

**COM (#0020):** Total of **4092** orbits.  $\lambda_o = 280^\circ$ ,  $\lambda_g - \lambda_o = 242.3^\circ$ ,  $\beta_g = 20.1^\circ$ ,  $\Delta r = 3^\circ$ ,  $\Delta \lambda_o = 40^\circ$ . COM (#0020), DLM (#0032), JCO (#0090) and FEV (#0506) are wrapped up in COM, though DLM is rejected now in the SD. The activity period seems to be over 70 degrees and too long for a meteor shower having such high inclination orbit. The name of COM is not suitable for this activity, because the maximum coincides with the former DLM.

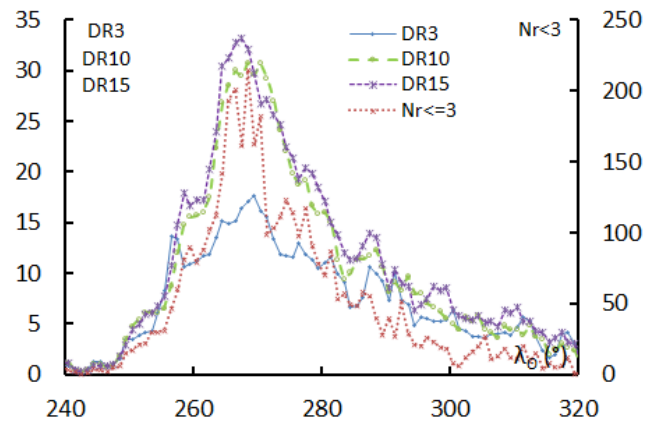
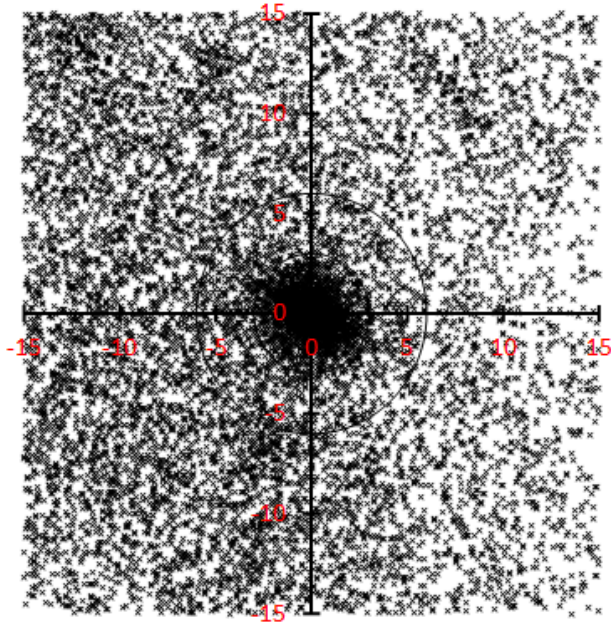


Table 1 – Number per year.

Year	N	Year	N
2007	220	2013	335
2008	374	2014	322
2009	372	2015	282
2010	377	2016	342
2011	406	2017	446
2012	286	2018	330

Table 2 – Activity profiles.

	$\lambda_o$	Max
Nr<=3	268.5	215
DR3	269.5	17.6
DR10	270.5	30.8
DR15	267.5	33.3

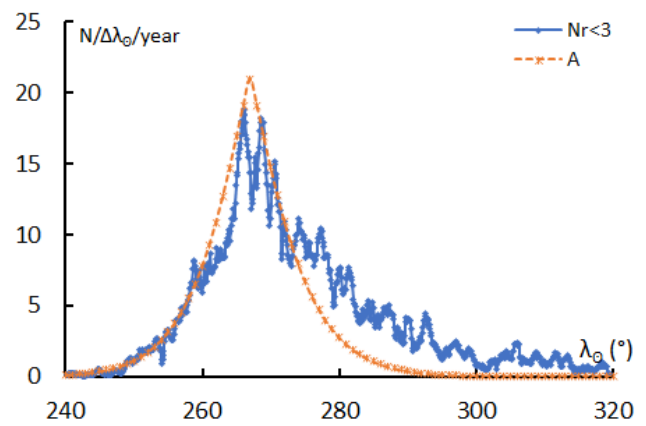


Table 3 – Evolution of the orbital parameters during the activity period.

$\lambda_o$	$\lambda_g - \lambda_o$	$\beta_g$	$\alpha_g$	$\delta_g$	$v_g$	$e$	$q$	$i$	$\omega$	$\Omega$	$\lambda_{II}$	$\beta_{II}$	$a$
240	244.3	22.9	133.7	41.3	63.2	0.978	0.615	132.1	256.3	240.0	350.0	-46.1	27.61
241	244.2	22.9	134.7	41.0	63.2	0.977	0.613	132.2	256.6	241.0	350.6	-46.1	26.17
242	244.2	22.8	135.8	40.7	63.2	0.975	0.611	132.3	256.8	242.0	351.2	-46.1	24.88
243	244.1	22.7	136.9	40.3	63.2	0.974	0.609	132.4	257.1	243.0	351.8	-46.1	23.72
244	244.1	22.7	137.9	40.0	63.2	0.973	0.607	132.4	257.4	244.0	352.4	-46.1	22.68
245	244.0	22.6	139.0	39.6	63.2	0.972	0.605	132.5	257.6	245.0	353.0	-46.1	21.72
246	243.9	22.5	140.0	39.3	63.2	0.971	0.602	132.6	257.9	246.0	353.6	-46.0	20.85
247	243.9	22.5	141.1	38.9	63.2	0.970	0.600	132.7	258.2	247.0	354.2	-46.0	20.06
248	243.8	22.4	142.1	38.6	63.2	0.969	0.598	132.7	258.4	248.0	354.8	-46.0	19.32
249	243.8	22.3	143.1	38.2	63.2	0.968	0.596	132.8	258.7	249.0	355.4	-46.0	18.65
250	243.7	22.3	144.1	37.8	63.2	0.967	0.594	132.9	258.9	250.0	356.0	-46.0	18.02
251	243.7	22.2	145.1	37.5	63.1	0.966	0.592	133.0	259.2	251.0	356.6	-46.0	17.44
252	243.6	22.1	146.1	37.1	63.1	0.965	0.590	133.0	259.5	252.0	357.2	-45.9	16.91
253	243.6	22.0	147.1	36.7	63.1	0.964	0.588	133.1	259.7	253.0	357.8	-45.9	16.41
254	243.5	22.0	148.1	36.3	63.1	0.963	0.586	133.2	260.0	254.0	358.5	-45.9	15.94
255	243.5	21.9	149.1	35.9	63.1	0.962	0.584	133.3	260.3	255.0	359.1	-45.9	15.50
256	243.4	21.8	150.1	35.6	63.1	0.961	0.582	133.3	260.5	256.0	359.7	-45.8	15.09
257	243.4	21.8	151.0	35.2	63.1	0.961	0.580	133.4	260.8	257.0	0.3	-45.8	14.70
258	243.3	21.7	152.0	34.8	63.1	0.960	0.578	133.5	261.0	258.0	0.9	-45.8	14.34

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

$\lambda_o$	$\lambda_g - \lambda_o$	$\beta_g$	$\alpha_g$	$\delta_g$	$v_g$	$e$	$q$	$i$	$\omega$	$\Omega$	$\lambda_{II}$	$\beta_{II}$	$a$
259	243.3	21.6	153.0	34.4	63.1	0.959	0.576	133.6	261.3	259.0	1.5	-45.7	14.00
260	243.2	21.6	153.9	34.0	63.1	0.958	0.574	133.7	261.6	260.0	2.1	-45.7	13.68
261	243.2	21.5	154.9	33.6	63.1	0.957	0.572	133.7	261.8	261.0	2.8	-45.6	13.37
262	243.1	21.4	155.8	33.2	63.1	0.956	0.570	133.8	262.1	262.0	3.4	-45.6	13.08
263	243.1	21.4	156.7	32.7	63.0	0.956	0.568	133.9	262.3	263.0	4.0	-45.6	12.81
264	243.0	21.3	157.7	32.3	63.0	0.955	0.566	134.0	262.6	264.0	4.6	-45.5	12.55
265	243.0	21.2	158.6	31.9	63.0	0.954	0.564	134.1	262.8	265.0	5.3	-45.5	12.31
266	242.9	21.1	159.5	31.5	63.0	0.953	0.562	134.1	263.1	266.0	5.9	-45.4	12.08
267	242.9	21.1	160.4	31.1	63.0	0.953	0.560	134.2	263.3	267.0	6.5	-45.4	11.85
268	242.8	21.0	161.4	30.7	63.0	0.952	0.558	134.3	263.6	268.0	7.1	-45.3	11.64
269	242.8	20.9	162.3	30.2	63.0	0.951	0.556	134.4	263.8	269.0	7.8	-45.3	11.44
270	242.7	20.9	163.2	29.8	63.0	0.951	0.554	134.5	264.1	270.0	8.4	-45.2	11.25
271	242.7	20.8	164.1	29.4	63.0	0.950	0.552	134.6	264.3	271.0	9.0	-45.2	11.07
272	242.6	20.7	165.0	29.0	63.0	0.950	0.550	134.6	264.6	272.0	9.7	-45.1	10.90
273	242.6	20.7	165.9	28.5	63.0	0.949	0.548	134.7	264.8	273.0	10.3	-45.0	10.73
274	242.5	20.6	166.7	28.1	63.0	0.948	0.546	134.8	265.1	274.0	11.0	-45.0	10.57
275	242.5	20.5	167.6	27.7	62.9	0.948	0.544	134.9	265.3	275.0	11.6	-44.9	10.42
276	242.4	20.5	168.5	27.2	62.9	0.947	0.542	135.0	265.6	276.0	12.2	-44.8	10.27
277	242.4	20.4	169.4	26.8	62.9	0.947	0.540	135.1	265.8	277.0	12.9	-44.8	10.14
278	242.3	20.3	170.2	26.4	62.9	0.946	0.538	135.2	266.1	278.0	13.5	-44.7	10.00
279	242.3	20.2	171.1	25.9	62.9	0.946	0.536	135.2	266.3	279.0	14.2	-44.6	9.88
280	242.2	20.2	172.0	25.5	62.9	0.945	0.534	135.3	266.5	280.0	14.8	-44.6	9.75
281	242.2	20.1	172.8	25.1	62.9	0.945	0.532	135.4	266.8	281.0	15.5	-44.5	9.64
282	242.1	20.0	173.7	24.6	62.9	0.944	0.530	135.5	267.0	282.0	16.2	-44.4	9.53
283	242.1	20.0	174.6	24.2	62.9	0.944	0.529	135.6	267.3	283.0	16.8	-44.3	9.42
284	242.0	19.9	175.4	23.7	62.9	0.943	0.527	135.7	267.5	284.0	17.5	-44.3	9.32
285	242.0	19.8	176.3	23.3	62.9	0.943	0.525	135.8	267.7	285.0	18.1	-44.2	9.22
286	241.9	19.8	177.1	22.9	62.9	0.943	0.523	135.9	268.0	286.0	18.8	-44.1	9.12
287	241.9	19.7	178.0	22.4	62.8	0.942	0.521	136.0	268.2	287.0	19.5	-44.0	9.03
288	241.8	19.6	178.8	22.0	62.8	0.942	0.519	136.0	268.5	288.0	20.2	-43.9	8.95
289	241.8	19.5	179.7	21.5	62.8	0.942	0.517	136.1	268.7	289.0	20.8	-43.8	8.86
290	241.7	19.5	180.5	21.1	62.8	0.941	0.516	136.2	268.9	290.0	21.5	-43.8	8.78
291	241.7	19.4	181.3	20.7	62.8	0.941	0.514	136.3	269.1	291.0	22.2	-43.7	8.71
292	241.6	19.3	182.2	20.2	62.8	0.941	0.512	136.4	269.4	292.0	22.9	-43.6	8.63
293	241.6	19.3	183.0	19.8	62.8	0.940	0.510	136.5	269.6	293.0	23.5	-43.5	8.56
294	241.5	19.2	183.8	19.3	62.8	0.940	0.508	136.6	269.8	294.0	24.2	-43.4	8.50
295	241.5	19.1	184.7	18.9	62.8	0.940	0.506	136.7	270.1	295.0	24.9	-43.3	8.43
296	241.4	19.1	185.5	18.5	62.8	0.940	0.505	136.8	270.3	296.0	25.6	-43.2	8.37
297	241.4	19.0	186.3	18.0	62.8	0.939	0.503	136.9	270.5	297.0	26.3	-43.1	8.31
298	241.3	18.9	187.2	17.6	62.7	0.939	0.501	137.0	270.7	298.0	27.0	-43.0	8.25
299	241.3	18.9	188.0	17.1	62.7	0.939	0.499	137.1	271.0	299.0	27.7	-42.9	8.20
300	241.2	18.8	188.8	16.7	62.7	0.939	0.498	137.2	271.2	300.0	28.4	-42.8	8.15
301	241.2	18.7	189.6	16.3	62.7	0.939	0.496	137.3	271.4	301.0	29.1	-42.7	8.10
302	241.1	18.6	190.5	15.8	62.7	0.939	0.494	137.4	271.6	302.0	29.8	-42.6	8.05
303	241.1	18.6	191.3	15.4	62.7	0.938	0.492	137.5	271.9	303.0	30.5	-42.5	8.00
304	241.0	18.5	192.1	15.0	62.7	0.938	0.491	137.6	272.1	304.0	31.2	-42.4	7.96
305	241.0	18.4	192.9	14.5	62.7	0.938	0.489	137.7	272.3	305.0	31.9	-42.3	7.92

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

$\lambda_{\theta}$	$\lambda_g - \lambda_{\theta}$	$\beta_g$	$\alpha_g$	$\delta_g$	$v_g$	$e$	$q$	$i$	$\omega$	$\Omega$	$\lambda_{\Pi}$	$\beta_{\Pi}$	$a$
306	240.9	18.4	193.7	14.1	62.7	0.938	0.487	137.8	272.5	306.0	32.6	-42.2	7.88
307	240.9	18.3	194.6	13.7	62.7	0.938	0.485	137.9	272.7	307.0	33.3	-42.1	7.85
308	240.8	18.2	195.4	13.2	62.7	0.938	0.484	138.0	272.9	308.0	34.0	-42.0	7.81
309	240.8	18.2	196.2	12.8	62.7	0.938	0.482	138.1	273.2	309.0	34.8	-41.9	7.78
310	240.7	18.1	197.0	12.4	62.6	0.938	0.480	138.2	273.4	310.0	35.5	-41.8	7.75
311	240.7	18.0	197.8	12.0	62.6	0.938	0.479	138.3	273.6	311.0	36.2	-41.6	7.72
312	240.6	17.9	198.7	11.5	62.6	0.938	0.477	138.4	273.8	312.0	36.9	-41.5	7.69
313	240.6	17.9	199.5	11.1	62.6	0.938	0.475	138.5	274.0	313.0	37.7	-41.4	7.66
314	240.5	17.8	200.3	10.7	62.6	0.938	0.473	138.6	274.2	314.0	38.4	-41.3	7.64
315	240.5	17.7	201.1	10.3	62.6	0.938	0.472	138.7	274.4	315.0	39.1	-41.2	7.62
316	240.4	17.7	201.9	9.9	62.6	0.938	0.470	138.8	274.6	316.0	39.9	-41.1	7.60
317	240.4	17.6	202.8	9.4	62.6	0.938	0.469	138.9	274.8	317.0	40.6	-41.0	7.58
318	240.3	17.5	203.6	9.0	62.6	0.938	0.467	139.0	275.0	318.0	41.3	-40.8	7.56
319	240.3	17.5	204.4	8.6	62.6	0.938	0.465	139.1	275.2	319.0	42.1	-40.7	7.54
320	240.2	17.4	205.2	8.2	62.6	0.938	0.464	139.2	275.5	320.0	42.8	-40.6	7.53