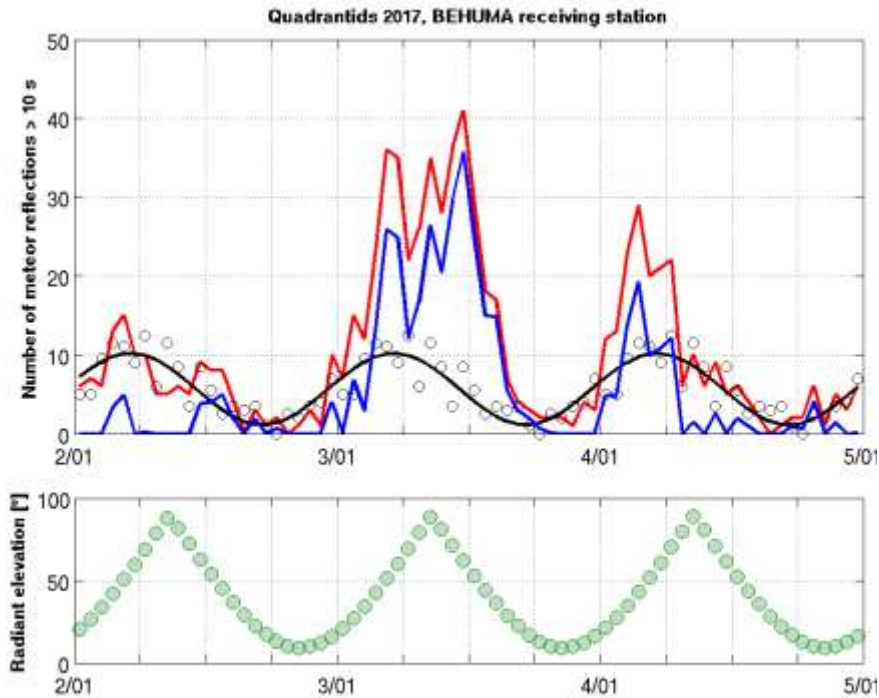


Total duration of meteor reflections > 10s

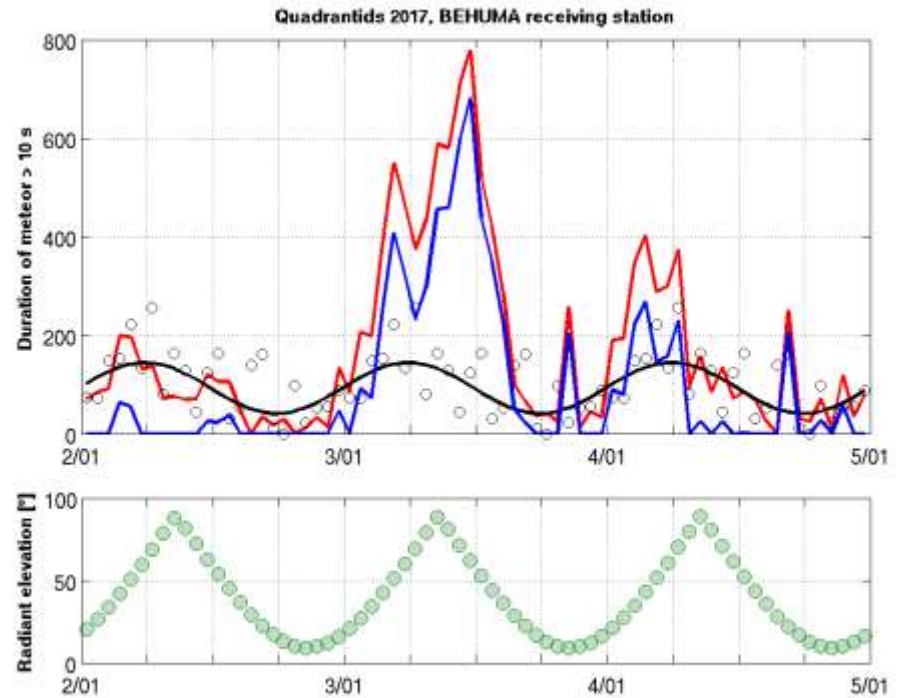


# Quadrantids 2017, Humain

Number of meteor reflections > 10 s



Total duration of meteor reflections > 10s





# Conclusions

- We have estimated the sporadic background and subtracted it from the total BRAMS radio meteor activity to obtain shower activity for the Perseids 2016-2018, Geminids 2017-2018, and Quadrantids 2017-2018.
- The resulting shower rates have to be corrected for the sensitivity of the setup (Observability Function), which is highly dependent on radiant-setup geometry and antenna gains.
- The main feature in the estimated shower activity is the shape of the Observability Function (repeating every 24 hours), which means that the diurnal variation of the sensitivity of the system swamps the real variation of the meteor rate.
- Calculation of the Observability Function is under development and expected to be ready by end 2018. To be continued...