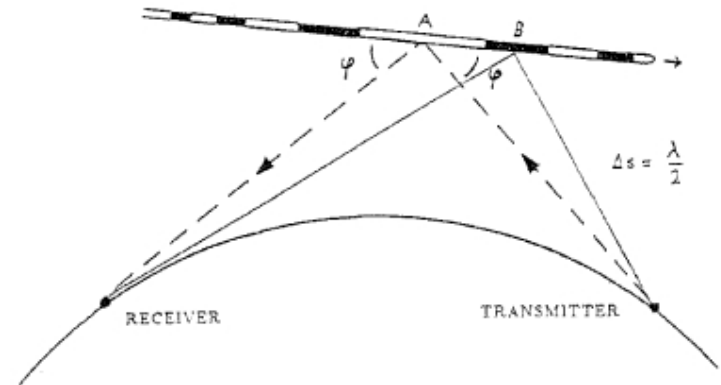


# CS1 and the Perseids

Casey Law

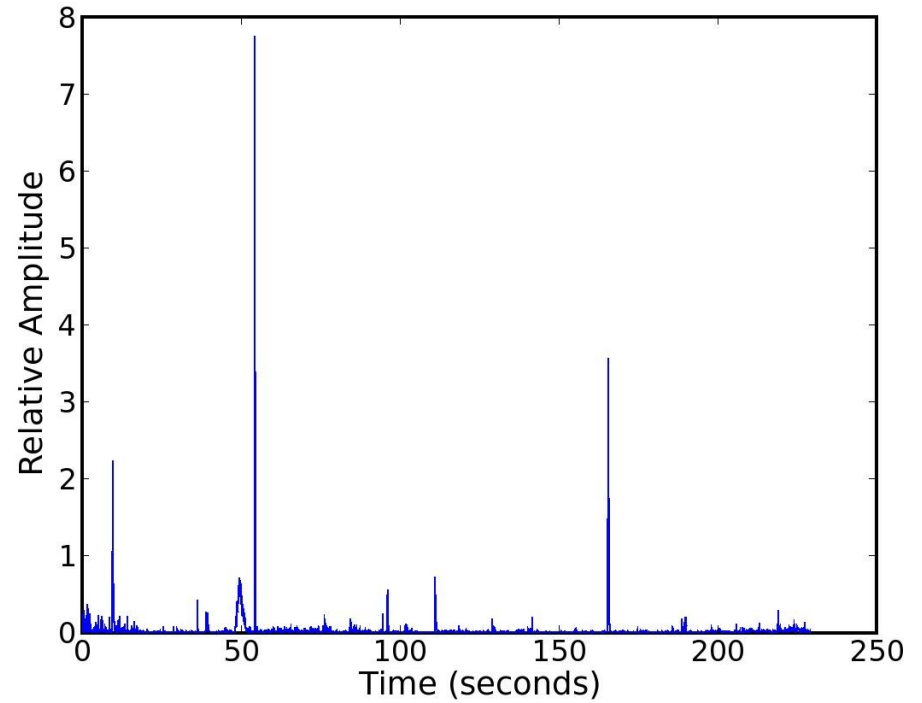
- Perseid meteor shower in mid-August
- 4min correlated data
- Observation within 1 day of shower peak

What do we observe? RFI!



Reflection of distant TV station from meteor trail  
(also possible to observe meteor itself)

Ampl. of one CS1 baseline  
 $\nu = 52.793540$  MHz (Italian TV)  
Noise level, ampl  $\sim 0.05$



### Examples from literature

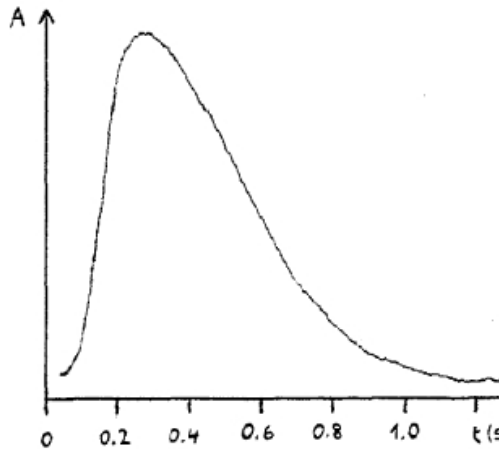


Figure 5 - A typical underdense meteor.

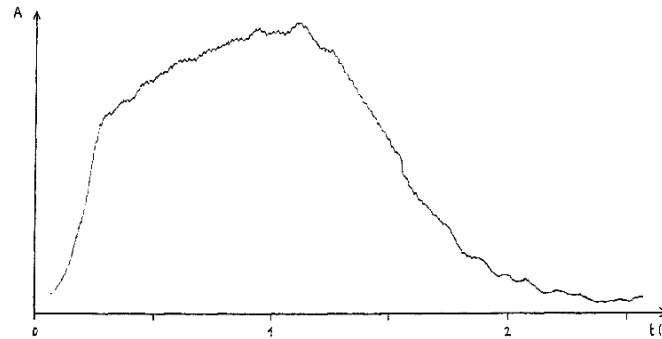


Figure 6 - A short overdense meteor.

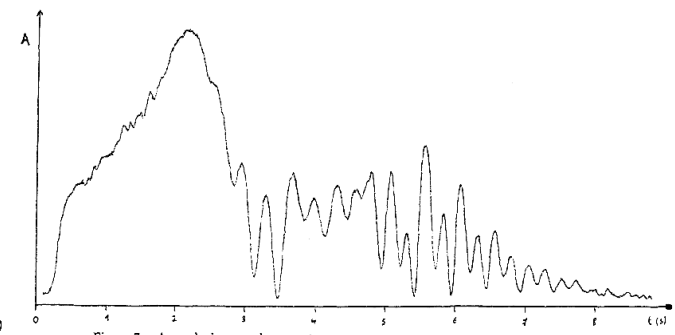
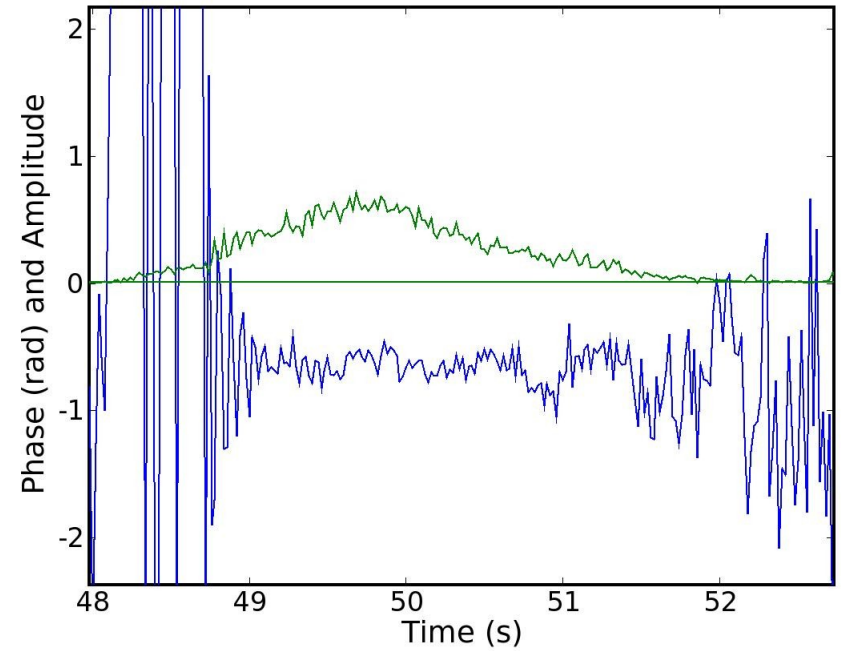


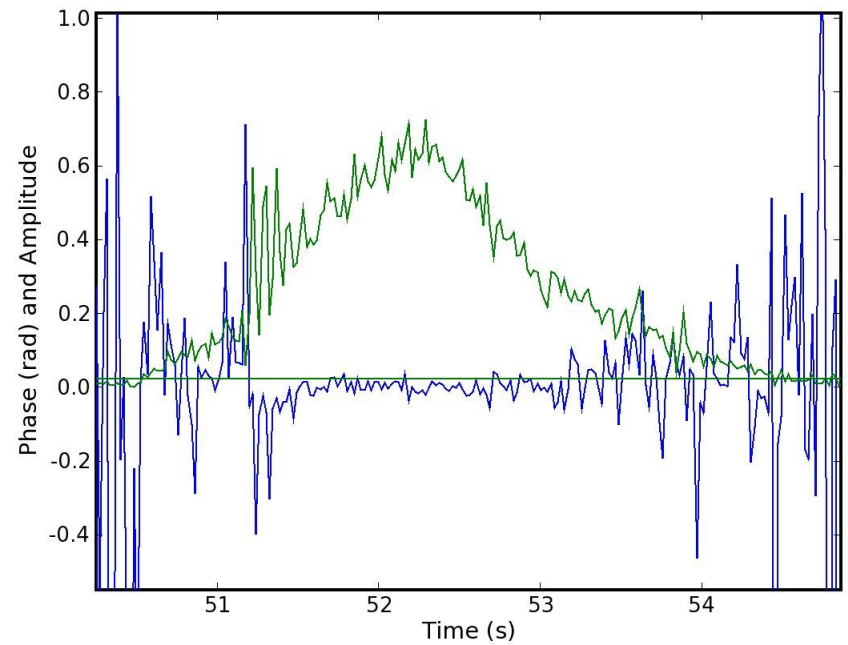
Figure 7 - An enduring overdense meteor.

Longest event (4s):

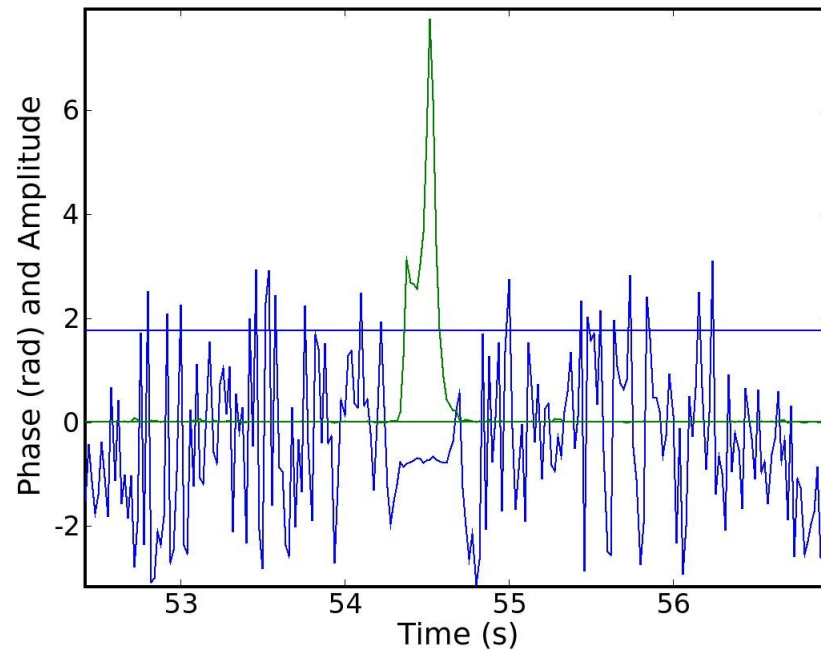
- ampl and phase



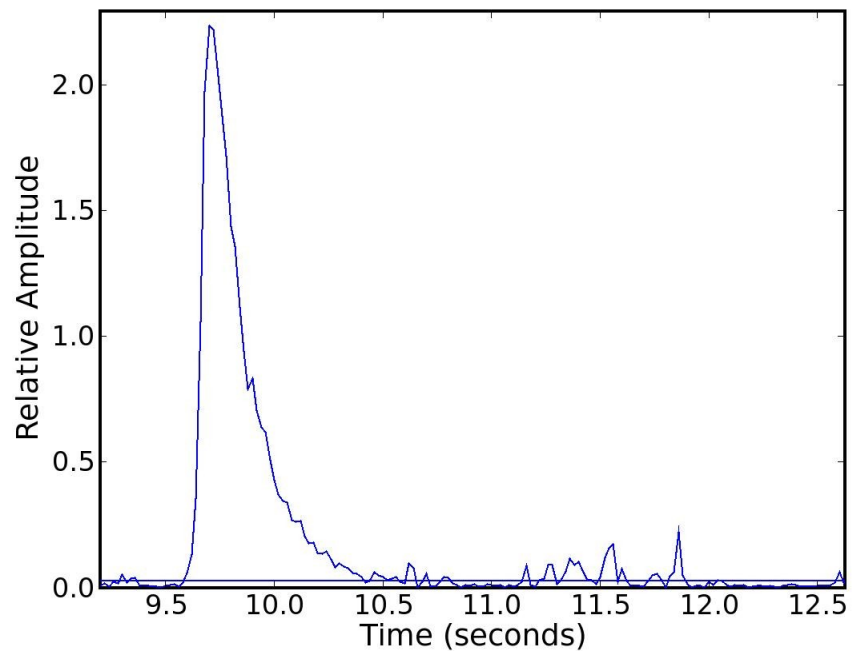
- closure phase



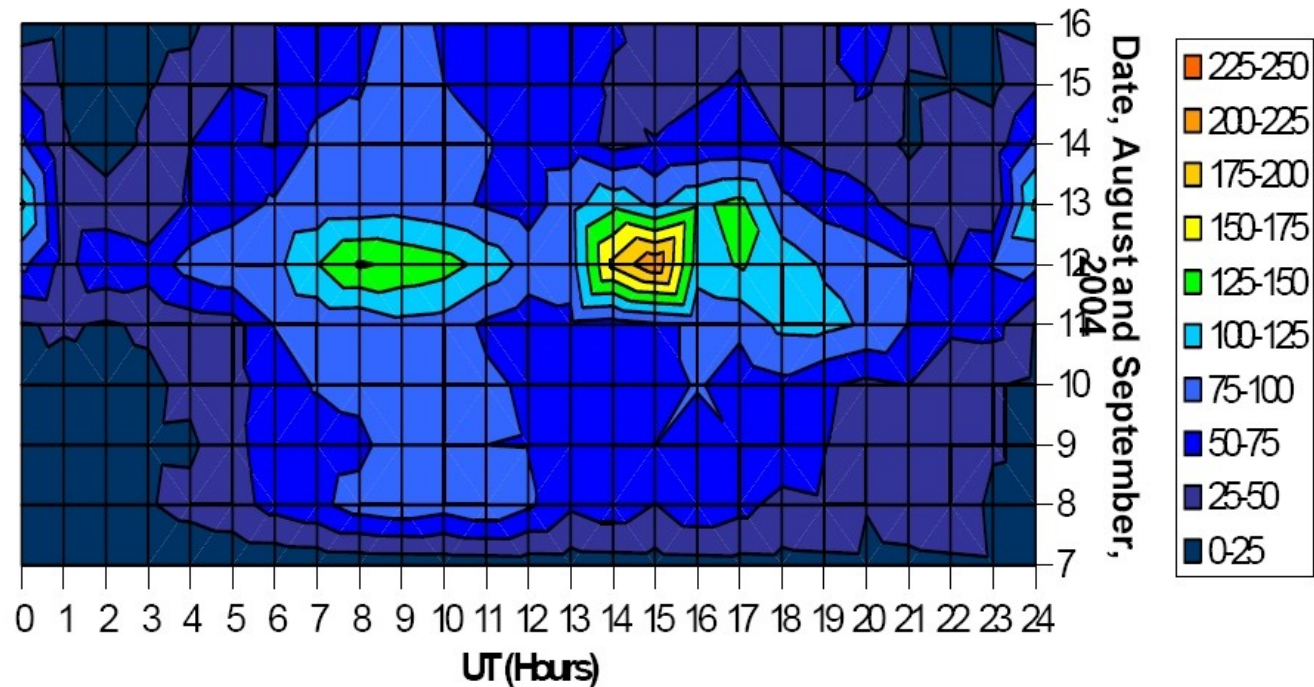
Brightest event



Oscillating event?



# Science with Meteor Showers



Perseid (2004) detection rate by amateur automated system

- Count rates of showers -- CS1 saw ~20 events => 300/hr
- Finding new showers
- Search for interstellar meteors

Conclusion: RFI can produce science!

