

## Introduction

A number of individuals based around the UK used the Forward Scatter technique (Using BRAMS and Graves) to detect and record Radio Meteor Events, monthly this data is then added to a central database. Given the receiving stations all different in setup and there is little or no standardisation across the stations there are limits to how the data can be used in a scientific context.

We can however plot trends and create matched events (Events with a duration that exceed 10 seconds recorded by three or more different contributors and are  $\pm$  within 2 seconds of each other)

### Contributor Locations

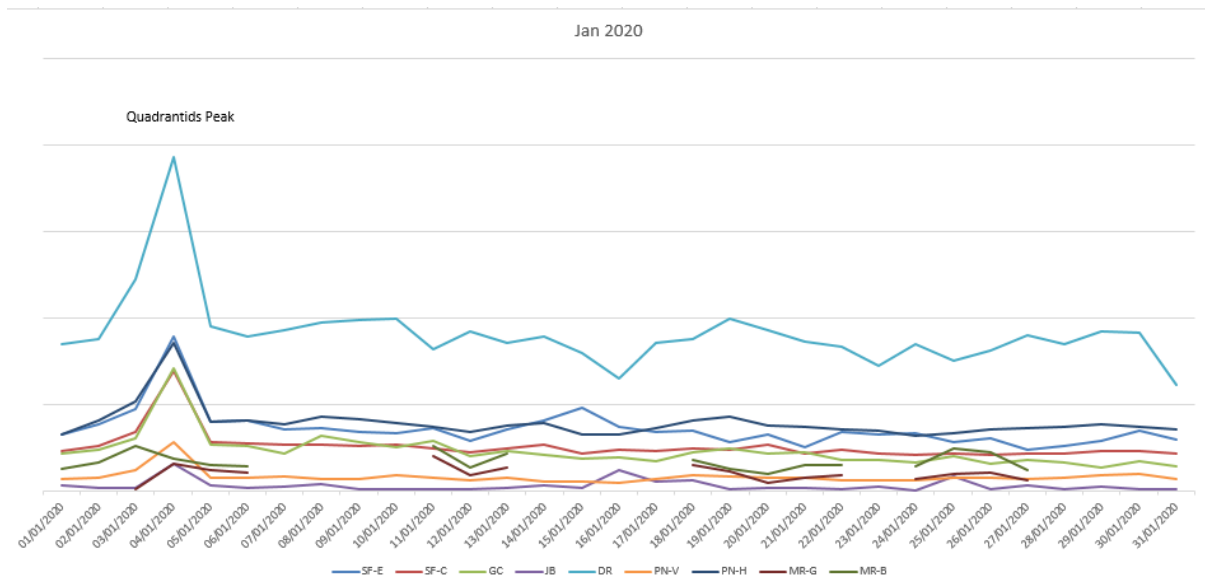


**Key Meteor showers in Dec 2019**

Shower	Dates	Peak
Quadrantids	28 Dec – 12 Jan	03/04 - Jan

**Trend of contributions for Jan 2020**

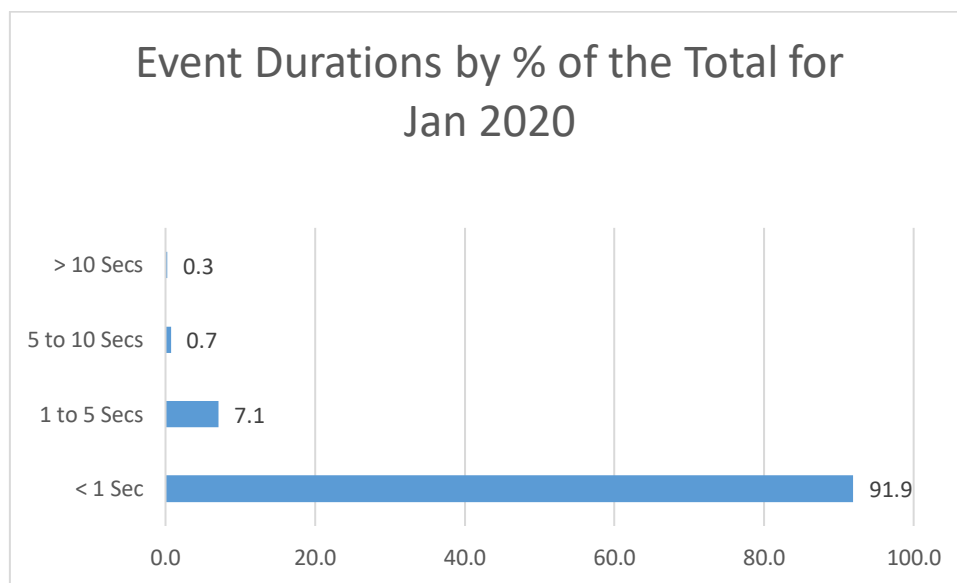
The graph below shows the trend of contributions over time for the month of Jan – Counts are not displayed as its simply a trend for the month they do show clearly a peak for the Quadrantids



## Jan Event data broken down into durations

Month	Raw Data				
	Total Count	< 1 Sec	1 to 5 Secs	5 to 10 Secs	> 10 Secs
Jan	74,313	68,325	5,270	527	196

Event Durations as a % of the Total				
Month	< 1 Sec	1 to 5 Secs	5 to 10 Secs	> 10 Secs
Jan	91.9	7.1	0.7	0.3

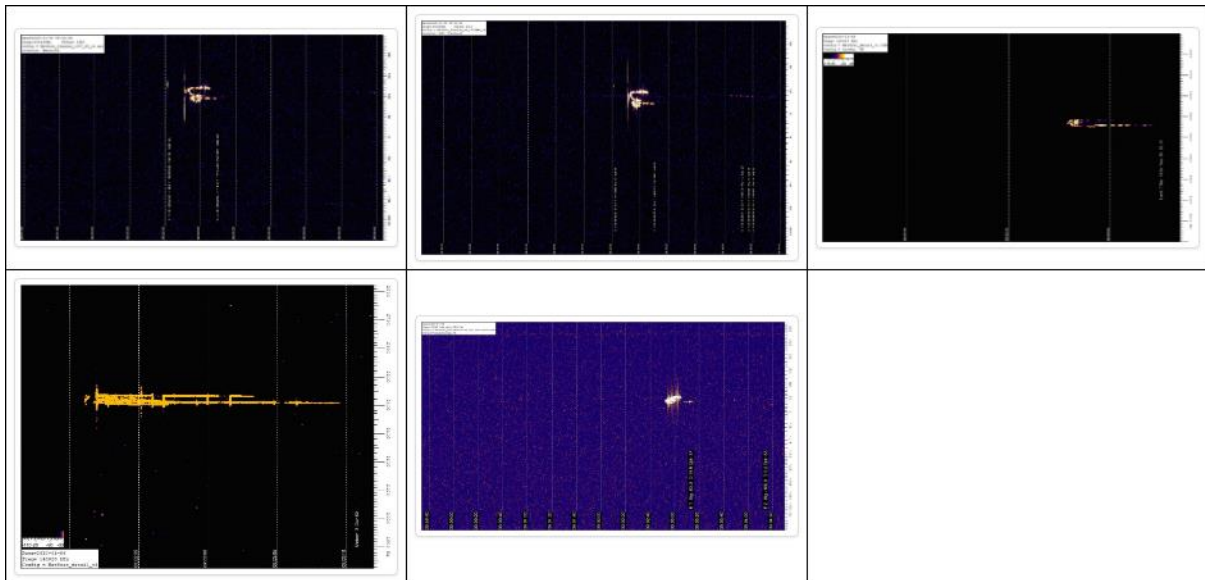


Matched Events - Events with a duration that exceed 10 seconds recorded by three or more different contributors and are + / - within 2 seconds of each other

There were 13 potential matches in Jan - the notable ones are below

**Event at 2020-01-06 at 09:02:50 UTC**

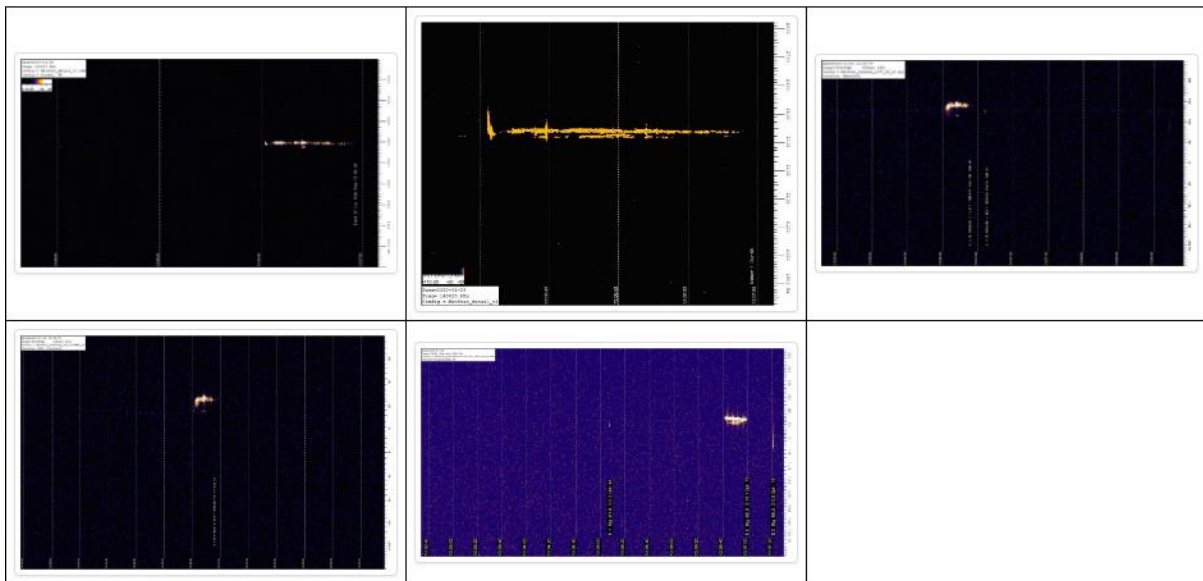
Contributor	RX Lat	RX Lng	TX Source	Time Sync	Time - UTC	Duration in Seconds	SN Ratio Calculated	Doppler Estimate Calculated
Steve Futcher - Emsworth	50.9	-0.9	Graves	NetTime	09:02:50	14.85 Calculated	24.40	-41
Steve Futcher - Clanfield	50.9	-1.0	Graves	NetTime	09:02:50	15.87 Calculated	32.10	-14
John Berman	51.4	-0.1	Graves	Dimension 4	09:02:51	16.70	29.70	20
Graham Cluer	51.4	-1.0	Graves	Dimension 4	09:02:51	11.50 Calculated	17.30	80
Derek Robson	52.7	-1.2	Graves	Dimension 4	09:02:51	15.87	19.70	-14



Please go to <http://meteor.m81.co.uk/picview10.php?id=861> to see the full size plots

## Event at 2020-01-23 at 13:06:40 UTC

Contributor	RX Lat	RX Lng	TX Source	Time Sync	Time - UTC	Duration in Seconds	SIN Ratio Calculated	Doppler Estimate Calculated
John Berman	51.4	-0.1	Graves	Dimension 4	13:06:40	15.90	36.50	35
Graham Cluer	51.4	-1.0	Graves	Dimension 4	13:06:41	11.33 Calculated	37.40	97
Steve Futcher - Emsworth	50.9	-0.9	Graves	NetTime	13:06:41	12.80 Calculated	22.30	24
Steve Futcher - Clanfield	50.9	-1.0	Graves	NetTime	13:06:41	12.29 Calculated	19.60	24
Derek Robson	52.7	-1.2	Graves	Dimension 4	13:06:41	18.09	19.40	24



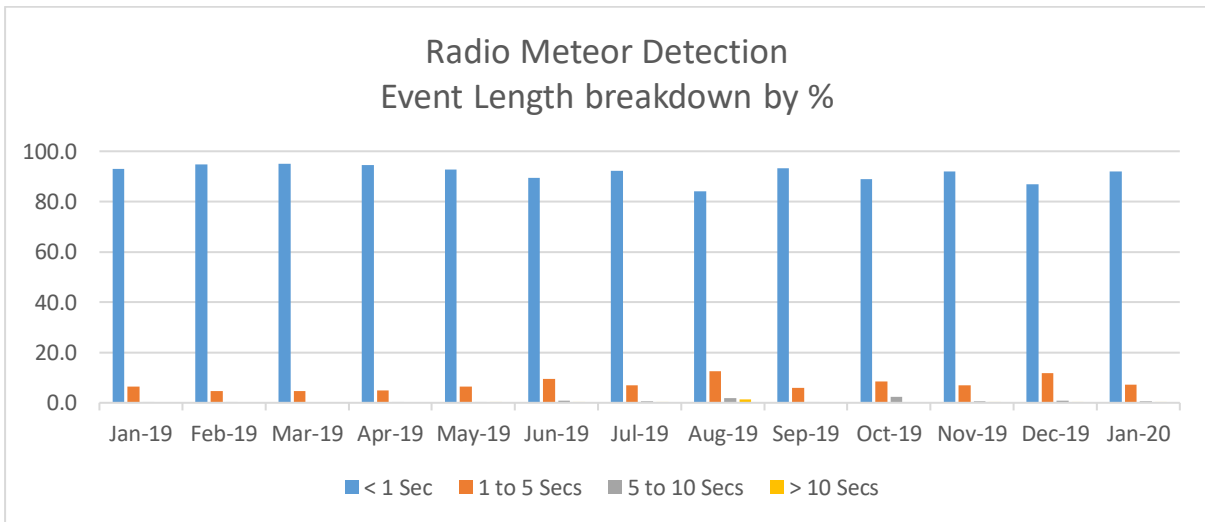
Please go to <http://meteor.m81.co.uk/picview10.php?id=869> to see the full size plots

To see all of the Jan Matches please go to:

[http://meteor.m81.co.uk/duration\\_lookup10list.php?order=date&ordertype=DESC](http://meteor.m81.co.uk/duration_lookup10list.php?order=date&ordertype=DESC)

Event data broken down into durations for 2019/20

Event Durations as a % of the Total				
Month	< 1 Sec	1 to 5 Secs	5 to 10 Secs	> 10 Secs
Jan 19	92.9	6.5	0.4	0.1
Feb 19	94.9	4.6	0.3	0.2
Mar 19	95.0	4.6	0.2	0.1
Apr 19	94.5	4.9	0.4	0.2
May 19	92.8	6.5	0.5	0.3
Jun 19	89.3	9.5	0.8	0.3
Jul 19	92.2	6.9	0.5	0.3
Aug 19	84.1	12.6	2.0	1.3
Sep 19	93.3	6.0	0.4	0.2
Oct 19	88.9	8.6	2.3	0.2
Nov 19	92.1	7.0	0.7	0.3
Dec 19	86.9	11.8	0.9	0.4
Jan 20	91.9	7.1	0.7	0.3



It can be clearly seen that the categorised event durations each month tend to be very aligned. You can see that in August there is an increase in longer duration events which are associated with the Perseids and for December a similar pattern for the Geminids

Please do feedback with any comments and or suggestion as to how we may make more us of this data – Jberman44@googlemail.com