

Similar to the last few years, the weather in May was rather unsteady. In particular in the first and in the second half few days of May there were larger gaps in the observing statistics. May 3 was particularly poor, when we recorded only 171 meteors in 71 hours of observing time. There was only one day in 2015 with a lower yield so far – January 29. Still about every other camera managed to obtain twenty or more observing nights. The overall effective observing time dropped to 7,300 hours, in which 16,500 meteors were recorded. The output is lower than in the previous May, but higher than in the years before.

Beside the Orionids, the eta Aquariids of May are the second meteor shower that originates from well-known comet 1/P Halley. In the last few years we experienced repeatedly enhanced activity. Figure 1 shows particularly strong outliers in 2012 and 2013. In 2015 there was also a single value that was significantly higher than the surrounding measures. It is not as prominent as in the years before, but it occurred earlier. At a solar longitude of 43° , the flux density doubles shortly, and then drops back to the long-term average. It is also noticeable that the descending branch starts a bit earlier this year, whereas it was a little late in 2014. The difference between both profiles makes up to 5° in solar longitude.

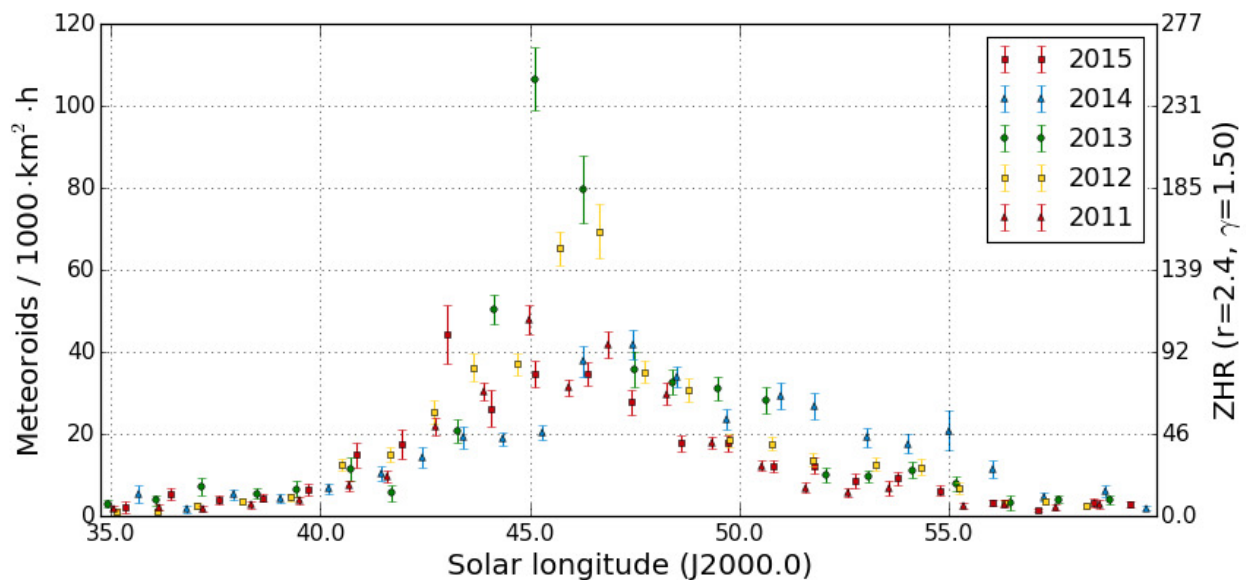


Figure 1: Flux density profile of the eta Aquariids, obtained from video observations of the IMO network in May 2011-2015.

The population index of the eta Aquariids is about 2.5 at the begin and end of the activity interval, in-between it drops to 2.0 (May 8/9). Thus, it is clearly smaller than the population index of sporadic meteors, which scatters between 2.5 and 3.0 just as in the preceding months (figure 2). Towards the end of May there are even values above 3.0, but here the scatter is particularly large.

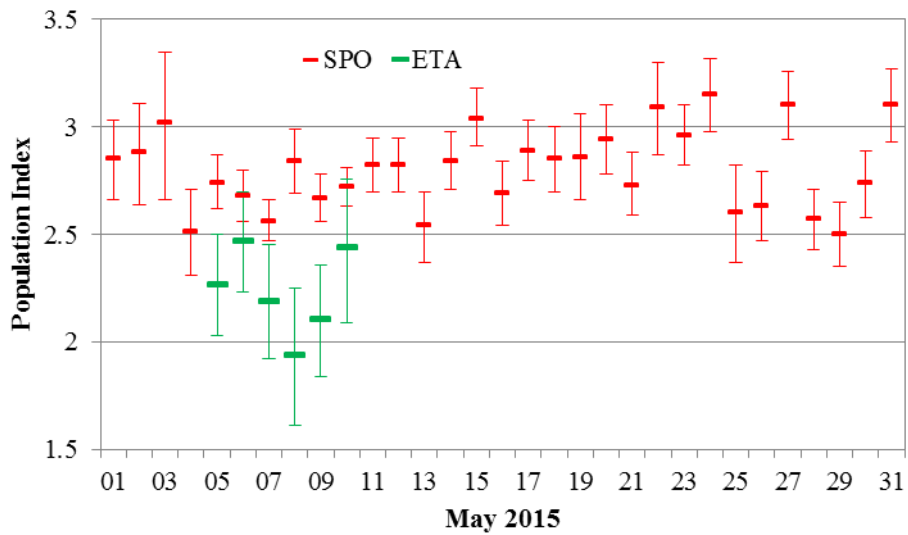


Figure 2: Population index profile of the eta Aquariids and sporadic meteors in May 2015.

Also the data set of May confirms that the population index profile which is computed with a complex algorithm (based on the effective collection area and a comparison of meteor count of weak and sensitive cameras) correlates well with a very simple measure, namely the average meteor brightness of all cameras. The correlation coefficient between these curves for sporadic meteors in May is 0.5. The problem is to find the right scale between both graphs. In figure 3, the mean meteor brightness is plotted against the secondary y-axis and scaled such that mean and variance are identical to the original graph.

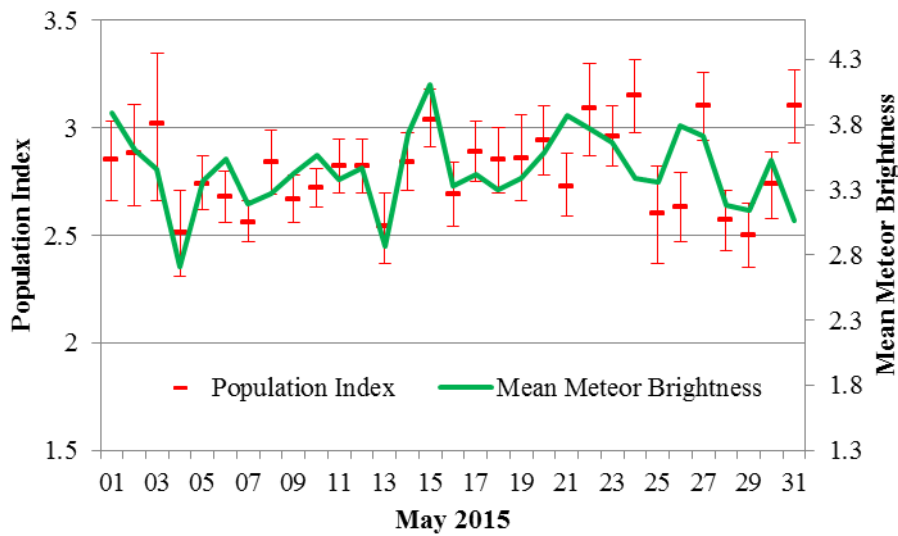


Figure 3: Population index and mean meteor brightness of sporadic meteors in May 2015.

Over the years, the eta Lyrids show a rather consistent activity profile, even though they are much weaker than the Aquariids (Figure 4).

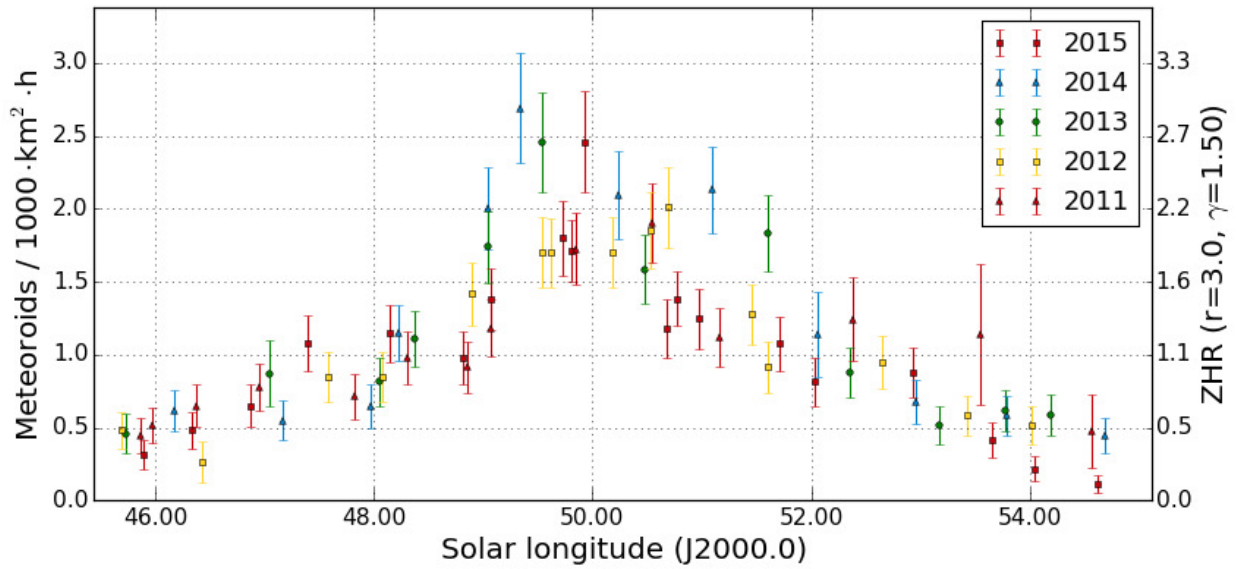


Figure 4: Flux density profile of the eta Lyrids, obtained from video observations of the IMO network in May 2011-2015.

The activity interval used by MetRec was too short, so that the descending activity branch had to be recomputed. At about 46° solar longitude the shower emerges from the sporadic background. Near 49.5° it peaks with 2 meteoroids per $1,000 \text{ km}^2$ and hour, and the shower ends at 54° solar longitude. The averaged activity profile (Figure 5) is based on roughly 2,000 shower members.

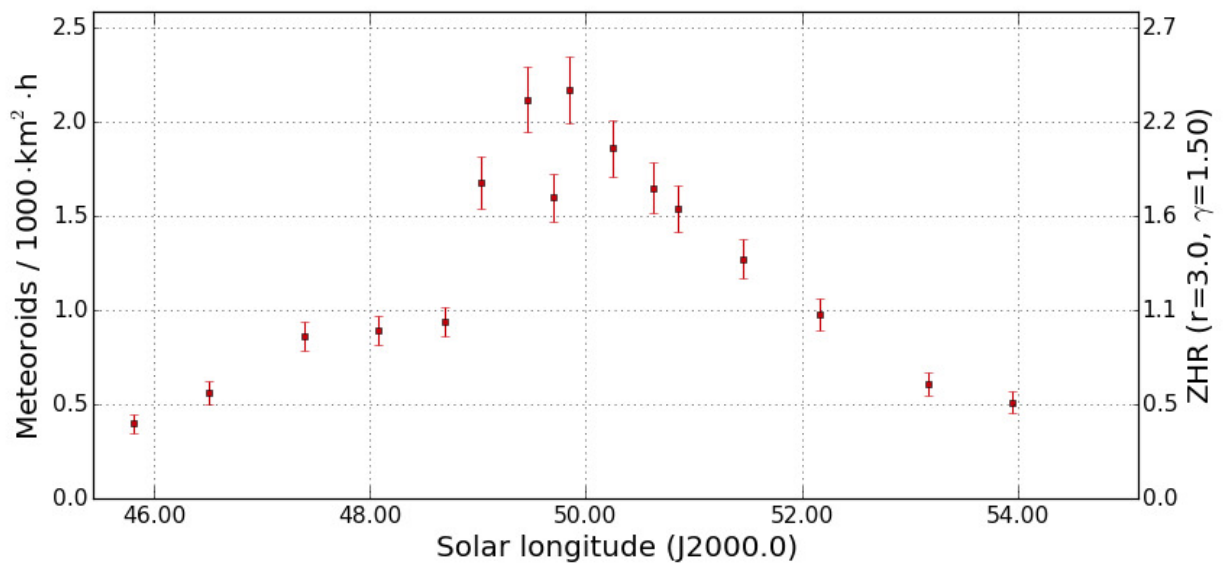


Figure 5: Mean flux density profile of the eta Lyrids 2011-2015.

1. Observers

Code	Name	Place	Camera	FOV [°]	St.LM [mag]	Eff.CA [km ²]	Nights	Time [h]	Meteors
ARLRA	Arlt	Ludwigsfelde/DE	LUDWIG2 (0.8/8)	1475	6.2	3779	27	109.2	451
BANPE	Bánfalvi	Zalaegerszeg/HU	HUVCS01 (0.95/5)	2423	3.4	361	12	7.5	48
BERER	Berkó	Ludanyhalaszi/HU	HULUD1 (0.8/3.8)	5542	4.8	3847	8	45.5	198
			HULUD3 (0.95/4)	4357	3.8	876	8	43.9	44
BOMMA	Bombardini	Faenza/IT	MARIO (1.2/4.0)	5794	3.3	739	23	96.9	217
BREMA	Breukers	Hengelo/NL	MBB3 (0.75/6)	2399	4.2	699	19	86.9	109
BRIBE	Klemt	Herne/DE	HERMINE (0.8/6)	2374	4.2	678	25	90.0	147
		Berg. Gladbach/DE	KLEMOI (0.8/6)	2286	4.6	1080	18	76.4	119
CASFL	Castellani	Monte Baldo/IT	BMH1 (0.8/6)	2350	5.0	1611	18	76.8	157
			BMH2 (1.5/4.5)*	4243	3.0	371	20	76.9	116
CRIST	Crivello	Valbrevenna/IT	BILBO (0.8/3.8)	5458	4.2	1772	22	105.1	214
			C3P8 (0.8/3.8)	5455	4.2	1586	19	72.1	150
			STG38 (0.8/3.8)	5614	4.4	2007	25	122.4	462
DONJE	Donati	Faenza/IT	JENNI (1.2/4)	5886	3.9	1222	26	135.3	383
ELTMA	Eltri	Venezia/IT	MET38 (0.8/3.8)	5631	4.3	2151	17	60.0	119
FORKE	Förster	Carlsfeld/DE	AKM3 (0.75/6)	2375	5.1	2154	18	83.4	168
GONRU	Goncalves	Tomar/PT	TEMPLAR1 (0.8/6)	2179	5.3	1842	28	181.8	492
			TEMPLAR2 (0.8/6)	2080	5.0	1508	29	187.0	403
			TEMPLAR3 (0.8/8)	1438	4.3	571	28	174.6	193
			TEMPLAR4 (0.8/3.8)	4475	3.0	442	29	182.2	414
			TEMPLAR5 (0.75/6)	2312	5.0	2259	26	170.7	329
GOVMI	Govedic	Sredisce ob Dr./SI	ORION2 (0.8/8)	1447	5.5	1841	5	30.4	89
HERCA	Hergenrother	Tucson/US	SALSA3 (0.8/3.8)	2336	4.1	544	28	191.9	380
HINWO	Hinz	Schwarzenberg/DE	HINWO1 (0.75/6)	2291	5.1	1819	20	86.4	193
IGAAN	Igaz	Debrecen/HU	HUDEB (0.8/3.8)	5522	3.2	620	22	85.7	86
		Hodmezovasar./HU	HUHOD (0.8/3.8)	5502	3.4	764	20	95.0	83
		Budapest/HU	HUPOL (1.2/4)	3790	3.3	475	9	47.3	19
JONKA	Jonas	Budapest/HU	HUSOR (0.95/4)	2286	3.9	445	19	71.8	71
			HUSOR2 (0.95/3.5)	2465	3.9	715	16	83.6	79
KACJA	Kac	Kamnik/SI	CVETKA (0.8/3.8)	4914	4.3	1842	15	69.8	189
		Ljubljana/SI	ORION1 (0.8/8)	1402	3.8	331	14	58.2	52
		Kamnik/SI	REZIKA (0.8/6)	2270	4.4	840	16	71.9	221
			STEFKA (0.8/3.8)	5471	2.8	379	16	68.8	130
KISSZ	Kiss	Sulysap/HU	HUSUL (0.95/5)*	4295	3.0	355	20	76.1	66
KOSDE	Koschny	Izana Obs./ES	ICC7 (0.85/25)*	714	5.9	1464	28	137.3	800
		La Palma / ES	ICC9 (0.85/25)*	683	6.7	2951	29	173.4	1256
		Noordwijkerhout/NL	LIC4 (1.4/50)*	2027	6.0	4509	19	57.5	83
LOJTO	Łojek	Grabniak/PL	PAV57 (1.0/5)	1631	3.5	269	13	64.8	53
LOPAL	Lopes	Lisboa/PT	NASO1 (0.75/6)	2377	3.8	506	25	16.8	107
MACMA	Maciejewski	Chelm/PL	PAV35 (0.8/3.8)	5495	4.0	1584	22	95.8	301
			PAV36 (0.8/3.8)*	5668	4.0	1573	23	91.3	219
			PAV43 (0.75/4.5)*	3132	3.1	319	18	93.9	143
			PAV60 (0.75/4.5)	2250	3.1	281	22	95.1	240
MARGR	Maravelias	Lofoupoli/GR	LOOMECON (0.8/12)	738	6.3	2698	24	172.0	303
MARRU	Marques	Lisbon/PT	CAB1 (0.8/3.8)	5291	3.1	467	29	208.9	325
			RAN1 (1.4/4.5)	4405	4.0	1241	24	171.1	190
MOLSI	Molau	Seysdorf/DE	AVIS2 (1.4/50)*	1230	6.9	6152	19	68.8	308
			ESCIMO2 (0.85/25)	155	8.1	3415	18	71.5	87
			MINCAM1 (0.8/8)	1477	4.9	1084	19	66.1	157
		Ketzür/DE	REMO1 (0.8/8)	1467	6.5	5491	28	129.0	550
			REMO2 (0.8/8)	1478	6.4	4778	27	125.0	463
			REMO3 (0.8/8)	1420	5.6	1967	5	21.7	44
			REMO4 (0.8/8)	1478	6.5	5358	27	131.9	576
MOSFA	Moschini	Rovereto/IT	ROVER (1.4/4.5)	3896	4.2	1292	19	15.5	100
OCHPA	Ochner	Albiano/IT	ALBIANO (1.2/4.5)	2944	3.5	358	4	18.1	19
OTTMI	Otte	Pearl City/US	ORIE1 (1.4/5.7)	3837	3.8	460	18	62.6	75
PERZS	Perkó	Becskehely/HU	HUBEC (0.8/3.8)*	5498	2.9	460	18	95.0	205
PUCRC	Pucer	Nova vas nad Dra./SI	MOBCAM1 (0.75/6)	2398	5.3	2976	3	8.8	10
ROTEC	Rothenberg	Berlin/DE	ARMEFA (0.8/6)	2366	4.5	911	21	87.5	151
SARAN	Saraiva	Carnaxide/PT	RO1 (0.75/6)	2362	3.7	381	23	158.7	200
			RO2 (0.75/6)	2381	3.8	459	25	174.3	241
			RO3 (0.8/12)	710	5.2	619	26	175.3	338
			SOFIA (0.8/12)	738	5.3	907	23	129.8	175
SCHHA	Schremmer	Niederkrüchten/DE	DORAEMON (0.8/3.8)	4900	3.0	409	22	67.7	119
SLAST	Slavec	Ljubljana/SI	KAYAK1 (1.8/28)	563	6.2	1294	19	76.4	118
			KAYAK2 (0.8/12)	741	5.5	920	17	85.8	63
STOEN	Stomeo	Scorze/IT	MIN38 (0.8/3.8)	5566	4.8	3270	22	75.1	231
			NOA38 (0.8/3.8)	5609	4.2	1911	23	95.0	272
			SCO38 (0.8/3.8)	5598	4.8	3306	25	90.0	251
STORO	Stork	Ondrejov/CZ	KUN1 (1.4/50)*	1913	5.4	2778	2	5.6	57
			OND1 (1.4/50)*	2195	5.8	4595	2	4.9	32
STRJO	Strunk	Herford/DE	MINCAM2 (0.8/6)	2354	5.4	2751	21	95.3	164
			MINCAM3 (0.8/6)	2338	5.5	3590	22	87.6	175
			MINCAM4 (1.0/2.6)	9791	2.7	552	22	84.0	95
			MINCAM5 (0.8/6)	2349	5.0	1896	22	100.9	147
			MINCAM6 (0.8/6)	2395	5.1	2178	23	88.7	150
TEPIS	Tepliczky	Agostyan/HU	HUAGO (0.75/4.5)	2427	4.4	1036	21	101.2	97
			HUMOB (0.8/6)	2388	4.8	1607	9	34.6	78
TRIMI	Triglav	Velenje/SI	SRAKA (0.8/6)*	2222	4.0	546	16	37.5	71
YRJIL	Yrjölä	Kuusankoski/FI	FINEXCAM (0.8/6)	2337	5.5	3574	4	9.2	16
ZELZO	Zelko	Budapest/HU	HUVCS03 (1.0/4.5)	2224	4.4	933	4	10.7	23
			HUVCS04 (1.0/4.5)	1484	4.4	573	4	8.1	16
Sum							31	7297.3	16485

* active field of view smaller than video frame

2. Observing Times (h)

May	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
ARLRA	5.7	5.8	-	4.4	3.6	5.7	5.5	0.5	3.2	5.6	5.2	4.8	2.5	5.3	5.2
BANPE	-	-	-	0.5	-	0.4	0.2	0.9	-	1.3	1.0	0.3	-	-	-
BERER	-	-	-	-	-	-	6.9	-	3.8	6.0	6.6	-	-	5.9	-
	-	-	-	-	-	-	7.0	-	3.6	6.0	6.8	-	-	6.1	-
BOMMA	1.1	2.4	-	0.6	3.0	5.8	5.8	4.6	2.9	2.7	5.1	7.4	7.3	-	-
BREMA	6.6	-	6.6	-	6.7	0.8	-	-	-	6.3	5.9	6.1	4.2	6.0	0.6
BRIBE	4.2	3.9	0.8	1.5	4.4	6.7	1.8	0.9	1.8	6.3	2.8	6.3	4.6	3.7	5.7
	1.6	2.4	-	-	5.0	5.7	-	1.4	-	6.3	4.2	6.3	4.4	-	6.0
CASFL	1.7	-	-	-	-	-	-	-	1.0	7.6	7.5	7.4	5.9	-	0.8
	1.4	-	-	-	-	4.1	6.4	0.2	5.5	7.4	7.4	4.6	3.6	-	-
CRIST	-	-	-	1.8	1.4	4.7	5.3	4.8	7.4	7.3	7.3	7.2	-	-	1.9
	-	-	-	2.7	2.8	-	-	5.2	7.4	7.4	7.1	4.2	-	-	3.0
	-	-	-	4.8	3.7	6.5	5.5	5.4	7.4	7.3	7.3	7.2	-	-	1.6
DINJE	1.2	1.9	-	1.8	2.0	7.4	7.1	6.1	4.9	7.9	7.7	7.4	7.5	-	-
ELTMA	-	-	-	0.4	-	3.5	6.3	-	3.0	6.9	7.1	-	2.6	-	-
FORKE	-	6.3	-	2.8	-	6.3	6.2	-	2.1	6.3	6.3	-	1.6	5.9	6.0
GONRU	3.4	-	-	4.9	8.2	4.3	4.5	6.7	8.0	6.7	4.9	7.2	7.1	7.9	7.9
	2.5	-	-	3.7	8.4	3.7	3.7	6.6	8.2	6.8	4.9	6.1	6.7	7.9	8.0
	1.2	-	-	5.0	8.3	4.3	1.2	6.3	6.6	5.8	8.0	2.6	6.2	7.8	7.8
	3.2	-	-	4.3	8.2	2.5	3.3	6.6	8.0	6.7	4.9	4.3	6.0	7.9	8.0
	1.2	-	-	3.7	8.3	3.5	1.5	6.4	6.6	5.8	8.1	-	6.0	8.0	8.0
GOVMI	-	-	-	-	-	-	-	6.2	-	7.1	5.9	5.7	-	-	-
HERCA	9.3	7.9	5.9	4.1	2.0	5.4	9.0	8.8	8.4	8.5	8.7	8.2	7.7	2.7	1.6
HINWO	-	6.7	1.0	4.2	0.2	6.6	5.1	-	1.6	6.4	6.4	-	1.8	6.2	6.3
IGAAN	-	3.1	-	1.5	1.4	2.0	6.3	7.3	5.6	2.5	7.1	-	2.1	3.3	-
	-	5.7	-	4.1	6.1	2.3	7.3	7.1	5.2	4.5	7.2	1.1	-	6.2	-
	-	7.4	-	-	-	-	6.8	-	2.2	5.2	-	-	1.7	-	-
JONKA	-	0.2	-	0.4	3.0	0.6	7.0	5.5	2.9	4.1	7.0	0.3	1.3	1.7	-
	-	5.5	-	-	4.5	-	7.3	6.1	2.5	5.0	7.1	-	-	2.2	-
KACJA	-	-	-	3.6	4.7	2.0	7.4	-	-	7.1	7.2	7.0	1.8	-	-
	-	-	-	3.3	4.2	-	7.4	3.3	-	6.5	6.9	-	1.6	-	-
	-	-	-	1.8	5.2	1.4	7.6	2.4	-	7.1	7.3	7.3	2.0	-	-
	-	-	-	3.7	4.7	1.9	7.3	1.7	-	6.8	7.0	6.2	1.7	-	-
KISSZ	-	6.1	-	0.4	-	-	7.7	3.6	6.6	1.3	7.2	-	1.9	5.9	0.5
KOSDE	2.1	2.5	-	5.5	4.9	8.5	8.5	8.2	8.5	6.9	-	-	3.2	1.1	1.0
	5.5	0.7	4.4	-	5.4	3.1	3.0	5.3	5.5	6.5	3.0	-	2.4	7.2	1.5
	3.0	1.3	5.2	-	4.2	-	-	-	5.6	3.5	-	3.5	2.3	5.2	1.7
LOJTO	-	4.8	2.9	-	-	-	5.1	4.3	6.1	-	6.1	-	5.4	5.2	6.1
LOPAL	0.2	-	-	0.2	0.8	0.5	-	1.3	1.2	0.9	0.2	-	0.3	0.3	2.0
MACMA	-	7.1	7.0	3.1	-	2.1	6.5	5.1	6.6	-	6.4	2.9	6.2	5.2	2.8
	-	3.5	6.8	3.4	1.3	1.6	5.7	5.7	6.5	-	6.3	2.9	4.7	5.2	2.4
	-	7.1	7.0	3.8	-	-	6.7	5.5	6.6	-	6.5	2.7	6.3	5.6	3.0
	-	7.1	7.0	3.9	1.7	2.1	6.5	5.5	6.6	-	6.4	2.4	6.1	5.5	2.4
MARGR	6.7	5.3	5.9	7.2	8.8	8.6	8.1	8.7	8.6	-	5.7	-	-	-	8.5
MARRU	6.6	-	-	4.9	8.2	7.2	5.0	8.1	7.8	7.9	7.8	4.6	7.9	7.9	7.9
	-	-	-	3.8	8.4	6.3	-	4.7	8.1	7.7	7.2	-	5.5	7.4	7.9
MOLSI	-	-	-	1.3	-	4.2	5.1	3.6	4.8	6.2	6.0	4.8	2.1	-	5.8
	-	-	-	2.0	-	3.7	6.7	4.5	4.1	6.7	6.3	3.7	2.1	-	6.4
	-	-	-	1.0	-	2.7	5.0	3.8	4.5	6.4	5.9	3.1	1.8	2.5	6.2
	6.6	6.5	-	4.8	6.1	5.9	4.6	2.9	3.6	5.9	5.9	5.8	5.0	5.7	5.6
	6.6	6.5	-	4.6	5.6	5.9	4.5	2.4	3.4	6.0	5.9	5.9	4.9	5.7	5.7
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6.9	6.8	-	4.8	6.3	6.1	4.8	2.7	3.8	6.2	5.9	6.0	5.3	5.9	5.9
MOSFA	-	-	-	0.2	0.2	1.0	2.6	-	2.0	2.1	1.6	0.7	0.5	-	-
OCHPA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTTMI	1.7	0.7	-	-	-	6.9	5.9	-	0.2	-	-	-	5.9	3.1	0.7
PERZS	-	-	-	5.1	0.9	-	7.5	6.9	2.4	6.5	7.3	6.9	-	-	-
PUCRC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ROTEC	5.7	5.9	-	3.7	2.8	5.4	2.4	-	2.6	5.4	4.1	6.1	-	4.8	5.9
SARAN	1.8	-	-	3.9	8.5	6.8	-	8.6	8.4	8.3	7.6	-	6.6	7.0	6.5
	3.9	-	-	5.9	8.6	5.6	-	8.5	8.3	8.4	7.9	-	-	6.9	6.7
	4.0	-	-	6.2	8.3	5.3	-	7.8	8.2	8.3	7.9	-	2.7	6.8	6.6
	-	-	-	7.0	3.7	-	8.4	8.3	5.0	5.2	-	1.1	0.7	6.5	6.5
SCHHA	2.2	0.3	0.3	1.7	-	6.7	-	0.2	4.9	5.4	1.3	4.7	4.7	-	4.9
SLAST	-	-	-	4.1	5.4	-	7.4	3.1	-	7.1	7.2	7.0	-	-	-
	-	-	-	5.5	6.8	1.5	7.3	4.0	-	7.4	7.3	7.1	2.6	-	-
STOEN	-	0.2	-	1.0	1.9	2.5	6.1	1.1	4.5	7.5	7.0	6.2	3.1	0.2	0.3
	-	0.2	-	1.1	3.3	5.6	6.5	1.1	5.4	7.5	7.1	6.9	3.4	0.3	-
	-	-	-	3.2	3.4	5.5	6.4	0.8	4.4	7.5	6.9	6.6	3.2	0.2	0.6
STORO	-	-	-	-	-	2.2	3.4	-	-	-	-	-	-	-	-
	-	-	-	-	-	1.9	3.0	-	-	-	-	-	-	-	-
STRJO	4.4	-	2.0	-	5.5	6.3	-	0.4	3.1	6.3	5.8	6.1	4.4	6.0	5.9
	5.6	2.3	2.4	-	5.4	6.4	4.3	0.8	2.9	2.0	4.6	6.2	4.4	-	3.0
	4.8	1.3	1.5	-	5.3	6.3	4.4	0.2	3.3	6.3	5.5	5.5	4.7	5.7	5.9
	6.5	-	2.0	-	5.4	6.3	3.9	0.5	2.5	6.3	5.4	6.2	4.6	5.9	5.9
	6.2	1.5	2.4	0.2	4.9	6.2	3.4	0.7	2.2	5.3	-	5.9	3.8	5.5	5.6
TEPIS	-	7.3	-	3.0	5.3	1.8	6.7	5.7	5.2	6.9	6.8	1.2	2.1	-	-
	-	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIMI	-	-	-	3.3	-	1.5	2.7	3.3	-	3.3	3.1	-	2.2	-	-
YRJIL	-	-	-	-	-	-	-	2.8	2.6	-	2.1	-	-	-	1.7
ZELZO	-	-	-	-	-	-	4.2	-	-	-	1.7	-	-	-	-
	-	-	-	-	-	-	1.1	-	-	-	2.8	-	-	-	-
Sum	135.3	151.2	71.1	172.4	260.6	262.0	339.4	261.8	309.7	396.1	418.8	262.7	228.5	226.2	228.4

May	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
ARLRA	3.1	4.5	4.4	2.7	4.9	4.8	-	3.6	4.1	-	3.2	4.5	0.5	1.6	4.3	-
BANPE	0.6	0.7	1.3	0.1	-	-	-	-	-	-	-	-	-	-	-	0.2
BERER	4.7	6.1	-	-	-	-	-	-	-	-	-	-	5.5	-	-	-
	4.1	4.9	-	-	-	-	-	-	-	-	-	-	5.4	-	-	-
BOMMA	-	3.9	3.9	-	5.1	-	-	-	6.6	1.6	0.2	5.2	6.9	6.9	4.5	3.4
BREMA	3.8	4.3	-	3.4	5.5	4.2	-	5.3	-	-	-	-	5.1	2.0	3.5	-
BRIBE	4.1	2.6	-	4.8	5.3	4.6	0.6	2.0	4.3	-	2.1	-	-	-	4.2	-
	3.9	5.9	-	2.6	4.8	2.3	-	-	5.4	-	3.0	-	-	-	5.2	-
CASFL	4.6	4.8	3.3	-	5.5	-	-	-	1.7	6.4	1.2	1.1	6.8	4.1	-	5.4
	3.7	4.3	3.0	0.8	4.1	-	-	-	-	6.2	-	0.4	6.5	3.6	0.2	3.5
CRIST	6.9	7.0	6.2	4.7	-	3.0	-	-	5.4	3.8	1.1	5.9	6.2	-	3.7	2.1
	1.0	7.0	1.3	-	1.0	2.7	-	-	1.4	0.5	-	6.5	6.6	-	0.4	3.9
	7.1	7.0	6.4	4.5	1.5	2.7	-	0.2	6.5	4.8	1.2	6.6	6.6	0.9	4.7	5.0
DINJE	2.3	7.4	7.3	3.4	5.3	-	-	1.3	6.9	3.5	0.4	7.0	7.0	6.9	6.8	6.9
ELTMA	3.6	7.0	5.1	1.7	1.7	-	-	-	1.3	-	-	-	6.4	2.2	0.3	0.9
FORKE	-	5.9	5.3	-	-	5.4	5.6	-	1.6	-	-	-	-	3.0	2.5	4.3
GONRU	7.9	-	4.5	7.8	7.7	7.7	7.7	7.6	7.6	7.5	7.6	7.5	7.4	7.4	3.3	0.9
	8.0	7.9	4.6	7.9	7.8	7.8	7.8	7.7	7.8	7.7	7.6	7.6	7.6	7.6	3.5	0.9
	7.8	7.9	2.8	7.7	7.6	7.6	7.5	7.6	7.5	7.4	7.4	7.3	7.3	7.3	2.8	-
	8.0	7.9	3.7	7.9	7.8	7.8	7.7	7.7	7.7	7.6	7.6	7.6	7.6	7.5	3.2	0.9
	8.0	7.9	-	7.8	7.8	7.8	7.8	7.7	7.7	7.7	7.6	7.6	7.6	7.5	3.1	-
GOVMI	-	-	5.5	-	-	-	-	-	-	-	-	-	-	-	-	-
HERCA	1.0	-	8.7	7.5	-	2.3	-	8.0	8.2	8.7	8.7	6.9	8.6	8.6	7.9	8.6
HINWO	-	6.2	5.1	-	-	5.4	5.9	-	1.9	-	-	-	-	2.1	3.9	3.4
IGAAN	6.5	0.3	6.6	-	3.3	-	-	3.9	2.0	1.0	-	-	2.3	5.9	5.7	6.0
	6.8	-	-	-	-	-	0.2	5.7	-	1.2	0.6	-	6.1	6.1	5.6	5.9
	-	6.6	6.4	-	-	-	-	-	-	-	-	-	5.9	-	-	5.1
JONKA	4.5	6.8	6.7	-	-	-	-	2.6	-	-	-	-	6.2	5.3	-	5.7
	6.0	6.8	6.7	-	-	-	-	3.6	-	-	-	1.6	6.3	6.2	-	6.2
KACJA	-	-	6.8	3.7	-	-	-	-	1.5	-	-	1.2	6.4	6.2	-	3.2
	-	-	6.4	5.0	-	-	-	-	-	-	-	0.7	6.2	6.1	0.2	0.4
	-	-	6.9	3.8	-	-	-	-	1.2	-	-	0.9	6.5	6.3	-	4.2
	-	-	6.7	2.8	-	-	-	-	0.6	-	-	1.1	6.4	6.3	-	3.9
KISSZ	6.9	6.9	6.8	3.9	-	-	-	3.8	0.2	-	-	-	4.4	0.3	1.4	0.3
KOSDE	2.0	7.7	8.2	2.3	0.4	0.9	5.4	0.6	3.4	4.8	3.5	8.1	8.0	6.6	7.9	6.6
	6.4	7.2	8.1	8.6	8.5	8.5	8.5	8.5	8.5	8.4	5.0	7.9	7.4	6.8	6.3	5.3
	0.5	3.6	1.7	2.2	4.1	-	-	4.5	-	-	1.7	-	2.9	0.8	-	-
LOJTO	-	4.9	-	-	-	-	5.1	-	-	-	-	-	4.5	-	-	4.3
LOPAL	0.8	0.3	-	0.7	0.8	1.2	0.8	0.8	0.4	0.2	1.5	0.3	0.6	0.3	0.2	-
MACMA	3.2	6.0	5.2	1.8	0.5	-	-	-	2.5	-	-	-	5.4	3.5	1.9	4.8
	2.6	6.1	3.5	1.7	4.3	-	-	-	2.6	-	-	-	5.5	3.0	1.0	5.0
	-	6.2	5.8	-	-	-	-	-	4.5	-	-	-	5.6	3.4	2.3	5.3
	3.0	6.0	3.5	1.9	4.0	-	-	-	3.3	-	-	-	-	3.1	1.8	5.3
MARGR	8.4	8.4	8.4	7.6	8.3	7.3	-	5.8	5.3	8.1	-	5.2	-	4.1	6.8	6.2
MARRU	7.8	7.7	7.5	7.8	7.7	7.7	7.1	7.6	7.2	7.5	7.5	7.2	7.2	7.4	7.3	4.6
	7.9	7.4	-	8.1	7.9	7.9	7.8	7.8	7.8	7.7	7.3	7.2	7.5	7.1	4.7	-
MOLSI	-	4.3	2.1	-	-	3.6	3.7	-	-	-	1.9	3.5	1.8	1.6	-	2.4
	-	4.0	2.5	-	-	3.4	-	-	-	-	1.9	4.9	3.7	2.7	-	2.2
	-	3.9	2.3	-	-	3.2	3.5	-	-	-	2.0	4.1	1.8	-	-	2.4
	4.6	2.9	3.2	5.1	5.4	5.2	-	5.1	3.8	1.3	4.7	4.8	-	2.9	4.6	0.5
	4.4	3.6	-	5.2	5.4	5.2	-	5.2	3.7	1.4	4.7	4.9	0.4	2.6	4.7	-
	-	-	-	-	-	-	-	-	3.9	5.1	4.9	5.1	-	2.7	-	-
	4.6	3.0	3.3	5.1	5.5	5.4	-	5.3	3.7	1.5	4.9	5.1	-	2.2	4.9	-
MOSFA	0.7	0.3	0.5	-	1.2	-	0.2	-	0.2	0.5	-	-	0.2	0.5	-	0.3
OCHPA	-	-	2.7	-	-	-	-	-	4.4	-	-	6.7	4.3	-	-	-
OTTMI	0.7	6.2	-	1.4	1.4	6.4	3.9	-	-	-	1.1	6.9	-	-	5.2	4.3
PERZS	6.7	7.0	6.9	-	1.1	-	-	4.2	-	-	2.5	3.9	6.5	6.5	-	6.2
PUCRC	-	-	-	-	-	-	-	-	-	-	-	-	-	6.0	0.7	2.1
ROTEC	-	5.2	3.8	-	4.5	5.5	-	3.3	3.6	-	2.9	3.8	-	0.1	-	-
SARAN	8.0	6.8	-	8.0	-	7.4	6.7	7.9	6.8	7.5	7.4	-	6.4	6.1	5.7	-
	7.8	6.3	0.9	8.1	7.1	7.3	7.6	8.0	7.1	7.3	7.3	7.9	7.9	6.9	6.1	-
	7.6	6.3	1.1	8.0	6.9	7.2	7.5	7.9	7.3	7.3	7.2	7.8	7.7	6.6	6.8	-
	6.1	2.2	-	8.2	7.1	7.3	6.7	7.9	5.6	6.4	6.4	6.0	5.8	5.3	2.9	-
SCHHA	2.4	4.8	2.1	4.6	4.4	-	3.9	3.7	2.5	-	-	0.3	-	1.7	-	-
SLAST	2.5	-	1.4	5.5	-	-	-	2.5	1.3	1.7	1.3	0.4	6.3	6.3	1.5	4.4
	-	3.9	6.8	5.4	-	-	-	-	-	2.9	-	-	2.7	6.5	1.9	6.2
STOEN	4.5	7.3	5.7	-	0.6	-	-	2.1	1.9	-	-	1.7	6.1	3.6	-	-
	4.1	7.0	7.0	-	1.2	-	-	2.2	3.2	1.4	-	1.3	6.6	6.1	-	6.5
	4.4	7.2	4.8	0.2	1.2	-	-	2.1	2.2	0.5	-	1.1	4.5	6.5	0.2	6.4
STORO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STRJO	5.9	2.4	-	5.5	2.7	3.3	-	5.1	5.3	-	-	-	4.2	-	4.7	-
	5.2	2.4	-	5.4	2.1	3.9	-	4.5	5.1	-	-	-	3.9	-	4.8	-
	5.9	-	-	-	0.2	0.6	-	5.2	5.3	-	-	3.0	2.5	-	0.6	-
	5.9	2.0	-	5.5	2.7	3.8	-	5.3	5.3	-	-	-	4.2	-	4.8	-
	5.4	1.9	-	5.2	2.2	2.4	-	4.3	4.9	-	-	-	3.9	-	4.7	-
TEPIS	4.4	6.3	6.4	5.1	-	-	-	-	4.0	-	-	4.0	6.0	5.9	2.2	4.9
	-	2.1	3.5	6.2	-	-	-	-	2.1	-	-	1.3	6.0	5.9	0.5	-
TRIMI	-	0.4	2.1	4.4	-	-	-	-	0.8	2.6	2.6	0.6	1.8	2.8	-	-
YRJIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZELZO	-	2.3	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	2.3	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-
Sum	269.3	334.3	267.8	239.3	196.1	190.7	129.3	205.7	234.2	164.1	149.7	212.5	332.1	272.0	188.6	187.4

3. Results (Meteors)

May	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
ARLRA	24	18	-	11	14	33	16	1	19	27	16	37	1	26	36
BANPE	-	-	-	3	-	4	1	6	-	8	6	2	-	-	-
BERER	-	-	-	-	-	-	45	-	3	29	38	-	-	34	-
	-	-	-	-	-	-	9	-	3	7	8	-	-	6	-
BOMMA	3	3	-	1	3	6	12	13	9	12	11	14	21	-	-
BREMA	6	-	8	-	14	1	-	-	-	10	4	9	7	7	1
BRIBE	9	5	2	9	8	22	1	1	1	8	1	14	10	3	7
	1	2	-	-	8	14	-	1	-	8	4	16	9	-	11
CASFL	8	-	-	-	-	-	-	-	3	25	20	7	9	-	2
	2	-	-	-	-	10	9	1	4	14	7	4	6	-	-
CRIST	-	-	-	1	1	7	9	11	21	29	16	16	-	-	4
	-	-	-	4	2	-	-	11	26	21	18	7	-	-	5
	-	-	-	10	5	24	23	21	44	34	36	40	-	-	2
DINJE	4	2	-	3	1	18	16	26	14	31	25	22	22	-	-
ELTMA	-	-	-	1	-	4	12	-	8	15	10	-	5	-	-
FORKE	-	5	-	2	-	16	12	-	4	16	10	-	2	11	17
GONRU	3	-	-	9	33	11	6	11	22	15	16	7	8	23	18
	1	-	-	5	20	11	5	17	22	9	14	3	3	23	13
	1	-	-	3	16	7	1	6	7	6	6	2	2	10	10
	4	-	-	5	26	13	2	11	23	9	13	4	7	16	19
	4	-	-	11	23	10	1	9	5	3	13	-	4	19	17
GOVMI	-	-	-	-	-	-	-	14	-	30	17	8	-	-	-
HERCA	14	13	20	9	12	5	19	13	12	23	22	9	17	3	1
HINWO	-	10	3	4	1	21	6	-	2	14	18	-	6	10	17
IGAAN	-	2	-	1	2	2	7	6	7	2	9	-	2	5	-
	-	4	-	6	2	7	10	3	2	6	10	2	-	2	-
	-	2	-	-	-	-	2	-	1	2	-	-	1	-	-
JONKA	-	1	-	2	1	5	8	6	2	2	11	2	4	1	-
	-	2	-	-	4	-	11	7	3	4	6	-	-	2	-
KACJA	-	-	-	13	6	3	15	-	-	29	27	5	1	-	-
	-	-	-	1	2	-	8	4	-	6	5	-	1	-	-
	-	-	-	5	10	1	32	1	-	25	34	13	3	-	-
	-	-	-	9	7	1	18	1	-	18	20	5	4	-	-
KISSZ	-	1	-	2	-	-	8	1	4	3	8	-	4	3	1
KOSDE	12	13	-	23	22	58	62	58	43	25	-	-	12	2	8
	69	7	40	-	59	43	39	20	33	24	6	-	6	17	3
	2	2	2	-	5	-	-	-	9	2	-	6	2	8	3
LOJTO	-	5	2	-	-	-	5	4	6	-	4	-	2	5	7
LOPAL	1	-	-	1	5	3	-	9	9	5	1	-	2	2	13
MACMA	-	21	23	7	-	3	15	12	22	-	34	5	12	32	7
	-	10	10	10	1	3	13	16	21	-	22	9	12	10	9
	-	15	13	3	-	-	7	10	16	-	13	1	12	7	4
	-	18	21	9	1	4	22	15	23	-	22	5	14	13	6
MARGR	13	4	13	10	18	13	8	17	24	-	5	-	-	-	9
MARRU	10	-	-	9	15	7	5	20	12	16	9	2	4	13	12
	-	-	-	1	12	2	-	13	13	15	4	-	4	12	10
MOLSI	-	-	-	4	-	13	9	11	37	47	25	6	9	-	47
	-	-	-	3	-	1	5	1	8	16	9	2	1	-	13
	-	-	-	6	-	6	7	5	14	26	16	4	3	3	22
	33	30	-	9	31	28	25	4	17	34	18	31	11	30	38
	23	11	-	7	19	25	10	3	12	21	21	38	8	24	34
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	29	31	-	8	27	34	22	9	13	43	20	30	19	34	29
MOSFA	-	-	-	1	1	8	14	-	14	13	10	5	3	-	-
OCHPA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTTMI	2	1	-	-	-	8	2	-	1	-	-	14	1	-	2
PERZS	-	-	-	5	2	-	18	13	3	24	23	9	-	-	-
PUCRC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ROTEC	10	9	-	2	6	10	4	-	4	16	7	12	-	13	9
SARAN	1	-	-	4	16	8	-	12	17	11	7	-	6	8	12
	1	-	-	10	21	11	-	17	12	13	10	-	-	13	11
	6	-	-	6	21	14	-	18	21	7	8	-	3	15	18
	-	-	-	-	12	2	-	13	16	7	4	-	2	2	14
SCHHA	4	2	1	3	-	16	-	1	9	8	2	15	8	-	6
SLAST	-	-	-	6	4	-	14	2	-	15	20	3	-	-	-
	-	-	-	2	1	1	8	2	-	10	4	1	1	-	-
STOEN	-	1	-	5	15	4	27	9	24	27	16	8	8	1	2
	-	1	-	4	13	7	25	4	32	31	14	9	11	2	-
	-	-	-	6	14	9	23	7	21	24	13	11	5	1	3
STORO	-	-	-	-	-	32	25	-	-	-	-	-	-	-	-
	-	-	-	-	-	15	17	-	-	-	-	-	-	-	-
STRJO	2	-	3	-	9	22	-	1	10	6	2	11	11	8	7
	13	9	10	-	16	15	2	2	7	2	3	18	8	-	6
	3	3	3	-	4	12	3	1	4	5	2	5	7	8	2
	6	-	6	-	5	13	2	1	3	8	6	15	8	5	15
	6	2	3	1	13	17	1	1	6	15	-	14	3	6	9
TEPIS	-	3	-	4	3	1	7	8	9	10	6	1	3	-	-
	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-
TRIMI	-	-	-	4	-	2	4	7	-	5	7	-	2	-	-
YRJIL	-	-	-	-	-	-	-	6	6	-	1	-	-	-	3
ZELZO	-	-	-	-	-	-	7	-	-	-	5	-	-	-	-
	-	-	-	-	-	-	4	-	-	-	6	-	-	-	-
Sum	330	276	183	303	612	726	785	554	822	1031	884	538	382	498	574

May	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
ARLRA	7	9	16	3	12	22	-	20	9	-	23	25	1	6	19	-
BANPE	4	4	8	1	-	-	-	-	-	-	-	-	-	-	-	1
BERER	2	20	-	-	-	-	-	-	-	-	-	-	27	-	-	-
	2	4	-	-	-	-	-	-	-	-	-	-	5	-	-	-
BOMMA	-	6	7	-	14	-	-	-	16	4	1	10	19	19	9	4
BREMA	3	6	-	5	6	3	-	6	-	-	-	-	9	2	2	-
BRIBE	4	1	-	12	8	5	1	1	8	-	1	-	-	-	5	-
	5	12	-	2	6	1	-	-	11	-	5	-	-	-	3	-
CASFL	14	7	1	-	10	-	-	-	2	12	2	1	15	6	-	13
	9	4	3	1	6	-	-	-	-	10	-	2	10	7	1	6
CRIST	10	13	13	10	-	5	-	-	11	1	2	14	9	-	7	4
	4	12	1	-	5	5	-	-	4	1	-	8	12	-	1	3
	20	36	30	13	5	2	-	1	17	16	3	28	21	3	16	12
DINJE	4	23	25	1	15	-	-	3	17	8	1	15	24	29	23	11
ELTMA	6	11	15	1	6	-	-	-	1	-	-	-	7	10	2	5
FORKE	-	19	8	-	-	11	10	-	3	-	-	-	-	8	9	5
GONRU	23	-	5	24	19	27	33	31	15	34	31	21	18	22	4	3
	16	11	3	22	18	18	17	23	19	17	21	19	22	26	4	1
	6	10	3	7	12	8	11	12	5	5	5	17	8	6	1	-
	21	20	3	15	15	23	27	16	17	22	24	19	12	23	4	1
	21	7	-	14	11	25	16	14	16	15	17	22	19	10	3	-
GOVMI	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-
HERCA	1	-	14	21	-	17	-	23	16	20	19	9	16	11	13	8
HINWO	-	20	12	-	-	9	14	-	2	-	-	-	-	7	7	10
IGAAN	9	1	4	-	3	-	-	7	1	1	-	-	1	6	4	4
	5	-	-	-	-	-	1	5	-	1	1	-	2	8	2	4
	-	3	4	-	-	-	-	-	-	-	-	-	2	-	-	2
JONKA	4	4	3	-	-	-	-	1	-	-	-	-	5	6	-	3
	5	5	8	-	-	-	-	6	-	-	-	1	9	2	-	4
KACJA	-	-	24	5	-	-	-	-	2	-	-	3	34	17	-	5
	-	-	8	2	-	-	-	-	-	-	-	1	6	5	1	2
	-	-	26	8	-	-	-	-	1	-	-	3	31	24	-	4
	-	-	7	1	-	-	-	-	2	-	-	1	15	15	-	6
KISSZ	7	6	5	2	-	-	-	1	1	-	-	-	5	1	2	1
KOSDE	9	40	53	11	1	5	30	2	25	38	20	35	53	49	52	39
	26	35	61	66	49	57	65	67	62	71	34	52	60	62	62	61
	1	2	6	7	5	-	-	7	-	-	5	-	8	1	-	-
LOJTO	-	5	-	-	-	-	2	-	-	-	-	-	4	-	-	2
LOPAL	5	2	-	4	5	7	6	5	3	1	9	2	4	2	1	-
MACMA	5	28	11	4	4	-	-	-	7	-	-	-	20	13	1	15
	2	18	6	3	7	-	-	-	4	-	-	-	13	4	2	14
	-	9	6	-	-	-	-	-	6	-	-	-	7	5	4	5
	4	22	9	1	2	-	-	-	9	-	-	-	-	12	1	7
MARGR	18	15	23	7	20	5	-	5	12	12	-	5	-	13	14	20
MARRU	15	9	7	16	15	18	14	16	8	12	15	12	12	7	8	7
	8	6	-	7	11	11	12	5	6	5	18	4	3	6	2	-
MOLSI	-	22	7	-	-	14	20	-	-	-	8	17	10	1	-	1
	-	6	1	-	-	7	-	-	-	-	2	5	2	2	-	3
	-	9	3	-	-	5	6	-	-	-	7	10	4	-	-	1
	24	7	4	16	23	16	-	21	14	8	25	26	-	9	17	1
	24	8	-	14	15	24	-	22	11	8	24	26	2	10	19	-
	-	-	-	-	-	-	-	-	10	1	18	11	-	4	-	-
	15	7	4	13	32	23	-	31	15	12	33	18	-	3	22	-
MOSFA	5	2	3	-	9	-	1	-	2	3	-	-	1	3	-	2
OCHPA	-	-	3	-	-	-	-	-	-	7	-	8	1	-	-	-
OTTMI	3	4	-	1	5	11	3	-	-	-	1	3	-	-	7	6
PERZS	14	12	21	-	1	-	-	10	-	-	2	13	17	10	-	8
PUCRC	-	-	-	-	-	-	-	-	-	-	-	-	-	4	3	3
ROTEC	-	1	6	-	2	8	-	5	8	-	9	8	-	2	-	-
SARAN	4	3	-	16	-	9	5	7	5	6	17	-	10	14	2	-
	11	10	1	6	8	8	12	11	8	10	8	4	6	14	5	-
	15	9	1	11	19	13	13	20	13	17	11	18	8	18	15	-
	7	8	-	2	7	8	15	12	5	6	10	8	5	7	3	-
SCHHA	3	9	5	4	7	-	2	4	3	-	-	1	-	6	-	-
SLAST	3	-	10	4	-	-	-	3	2	4	1	3	11	9	1	3
	-	1	7	5	-	-	-	-	-	2	-	-	6	7	1	4
STOEN	7	18	14	-	3	-	-	12	7	-	-	6	10	7	-	-
	8	21	15	-	7	-	-	14	9	4	-	2	10	12	-	17
	9	19	10	1	7	-	-	11	7	2	-	5	15	10	1	17
STORO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STRJO	11	3	-	11	4	5	-	5	14	-	-	-	9	-	10	-
	4	3	-	11	2	5	-	13	7	-	-	-	9	-	10	-
	7	-	-	-	2	4	-	5	4	-	-	2	7	-	2	-
	9	1	-	8	4	4	-	6	9	-	-	-	6	-	7	-
	11	3	-	2	2	1	-	4	9	-	-	-	12	-	9	-
TEPIS	2	8	6	8	-	-	-	-	2	-	-	4	8	2	1	1
	-	8	10	10	-	-	-	-	7	-	-	8	11	15	1	-
TRIMI	-	1	5	9	-	-	-	-	2	8	5	1	4	5	-	-
YRJIL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZELZO	-	4	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-
Sum	501	673	606	448	449	449	336	493	511	404	438	536	732	627	425	359