

**AND (#0018):** Total of 167 orbits.  $\lambda_o = 228.6^\circ$ ,  $\lambda_g - \lambda_o = 163.4^\circ$ ,  $\beta_g = 18.8^\circ$ ,  $\Delta r = 6^\circ$ ,  $\Delta \lambda_o = 10^\circ$ . This shower is very unique; the radiant drifts towards the position of the ‘Great Andromedids’. The activity period is wide and the meteor rates fluctuate; the maximum seems to be at  $\lambda_o = 224^\circ \sim 230^\circ$ .

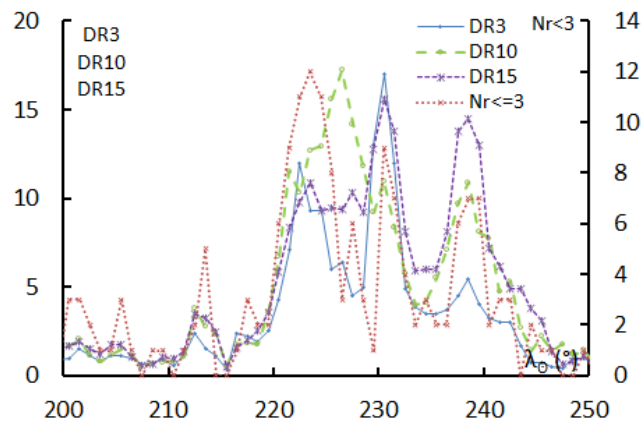
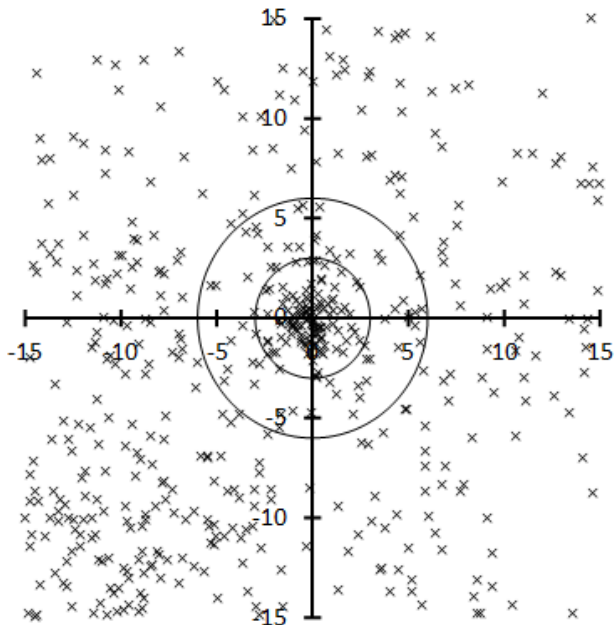


Table 1 – Number per year.

Year	N	Year	N
2007	7	2013	6
2008	12	2014	11
2009	20	2015	17
2010	23	2016	20
2011	6	2017	17
2012	12	2018	16

Table 2 – Activity profiles.

	$\lambda_o$	Max
Nr<=3	223.5	12
DR3	230.5	17.0
DR10	226.5	17.2
DR15	230.5	15.6

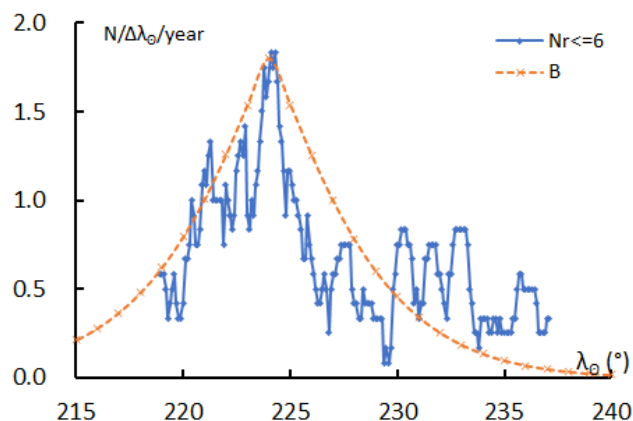


Table 3 – Evolution of the orbital parameters during the activity period.

$\lambda_o$	$\lambda_g - \lambda_o$	$\beta_g$	$\alpha_g$	$\delta_g$	$v_g$	$e$	$q$	$i$	$\omega$	$\Omega$	$\lambda_{II}$	$\beta_{II}$	$a$
210	172.5	10.3	16.8	18.3	20.9	0.796	0.670	6.6	254.8	210.0	104.7	-6.3	3.28
211	172.1	10.9	17.1	19.0	20.7	0.793	0.677	6.8	253.9	211.0	104.8	-6.5	3.27
212	171.6	11.4	17.4	19.7	20.5	0.790	0.684	7.0	253.0	212.0	104.8	-6.7	3.26
213	171.1	12.0	17.7	20.4	20.3	0.787	0.691	7.2	252.1	213.0	104.9	-6.9	3.25
214	170.7	12.5	18.0	21.1	20.1	0.784	0.698	7.5	251.2	214.0	105.0	-7.1	3.24
215	170.2	13.0	18.2	21.8	19.9	0.781	0.705	7.7	250.3	215.0	105.1	-7.2	3.22
216	169.7	13.6	18.5	22.5	19.7	0.778	0.712	7.9	249.4	216.0	105.2	-7.4	3.21
217	169.2	14.1	18.8	23.2	19.5	0.775	0.719	8.1	248.5	217.0	105.3	-7.5	3.19
218	168.7	14.6	19.1	23.9	19.3	0.772	0.725	8.2	247.6	218.0	105.4	-7.6	3.18
219	168.3	15.2	19.4	24.6	19.1	0.768	0.732	8.4	246.7	219.0	105.5	-7.7	3.16
220	167.8	15.7	19.6	25.3	18.9	0.765	0.738	8.6	245.8	220.0	105.6	-7.8	3.14
221	167.3	16.2	19.9	26.0	18.7	0.761	0.745	8.7	245.0	221.0	105.7	-7.9	3.12
222	166.8	16.8	20.2	26.6	18.5	0.757	0.751	8.9	244.1	222.0	105.8	-8.0	3.09
223	166.3	17.3	20.4	27.3	18.3	0.753	0.757	9.0	243.2	223.0	105.9	-8.1	3.07
224	165.8	17.8	20.7	28.0	18.1	0.749	0.764	9.2	242.4	224.0	106.1	-8.1	3.04
225	165.3	18.4	21.0	28.7	17.9	0.745	0.770	9.3	241.5	225.0	106.2	-8.2	3.02
226	164.8	18.9	21.2	29.3	17.7	0.741	0.776	9.4	240.7	226.0	106.3	-8.2	2.99
227	164.3	19.4	21.5	30.0	17.5	0.736	0.782	9.5	239.8	227.0	106.5	-8.2	2.96
228	163.8	20.0	21.7	30.7	17.3	0.732	0.787	9.7	239.0	228.0	106.6	-8.3	2.93
229	163.3	20.5	22.0	31.3	17.1	0.727	0.793	9.8	238.1	229.0	106.8	-8.3	2.91

Table 3 – Continued, evolution of the orbital parameters during the activity period.

$\lambda_{\theta}$	$\lambda_g - \lambda_{\theta}$	$\beta_g$	$\alpha_g$	$\delta_g$	$\nu_g$	$e$	$q$	$i$	$\omega$	$\Omega$	$\lambda_{\Pi}$	$\beta_{\Pi}$	$a$
230	162.8	21.0	22.2	32.0	16.9	0.722	0.799	9.9	237.3	230.0	106.9	-8.3	2.88
231	162.2	21.5	22.5	32.6	16.7	0.717	0.804	10.0	236.5	231.0	107.1	-8.3	2.85
232	161.7	22.0	22.7	33.3	16.5	0.712	0.810	10.0	235.7	232.0	107.3	-8.3	2.81
233	161.2	22.6	22.9	33.9	16.3	0.707	0.815	10.1	234.9	233.0	107.4	-8.3	2.78
234	160.7	23.1	23.2	34.6	16.1	0.702	0.821	10.2	234.0	234.0	107.6	-8.2	2.75
235	160.1	23.6	23.4	35.2	15.9	0.696	0.826	10.3	233.2	235.0	107.8	-8.2	2.72
236	159.6	24.1	23.6	35.9	15.6	0.691	0.831	10.3	232.4	236.0	108.0	-8.2	2.69
237	159.0	24.6	23.8	36.5	15.4	0.685	0.836	10.4	231.6	237.0	108.2	-8.1	2.65
238	158.5	25.1	24.1	37.1	15.2	0.679	0.841	10.4	230.9	238.0	108.4	-8.1	2.62
239	157.9	25.6	24.3	37.8	15.0	0.673	0.846	10.5	230.1	239.0	108.6	-8.0	2.59
240	157.4	26.1	24.5	38.4	14.8	0.667	0.850	10.5	229.3	240.0	108.8	-7.9	2.55
241	156.8	26.6	24.7	39.0	14.6	0.661	0.855	10.5	228.5	241.0	109.0	-7.9	2.52
242	156.2	27.1	24.9	39.6	14.4	0.654	0.859	10.6	227.7	242.0	109.3	-7.8	2.49
243	155.7	27.6	25.1	40.2	14.2	0.648	0.864	10.6	227.0	243.0	109.5	-7.7	2.45
244	155.1	28.1	25.2	40.8	14.0	0.641	0.868	10.6	226.2	244.0	109.7	-7.6	2.42
245	154.5	28.6	25.4	41.4	13.8	0.635	0.872	10.6	225.5	245.0	110.0	-7.5	2.39
246	153.9	29.1	25.6	42.0	13.6	0.628	0.877	10.6	224.7	246.0	110.2	-7.4	2.35
247	153.3	29.6	25.8	42.6	13.4	0.621	0.881	10.6	223.9	247.0	110.5	-7.3	2.32
248	152.7	30.1	25.9	43.2	13.2	0.614	0.885	10.6	223.2	248.0	110.7	-7.2	2.29
249	152.1	30.6	26.1	43.8	13.0	0.606	0.888	10.6	222.5	249.0	111.0	-7.1	2.26
250	151.5	31.1	26.2	44.4	12.8	0.599	0.892	10.6	221.7	250.0	111.2	-7.0	2.23