Results of the IMO Video Meteor Network – August 2011

Sirko Molau, Abenstalstr. 13b, 84072 Seysdorf *2011/11/08*

1. Observers

Code	Name	Place	Camera	FOV [°²]	St.LM [mag]	Eff.CA [km²]	Nights	Time [h]	Tot. CA [10³km²h]	Meteors
BASLU	Bastiaens	Hove/BE	URANIA1 (0.95/4)*	4545	2.5	237	19	27.5	10.7	91
BERER	Berko	Ludanyhalaszi/HU	HULUD1 (0.95/3)	2256	4.8	1540	30	190.6	154.6	1821
			HULUD2 (0.75/6)	4860	3.9	1103	29	180.4	91.5	1031
			HULUD3 (0.75/6)	4661	3.9	1052	30	183.5	87.8	804
BREMA	Breukers	Hengelo/NL	MBB3 (0.75/6)	2399	4.2	699	10	53.4	-	268
			MBB4 (0.8/8)	1477	-	-	14	55.7	-	249
BRIBE	Brinkmann	Herne/DE	HERMINE (0.8/6)	2374	4.2	678	24	92.5	34.2	424
		Berg. Gladbach/DE	KLEMOI (0.8/6)	2286	4.6	1080	23	88.9	43.9	398
CASFL	Castellani	Monte Baldo/IT	BMH1 (0.8/6)	2350	-	-	25	172.4	-	898
			BMH2 (1.5/4.5)*	4243	3.0	371	27	128.2	155.9	613
CRIST	Crivello	Valbrevenna/IT	C3P8 (0.8/3.8)	5455	4.2	1586	29	212.6	275.2	1686
			STG38 (0.8/3.8)	5614	4.4	2007	31	227.9	414.0	2573
CSISZ	Csizmadia	Zalaegerszeg/HU	HUVCSE01 (0.95/5)	2423	3.4	361	25	122.7	20.1	638
CURMA	Currie	Grove/UK	MIC4 (0.8/6)	2411	5.2	2373	5	17.0	-	154
ELTMA	Eltri	Venezia/IT	MET38 (0.8/3.8)	5631	4.3	2151	30	222.7	181.0	1706
GONRU	Goncalves	Tomar/PT	TEMPLAR1 (0.8/6)	2179	5.3	1842	22	134.0	136.3	752
			TEMPLAR2 (0.8/6)	2080	5.0	1508	21	139.0	85.5	810
			TEMPLAR3 (0.8/8)	1438	4.3	571	24	114.1	64.1	653
GOVMI	Govedic	Sredisce ob Dr./SI	ORION2 (0.8/8)	1447	5.5	1841	21	105.7	-	569
HERCA	Hergenrother	Tucson/US	SALSA3 (1.2/4)*	2198	4.6	894	4	22.4	-	99
IGAAN	Igaz	Baja/HU	HUBAJ (0.8/3.8)	5552	2.8	403	30	191.9	55.6	1310
		Debrecen	HUDEB (0.8/3.8)	5522	3.2	620	20	124.7	70.9	1037
		Hodmezovasar./HU	HUHOD (0.8/3.8)	5502	3.4	764	31	192.2	91.3	1418
		Budapest/HU	HUPOL (1.2/4)	3790	3.3	475	14	74.0	19.4	551
		Sopron/HU	HUSOP (0.8/6)	2031	3.8	460	27	179.0	34.6	1094
JONKA	Jonas	Budapest/HU	HUSOR (0.95/4)	2286	3.9	445	22	122.1	-	849
KACJA	Kac	Kostanjevec/SI	METKA (0.8/8)*	1372	4.0	361	20	148.3	-	655
		Ljubljana/SI	ORION1 (0.8/8)	1402	3.8	331	29	173.9	112.3	1580
		Kamnik/SI	REZIKA (0.8/6)	2270	4.4	840	23	149.1	172.4	2177
			STEFKA (0.8/3.8)	5471	2.8	379	22	148.9	45.2	1872
KERST	Kerr	Glenlee/AU	GOCAM1 (0.8/3.8)	5189	4.6	2550	24	207.3	514.3	1734
KOSDE	Koschny	Noordwijkerh./NL	LIC4 (1.4/50)*	2027	6.0	4509	14	62.6	117.9	365
LERAR	Leroy	Gretz/FR	SAPHIRA (1.2/6)	3260	3.4	301	26	69.3	-	216
LUNRO	Lunsford	Chula Vista/US	BOCAM (1.4/50)*	1860	5.1	1719	4	18.2	-	222
MACMA	Maciejewski	Chelm/PL	PAV35 (1.2/4)	4383	2.5	253	27	112.8	19.0	467
			PAV36 (1.2/4)*	5732	2.2	227	26	125.7	19.7	447
			PAV43 (0.95/3.75)*	2544	2.7	176	30	112.8	22.0	412
MOLSI	Molau	Seysdorf/DE	AVIS2 (1.4/50)*	1776	6.1	3817	12	59.9	250.6	1420
			MINCAM1 (0.8/8)	1477	4.9	1084	28	143.4	89.7	893
		Ketzür/DE	REMO1 (0.8/3.8)	5600	3.0	486	29	110.0	-	385
			REMO2 (0.8/3.8)	5613	4.0	1186	30	129.0	53.3	501
MORJO	Morvai	Fülöpszallas/HU	HUFUL (1.4/5)	2522	3.5	532	9	54.4	35.9	409
OTTMI	Otte	Pearl City/US	ORIE1 (1.4/5.7)	3837	3.8	460	29	155.8	-	891
PERZS	Perko	Becsehely/HU	HUBEC (0.8/3.8)*	5498	2.9	460	24	154.8	53.0	1509
ROTEC	Rothenberg	Berlin/DE	ARMEFA (0.8/6)	2366	4.5	911	22	83.7	-	426
SARAN	Saraiva	Carnaxide/PT	RO1 (0.75/6)	2362	3.7	381	21	120.9	-	643
			RO2 (0.75/6)	2381	3.8	459	14	72.0	30.2	415
SCALE	Scarpa	Alberoni/IT	LEO (1.2/4.5)	4133	-	-	17	124.3	-	716
SCHHA	Schremmer	Niederkrüchten/DE	DORAEMON (0.8/3.8)	4900	3.0	409	23	83.2	37.2	361
SLAST	Slavec	Ljubljana/SI	KAYAK1 (1.8/28)	588	-	-	12	57.9	-	177
STOEN	Stomeo	Scorze/IT	MIN38 (0.8/3.8)	5566	4.8	3270	30	221.4	352.9	2581
			NOA38 (0.8/3.8)	5609	4.2	1911	30	215.6	269.7	2196
			SCO38 (0.8/3.8)	5598	4.8	3306	30	217.1	273.4	2769
STORO	Stork	Kunzak/CZ	KUN1 (1.4/50)*	1913	5.4	2778	3	12.8	-	247
		Ondrejov/CZ	OND1 (1.4/50)*	2195	5.8	4595	3	12.6	51.1	328
STRJO	Strunk	Herford/DE	MINCAM2 (0.8/6)	2362	4.6	1152	18	37.9	-	203
			MINCAM3 (0.8/12)	728	5.7	975	22	53.6	-	263
			MINCAM5 (0.8/6)	2349	5.0	1896	24	64.6	53.5	377
TEPIS	Tepliczky	Budapest/HU	HUMOB (0.8/6)	2388	4.8	1607	29	163.6	97.7	1514
TRIMI	Triglav	Velenje/SI	SRAKA (0.8/6)*	2222	-	-	28	166.4	-	741
YRJIL	Yrjölä	Kuusankoski/FI	FINEXCAM (0.8/6)	2337	5.5	3574	23	73.0	63.7	624
ZELZO	Zelko	Budapest/HU	HUVCSE02 (0.95/5)	1606	3.8	390	2	9.0	-	40
Sum							31	7300.9	-	53272

* active field of view smaller than video frame

2. Observing Times (h)

August	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
BASLU	1.5	0.7	3.1	0.2	0.4	0.6	-	-	-	0.4	0.2	0.4	-	4.0	0.6
BERER	-	6.6	6.9	6.9	6.9	1.7	0.3	1.7	7.3	7.4	7.4	7.6	7.6	7.6	3.0
	-	6.7	5.9	7.0	7.0	2.3	-	0.7	7.4	7.5	7.5	7.6	7.7	7.7	0.3
	-	5.5	6.9	5.3	7.0	1.7	0.3	0.9	7.3	7.5	7.5	7.6	7.6	7.6	1.1
BREMA	6.2	-	-	-	-	-	-	-	4.9	-	-	5.3	-	7.2	3.5
	-	-	-	-	-	-	-	-	3.8	-	-	5.2	-	-	3.7
BRIBE	6.7	4.3	0.7	-	2.5	-	3.4	0.3	4.6	-	-	2.0	2.0	3.9	2.8
	6.8	4.9	1.2	-	3.4	-	2.7	0.9	3.3	-	-	-	-	4.9	3.8
CASFL	0.5	4.0	5.5	7.8	-	-	-	8.0	8.0	8.0	8.2	8.2	-	1.8	8.4
	-	2.7	4.9	4.9	-	0.3	-	7.7	7.5	8.7	8.8	8.8	8.9	3.6	9.0
CRIST	7.3	7.3	7.4	7.5	5.9	-	-	7.7	7.7	7.8	7.8	7.9	3.8	4.8	8.0
	7.3	7.4	7.4	7.5	6.0	4.6	0.3	7.7	7.7	7.7	7.8	7.9	5.9	5.8	8.0
CSISZ	-	6.2	-	-	7.0	7.0	2.4	-	0.5	7.1	6.8	3.0	6.0	7.6	-
CURMA	-	3.1	-	4.5	-	-	-	-	-	0.2	-	-	-	7.2	-
ELTMA	7.4	-	4.8	7.6	5.6	4.2	3.6	7.2	7.8	7.9	7.9	7.9	8.0	8.1	8.1
GONRU	-	3.4	7.8	-	1.1	5.1	7.8	7.9	8.2	8.3	3.6	5.1	-	3.4	-
	-	6.6	7.9	-	0.5	5.9	7.9	8.0	8.2	8.3	3.9	6.6	-	2.9	-
	-	5.0	8.0	-	1.3	4.3	8.1	8.1	8.1	8.2	5.2	5.0	0.7	1.4	-
GOVMI	-	-	-	0.3	7.2	7.2	5.5	-	0.9	-	-	7.1	4.7	6.8	1.2
HERCA	-	8.4	-	3.6	4.8	5.6	-	-	-	-	-	-	-	-	-
IGAAN	3.9	4.9	1.7	-	7.5	7.5	4.6	3.8	3.1	7.7	7.8	6.3	5.8	7.9	7.3
	-	-	-	-	-	-	-	-	-	-	-	5.2	4.0	7.7	7.7
	3.2	6.4	6.7	3.3	7.4	7.5	7.2	2.3	5.5	7.6	7.6	7.8	5.3	7.9	7.6
	-	6.9	4.9	5.3	7.1	2.2	3.7	1.1	6.0	7.3	7.3	2.2	5.6	7.5	-
	1.8	7.1	-	2.7	6.9	5.9	-	-	5.1	5.4	7.6	2.9	6.2	7.8	4.3
JONKA	0.6	6.2	4.9	5.0	7.1	5.0	2.3	0.1	5.4	7.6	7.6	6.9	7.8	7.8	0.5
KACJA	-	7.1	-	-	7.3	7.6	5.0	-	-	7.8	8.0	4.2	-	7.9	-
	3.5	6.7	2.1	1.5	5.9	5.0	2.1	-	2.0	7.7	7.7	7.8	-	7.9	4.7
	-	-	-	-	-	-	-	-	4.2	7.8	7.8	7.9	7.9	5.9	3.1
	-	-	-	-	-	-	-	-	4.0	7.8	7.8	7.8	7.3	5.9	5.5
KERST	10.1	11.2	10.1	8.2	6.5	11.2	6.3	10.1	10.3	8.7	9.5	8.3	4.1	6.9	9.2
KOSDE	5.4	-	5.8	-	-	1.6	-	-	5.5	-	-	-	-	5.3	-
LERAR	6.9	-	1.1	-	1.2	1.4	2.5	4.1	7.0	6.2	1.0	1.6	-	0.5	1.4
LUNRO	2.9	-	7.1	6.4	-	1.8	-	-	-	-	-	-	-	-	-
MACMA	0.6	6.1	6.2	5.7	6.5	2.8	-	-	4.7	6.8	0.2	-	4.6	5.6	1.2
	1.1	5.8	6.9	6.1	6.5	2.7	1.6	-	5.2	7.5	-	-	5.6	7.6	2.5
	0.5	4.8	6.3	6.1	6.5	1.7	1.2	0.2	4.2	7.0	0.2	0.2	3.9	7.5	2.1
MOLSI	6.1	6.2	-	6.3	-	-	3.9	-	-	-	0.6	-	1.3	-	-
	6.9	7.0	-	7.1	1.2	0.9	-	7.3	2.7	7.5	3.3	0.1	3.3	-	3.4
	6.1	6.2	6.2	3.6	6.4	0.4	6.5	4.0	0.9	-	4.5	2.0	4.6	6.8	2.7
	4.3	6.2	1.1	3.6	6.4	0.9	5.7	4.0	1.9	-	4.5	2.1	2.4	6.6	2.2
MORJO	-	-	-	-	-	-	-	-	-	4.3	5.6	5.8	-	7.7	4.8
OTTMI	3.9	1.9	7.1	4.7	0.1	4.9	7.0	7.4	7.8	7.1	6.4	7.9	-	8.3	6.5
PERCZ	1.9	7.2	-	-	7.5	7.5	2.1	-	0.6	7.8	7.8	7.2	4.2	8.0	-
ROTEC	6.2	-	5.2	1.4	1.3	-	4.7	4.2	-	-	-	1.7	2.8	1.3	3.6
SARAN	-	0.3	7.5	-	0.3	1.1	7.8	8.1	8.3	5.9	2.8	8.5	0.7	-	-
	-	0.6	7.9	-	-	1.1	8.3	-	6.5	8.4	4.1	8.0	2.3	1.3	0.5
SCALE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.3
SCHHA	-	3.4	3.8	0.9	2.1	0.3	3.4	-	6.5	1.0	-	-	2.6	6.0	0.8
SLAST	0.7	2.0	-	-	2.5	-	-	-	-	-	-	-	-	-	-
STOEN	6.1	6.5	6.9	6.8	1.9	3.6	-	7.4	6.8	7.9	7.9	7.9	7.0	7.3	8.1
	6.0	4.5	6.7	6.9	1.5	2.8	-	5.9	7.0	7.9	7.9	8.0	8.0	7.3	8.1
	6.0	6.3	5.8	6.6	1.6	3.0	-	7.7	6.7	7.8	7.9	8.0	7.3	7.7	8.1
STORO	-	4.5	3.2	5.1	-	-	-	-	-	-	-	-	-	-	-
	5.0	5.8	-	1.8	-	-	-	-	-	-	-	-	-	-	-
STRJO	5.6	2.7	-	-	0.2	-	1.8	0.4	1.8	-	1.3	-	0.1	0.3	0.3
	5.6	3.8	-	-	-	-	2.7	-	2.1	-	-	2.0	0.5	-	2.5
	5.6	4.9	-	-	1.4	-	2.8	-	1.7	-	-	3.1	0.3	0.7	0.9
TEPIS	1.2	5.6	4.4	2.1	6.7	2.5	3.8	-	7.0	7.1	7.1	2.3	5.2	7.3	-
TRIMI	2.7	7.3	0.7	6.0	7.5	7.5	7.6	-	2.8	7.8	7.8	5.9	5.9	8.0	1.9
YRJIL	2.2	2.6	2.8	2.2	3.2	-	-	3.5	3.3	3.2	2.8	4.0	4.4	4.6	-
ZELZO	-	-	-	-	-	-	-	-	-	-	-	3.9	-	-	-
Sum	166.3	251.5	211.5	178.5	194.8	150.9	146.9	148.4	249.8	281.6	245.0	260.7	193.9	293.1	180.3

August	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
BASLU	3.4	-	-	-	2.3	2.5	-	-	2.8	0.6	-	0.1	2.8	-	-	0.9
BERER	3.5	7.7	7.8	7.7	7.9	7.9	8.0	8.1	8.0	8.2	8.3	3.7	5.2	6.8	8.5	4.4
	2.1	7.8	7.9	4.7	8.0	8.0	8.0	8.2	8.3	8.3	8.4	3.3	4.2	3.2	8.6	6.1
	4.4	7.8	7.9	6.1	8.0	8.0	8.0	8.2	8.3	8.2	8.4	3.2	5.0	3.9	8.6	5.7
BREMA	-	2.2	-	7.5	7.4	7.7	1.5	-	-	-	-	-	-	-	-	-
	-	-	-	7.4	6.8	3.4	-	2.5	1.3	3.7	-	5.1	2.7	2.9	4.5	2.7
BRIBE	-	-	2.0	7.6	6.4	4.5	0.3	3.9	6.5	4.4	-	4.1	6.0	1.4	7.6	4.6
	0.7	1.6	0.3	7.7	-	3.0	2.0	7.3	7.5	5.9	-	2.0	4.7	2.7	5.0	6.6
CASFL	6.8	7.6	-	-	7.3	6.1	6.9	8.8	8.9	7.7	3.5	9.0	9.0	7.4	8.1	6.9
	6.0	4.0	3.8	5.7	4.3	2.0	2.5	3.4	3.7	2.3	2.5	1.3	-	2.5	6.1	2.3
CRIST	7.8	8.2	8.2	8.3	8.3	8.4	8.4	8.5	8.5	8.6	2.5	8.7	8.7	8.8	7.7	2.1
	8.1	8.1	8.2	8.2	8.3	8.4	8.4	8.5	8.5	8.6	6.9	8.7	8.7	8.8	8.8	3.7
CSISZ	5.9	6.4	6.3	3.2	5.2	4.8	3.6	7.3	5.6	6.8	4.6	-	4.3	2.5	0.4	2.2
CURMA	-	2.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ELTMA	8.2	8.1	8.3	7.4	8.1	8.5	8.5	5.7	6.5	8.5	8.2	8.8	8.9	6.3	7.9	8.7
GONRU	2.9	6.4	7.2	0.8	-	-	-	6.9	8.6	5.5	8.7	8.8	8.8	7.7	-	-
	-	8.3	7.6	2.7	-	-	-	8.2	8.7	3.5	8.8	8.8	8.9	6.8	-	-
	0.3	7.2	4.2	2.3	0.9	0.7	-	-	-	2.8	9.0	8.3	6.1	7.6	1.3	-
GOVMI	7.8	7.9	7.1	2.0	6.2	6.9	5.2	8.2	-	-	2.2	-	-	3.2	4.1	4.0
HERCA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IGAAN	8.1	8.1	8.2	4.7	6.3	8.4	6.9	8.4	8.5	7.6	7.6	3.5	5.6	7.0	7.5	5.7
	4.6	8.0	8.0	5.1	7.0	8.2	6.1	8.4	7.0	6.2	6.8	6.7	5.5	3.6	2.6	6.3
	6.5	8.0	6.9	4.4	6.4	8.3	8.3	6.9	7.0	8.3	5.9	2.8	4.4	4.8	3.6	6.4
	6.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7.9	8.0	8.1	5.3	7.3	8.2	8.2	8.4	8.4	8.5	8.4	-	6.4	8.7	5.7	7.8
JONKA	4.1	6.7	8.1	5.4	8.2	7.3	7.5	-	-	-	-	-	-	-	-	-
KACJA	6.3	8.2	8.2	-	8.3	8.5	8.5	8.5	8.6	8.3	8.6	-	-	6.4	-	5.0
	8.0	8.1	8.1	3.5	8.1	8.3	8.2	8.4	8.4	8.4	8.4	0.4	8.7	6.4	3.3	4.6
	6.7	8.1	8.1	1.7	7.2	7.5	8.4	8.5	8.4	8.6	6.8	0.8	8.2	8.8	1.5	5.2
	6.1	8.2	7.9	2.3	7.2	7.5	8.4	8.5	8.5	8.6	6.9	0.6	8.2	8.5	-	5.4
KERST	7.6	9.2	10.5	10.4	11.1	7.6	-	9.5	-	-	-	-	-	-	3.9	6.8
KOSDE	5.3	-	-	5.1	6.4	5.2	-	-	6.2	-	0.6	2.2	-	2.0	-	6.0
LERAR	5.0	2.0	3.0	8.0	-	0.3	-	2.0	0.3	2.1	0.7	0.9	2.6	3.3	3.3	0.9
LUNRO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MACMA	3.6	4.0	3.8	-	7.7	7.2	5.6	6.4	1.7	0.9	6.7	7.2	0.3	3.3	0.4	3.0
	5.6	4.4	4.8	1.1	7.4	6.7	5.8	6.2	2.6	2.1	7.0	6.6	-	4.3	-	2.0
	3.4	3.0	3.9	0.3	7.6	6.9	5.6	8.9	1.8	2.1	5.1	5.9	0.3	4.2	-	1.4
MOLSI	-	-	-	-	-	-	-	-	-	-	5.3	6.4	5.2	2.5	8.0	8.1
	6.3	6.0	4.6	2.0	8.1	6.0	8.1	2.1	1.3	8.4	3.8	8.5	8.6	1.5	8.7	8.7
	2.0	5.8	4.1	5.7	5.5	1.4	2.0	4.1	-	0.8	3.8	6.2	2.0	1.3	4.2	0.2
	2.8	7.2	2.6	7.4	5.9	2.1	6.0	6.2	2.8	3.5	7.7	5.3	3.7	4.3	6.3	3.3
MORJO	7.8	7.2	6.7	4.5	-	-	-	-	-	-	-	-	-	-	-	-
OTTMI	7.3	5.8	2.5	1.6	3.9	5.8	5.0	4.8	5.8	5.6	5.0	6.7	6.1	2.4	-	6.5
PERCZ	8.0	8.0	8.1	3.2	6.4	8.2	7.1	7.4	8.4	8.6	8.5	-	8.8	-	2.3	-
ROTEC	3.0	5.1	2.3	7.5	5.3	3.3	4.9	4.3	-	-	-	5.2	4.4	-	4.1	1.9
SARAN	7.3	8.7	8.1	-	-	-	-	6.8	8.4	2.4	9.1	6.0	7.5	5.3	-	-
	6.9	7.4	8.7	-	-	-	-	-	-	-	-	-	-	-	-	-
SCALE	6.2	7.4	6.7	7.0	6.9	6.7	7.5	8.1	7.4	8.5	4.6	7.9	7.0	7.5	9.0	8.6
SCHHA	3.9	0.9	1.4	8.3	5.1	4.6	0.7	4.9	6.8	6.7	-	-	-	-	4.9	4.2
SLAST	-	-	-	-	4.9	5.1	5.7	6.5	5.5	8.2	8.2	-	6.3	2.3	-	-
STOEN	8.0	8.2	8.3	8.3	8.3	8.4	8.5	8.2	6.9	8.7	4.7	7.4	8.8	8.9	8.8	8.9
	8.0	8.2	8.3	8.3	8.3	8.4	8.5	7.6	7.0	8.7	3.4	7.4	8.8	8.8	8.5	8.9
	8.0	8.2	8.3	8.3	8.2	8.4	8.5	7.9	6.9	8.7	3.5	7.3	8.8	8.9	8.0	8.7
STORO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STRJO	1.7	1.7	1.7	7.0	7.1	2.8	0.3	1.1	-	-	-	-	-	-	-	-
	2.4	2.6	1.2	7.0	5.1	3.1	1.1	2.6	1.3	0.5	-	1.0	1.5	2.2	2.5	0.3
	1.6	1.7	1.3	7.0	7.1	1.3	0.5	1.7	5.5	4.6	-	2.1	2.5	1.2	4.7	0.4
TEPIS	5.3	7.5	7.3	5.1	7.7	7.7	7.8	7.9	8.0	1.4	6.0	2.3	5.4	8.3	8.4	5.2
TRIMI	7.1	8.1	7.0	-	5.2	8.2	6.1	7.5	5.6	7.6	8.7	0.6	7.8	5.4	-	2.1
YRJIL	-	-	4.8	5.3	-	2.8	-	0.2	1.8	0.4	5.4	4.8	5.5	1.7	-	1.5
ZELZO	-	-	-	-	-	-	5.1	-	-	-	-	-	-	-	-	-
Sum	267.2	311.0	288.4	250.1	310.6	291.2	252.2	302.6	268.5	258.6	249.2	206.6	252.9	226.3	207.4	204.9

3. Results (Meteors)

August	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
BASLU	6	2	8	2	2	4	-	-	-	2	1	2	-	23	1
BERER	-	71	38	34	63	6	1	8	127	126	164	188	179	110	6
	-	33	29	31	51	11	-	4	67	101	84	108	111	55	1
	-	29	24	18	32	3	1	3	42	78	69	74	85	38	4
BREMA	32	-	-	-	-	-	-	-	30	-	-	48	-	47	14
	-	-	-	-	-	-	-	-	23	-	-	32	-	-	14
BRIBE	51	10	1	-	12	-	10	1	28	-	-	17	8	27	8
	56	19	8	-	19	-	17	3	13	-	-	-	-	26	7
CASFL	1	13	22	28	-	-	-	56	44	64	89	112	-	9	55
	-	8	16	12	-	1	-	31	64	58	66	100	55	6	43
CRIST	76	36	53	66	26	-	-	99	119	102	116	202	105	14	48
	89	55	74	83	48	12	1	115	146	149	167	299	178	19	92
CSISZ	-	31	-	-	28	20	14	-	4	62	64	20	80	69	-
CURMA	-	23	-	28	-	-	-	-	-	2	-	-	-	87	-
ELTMA	49	-	24	69	26	30	37	60	94	122	141	215	167	73	65
GONRU	-	18	54	-	2	55	35	71	47	39	15	33	-	17	-
	-	35	58	-	1	39	57	71	73	56	18	50	-	14	-
	-	29	47	-	4	37	57	73	60	73	23	47	7	7	-
GOVMI	-	-	-	2	56	57	30	-	3	-	-	62	46	46	4
HERCA	-	38	-	12	26	23	-	-	-	-	-	-	-	-	-
IGAAN	16	36	10	-	51	49	43	10	7	105	103	189	54	87	45
	-	-	-	-	-	-	-	-	-	-	-	191	159	115	71
	25	33	32	11	52	60	44	9	43	99	119	195	87	101	47
	-	33	13	11	34	12	18	5	44	74	72	27	98	77	-
	15	47	-	11	29	32	-	-	37	46	102	66	101	114	47
JONKA	4	43	37	29	54	20	16	1	51	95	68	44	99	90	2
KACJA	-	36	-	-	32	29	23	-	-	53	76	27	-	53	-
	14	38	12	5	13	13	6	-	16	66	190	311	-	152	61
	-	-	-	-	-	-	-	-	110	181	213	237	160	140	56
	-	-	-	-	-	-	-	-	64	176	211	309	229	159	61
KERST	158	169	129	113	51	103	33	94	102	40	74	71	19	61	50
KOSDE	31	-	46	-	-	15	-	-	33	-	-	-	-	41	-
LERAR	13	-	3	-	4	7	7	9	17	30	6	20	-	4	5
LUNRO	79	-	66	70	-	7	-	-	-	-	-	-	-	-	-
MACMA	3	19	31	27	28	17	29	-	29	43	1	-	44	41	8
	6	15	27	26	19	8	6	-	36	43	-	-	53	52	12
	3	19	35	17	20	11	6	1	33	46	1	1	36	37	8
MOLSI	187	169	-	155	-	-	101	-	-	-	17	-	3	-	-
	49	51	-	54	7	12	-	58	12	76	16	2	86	-	30
	32	31	6	18	23	2	25	14	3	-	22	9	28	34	18
	11	45	10	12	16	2	27	15	6	-	24	10	22	25	10
MORJO	-	-	-	-	-	-	-	-	-	40	64	88	-	86	14
OTTMI	26	9	21	19	1	17	45	32	48	64	64	94	-	72	46
PERCZ	13	72	-	-	91	62	13	-	3	144	155	194	105	139	-
ROTEC	52	-	28	10	11	-	44	25	-	-	-	9	33	12	10
SARAN	-	1	58	-	1	12	52	57	50	38	18	83	4	-	-
	-	2	43	-	-	10	45	-	43	41	15	98	14	8	1
SCALE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	86
SCHHA	-	15	23	3	12	1	9	-	37	2	-	-	10	51	3
SLAST	4	5	-	-	5	-	-	-	-	-	-	-	-	-	-
STOEN	54	44	47	97	20	26	-	108	133	183	205	232	157	68	117
	32	20	36	84	12	15	-	98	129	145	178	228	139	70	114
	64	51	65	89	13	30	-	106	133	177	231	272	200	133	117
STORO	-	160	18	69	-	-	-	-	-	-	-	-	-	-	-
	108	199	-	21	-	-	-	-	-	-	-	-	-	-	-
STRJO	34	6	-	-	2	-	10	2	12	-	13	-	1	1	4
	35	13	-	-	-	-	12	-	17	-	-	20	1	-	11
	52	18	-	-	8	-	20	-	5	-	-	23	1	8	3
TEPIS	12	61	20	12	66	26	36	-	67	119	132	26	155	124	-
TRIMI	7	35	4	20	22	34	24	-	24	52	85	49	41	28	9
YRJIL	15	15	22	20	23	-	-	30	20	33	22	111	98	56	-
ZELZO	-	-	-	-	-	-	-	-	-	-	-	38	-	-	-
Sum	1514	1960	1298	1388	1116	930	954	1269	2348	3245	3514	4883	3258	2926	1428

August	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
BASLU	7	-	-	-	5	6	-	-	6	3	-	1	7	-	-	3
BERER	28	65	54	62	72	49	31	39	51	57	52	11	11	31	59	28
	8	36	27	25	41	22	17	22	32	18	19	6	7	14	29	22
	17	26	27	19	29	26	16	19	27	22	17	9	10	9	19	12
BREMA	-	6	-	33	27	29	2	-	-	-	-	-	-	-	-	-
	-	-	-	37	28	14	-	6	5	18	-	21	7	12	17	15
BRIBE	-	-	5	36	28	15	1	18	36	15	-	23	23	9	33	9
	4	8	1	34	-	10	3	26	34	16	-	13	24	5	28	24
CASFL	25	31	-	-	39	23	29	34	31	33	14	43	25	29	25	24
	23	11	14	14	12	4	6	11	9	8	5	4	-	7	14	11
CRIST	45	69	60	50	44	37	35	27	44	45	2	41	46	39	38	2
	70	78	77	67	70	80	63	56	86	75	24	80	62	78	71	9
CSISZ	36	31	20	17	22	20	7	17	8	20	10	-	24	4	1	9
CURMA	-	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ELTMA	73	54	47	34	36	24	28	22	30	22	25	42	29	31	17	20
GONRU	5	49	19	1	-	-	-	27	50	17	55	63	42	38	-	-
	-	51	26	3	-	-	-	47	41	7	48	47	39	29	-	-
	3	30	16	6	3	2	-	-	-	7	37	31	21	27	6	-
GOVMI	41	44	28	2	20	25	17	35	-	-	9	-	-	10	13	19
HERCA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IGAAN	50	48	35	30	37	30	31	33	34	32	27	10	22	30	34	22
	37	68	61	18	46	44	26	25	35	21	22	25	26	8	7	32
	50	42	35	32	38	33	30	36	26	30	24	6	14	26	15	24
	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	55	40	52	23	27	37	28	26	30	30	35	-	15	28	4	17
JONKA	18	40	29	21	49	19	20	-	-	-	-	-	-	-	-	-
KACJA	24	45	36	-	24	28	24	28	25	28	34	-	-	14	-	16
	103	82	69	29	55	55	32	52	46	40	38	1	38	23	9	11
	77	92	78	17	63	81	72	96	79	104	92	1	98	90	3	37
	72	67	79	5	50	43	35	58	55	52	46	3	41	39	-	18
KERST	48	61	67	69	72	48	-	43	-	-	-	-	-	-	19	40
KOSDE	13	-	-	22	45	22	-	-	38	-	4	12	-	7	-	36
LERAR	23	3	7	10	-	2	-	6	1	3	1	2	8	14	9	2
LUNRO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MACMA	15	14	17	-	17	22	16	13	3	2	14	19	1	7	2	7
	20	7	19	5	18	16	5	14	4	4	13	9	-	8	-	2
	7	4	9	1	20	17	15	16	4	7	8	8	2	16	-	4
MOLSI	-	-	-	-	-	-	-	-	-	-	82	200	168	31	185	122
	38	47	23	14	50	20	30	5	6	46	13	53	40	6	33	16
	9	10	3	21	16	3	4	5	-	3	7	16	6	5	11	1
	12	21	5	40	25	9	17	24	6	8	11	21	23	18	21	5
MORJO	39	34	25	19	-	-	-	-	-	-	-	-	-	-	-	-
OTTMI	28	30	13	4	13	31	17	19	25	28	19	36	33	12	-	25
PERCZ	78	50	47	9	32	41	27	52	37	47	44	-	46	-	8	-
ROTEC	14	15	11	35	16	9	21	13	-	-	-	21	20	-	13	4
SARAN	27	31	27	-	-	-	-	31	25	18	35	26	27	22	-	-
	25	41	29	-	-	-	-	-	-	-	-	-	-	-	-	-
SCALE	84	83	80	43	41	31	32	26	31	32	14	34	25	29	21	24
SCHHA	24	3	2	39	18	17	2	14	21	27	-	-	-	-	20	8
SLAST	-	-	-	-	10	11	12	16	12	34	38	-	23	7	-	-
STOEN	115	94	75	76	76	54	72	68	46	61	27	98	79	59	42	48
	106	99	77	61	60	49	53	39	30	56	16	56	57	57	31	49
	117	104	85	81	73	54	70	58	38	84	15	70	67	72	50	50
STORO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STRJO	13	6	11	37	36	12	2	1	-	-	-	-	-	-	-	-
	13	8	4	38	29	14	4	7	8	2	-	4	4	9	9	1
	5	6	9	51	30	12	2	11	34	22	-	10	9	7	29	2
TEPIS	64	64	55	35	63	54	43	40	42	10	44	12	21	39	47	25
TRIMI	34	28	31	-	17	27	23	23	21	21	34	2	21	19	-	6
YRJIL	-	-	26	30	-	8	-	1	10	2	21	18	28	7	-	8
ZELZO	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
Sum	1875	1990	1652	1355	1642	1339	1022	1305	1262	1237	1095	1208	1339	1081	992	869

In August 2011, the observing conditions varied significantly between different observing sites. Whereas observers in southern and eastern Europe enjoyed almost continuously clear skies (the cameras STG38 in Italy and HUHOD in Hungary did not miss even a single night), the summer month was rather rainy farther north. In particular the Perseid maximum was literally rained out. It's only thanks to the high meteor activity, that many cameras still reported so many observing nights. Already the smallest cloud gap is sufficient in August to catch a meteor and thereby collect an observing night. In total, there were 44 cameras with 20 and more observing nights.

Anyhow, August 2011 was once more a record breaking month. 36 observers participated with 62 video cameras in the IMO network – more than ever before. In selected nights, up to 48 cameras were active in parallel. With more than 7,300 hours of effective observing time, we surpassed the previous best result of October 2010 by a whopping 30%. Those more than 53,000 meteors recorded in that time imply even a 35% increase to the previous record. Now that the IMO Video Meteore Database contains almost 900,000 entries we may celebrate our one millionth meteors still in this year!

Once more, our network grew in size. Matrin Breukers started to operate his second camera MBB4. For Rui Goncalves, TEMPLAR3 is already the third active camera, and with HUDEB Antal Igaz even operates five cameras now at four different locations. Thus, he has become the single most diligent IMO network member now.
In Italy, Leo Scarpa joined the IMO network. His camera LEO is based on a Mintron camera with 4.5mm f/1.2 lens. Maciej Maciejewski from the Polish fireball network PFN is also regularly contributing the observations of his three cameras PAV35, PAV36 and PAV43 since August.

Let's have a look at the observing results. The southern delta Aquariids and alpha Capricornids, whose maxima occur in late July but which are active well into August, have been discussed already in the previous monthly report.
In the 2009 meteor shower analysis, the kappa Cygnids were detected in the solar longitude interval 134° (August 7) to 146° (August 19). Their activity profile was flat and showed a barely visible maximum at solar longitude 141° (August 14). That is confirmed by video data from 2011. The flux density profile (Figure 1) based on 749 shower members (with almost 11,000 SPOs in parallel) shows a rise from the sporadic background starting on August 13. At the maximum, the flux density is about twice the background, and by August 23 the activity has fallen to the background level again.

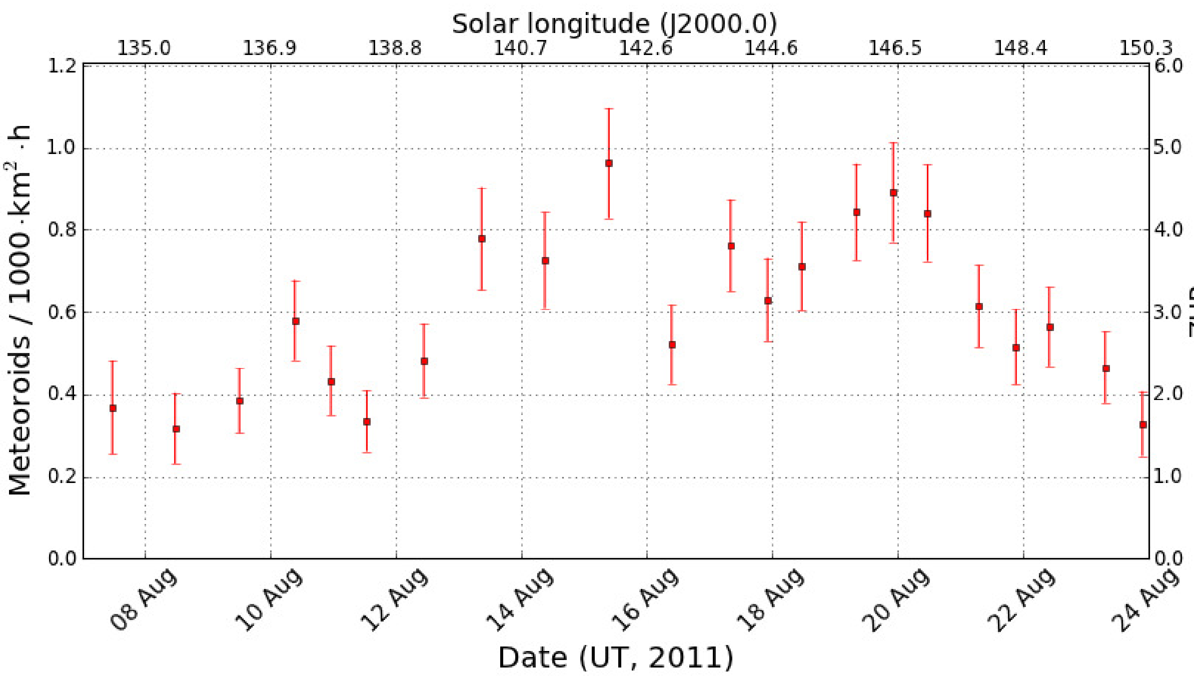

Figure 1: Flux density profile of the kappa Cygnids, determined from data of the IMO Video Meteor Network in August 2011.

Highlight of the month were the Perseids, of course. In the 2009 long-term analysis we could identify them between 111° (Juli 14) and 153° (August 27) solar longitude. Their maximum was reached at 140°, and at the rising edge there was a small „hump" at 135° solar longitude (August 7). Figure 2 shows first the complete flux density profile of the Perseids 2011 from mid-July until end of August, based on 18,800 Perseids (at 17,800 SPOs). It shows on the one hand the slow rise in July, contrary to a comparatively steep fall starting in mid-August. Also the small „hump" near 135° solar longitude shows up again – it seems that this is indeed a real structure.

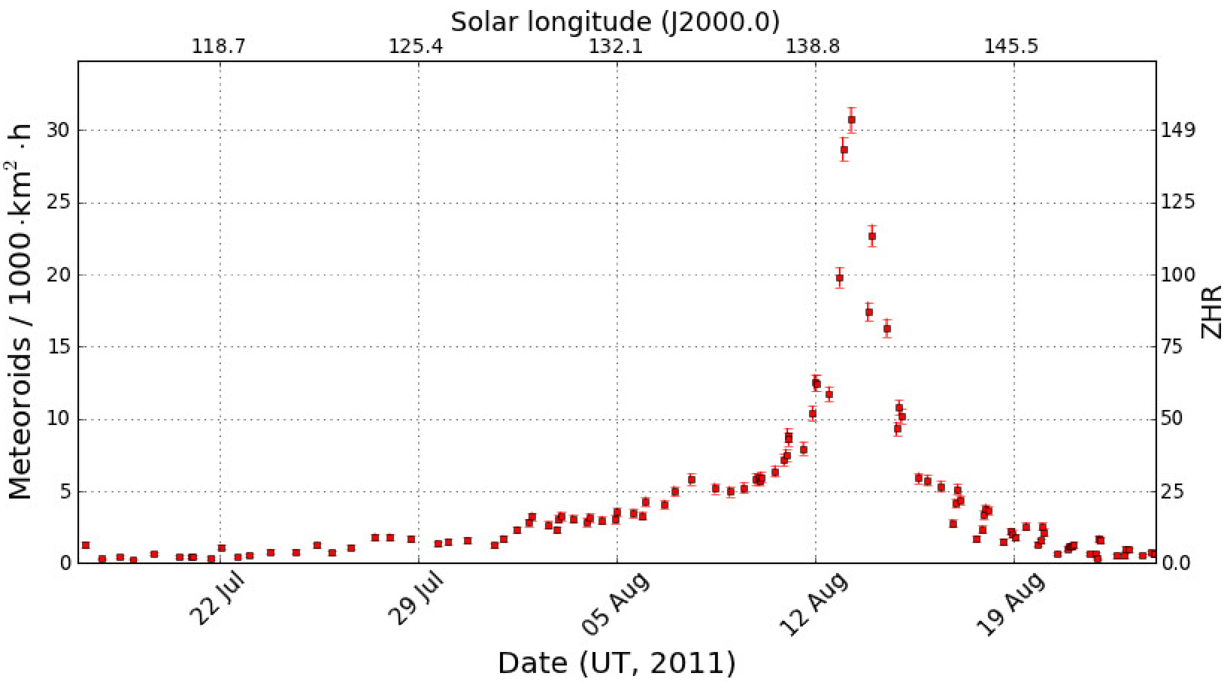

***Figure 2:** Complete flux density profile of the Perseids in July and August 2011, based on roughly 18,800 Perseids.*

Looking at the maximum period August 9 to 17 in detail yields a strange picture. As expected, there are clusters of data points in the European night time hours with gaps inbetween. However, there is no flat overall profile, but instead a steep activity rise at each single night towards the (European) morning hours (Figure 3).

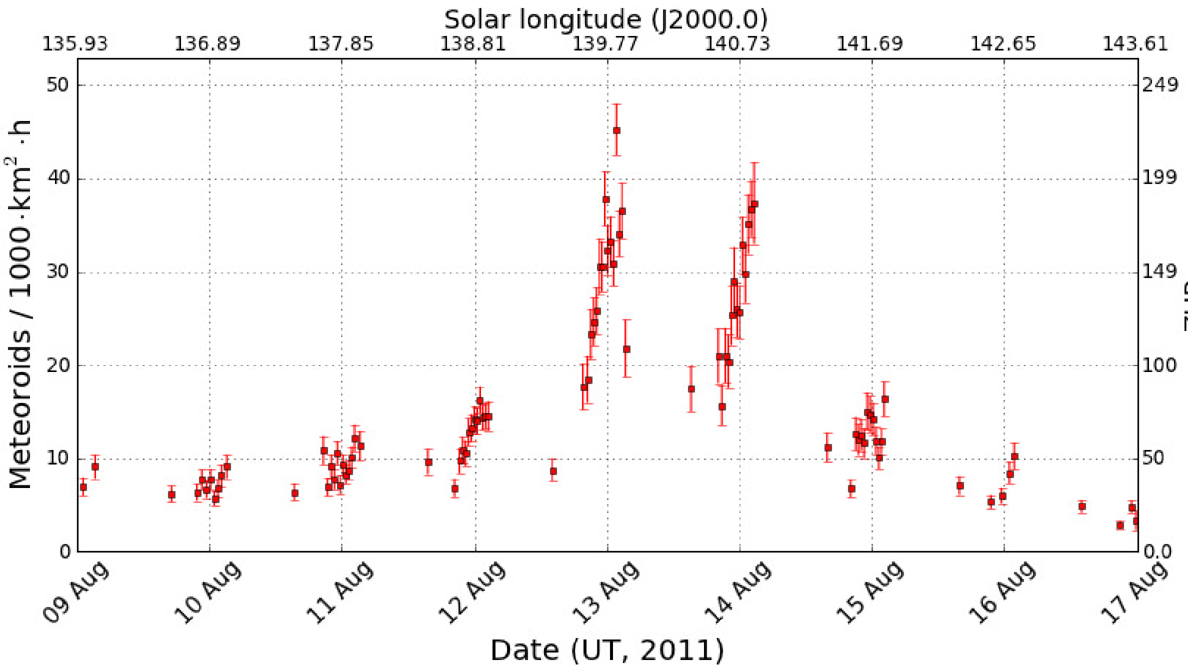

Figure 3: *Detailed flux density profile of the Perseids between August 9 and 17, 2011.*

It is obvious that the modelling of the flux density contains a systematic error which correlates to the local observing time. The Moon and linked to it the stellar limiting magnitude can be excluded, because the effect can be observed at different lunar phases both before and after the maximum. The fields of view of the video cameras remained constant in the time interval, but the position of the Perseid radiant changes uniformly in the course of each night. Thus, the variable distance of the radiant from the fields of view could have an effect, as it results in different angular meteor velocities and thereby meteor limiting magnitudes. However, the cameras look in many different directions, so that possible effects should compensate each other to some extend.

As the Perseid radiant raises continuously in the course of the night at mid-northern latitudes, it's fairly obvious to link the systematic variations to the radiant altitude. That altitude affects the calculation of the effective collection area in two ways.
On the one hand, it's an input parameter for the calculation of the meteor layer altitude, at which Perseids typically occur. The altitude of the Perseids varies by about 5% during the night. However, also this has almost no effect on the effective collection area, because there are two reverse effects (higher altitude means a larger collection area, but also lower brightness because of larger distance) which almost cancel each other out.
On the other hand, the Sine of the radiant altitude (resp. Cosine of the zenith distance) influences the effective collection area and thereby flux density directly. In the current implementation, a formula of Kresak from 1954 is used, which deviates from the pure Sine only for radiant altitudes below 10 degrees.

In the past, the so-called zenith exponent was discussed several times. The Cosine of the zenith distance will be raised to the power of the zenith exponent gamma to account for different entry angles of meteoroids in the atmosphere. In IMO meteor shower analyses, gamma is typically set to 1.0, whereas Zvolankova derived a values of 1.47 in the eighties, and Jenniskens used a value of 1.4 in his meteor shower analyses of the nineties. To analyse, whether a zenith exponent larger than 1.0 can indeed explain the observed systematic deviations, the flux densities of all cameras between August 8 and 17 were recomputed with different zenith exponents beween 1.0 and 2.0. The result is given in Figure 4.

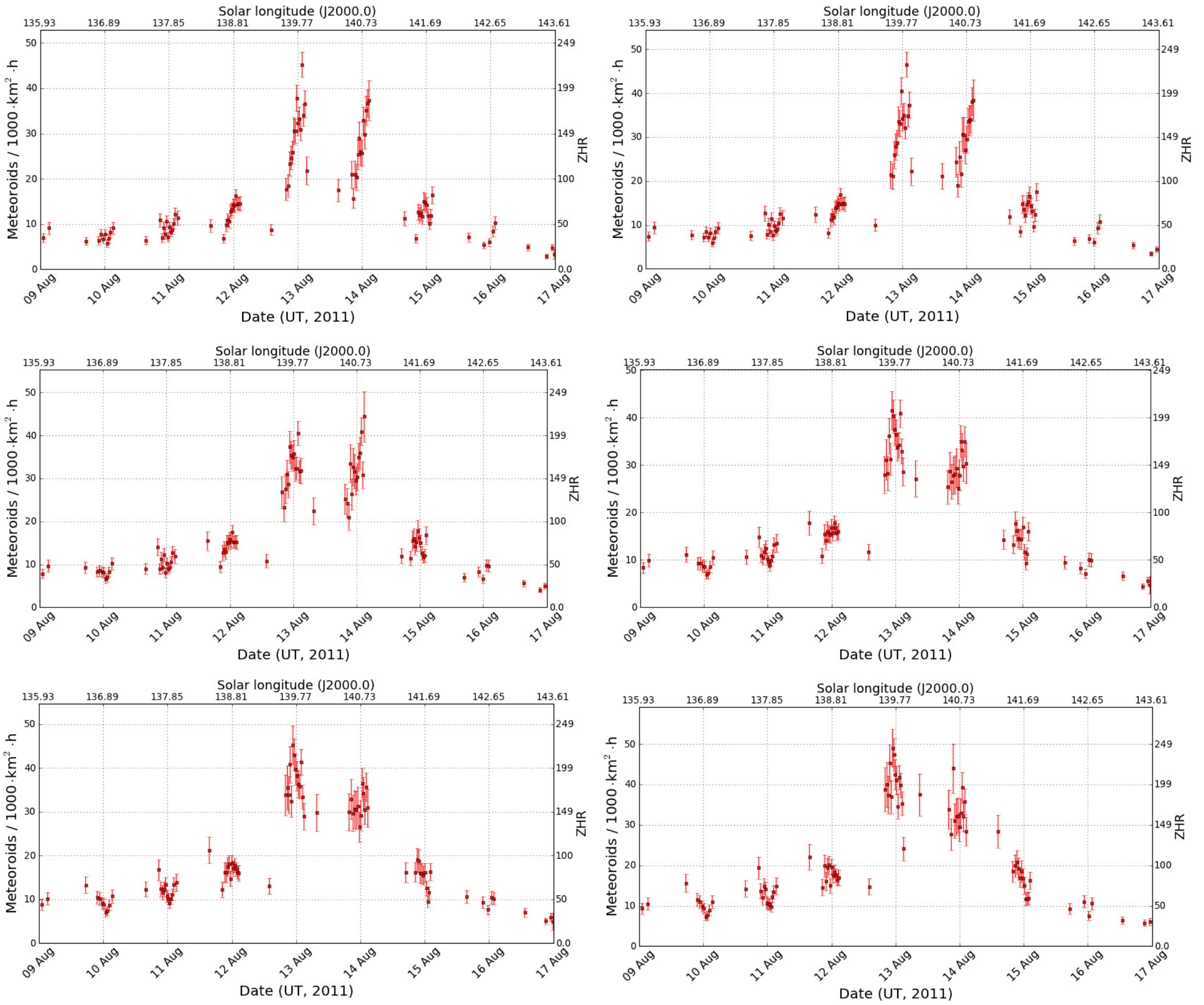

Figure 4: *Flux density profile of the Perseid maximum in August 2011, calculated with zenith exponents between 1.0 and 2.0 (upper left to lower right).*

The daily variations become indeed smaller with increasing gamma value, and in the end they partly reverse. The value of the zenith exponent cannot be determined exactly from these graphs alone, and it might even be that the Cosine has to be transformed by a different function than raising it to the power of gamma, but a zenith exponent of about 1.6 subjectively seems to level out the daily variations best. Figure 5 gives once more the detailed flux density profile of the Perseids with a zenith exponent of 1.6. The peak flux density is reached with 40 meteoroids per 1,000 km^2 and hour on August 12 at 23 UT (solar longitude 139.73°). Applying the formula of Koschak and Rendtel would yield a ZHR of about 200. However, in previous shower analyses we found already that this values is overestimated by a factor of 2 to 3. Thus, the peak ZHR would rather have been of the order of 80 to 100. Visual Perseid observations of 2011 do not yield a clear profile, as the observers were significantly hampered by the Moon. The smoothed quick look profile yields a maximum ZHR of 60 in the night of August 12/13, which seems to be systematically underestimated in view of the video data.

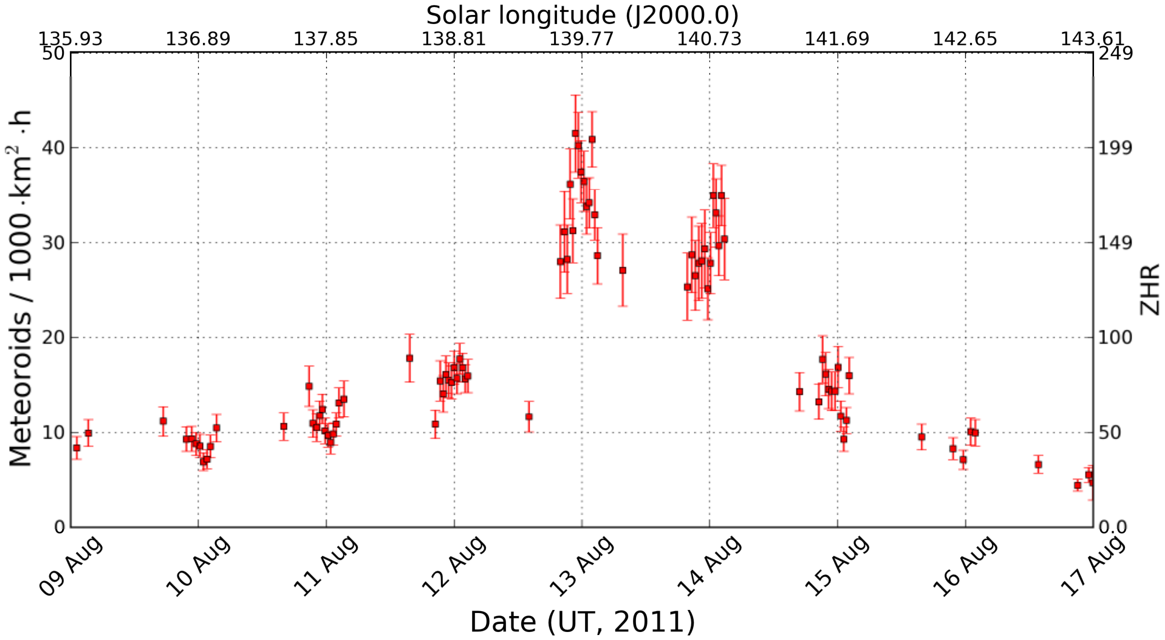

Figure 5: *Detailed flux density profile of the Perseids between August 9 and 17, 2011, obtained with a zenith exponent of 1.6.*

Finally we want to present an unusual meteor cluster, recorded by Javor Kac on the morning of August 14 with his camera STEFKA. Within five seconds starting at 00:34:10 UT, seven meteors occured in the lower right quadrant of his camera (Figure 6). MetRec detected all seven of them and classified three as Perseids.

Figure 6: *Cluster of seven meteors, recorded with STEFKA on August 14, 2011, between 00:34:10 and 00:34:15 UT. The trail in the uppper left was caused by a bright satellite.*