

The 2015 February 5 event

Chris Steyaert
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'Global' hourly counts

www.rmob.org - Radio Meteor Observatory's On Line - Windows Internet Explorer

http://www.rmob.org/livedata/main.php

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www.rmob.org

Live observations

- Live meteor observatory
- Daily Shower activity

RMOB Data

RMOB Archives

- Visual RMOB Archives
- Archives in Text format

Search Engine

- RMOB full TXT Search engine

RMOB Tools

- Excel
- RMOB Excel Sheet

Radio Meteor Observatory's On Line

Dave Jones
SMRST Hvezdarna_Vsetin
Maarten Vanleenhove
HPHK
OBSJAROMER
OBSUPICE-R1
ZVPP
Istvan Tepliczky
Kate Kay
Naoya Saito
Norman Lockyer_Observatory
Radioastro Essen
Jay Hainline_KA9CFD
EK8RSC Haik_Saroyan
Hirofumi Sugimoto_113
Hirofumi Sugimoto_053
Bob Mobile_K1SIX
Fabio Moschini
Cardenosa David
Adam Rawlinson
Frederic Lucas
Bill Ward
Jeff Brower

Observer's list (by date/time last upload data) and location



Google

Imagery ©2014 NASA Terms of Use Report a map error

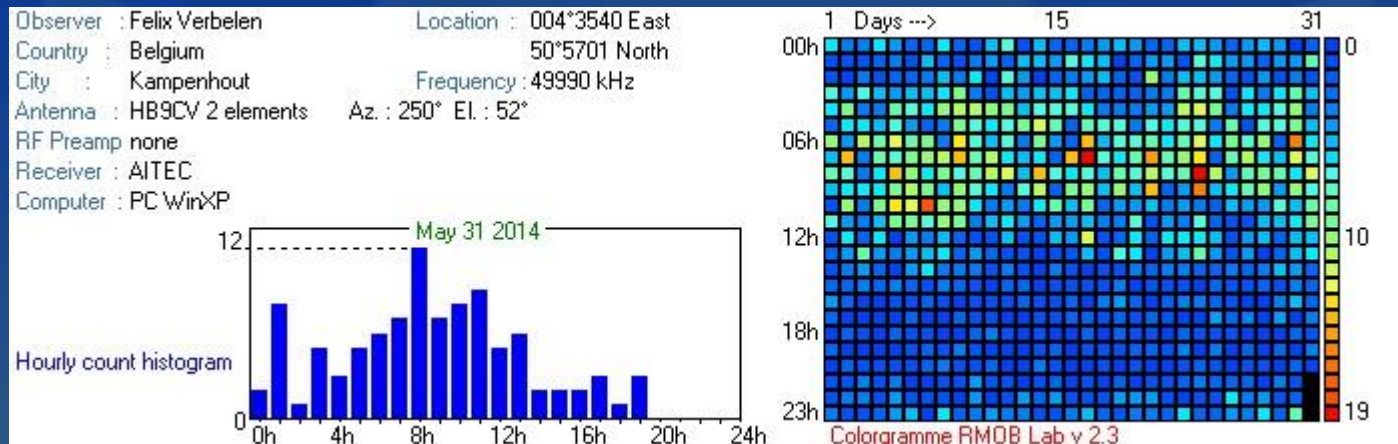
- Associazione Astrofili
- Veneziani_AAV_
- Grahame Booth
- Stan Nelson5
- Jeff JosephCo
- Romano Serra
- Bramond Philippe
- Gaspard De_Wilde
- Mate_(HG8_054) Pinter
- Chris Steyaert
- johan coussens
- Joseph Gordon
- Fritz LENSCH
- Peter Knol
- Franky Dubois
- Mikhail Svoiski
- Felix Verbelen
- kevin pallivec
- Fernando Roque CT7ABI
- Alexei Pace
- Diego Rodriguez
- Kielder Observatory
- Remote_Station
- Mike Otte
- Ryumshin Igor

http://217.169.242.217/rmob/index.php?lng=en

Internet | Protected Mode: On

105%

'Standard' graph of hourly counts



Daily pattern

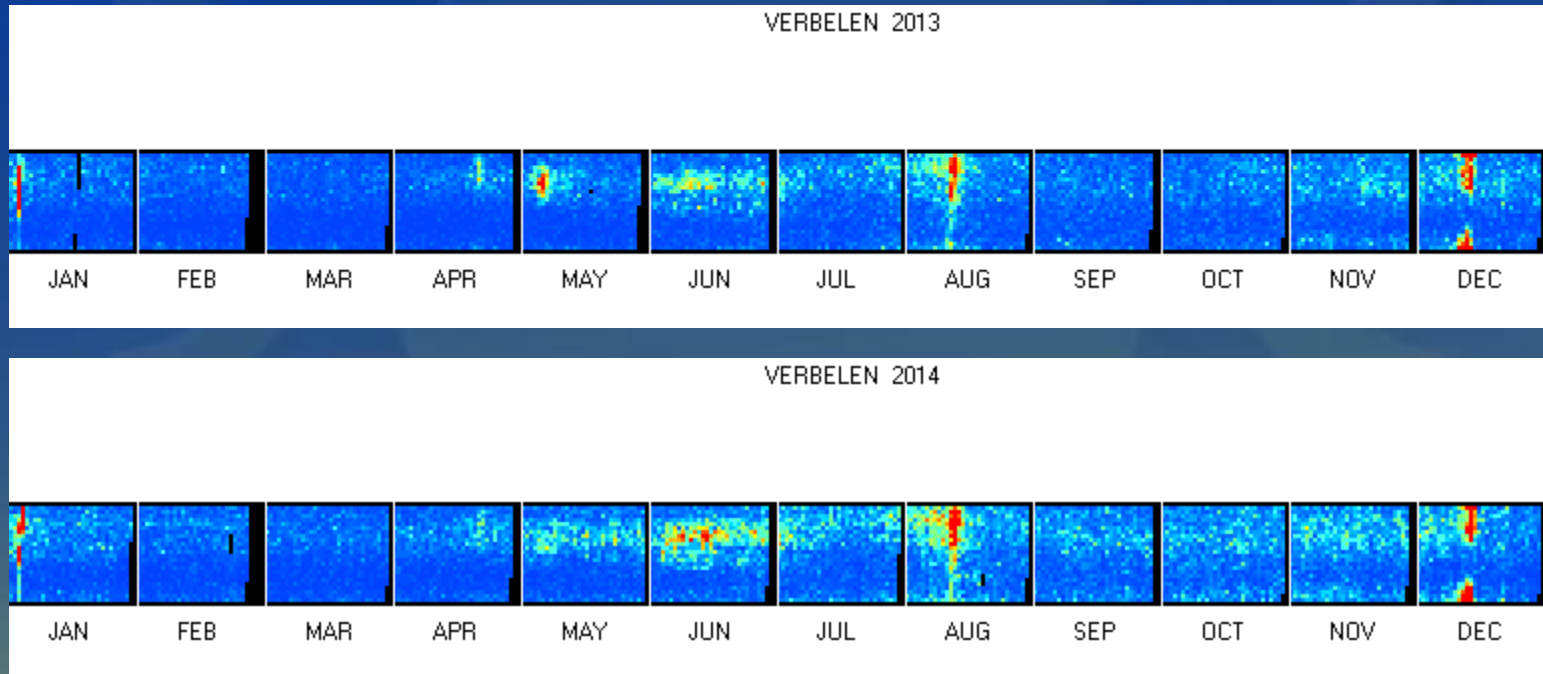
Forward scatter observations of recent outbursts

- October 2011: Draconids
- May 2013: eta Aquarids (longer lasting)
- May 2014: 209P/LINEAR Camelopardalids

= Confirmations of known streams/predicted outburst

Discover new/unknown outbursts?

Best conditions ?



Discover new/unknown outbursts?

From: "lucas pellens" <lucas.pellens@skynet.be>
To: radioastronomie@ls.vvs.be
Subject: [radioastronomie] verhoogde activiteit
Date: Thu, **5 Feb 2015** 12:27:45 +0100
List-Id: WG Radioastronomie VVS <radioastronomie.ls.vvs.be>

Allen,
Vanmorgen hebben zich een aantal boeiende reflecties laten optekenen.
Enkele daarvan in bijlage.
gr Lucas Pellens

201502051050LP.jpg

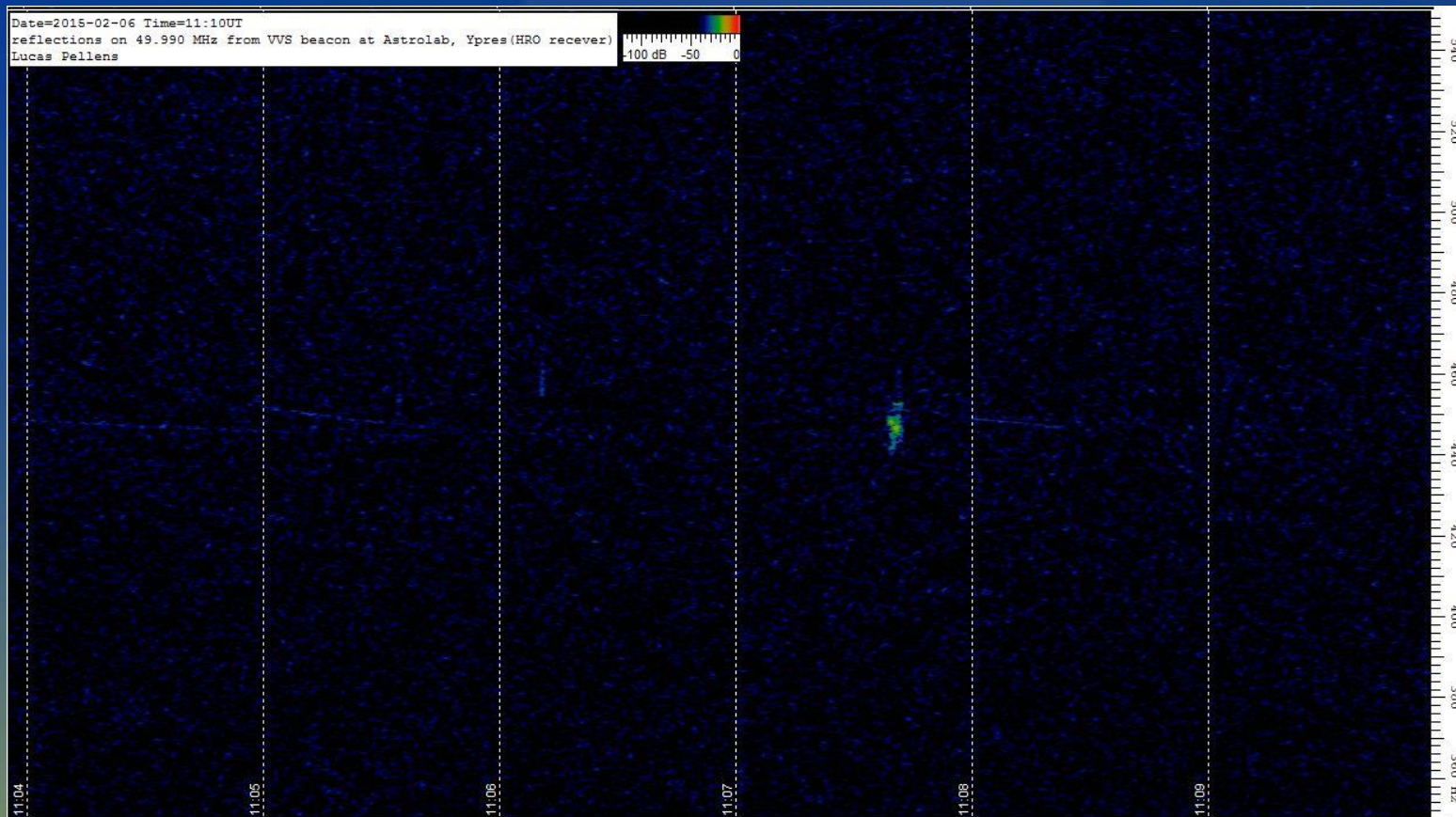
201502051110LP.jpg

Subject: [radioastronomie] **increased activity**

All,
This morning a number of exciting reflections were recorded.

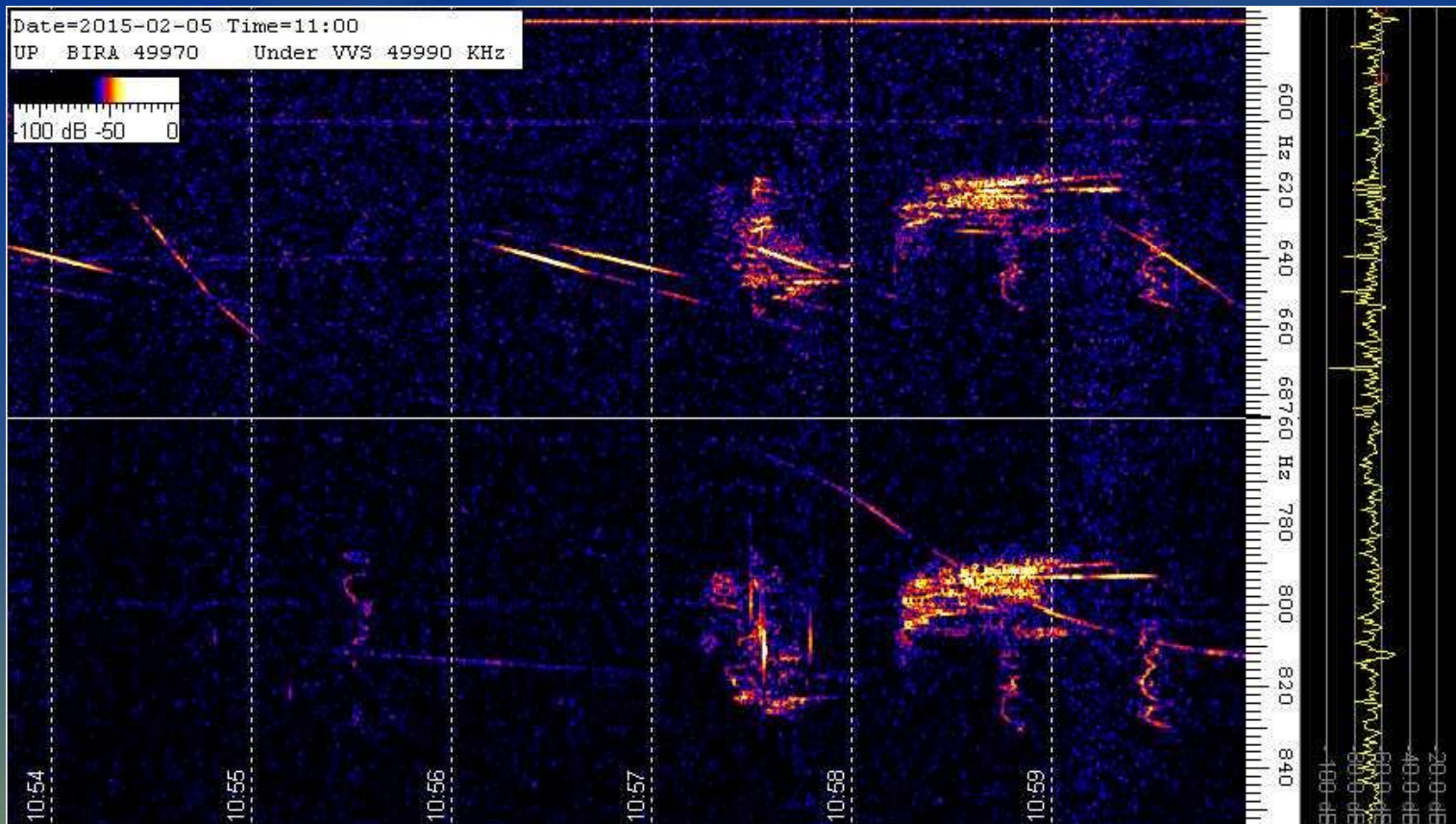
Discover new/unknown outbursts?

Lucas Pellens observation (VVS beacon):

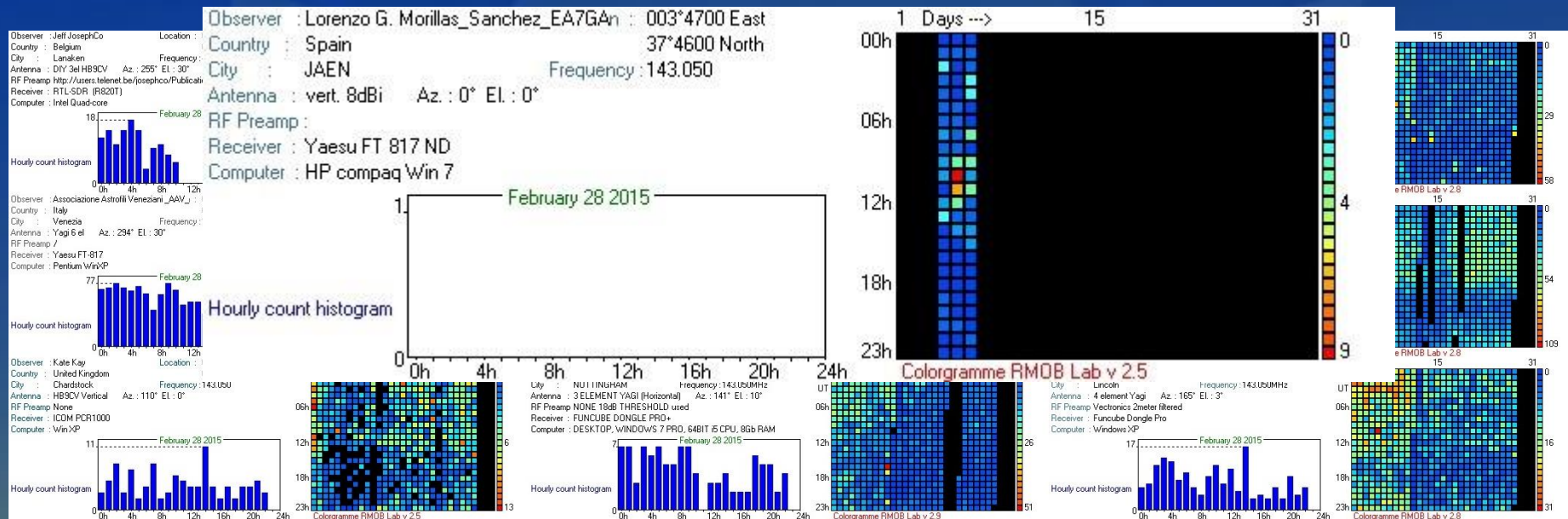


Discover new/unknown outbursts?

Gaspard De Wilde observation (VVS + BRAMS beacons):



All with increased activity on Feb 5 10-11h UT



ORAVES beacon



Increased activity on Feb 5 10-11h UT

- 'No' observations from
- Radiant for Europe:



Increased activity on Feb 5 10-11h UT

Radiant search in

427 FED

Low number of u
high elevation rad

Announced and
[IMO-News]



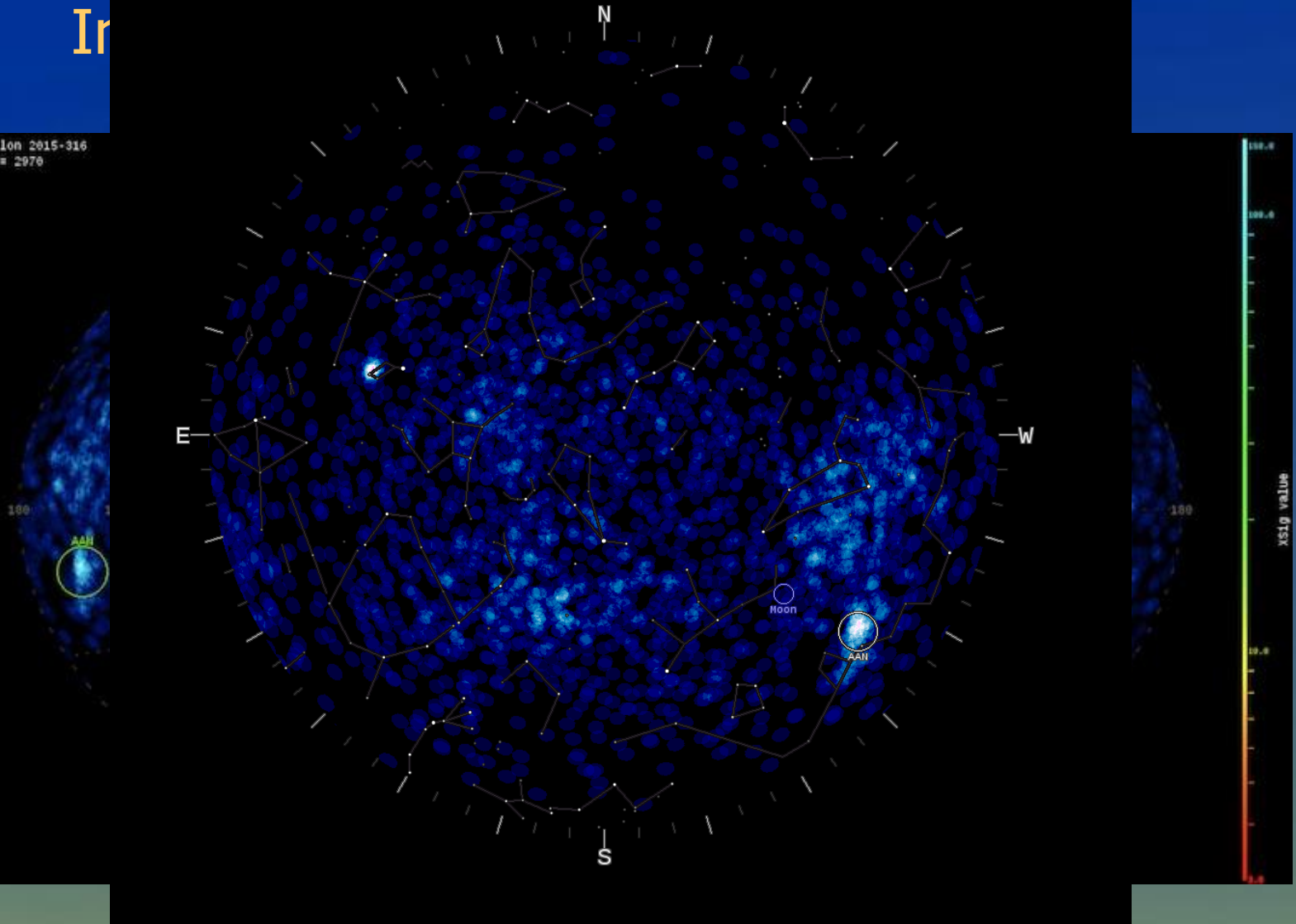
Increased activity on Feb 5 10-11h UT

Responses:

video: Sirko Molau
Carl Johannink (CAMS Benelux)

daytime Europe, no video observations
hours/day before/after


```
20150207 10:30:01 UTC
lat 43.265 lon -80.772 lim 4.00 V
2970 radiants
```



Increased activity on Feb 5 10-11h UT

CMOR map integrated for one day

Detail not (yet) obtained

Christoph :

After I realized this "outburst", I also looked at the NASA fireball site and found indeed one possible candidate (observer: lat 31.44 deg lon 249.22 deg)

time 20150205 10.50 hours

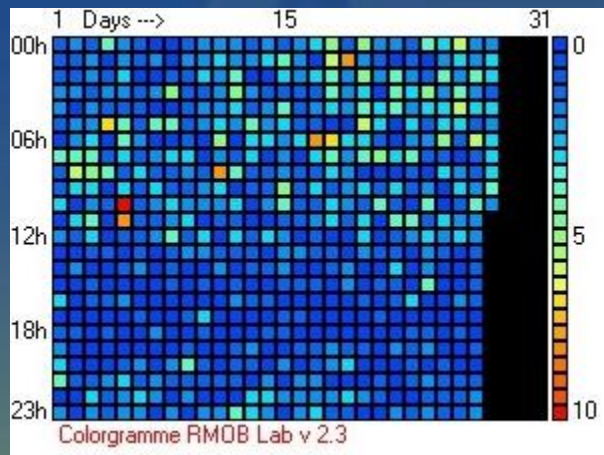
alp 283.3 +/- 0.2 deg del 34.72 +/- 0.04 deg
v_inf 36.5 +/- 0.3 km/s

Increased activity on Feb 5 10-11h UT

'Feb Lyrids' : α 283.3 δ 34.7 v_{inf} 36.5

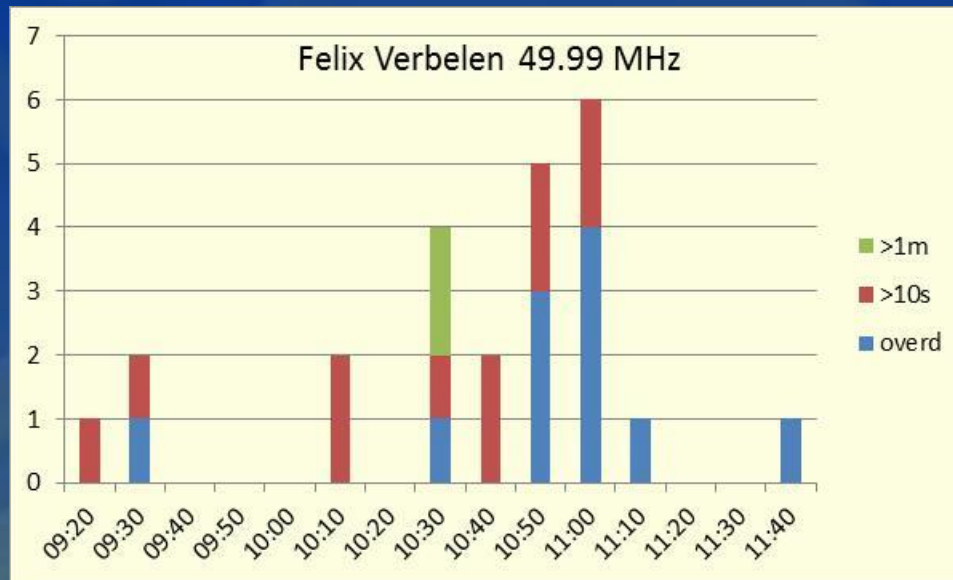
April Lyrids: α = 270 δ = 34 v = 49 km/s

Feb 5 11h UT conditions \approx April 22 5h UT



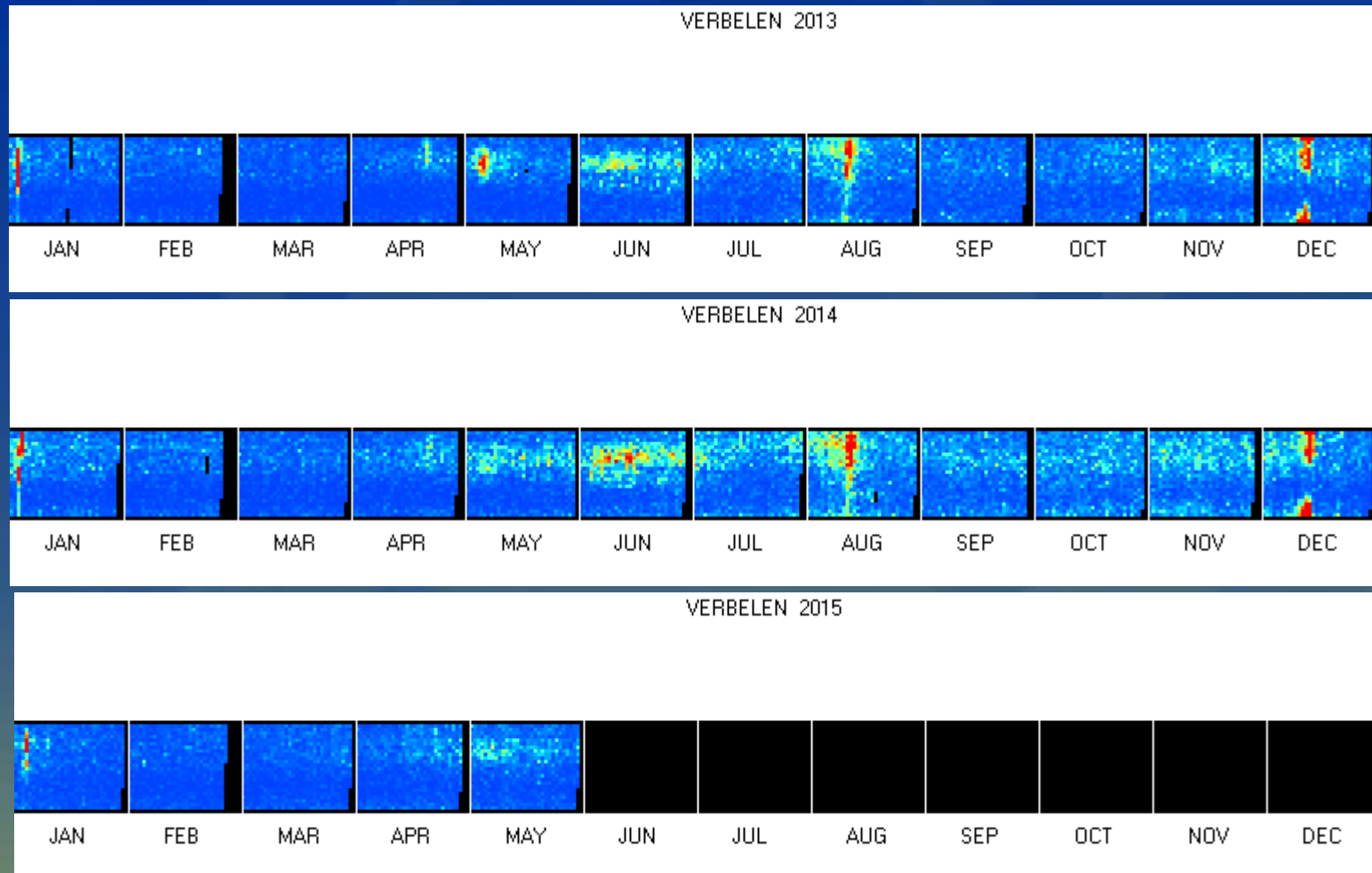
Increased activity on Feb 5 10-11h UT

Detailed count profile



High activity less than a full hour
→ max rate underestimated

Earlier radio observations?



Conclusion

There was an outburst of mainly bright meteors on Feb 5 10h30 – 11h15 UT most probably from a radiant in Lyra, which has not yet been observed in the visual range

20 years ago...

Radio Meteor Observation Bulletin No. 28

Dec 1995

1. FORWARD SCATTER METEOR OBSERVATIONS

Observer: Maurice De Meyere

Location: Deurle, Belgium (3 37' E, 51 00' N)

Frequency: 66.51 MHz

Transmitter locations (all stations of more than 10 kW):

66.35 MHz,	Klaipeda,	Lithuania	12 kW,	05h00-22h00
66.41	Siedlce	Poland	39	04h57(Sun05h57)-02h00(Sat03h00)
66.47	Viesintos	Lithuania	12	05h00-22h00
66.50	Sofia	Bulgaria	10	24hrs
66.56	Poznan	Poland	56	04h57(Sun05h57)-02h00(Sat03h00)
66.62	Budapest	Hungary	100	24hrs
66.68	Valmiera	Latvia	20	06h00-22h00

Antenna: crossed Yagi, 4 elements, astronomical azimuth 270 o (= East), elevation 27 o

Antenna amplifier: 25 dB max level 90 dBmV

Receiver: commercial, Progression 447A, TESLA, Bratislava

The receiver was calibrated with a Marconi TF2008 signal generator.

Sensitivity: 5 mV (modulation frequency 1000 Hz, frequency sweep 38 kHz) at (S+N)/N = 20 dB

Observing method: automated setup, 150 samples/second, 8 bit resolution.

[Time and details of all individual meteor reflections are stored on file in the University of Ghent format (Prometeos), and are available for further analysis.

November 1995

Raw counts of reflections with a duration of at least 0.027 s during one hour interval starting at UT:

Nov	UT													
1995	20h	21	22	23	00	01	02	03	04	05	06	07	08	09

11-12	43	47	61	79	71	58	70	68	76	58	78	60		
12-13	42	56	77	78	76	65	94	69	64	80	78	85		
13-14	41	62	73	68	65	80	78	87	57	64	72	72		
14-15	41	45	65	68	85	71	83	90	83	101	71	92	52	
15-16	55	52	69	92	76	93	95	97	97	89	109	212	114	172
16-17	42	59	83	73	96	93	116	140	154	156	132	177	179	154
17-18	34	40	69	70	161	100	198*	169*	283*	305*	247*	188		
18-19	28	53	61	59	71	81	68	115	102	69	85	124	50	49
19-20	48	53	62	68	73	77	79	94	67	88	97	86		
20-21	30	58	65	67	74	76	80	78	97	75	105	72		
21-22	47	41	44	79	53	232*	75	86	67	61	61	64		
22-23	31	69	62	51	67	67	72	105	61	82	79	72		
23-24	47	74	60	82	68	69	78	66	62	73	61	42		
24-25	31	42	67	58	62	70	63	80	49	61	51	64		

Notes:

. * good Leonid activity during early Nov 18.

20 years ago...

. & **alpha Monocerotids**

Meteor reflections during 5 minute interval starting at UT:

1995 Nov 22		Number ≥ 0.027 s	Number ≥ 1.00 s
0h40		4	1
0h45		7	0
0h50		5	1
0h55		6	0
1h00		8	1
1h05		13	2
1h10		17	4
1h15		28	7
1h20		39	13
1h25		34	9
1h30		26	11
1h35		30	8
1h40		11	4
1h45		7	0
1h50		10	1
1h55		10	1
2h00		7	1
2h05		4	1

Maurice De Meyere / Chris Steyaert

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- Christoph Gerber, Sirko Molau, Carl Johannink, Mike Otte, Enrico Stomeo, Lucas Pellens, Felix Verbelen, Juergen Rendtel
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- IMO