

Results of the IMO Video Meteor Network – April 2010

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1. Observers

Code	Name	Place	Camera	FOV	LM	Nights	Time	Meteors
BENOR	Benitez-S.	Las Palmas	TIMES4 (1.4/50) TIMES5 (0.95/50)	Ø 20° Ø 10°	3 mag 3 mag	10 7	17.4 5.2	50 15
BRIBE	Brinkmann	Herne	HERMINE (0.8/6)	Ø 55°	3 mag	29	111.9	326
CASFL	Castellani	Monte Baldo	BMH1 (0.8/6) BMH2 (0.8/6)	Ø 55° Ø 55°	3 mag 3 mag	25 14	77.9 51.0	202 147
CRIST	Crivello	Valbrevenna	C3P8 (0.8/3.8) STG38 (0.8/3.8)	Ø 80° Ø 80°	3 mag 3 mag	23 22	96.4 72.4	249 137
ELTMA	Eltri	Venezia	MET38 (0.8/3.8)	Ø 80°	3 mag	18	74.9	168
GONRU	Goncalves	Tomar	TEMPLAR1 (0.8/6) TEMPLAR2 (0.8/6)	Ø 55° Ø 55°	3 mag 3 mag	15 18	83.0 71.1	236 181
GOVMI	Govedic	Sredisce ob Dravi	ORION2 (0.8/8)	Ø 42°	4 mag	12	41.0	97
HERCA	Hergenrother	Tucson	SALSA2 (1.2/4)	Ø 80°	3 mag	27	103.8	223
HINWO	Hinz	Brannenburg	AKM2 (0.85/25)	Ø 32°	6 mag	14	58.0	127
IGAAN	Igaz	Budapest	HUBAJ (0.8/3.8) HUPOL (0.8/3.8)	Ø 80° Ø 80°	3 mag 3 mag	20 19	37.5 40.1	93 91
JOBKL	Jobse	Oostkapelle	BETSY2 (1.2/85)	Ø 25°	7 mag	14	84.9	419
KACJA	Kac	Kostanjevec Ljubljana Kamnik	METKA (0.8/8) ORION1 (0.8/8) REZIKA (0.8/6) STEFKA (0.8/3.8)	Ø 42° Ø 42° Ø 55° Ø 80°	4 mag 4 mag 3 mag 3 mag	11 23 9 6	27.9 40.8 49.8 31.3	66 96 220 101
KERST	Kerr	Glenlee	GOCAM1 (0.8/3.8)	Ø 80°	3 mag	11	81.8	515
KOSDE	Koschny	Noordwijkerhout	LIC4 (1.4/50)	Ø 60°	6 mag	19	99.2	484
LUNRO	Lunsford	Chula Vista	BOCAM (1.4/50)	Ø 60°	6 mag	11	61.8	203
MOLSI	Molau	Seysdorf	AVIS2 (1.4/50) MINCAM1 (0.8/8)	Ø 60° Ø 42°	6 mag 4 mag	11 28	54.2 112.6	309 313
		Ketzür	REMO1 (0.8/3.8) REMO2 (0.8/3.8)	Ø 80° Ø 80°	3 mag 3 mag	24 24	71.0 105.3	155 259
MORJO	Morvai	Fülpöszallas	HUFUL (0.8/3.8)	Ø 80°	3 mag	21	42.0	93
OCHPA	Ochner	Albiano	ALBIANO (1.2/4.5)	Ø 68°	3 mag	21	85.8	167
OTTMI	Otte	Pearl City	ORIE1 (1.4/16)	Ø 20°	4 mag	18	57.7	154
ROTEC	Rothenberg	Berlin	ARMEFA (0.8/6)	Ø 55°	3 mag	21	67.5	191
SCHHA	Schremmer	Niederkräutchen	DORAEMON (0.8/3.8)	Ø 80°	3 mag	28	68.2	171
SLAST	Slavec	Ljubljana	KAYAK1 (1.8/28)	Ø 50°	4 mag	14	58.8	143
STOEN	Stomeo	Scorze	MIN38 (0.8/3.8) NOA38 (0.8/3.8) SCO38 (0.8/3.8)	Ø 80° Ø 80° Ø 80°	3 mag 3 mag 3 mag	17 19 19	113.8 127.0 124.5	429 425 481
STORO	Stork	Kunzak	KUN1 (1.4/50)	Ø 55°	6 mag	3	25.8	225
STRJO	Strunk	Ondrejov	OND1 (1.4/50)	Ø 55°	6 mag	5	37.1	481
		Herford	MINCAM2 (0.8/6) MINCAM3 (0.8/8) MINCAM5 (0.8/6)	Ø 55° Ø 42° Ø 55°	3 mag 4 mag 3 mag	21 1 16	44.3 3.1 68.1	109 6 204
TEPIS	Tepliczky	Budapest	HUMOB (0.8/3.8)	Ø 80°	3 mag	9	46.0	127
YRJIL	Yrjölä	Kuusankoski	FINEXCAM (0.8/6)	Ø 55°	3 mag	10	25.2	66
Sum						30	2758.0	8956

2. Observing Times (h)

April	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
BENOR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3
BRIBE	4.0	0.3	0.7	2.7	5.9	7.0	0.7	8.4	2.4	3.5	3.8	2.8	2.2	2.5	3.2
CASFL	0.7	3.8	-	-	5.5	6.4	4.5	2.4	2.7	0.8	2.5	1.5	2.3	4.2	3.9
	6.0	-	-	-	5.0	-	-	-	-	-	-	-	-	-	4.6
CRIST	5.7	-	-	1.0	7.0	7.2	0.5	7.1	5.4	5.1	6.9	0.8	6.1	5.1	5.7
	-	-	-	-	5.2	4.3	-	5.1	4.8	2.3	4.3	1.0	3.3	4.2	5.6
ELTMA	-	5.0	-	-	5.1	4.7	5.4	4.0	0.9	-	4.0	1.3	-	-	1.9
GONRU	-	-	1.6	5.9	6.5	3.0	5.8	6.1	8.0	7.9	6.7	-	-	-	-

	-	1	1	3	2	-	-	-	4	3	-	-	-	-	-
BRIBE	20	24	9	9	13	21	41	17	16	-	7	1	2	4	3
CASFL	-	-	9	9	19	21	1	-	10	5	1	5	4	7	7
-	-	15	15	23	15	2	-	-	10	4	-	3	3	7	13
CRIST	-	2	12	2	-	-	-	-	10	9	4	12	11	2	7
-	1	5	4	3	3	-	-	-	5	9	2	5	7	1	7
ELTMA	-	-	11	16	14	14	-	-	-	5	3	-	12	10	10
GONRU	-	-	-	-	-	-	25	-	25	11	22	-	9	4	-
-	-	-	-	-	-	18	9	-	15	13	11	-	1	3	-
GOVMI	-	13	1	17	1	-	-	-	3	8	3	7	8	16	4
HERCA	1	9	1	5	7	5	19	-	6	2	8	2	-	8	3
HINWO	-	-	-	-	6	2	10	-	7	6	-	-	5	12	-
IGAAN	4	10	-	3	2	2	1	-	-	6	5	1	6	13	2
-	5	9	-	4	3	9	12	2	5	6	1	4	3	5	2
JOBKL	36	46	31	28	-	24	47	30	32	-	-	-	-	-	-
KACJA	-	7	-	-	-	-	-	-	3	9	-	-	3	5	1
-	2	2	8	2	4	1	-	5	6	1	6	2	9	2	-
-	-	-	29	-	4	-	-	-	-	-	26	21	17	-	-
-	-	-	20	-	-	-	-	-	-	-	-	14	13	-	-
KERST	-	48	-	-	9	17	76	49	59	59	-	-	19	-	-
KOSDE	30	42	13	-	-	14	81	37	32	-	12	11	-	-	-
LUNRO	-	14	-	-	30	-	-	22	-	10	1	-	-	-	13
MOLSI	-	-	-	-	-	3	101	46	38	27	15	17	16	23	-
-	1	25	16	10	15	9	44	13	19	7	4	21	11	16	-
-	3	8	4	12	2	4	24	18	8	1	1	4	1	2	-
-	12	15	16	16	7	4	34	16	14	6	2	8	2	-	-
MORJO	-	9	1	2	4	1	2	6	3	5	3	-	7	5	6
OCHPA	3	-	9	9	15	27	1	-	1	1	-	5	3	-	3
OTTMI	-	13	16	7	5	20	4	10	-	-	-	4	7	-	-
ROTEC	12	20	11	19	5	6	10	20	14	7	-	10	1	4	-
SCHHA	7	12	5	4	4	14	24	8	5	6	8	2	2	2	3
SLAST	-	8	4	10	-	-	1	-	4	6	-	-	-	-	-
STOEN	-	-	30	33	29	19	-	-	23	-	3	-	6	14	-
-	-	31	25	36	22	1	-	22	26	6	-	7	17	-	-
-	-	34	37	38	16	1	-	25	33	7	-	12	13	-	-
STORO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	149	-	-	-	-	-	-	-	-	-
STRJO	8	7	5	5	3	4	24	4	3	-	-	1	-	-	1
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	16	13	8	18	5	10	46	25	9	-	-	4	-	-	-
TEPIS	6	21	-	-	7	-	19	-	17	-	-	-	-	-	-
YRJIL	-	-	6	13	16	-	-	2	6	9	-	-	3	-	-
Sum	164	385	308	395	318	312	744	386	412	330	186	192	179	254	94

In April, finally all observers enjoyed favourite observing conditions. Whereas in the first few months of 2010 the weather was often poor, it presented mostly clear skies to the observers in April. There was hardly any camera with less than ten observing nights, but 15 cameras with twenty and more nights. So it comes as no surprise, that we collected nearly 9,000 meteors in 2,700 hours of effective observing time – far more than in any other April before. That result was not only achieved thanks to the good weather, but is also an outcome of 41 video cameras active that month. Among them HUPOL, a new camera at the outskirt of Budapest, which further completes the Hungarian network.

As expected, the Lyrids were the highlight of April. Their maximum was predicted for the early evening (UT) of April 22. The data of ten video system (mainly from Germany) which enjoyed clear skies almost all night long, were used as a basis for the following analysis. Between 21 and 03 UT, they recorded 279 Lyrids. The number of shower meteors was accumulated in half hour intervals, corrected by the radiant altitude, and accumulated over all cameras.

Figure 1 shows the resulting activity profile. It shows the expected trend of decreasing rates in the night following the maximum. In particular the first half of the night was hampered significantly by moonlight. As the limiting magnitude was not taken into consideration in this analysis, the real activity at the begin of night was even a bit higher. Amazing are the strong rate fluctuations in the course of the night, in particular the breakdowns near 22:45 and 00:45 UT

(resp. the activity peaks inbetween). Both are not only visible in the sum of all cameras, but also in the individual profiles of the three most powerful (image-intensified) cameras AVIS2, LIC4 and OND1. For this reason it is unlikely that the breakdowns were caused by short cloud patches at single sites.

The results from the preliminary analysis of visual data are given for comparison (crosses in figure 1). They show the same tendency, but they were based on about $\frac{1}{4}$ less meteors in the same time interval. Due to the lower temporal resolution, short-term fluctuations would not become visible here.

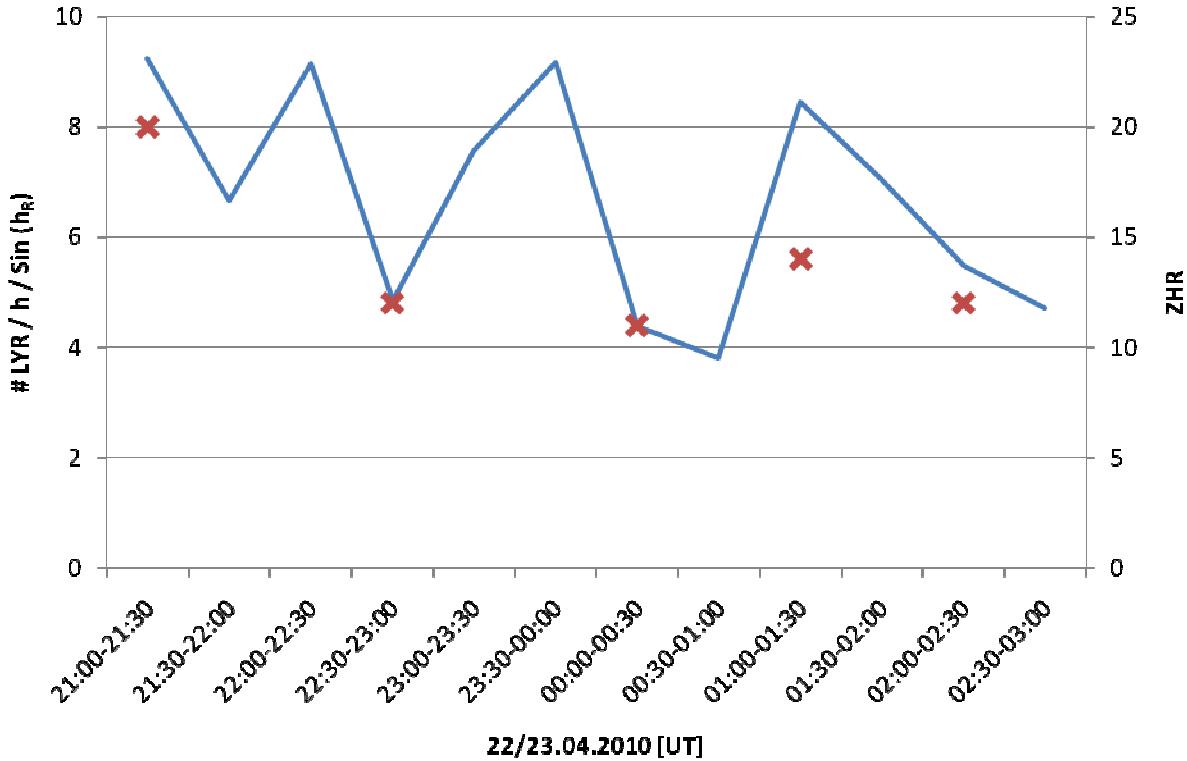


Figure 1: Lyrid activity profile of April 22/23, 2010. Crosses mark the ZHR from preliminary IMO analyses of visual observations.