



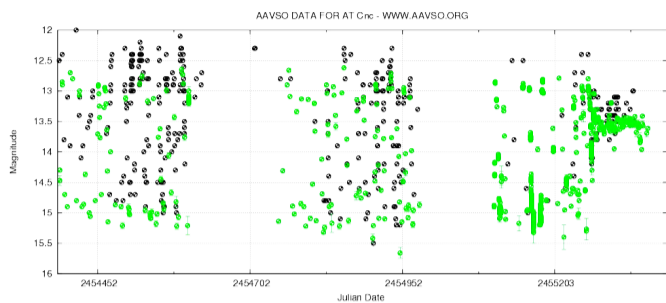
# АСТРОНОМИЧЕСКАЯ ГАЗЕТА

## Z (Z Cam)

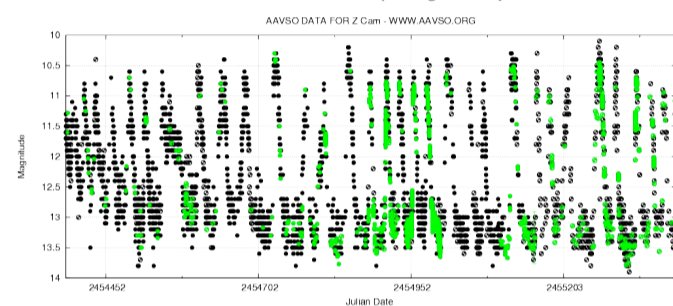
Z Cam.

"Z CamPaign" -

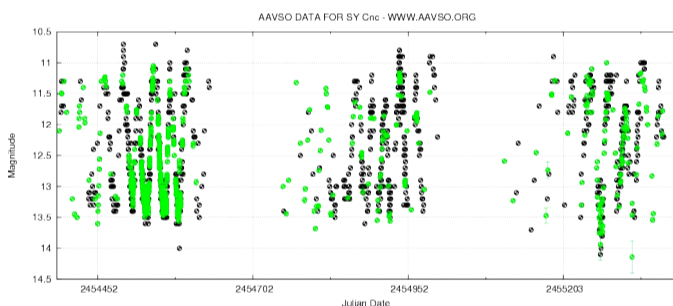
Z (Z Cam).



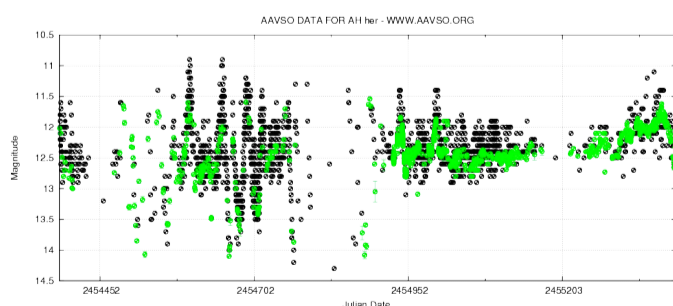
Z (Z Cam) - 8



SY (SY Cnc) -



AH (AH Her) -



(AAVSO)

## И снова о Юпитере...

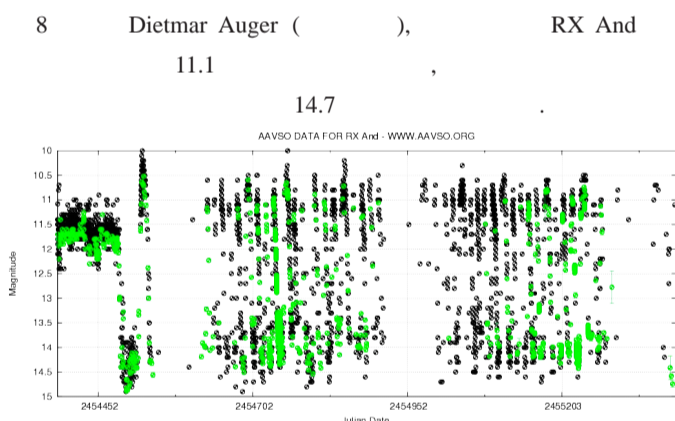
16 " 8, .4. NASA

Hammel) (Heidi

(Goddard Space Flight Center)  
(Amy Simon-Miller)

Wong) (Mike

S&T



RX (RX And) -

8 Dietmar Auger ( ), RX And

11.1

14.7

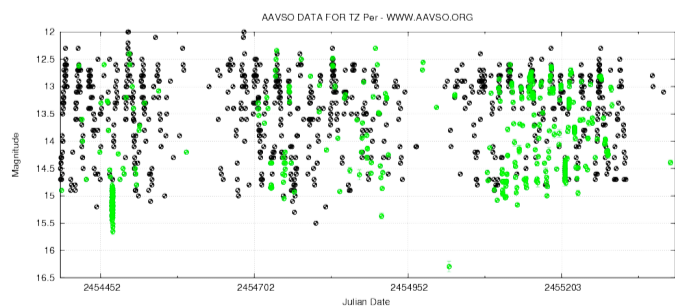
TZ (TZ Per) -

14.39 mag.

1000

Z Cam,

AAVSO.



AT (AT Cnc) -

13.5. Dick Sabo

8

( 12.3m),

11.9m (11.8-12.0V) . 1 , H Her

12.66m,

2010)

(8 12.3V.

# -2010 -

IMO

?

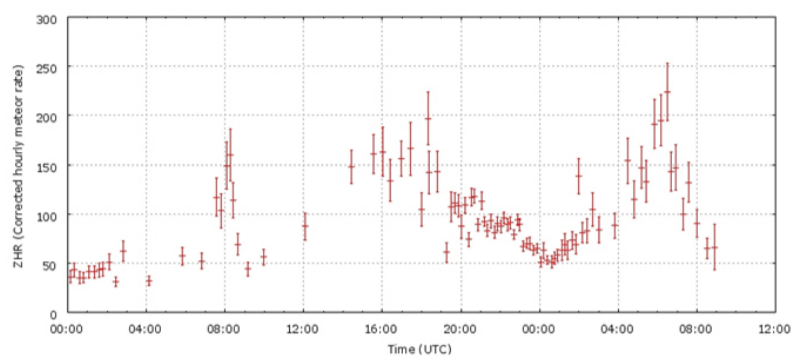
1988 (The International Meteor Organization, IMO).

IMO «WGN», 250

IMO 22-

IMO 5

### 12-13 August in detail



2009 IMO

IMO

### Observer statistics

Data has been received from 191 observers in 34 countries. Thank you for your efforts!

#### Spatial distribution of observers

Note: click on the map for an interactive version.



2009 IMO

## -2009 -

2009

14273

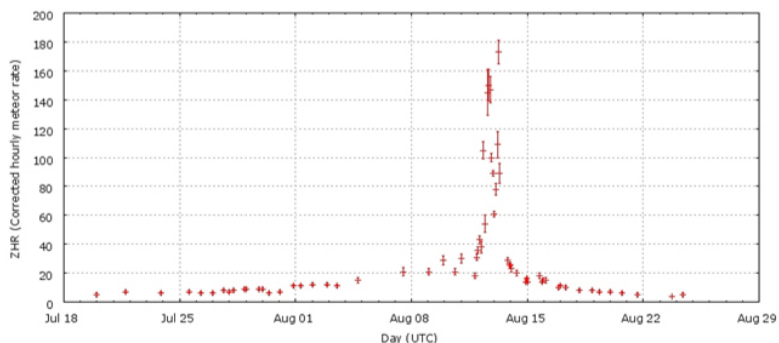
IMO

191

34

### Activity profile

ZHR<sub>max</sub> = 173 based on 14273 reported Perseids, assuming population index r = 2.0. ZHR (Zenithal Hourly Rate) is the number of meteors an observer would see under a dark sky with the radiant of the shower in zenith.



2009 IMO

3000

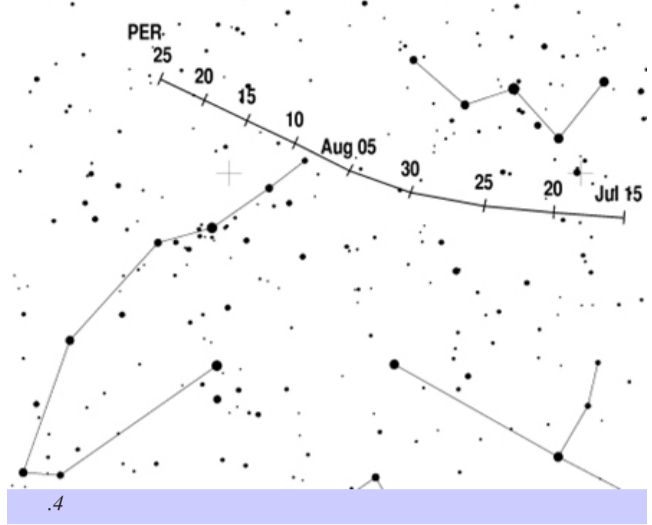
IMO

2009?

## -2010 -

!

2010



PER-25  
20 15 10 Aug 05 30 25 20 Jul 15

4

Specify the night as a pair of local dates (enter two consecutive days: day1 / day2, month, year). Night (Local Time)\*: -

: 09/10, 08, 2010 ( , , 9 10 2010 ).

Specify the observation begin and end in Universal Time. (hour, day, month, year) -

(UT)

Observation begin (Universal Time)\*: - : 1620, 09, 08, 2010. ( , , 16:20 UT 9 2010 )

Observation end (Universal Time)\*: - : 2045, 09, 08, 2010. ( , , 20:45 UT 9 2010 )

Observed showers. Use IMO three-letter codes. -

IMO.

PER -  
SDA -  
CAP -  
KCG -

Observed number of meteors per period and per shower. Use short periods in case of shower maxima or outbursts (e.g. 5 minuts). -

( )

(M: observing method (C(ounting), P(lotting), R (meteor coordinates estimated directly) or "-" (shower not observed during the period))(N: number of meteors observed). - : , C - , P - , R - ; N -

( )

4

Type: visualsummary  
Date: 2009-08-12  
Observer: Marcin Chwala (CHWMA)  
Location: Urz?dów, Poland (14142)  
Coordinates: 50.99N , 22.14E  
Remarks:

date	Period (UT) hh:mm:ss - hh:mm:ss	Field (°)		Teff h	F	Lm	KCG		PER		SDA		SPO	
		RA	Dec				M	N	M	N	M	N	M	N
12/8	19:24:00 - 19:41:00	300	65	0.250	1.69	6.22	C	0	C	7	C	0	C	0
12/8	19:41:00 - 19:54:00	300	65	0.200	2.04	6.28	C	0	C	5	C	0	C	0
12/8	20:01:00 - 20:18:00	300	65	0.250	2.08	6.36	C	0	C	9	C	0	C	1
12/8	20:18:00 - 20:33:00	300	65	0.233	1.19	6.36	C	0	C	7	C	0	C	1
12/8	20:33:00 - 20:50:00	300	65	0.250	1.06	6.36	C	1	C	8	C	1	C	0
12/8	20:50:00 - 21:07:00	300	65	0.250	1.00	6.33	C	0	C	6	C	0	C	3
12/8	21:07:00 - 21:24:00	300	65	0.250	1.00	6.33	C	0	C	11	C	0	C	0
12/8	21:24:00 - 21:42:00	300	65	0.250	1.00	6.33	C	0	C	13	C	1	C	1
12/8	21:42:00 - 22:00:00	300	65	0.250	1.00	6.27	C	1	C	9	C	0	C	2
12/8	22:00:00 - 22:17:00	300	65	0.250	1.00	6.27	C	0	C	12	C	0	C	2
12/8	22:17:00 - 22:34:00	300	65	0.250	1.00	6.27	C	0	C	8	C	1	C	1
12/8	22:34:00 - 22:52:00	300	65	0.250	1.00	6.27	C	1	C	13	C	0	C	1
12/8	22:52:00 - 23:09:00	300	65	0.250	1.00	6.16	C	0	C	5	C	1	C	2
12/8	23:09:00 - 23:26:00	300	65	0.250	1.09	6.16	C	0	C	7	C	0	C	1
12/8	23:26:00 - 23:43:00	300	65	0.250	1.31	6.16	C	0	C	7	C	0	C	1
12/8	23:43:00 - 00:06:00	300	65	0.250	1.23	6.16	C	0	C	5	C	1	C	1

Show	Period (UT)	Lm	Field (°)												Tot		
			-6	-5	-4	-3	-2	-1	+0	+1	+2	+3	+4	+5		+6	+7
SDA	12/8 19:24:00 - 00:06:00	6.27	0	0	0	0	0	0	0	1	0	3	1	0	0	0	5
KCG	12/8 19:24:00 - 00:06:00	6.27	0	0	0	0	0	1	0	0	1	1	0	0	0	0	3
SPO	12/8 19:24:00 - 00:06:00	6.27	0	0	0	0	0	1	0	1	1	5	5	4	0	0	17
PER	12/8 19:24:00 - 19:41:00	6.22	0	0	0	0	0	1.5	0.5	1	3	1	0	0	0	0	7
PER	12/8 19:41:00 - 19:54:00	6.28	0	0	0	1	0	1	0	0	1	0	0.5	1.5	0	0	5
PER	12/8 20:01:00 - 20:18:00	6.36	0	0	0	0	0	1	1	1	2	1	1.5	1.5	0	0	9
PER	12/8 20:18:00 - 20:33:00	6.36	0	0	0	0	0	2	1	0	1	2	1	1	0	0	7
PER	12/8 20:33:00 - 20:50:00	6.36	0	0	0	0	0	0	0	2	0	0	2	3.5	0.5	0	8
PER	12/8 20:50:00 - 21:07:00	6.33	0	0	0	0	0	1	0	0	1	2	0	2	0	0	6
PER	12/8 21:07:00 - 21:24:00	6.33	0	0	0	1	0	1	0	0	3.5	1.5	1.5	2.5	0	0	11
PER	12/8 21:24:00 - 21:42:00	6.33	0	0	0	0	0	0	2	1	6	2	2	2	0	0	13
PER	12/8 21:42:00 - 22:00:00	6.27	0	0	1	0	0	0	0	1	2	3	1.5	0.5	0	0	9
PER	12/8 22:00:00 - 22:17:00	6.27	0	0	0	0	0	0	2	1	1	1	2.5	4.5	0	0	12
PER	12/8 22:17:00 - 22:34:00	6.27	0	0	0	0	0	1	1	1	2	1	1	1	0	0	8
PER	12/8 22:34:00 - 22:52:00	6.27	0	0	0	0	1	2	1	2	1	2	3	1	0	0	13
PER	12/8 22:52:00 - 23:09:00	6.16	0	0	0	0	0	0	0	0	2	2	1	0	0	0	5
PER	12/8 23:09:00 - 23:26:00	6.16	0	0	0	0	1	0	1	0	1	2	2	0	0	0	7
PER	12/8 23:26:00 - 23:43:00	6.16	0	0	0	0	0	1	1	2	0.5	2.5	0	0	0	0	7
PER	12/8 23:43:00 - 00:06:00	6.16	0	0	0	0	0	0	1	0	2.5	0.5	1	0	0	0	5

Observer details -->

First name(s) --> ( ) (Stanislav)

Family name(s) --> ( ) (Korotkiy)

Country --> ( ) (Russia)

IMO Code --> ( ) (KORST)

Observing location -->

Longitude --> (41° 25' 00" E)

Latitude --> (43° 45' 00" N)

Height --> (2070)

Name --> (Special Astrophysical Observatory of the Russian Academy of Science)

Country --> (Russia)

IMO Code --> (84558 - )

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15

15

( 5

5

10%) : k = 10%/100%=0.1

(1.2) F=1.11.

( 10

3-

2.5 1.5

1

: 30, 15 5

(Lm)

(F):

«1.00»

(Teff):

«1.57» ( . .

)

<http://www.imo.net/visual/report>

( Shower rows: ) -

"1",

( Period rows: ),

Distribution rows: ).

( ) 30 (

).

Observer details -->

First name(s) --> ( ) (Stanislav)

Family name(s) --> ( ) (Korotkiy)

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		RA	Dec				M	N	M	N	M	N	M	N
12/8	19:24:00 - 19:41:00	300	65	0.250	1.69	6.22	C	0	C	7	C	0	C	0
12/8	19:41:00 - 19:54:00	300	65	0.200	2.04	6.28	C	0	C	5	C	0	C	0
12/8	20:01:00 - 20:18:00	300	65	0.250	2.08	6.36	C	0	C	9	C	0	C	1
12/8	20:18:00 - 20:33:00	300	65	0.233	1.19	6.36	C	0	C	7	C	0	C	1
12/8	20:33:00 - 20:50:00	300	65	0.250	1.06	6.36	C	1	C	8	C	1	C	0
12/8	20:50:00 - 21:07:00	300	65	0.250	1.00	6.33	C	0	C	6	C	0	C	3
12/8	21:07:00 - 21:24:00	300	65	0.250	1.00	6.33	C	0	C	11	C	0	C	0
12/8	21:24:00 - 21:42:00	300	65	0.250	1.00	6.33	C	0	C	13	C	1	C	1
12/8	21:42:00 - 22:00:00	300	65	0.250	1.00	6.27	C	1	C	9	C	0	C	2
12/8	22:00:00 - 22:17:00	300	65	0.250	1.00	6.27	C	0	C	12	C	0	C	2
12/8	22:17:00 - 22:34:00	300	65	0.250	1.00	6.27	C	0	C	8	C	1	C	1
12/8	22:34:00 - 22:52:00	300	65	0.250	1.00	6.27	C	1	C	13	C	0	C	1
12/8	22:52:00 - 23:09:00	300	65	0.250	1.00	6.16	C	0	C	5	C	1	C	2
12/8	23:09:00 - 23:26:00	300	65	0.250	1.09	6.16	C	0	C	7	C	0	C	1
12/8	23:26:00 - 23:43:00	300	65	0.250	1.31	6.16	C	0	C	7	C	0	C	1
12/8	23:43:00 - 00:06:00	300	65	0.250	1.23	6.16	C	0	C	5	C	1	C	1

Show	Period (UT)	Lm	Field (°)												Tot		
			-6	-5	-4	-3	-2	-1	+0	+1	+2	+3	+4	+5		+6	+7
SDA	12/8 19:24:00 - 00:06:00	6.27	0	0	0	0	0	0	0	1	0	3	1	0	0	0	5
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SPO	12/8 19:24:00 - 00:06:00	6.27	0	0	0	0	0	1	0	1	1	5	5	4	0	0	17
PER	12/8 19:24:00 - 19:41:00	6.22	0	0	0	0	0	1.5	0.5	1	3	1	0	0	0	0	7
PER	12/8 19:41:00 - 19:54:00	6.28	0	0	0	1	0	1	0	0	1	0	0.5	1.5	0	0	5
PER	12/8 20:01:00 - 20:18:00	6.36	0	0	0	0	0	1	1	1	2	1	1.5	1.5	0	0	9
PER	12/8 20:18:00 - 20:33:00	6.36	0	0	0	0	0	2	1	0	1	2	1	1	0	0	7
PER	12/8 20:33:00 - 20:50:00	6.36	0	0	0	0	0	0	0	2	0	0	2	3.5	0.5	0	8
PER	12/8 20:50:00 - 21:07:00	6.33	0	0	0	0	0	1	0	0	1	2	0	2	0	0	6
PER	12/8 21:07:00 - 21:24:00	6.33	0	0	0	1	0	1	0	0	3.5	1.5	1.5	2.5	0	0	11
PER	12/8 21:24:00 - 21:42:00	6.33	0	0	0	0	0	0	2	1	6	2	2	2	0	0	13
PER	12/8 21:42:00 - 22:00:00	6.27	0	0	1	0	0	0	0	1	2	3	1.5	0.5	0	0	9
PER	12/8 22:00:00 - 22:17:00	6.27	0	0	0	0	0	0	2	1	1	1	2.5	4.5	0	0	12
PER	12/8 22:17:00 - 22:34:00	6.27	0	0	0	0	0	1	1	1	2	1	1	1	0	0	8
PER	12/8 22:34:00 - 22:52:00	6.27	0	0	0	0	1	2	1	2	1	2	3	1	0	0	13
PER	12/8 22:52:00 - 23:09:00	6.16	0	0	0	0	0	0	0	0	2	2	1	0	0	0	5
PER	12/8 23:09:00 - 23:26:00	6.16	0	0	0	0	1	0	1	0	1	2	2	0	0	0	7
PER	12/8 23:26:00 - 23:43:00	6.16	0	0	0	0	0	1	1	2	0.5	2.5	0	0	0	0	7
PER	12/8 23:43:00 - 00:06:00	6.16	0	0	0	0	0	0	1	0	2.5	0.5	1	0	0	0	5

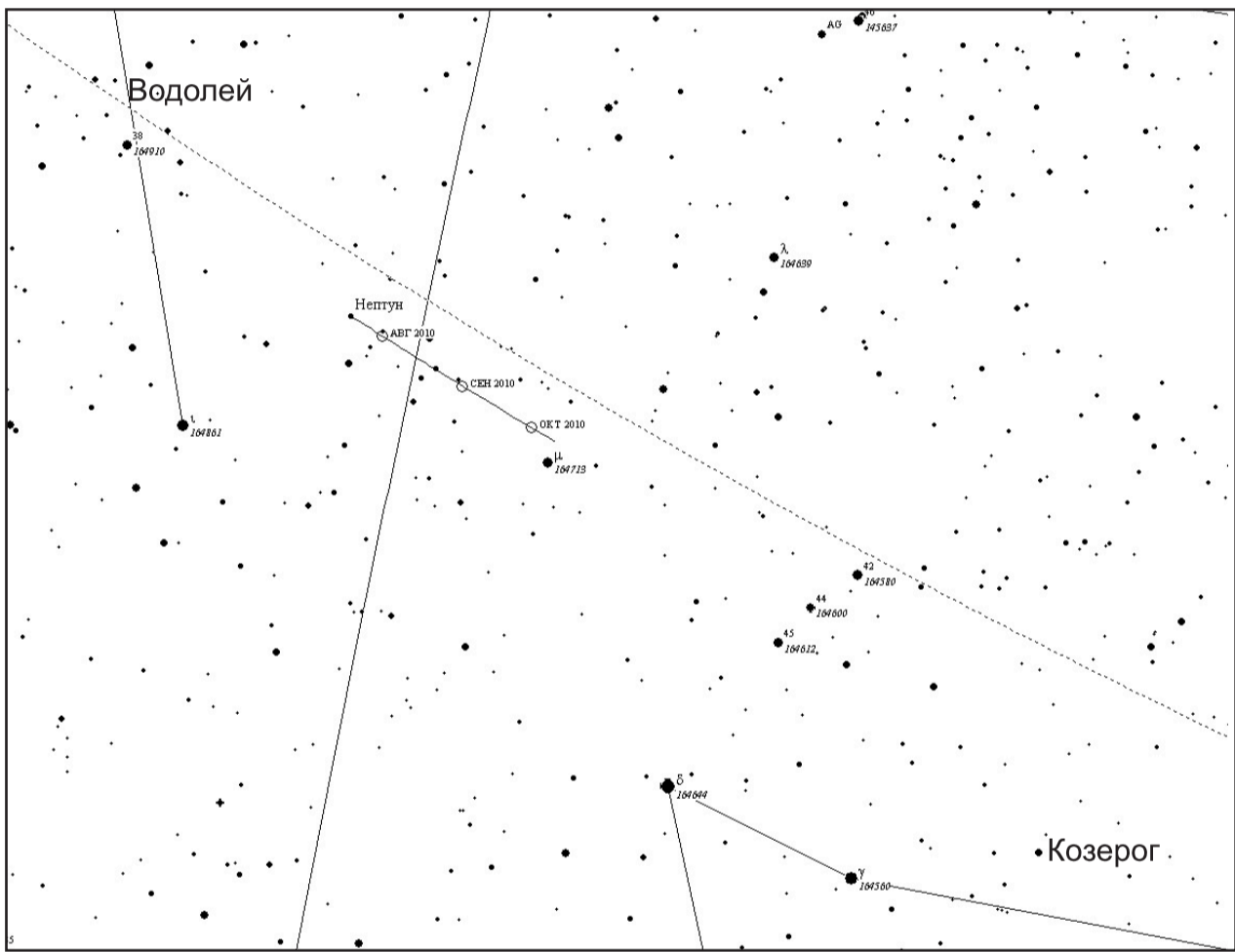
5

Try to define periods as to comprise no more than 20 meteors in line.

20  
 Period (UT) (hhmm \_ hhmm) - ( ) ( )  
 UT) ( \_ )  
 Field (°) - (RA - : (hh.hh/24h)\*360 ) (Dec - )  
 10  
 Teff (h) - :  
 0.45 1.75.  
 F - ( PER) SPO  
 Lm -  
 (M)  
 (N)  
 "M" - :  
 !),  
 "P" ( !).  
 "N" -

(SPO).  
 Magnitude distributions for showers and sporadics. -  
 Try to group the above periods as to comprise no more than 30 meteors in a magnitude distribution. -  
 30  
 0.5  
 Shower -  
 ( PER) SPO  
 Interval (UT) - (UT)  
 2.5 . . , "0.5"  
 "+2" "+3".  
 "-4.0", "1" "-4".  
 "C" ( -  
 "Tot" -

: Comments (add your name if you report for somebody else):  
 ( )  
 Reporter e-mail\*: (you will receive a copy of the observation) -  
 "Submit"  
 1. 2009-2010 - ( ) -  
<http://feraj.narod.ru/Radiants/Predictions/Perseids2009.html>  
 2. -  
 IMO ( ) :  
<http://www.astronomer.ru/data/library/articles/gelios/major/major.html>  
 3. IMO - Visual Meteor Observation - Major Showers Observations -  
<http://www.imo.net/visual/major>  
 4. 2009 -  
<http://www.imo.net/live/perseids2009/>  
 5. 2010 . (IMO),  
<http://feraj.narod.ru/Radiants/Observations/mc2010ru.pdf>



! 17 2010 .  
 164  
 24  
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 // . - 2010. - 8. -  
 4).  
 17 2010 . - 7.8m.

**19 2010 .**

20:30.  
 300  
 -150 -75.  
 agga ( ) .  
 00:30,  
 ?",  
 (Kosh),

**НАПИСАЛ СТАТЬЮ  
 В "АСТРОГАЗЕТУ" ?**

"Астрономическая газета"  
 №9 (9), 15 июля 2010г.

Редакторы: А.Новичонок, А.Смирнов  
 Научный редактор: Д.Честнов  
 Творческий редактор: В.Аглетдинов  
 Корректор: Н.Леушина  
 Вёрстка и дизайн: А.Смирнов

Астрономический сайт «Северное сияние»  
<http://www.severastro.narod.ru>  
 Страничка газеты:  
<http://www.waytostars.ru/index.php/gazeta>

Для связи с нами: [agaz@list.ru](mailto:agaz@list.ru)