

The Moon occults the asteroid 4 Vesta since 1400 January 01 to 2500 December 31

Conditions of minimum geocentric angular distance (within 0.500 \emptyset)

#1	#2	Date	TDT	Dm (\emptyset)	D1	Err	RA (\emptyset)	Dec	r1	r2	p (\emptyset)	e	m1	m2	tm(s)	tw(h)		
1.	-10	-13	1401/05/28 05:53:02	0.22926	1.26790	0.00000	262.19	-18.36	0.00	1.16	178	-171	5.6	3129	0.7	Moon	Vesta	
2.	-10	-13	1403/01/29 12:21:06	0.26915	1.17818	0.00000	38.12	9.81	0.00	2.53	196	81	7.9	3493	0.8	Moon	Vesta	
3.	-10	-13	1404/08/10 03:40:03	0.47607	1.15014	0.00000	190.78	-0.63	0.00	2.79	159	44	-9.3	7.7	3394	0.3	Moon	Vesta
4.	-10	-13	1404/09/07 13:58:35	0.37712	1.15656	0.00000	204.02	-4.61	0.00	2.97	339	31	-8.6	7.7	3502	0.7	Moon	Vesta
5.	-10	-13	1404/12/30 14:28:22	0.12354	1.22912	0.00000	264.52	-20.97	0.00	3.03	353	-23	-8.2	7.7	3454	0.9	Moon	Vesta
6.	-10	-13	1406/03/20 22:03:41	0.30175	1.28972	0.00000	16.93	2.06	0.00	3.49	24	9	-6.2	8.3	3188	0.7	Moon	Vesta
7.	-10	-13	1407/10/27 11:48:04	0.40213	1.22122	0.00000	180.96	4.47	0.00	2.92	153	-43	-9.5	7.8	3290	0.5	Moon	Vesta
8.	-10	-13	1409/04/11 10:30:55	0.22985	1.14549	0.00000	346.91	-9.72	0.00	2.92	27	-46	-9.4	7.9	3654	0.9	Moon	Vesta
9.	-10	-13	1411/01/10 17:05:30	0.11234	1.18218	0.00000	125.17	23.72	0.00	1.46	343	-175	6.4	3372	0.9	Moon	Vesta	
10.	-10	-13	1412/09/14 16:18:22	0.25156	1.25339	0.00000	280.55	-26.89	0.00	1.88	188	99	7.0	3284	0.7	Moon	Vesta	
11.	-10	-13	1415/12/30 04:03:53	0.11130	1.14619	0.00000	273.75	-22.35	0.00	3.12	187	-14	-6.9	7.8	3718	1.0	Moon	Vesta
12.	-10	-13	1417/09/05 03:43:28	0.33089	1.23862	0.00000	91.14	19.89	0.00	2.55	356	-80	7.9	3279	0.7	Moon	Vesta	
13.	-10	-13	1422/09/17 10:17:34	0.20821	1.14698	0.00000	197.63	-2.49	0.00	3.13	160	15	-7.1	7.8	3671	1.0	Moon	Vesta
14.	-10	-13	1422/10/15 22:33:59	0.40168	1.15610	0.00000	211.86	-7.66	0.00	3.16	341	5	-4.8	7.8	3471	0.6	Moon	Vesta
15.	-10	-13	1423/01/09 14:02:24	0.20997	1.20274	0.00000	257.20	-19.18	0.00	2.81	351	-40	-9.3	7.6	3503	0.9	Moon	Vesta
16.	-10	-13	1423/02/07 01:35:31	0.39763	1.21288	0.00000	272.11	-20.75	0.00	2.57	176	-55	-9.9	7.5	3332	0.6	Moon	Vesta
17.	-10	-13	1423/05/29 19:48:56	0.28593	1.21234	0.00000	308.57	-19.81	0.00	1.42	190	-130	6.2	3297	0.7	Moon	Vesta	
18.	-10	-13	1424/03/01 21:59:40	0.13530	1.26184	0.00000	0.86	-4.96	0.00	3.44	22	10	-6.3	8.2	3336	0.8	Moon	Vesta
19.	-10	-13	1424/04/27 12:41:24	0.31698	1.28674	0.00000	24.57	5.02	0.00	3.42	23	-22	-8.1	8.3	3188	0.6	Moon	Vesta
20.	-10	-13	1425/02/25 00:05:39	0.22208	1.24722	0.00000	62.33	19.41	0.00	2.54	15	79	7.8	3322	0.8	Moon	Vesta	
21.	-10	-13	1425/03/24 20:53:32	0.30916	1.25626	0.00000	71.59	21.80	0.00	2.87	12	60	8.1	3259	0.7	Moon	Vesta	

22.	-10	-13	1425/11/05 11:49:15	0.44707	1.23606	0.00000	174.36	8.04	0.00	2.66	335	-60	7.8	3203	0.4	Moon	Vesta	
23.	-10	-13	1427/05/19 09:46:37	0.47171	1.15063	0.00000	350.22	-8.80	0.00	2.30	27	-78	7.5	3370	0.3	Moon	Vesta	
24.	-10	-13	1429/06/06 06:39:54	0.04389	1.15431	0.00000	131.42	22.18	0.00	2.97	341	45	-9.3	7.9	3693	1.0	Moon	Vesta
25.	-10	-13	1436/01/28 14:21:37	0.41642	1.19625	0.00000	67.08	20.35	0.00	2.00	4	112	7.3	3257	0.5	Moon	Vesta	
26.	-10	-13	1437/09/05 05:57:00	0.24522	1.26286	0.00000	231.22	-15.75	0.00	2.45	350	62	7.4	3304	0.8	Moon	Vesta	
27.	-10	-13	1440/10/24 19:11:36	0.41188	1.14723	0.00000	205.53	-5.75	0.00	3.14	161	-15	-7.1	7.8	3483	0.6	Moon	Vesta
28.	-10	-13	1440/11/22 08:05:31	0.00939	1.15610	0.00000	219.88	-10.34	0.00	2.99	343	-29	-8.5	7.7	3706	1.0	Moon	Vesta
29.	-10	-13	1440/12/20 21:04:48	0.07376	1.16697	0.00000	234.33	-14.22	0.00	2.78	346	-43	-9.4	7.6	3667	1.0	Moon	Vesta
30.	-10	-13	1441/01/18 09:02:55	0.23483	1.17630	0.00000	248.47	-17.17	0.00	2.51	169	-58	7.5	3570	0.9	Moon	Vesta	
31.	-10	-13	1441/06/06 02:38:01	0.01648	1.17648	0.00000	278.25	-20.82	0.00	1.18	359	-166	5.7	3418	0.9	Moon	Vesta	
32.	-10	-13	1442/03/12 03:18:09	0.38174	1.24505	0.00000	356.04	-6.47	0.00	3.41	21	-8	-5.8	8.2	3241	0.6	Moon	Vesta
33.	-10	-13	1442/04/09 11:35:11	0.19210	1.26069	0.00000	8.29	-1.70	0.00	3.36	22	-22	-8.0	8.2	3324	0.8	Moon	Vesta
34.	-10	-13	1442/05/07 18:44:26	0.32693	1.26782	0.00000	19.93	2.92	0.00	3.22	22	-36	-9.1	8.2	3231	0.6	Moon	Vesta
35.	-10	-13	1443/02/07 03:57:25	0.09234	1.22975	0.00000	46.50	13.48	0.00	2.53	199	81	7.8	3417	0.9	Moon	Vesta	
36.	-10	-13	1443/03/07 00:41:48	0.38643	1.23469	0.00000	55.02	16.45	0.00	2.87	197	62	8.1	3252	0.6	Moon	Vesta	
37.	-10	-13	1443/04/04 00:41:38	0.25240	1.24969	0.00000	65.56	19.49	0.00	3.16	194	45	-9.5	8.2	3314	0.8	Moon	Vesta
38.	-10	-13	1443/05/02 03:26:30	0.13173	1.26894	0.00000	77.57	22.02	0.00	3.37	10	29	-8.6	8.3	3313	0.8	Moon	Vesta
39.	-10	-13	1447/08/11 20:49:06	0.44720	1.16090	0.00000	151.61	15.13	0.00	3.35	155	3	-3.9	8.1	3385	0.5	Moon	Vesta
40.	-10	-13	1449/01/24 10:27:13	0.27615	1.28794	0.00000	316.15	-19.17	0.00	3.27	22	2	-3.3	8.0	3219	0.7	Moon	Vesta
41.	-10	-13	1450/09/29 20:54:15	0.21469	1.21689	0.00000	127.49	19.42	0.00	2.66	341	-70	7.9	3422	0.8	Moon	Vesta	
42.	-10	-13	1454/04/03 01:49:54	0.46999	1.16580	0.00000	72.93	21.13	0.00	3.02	181	52	-9.7	8.1	3335	0.3	Moon	Vesta
43.	-10	-13	1455/10/13 13:16:24	0.10793	1.28048	0.00000	236.85	-17.45	0.00	2.96	172	30	-8.8	7.7	3312	0.8	Moon	Vesta
44.	-10	-13	1457/05/22 10:01:58	0.19520	1.21182	0.00000	55.09	15.33	0.00	3.54	190	-14	-6.9	8.4	3447	0.9	Moon	Vesta
45.	-10	-13	1461/01/19 05:20:41	0.29820	1.20773	0.00000	31.20	7.22	0.00	2.49	21	83	7.8	3385	0.8	Moon	Vesta	
46.	-10	-13	1461/05/11 09:51:08	0.39799	1.25920	0.00000	72.84	20.20	0.00	3.52	191	15	-7.2	8.4	3185	0.5	Moon	Vesta
47.	-10	-13	1461/06/08 15:38:23	0.07948	1.27699	0.00000	85.86	22.16	0.00	3.56	7	1	-2.0	8.4	3304	0.8	Moon	Vesta
48.	-10	-13	1462/08/27 09:44:50	0.49830	1.29177	0.00000	193.44	-0.84	0.00	2.99	155	31	-8.8	7.7	3039	0.1	Moon	Vesta
49.	-10	-13	1463/07/03 03:21:29	0.18411	1.21034	0.00000	320.53	-20.65	0.00	1.31	197	-152	6.0	3307	0.8	Moon	Vesta	
50.	-10	-13	1465/09/18 05:36:03	0.11502	1.16051	0.00000	159.35	12.48	0.00	3.20	154	-28	-8.4	8.0	3656	1.0	Moon	Vesta
51.	-10	-13	1467/03/04 02:17:16	0.12372	1.27969	0.00000	324.93	-16.70	0.00	3.07	204	-30	-8.8	7.9	3306	0.8	Moon	Vesta
52.	-10	-13	1468/12/02 17:57:45	0.46856	1.27309	0.00000	123.32	21.23	0.00	1.67	342	-139	6.8	2984	0.3	Moon	Vesta	
53.	-10	-13	1472/05/10 06:15:42	0.09907	1.16032	0.00000	79.74	22.11	0.00	3.45	359	22	-7.9	8.3	3646	1.0	Moon	Vesta
54.	-10	-13	1473/11/20 04:39:02	0.49875	1.29206	0.00000	245.97	-19.35	0.00	3.14	176	2	-3.3	7.7	3037	0.1	Moon	Vesta
55.	-10	-13	1475/07/27 18:25:09	0.13184	1.19845	0.00000	73.30	17.86	0.00	2.95	185	-59	8.1	3514	0.9	Moon	Vesta	
56.	-10	-13	1479/01/29 01:53:35	0.27367	1.18287	0.00000	23.69	4.29	0.00	2.80	21	66	8.0	3490	0.8	Moon	Vesta	
57.	-10	-13	1479/06/18 22:35:02	0.39387	1.26114	0.00000	81.35	20.65	0.00	3.53	188	-14	-7.0	8.4	3186	0.5	Moon	Vesta
58.	-10	-13	1479/07/17 04:59:03	0.13618	1.27082	0.00000	94.25	21.84	0.00	3.39	3	-29	-8.6	8.3	3312	0.8	Moon	Vesta
59.	-10	-13	1479/12/03 15:40:13	0.38336	1.25691	0.00000	138.47	19.06	0.00	1.76	347	-125	6.9	3120	0.5	Moon	Vesta	

60.	-10	-13	1480/08/08 06:00:33	0.10592	1.28452	0.00000	174.64	7.80	0.00	3.08	157	28	-8.6	7.8	3296	0.8	Moon	Vesta
61.	-10	-13	1480/09/05 14:43:14	0.01095	1.29800	0.00000	187.78	2.04	0.00	3.17	156	15	-7.3	7.8	3274	0.8	Moon	Vesta
62.	-10	-13	1480/10/04 01:02:05	0.26102	1.30230	0.00000	201.28	-4.04	0.00	3.19	156	5	-4.8	7.8	3198	0.7	Moon	Vesta
63.	-10	-13	1481/10/28 11:17:01	0.37548	1.24024	0.00000	301.72	-24.60	0.00	2.38	9	74		7.5	3263	0.6	Moon	Vesta
64.	-10	-13	1481/11/25 15:28:51	0.14866	1.24532	0.00000	313.88	-22.38	0.00	2.72	194	58		7.8	3394	0.8	Moon	Vesta
65.	-10	-13	1481/12/23 23:11:56	0.39423	1.24385	0.00000	326.75	-18.79	0.00	3.02	198	42	-9.4	8.0	3245	0.5	Moon	Vesta
66.	-10	-13	1482/01/21 08:33:16	0.30396	1.23335	0.00000	339.58	-14.07	0.00	3.25	202	26	-8.4	8.1	3339	0.7	Moon	Vesta
67.	-10	-13	1482/02/18 17:56:04	0.10279	1.21578	0.00000	352.04	-8.60	0.00	3.39	25	11	-6.6	8.2	3479	0.9	Moon	Vesta
68.	-10	-13	1483/10/26 10:57:53	0.08917	1.15556	0.00000	164.97	10.61	0.00	2.72	153	-60		7.8	3682	1.0	Moon	Vesta
69.	-10	-13	1487/04/28 03:29:41	0.15721	1.26751	0.00000	109.34	25.07	0.00	2.73	168	62		7.9	3310	0.8	Moon	Vesta
70.	-10	-13	1497/03/07 03:50:03	0.22383	1.17338	0.00000	28.20	6.25	0.00	3.33	199	33	-8.8	8.3	3553	0.9	Moon	Vesta
71.	-10	-13	1497/07/26 09:53:46	0.20539	1.24760	0.00000	88.71	20.53	0.00	3.21	185	-43	-9.5	8.3	3350	0.8	Moon	Vesta
72.	-10	-13	1497/08/23 13:37:24	0.36664	1.24665	0.00000	100.07	21.14	0.00	2.91	1	-60		8.1	3246	0.6	Moon	Vesta
73.	-10	-13	1498/08/18 10:35:50	0.13462	1.27912	0.00000	168.65	9.81	0.00	3.25	159	13	-6.9	8.0	3300	0.8	Moon	Vesta
74.	-10	-13	1498/09/15 19:55:08	0.09791	1.29400	0.00000	182.02	4.49	0.00	3.25	337	5	-5.0	7.9	3273	0.8	Moon	Vesta
75.	-10	-13	1498/10/14 06:09:56	0.00113	1.29898	0.00000	195.48	-1.20	0.00	3.17	337	-16	-7.5	7.9	3272	0.8	Moon	Vesta
76.	-10	-13	1498/11/11 16:12:40	0.46073	1.29252	0.00000	209.01	-6.85	0.00	3.01	157	-30	-8.8	7.8	3075	0.3	Moon	Vesta
77.	-10	-13	1499/07/19 00:34:08	0.24507	1.26949	0.00000	255.61	-22.05	0.00	1.37	169	132		6.1	3180	0.7	Moon	Vesta
78.	-10	-13	1499/11/07 09:21:34	0.07191	1.26755	0.00000	291.50	-24.89	0.00	2.68	4	55		7.7	3352	0.8	Moon	Vesta
79.	-10	-13	1499/12/05 16:49:39	0.48445	1.27295	0.00000	305.83	-23.33	0.00	2.96	190	40	-9.4	7.9	3092	0.2	Moon	Vesta
80.	-10	-13	1500/03/28 05:11:10	0.06480	1.21269	0.00000	359.71	-5.40	0.00	3.33	205	-20	-7.8	8.1	3495	0.9	Moon	Vesta
81.	-10	-13	1501/12/02 01:21:14	0.34553	1.14858	0.00000	163.71	11.75	0.00	2.04	154	-99		7.3	3495	0.7	Moon	Vesta
82.	-10	-13	1506/12/15 20:06:41	0.02569	1.20520	0.00000	289.47	-23.35	0.00	3.16	13	15	-7.2	7.9	3536	0.9	Moon	Vesta
83.	-10	-13	1508/08/22 03:36:59	0.18259	1.16647	0.00000	108.05	20.91	0.00	3.05	168	-51	-9.7	8.2	3598	0.9	Moon	Vesta
84.	-10	-13	1512/02/22 21:59:40	0.42166	1.25853	0.00000	54.87	16.30	0.00	2.66	189	74		8.0	3156	0.5	Moon	Vesta
85.	-10	-13	1515/03/17 04:55:07	0.42993	1.16019	0.00000	23.50	4.99	0.00	3.46	19	19	-7.5	8.3	3401	0.5	Moon	Vesta
86.	-10	-13	1515/04/14 11:34:08	0.24809	1.17326	0.00000	35.41	8.99	0.00	3.55	198	6	-5.0	8.4	3534	0.9	Moon	Vesta
87.	-10	-13	1515/08/05 12:25:31	0.23290	1.22044	0.00000	82.60	19.20	0.00	2.95	186	-58		8.1	3409	0.8	Moon	Vesta
88.	-10	-13	1515/09/02 13:32:27	0.30416	1.21739	0.00000	92.26	20.03	0.00	2.61	3	-76		7.9	3361	0.7	Moon	Vesta
89.	-10	-13	1515/11/23 21:12:27	0.27697	1.20850	0.00000	100.01	20.87	0.00	1.63	0	-151		6.7	3256	0.7	Moon	Vesta
90.	-10	-13	1516/10/23 11:18:23	0.11138	1.28529	0.00000	189.75	1.18	0.00	3.05	158	-31	-8.9	7.9	3297	0.8	Moon	Vesta
91.	-10	-13	1516/11/20 19:54:15	0.47382	1.27951	0.00000	202.62	-3.95	0.00	2.80	158	-46	-9.7	7.7	3090	0.3	Moon	Vesta
92.	-10	-13	1517/07/27 04:14:45	0.42695	1.25820	0.00000	234.49	-16.00	0.00	1.70	343	103		6.7	3138	0.4	Moon	Vesta
93.	-10	-13	1517/11/16 11:44:38	0.23683	1.28618	0.00000	283.25	-24.21	0.00	2.92	0	38	-9.3	7.8	3252	0.7	Moon	Vesta
94.	-10	-13	1517/12/14 21:10:52	0.37735	1.29231	0.00000	298.78	-23.41	0.00	3.13	186	24	-8.3	7.9	3147	0.5	Moon	Vesta
95.	-10	-13	1518/05/05 12:16:22	0.18041	1.21127	0.00000	6.18	-2.82	0.00	2.93	25	-49	-9.7	8.0	3467	0.9	Moon	Vesta
96.	-10	-13	1521/07/19 05:29:17	0.35331	1.18702	0.00000	303.72	-24.91	0.00	1.24	194	173		5.8	3228	0.7	Moon	Vesta
97.	-10	-13	1523/08/10 07:49:19	0.11989	1.29931	0.00000	136.94	18.80	0.00	3.40	158	-12	-6.9	8.2	3244	0.8	Moon	Vesta

98.	-10	-13	1526/10/26	18:51:38	0.05383	1.15053	0.00000	115.08	19.83	0.00	2.03	165	-109	7.3	3619	1.0	Moon	Vesta	
99.	-10	-13	1528/07/27	00:03:02	0.39552	1.22070	0.00000	250.56	-21.55	0.00	1.51	178	119	6.4	3224	0.6	Moon	Vesta	
100.	-10	-13	1530/04/01	02:46:53	0.14778	1.28436	0.00000	58.79	17.61	0.00	3.25	187	40	-9.4	8.3	3270	0.8	Moon	Vesta
101.	-10	-13	1533/05/21	20:25:01	0.08837	1.17211	0.00000	42.86	11.41	0.00	3.41	16	-26	-8.3	8.3	3613	1.0	Moon	Vesta
102.	-10	-13	1533/06/19	03:15:58	0.15299	1.18349	0.00000	54.56	14.24	0.00	3.23	193	-41	-9.2	8.3	3558	0.9	Moon	Vesta
103.	-10	-13	1533/07/17	08:37:56	0.09143	1.19088	0.00000	65.55	16.37	0.00	2.96	191	-57	-9.9	8.1	3553	1.0	Moon	Vesta
104.	-10	-13	1533/08/14	10:56:31	0.26214	1.19187	0.00000	75.16	17.81	0.00	2.64	8	-75	7.9	3463	0.8	Moon	Vesta	
105.	-10	-13	1533/12/01	16:53:45	0.29213	1.17907	0.00000	77.24	18.58	0.00	1.58	7	175	6.6	3291	0.8	Moon	Vesta	
106.	-10	-13	1535/12/25	02:13:27	0.02274	1.30198	0.00000	291.70	-22.98	0.00	3.19	183	7	-5.7	7.9	3264	0.8	Moon	Vesta
107.	-10	-13	1536/05/14	11:56:10	0.09869	1.22920	0.00000	359.54	-5.89	0.00	2.58	203	-66	7.7	3438	0.9	Moon	Vesta	
108.	-10	-13	1538/01/14	19:37:46	0.44124	1.18873	0.00000	121.62	24.69	0.00	1.48	350	173	6.4	3130	0.4	Moon	Vesta	
109.	-10	-13	1538/04/06	10:33:32	0.42461	1.19507	0.00000	119.78	25.43	0.00	2.14	171	91	7.4	3295	0.5	Moon	Vesta	
110.	-10	-13	1538/05/04	09:47:04	0.01014	1.19884	0.00000	128.69	23.93	0.00	2.45	167	72	7.6	3540	1.0	Moon	Vesta	
111.	-10	-13	1538/06/01	14:29:11	0.20908	1.19611	0.00000	139.83	21.12	0.00	2.73	343	56	-9.9	7.8	3505	0.9	Moon	Vesta
112.	-10	-13	1538/06/29	22:28:06	0.12864	1.18706	0.00000	152.01	16.95	0.00	2.96	339	42	-9.2	7.9	3570	0.9	Moon	Vesta
113.	-10	-13	1538/07/28	08:18:48	0.27556	1.17419	0.00000	164.60	11.62	0.00	3.12	155	28	-8.4	7.9	3532	0.8	Moon	Vesta
114.	-10	-13	1540/01/11	16:26:51	0.29815	1.16947	0.00000	330.30	-16.45	0.00	3.20	23	26	-8.3	8.0	3525	0.8	Moon	Vesta
115.	-10	-13	1541/09/16	20:09:44	0.33419	1.28265	0.00000	144.08	16.97	0.00	3.09	336	-42	-9.5	8.1	3189	0.6	Moon	Vesta
116.	-10	-13	1546/09/30	09:58:38	0.33633	1.18237	0.00000	255.19	-22.18	0.00	2.51	360	60	7.5	3468	0.7	Moon	Vesta	
117.	-10	-13	1548/05/08	15:17:48	0.24295	1.29960	0.00000	66.17	19.27	0.00	3.56	4	11	-6.6	8.4	3193	0.7	Moon	Vesta
118.	-10	-13	1549/12/16	10:09:06	0.00232	1.17830	0.00000	242.87	-16.99	0.00	2.94	353	-31	-8.7	7.7	3632	1.0	Moon	Vesta
119.	-10	-13	1554/01/03	08:09:33	0.43291	1.30057	0.00000	285.16	-22.15	0.00	3.16	1	-9	-6.2	7.8	3083	0.4	Moon	Vesta
120.	-10	-13	1554/01/31	18:51:43	0.16913	1.29586	0.00000	301.12	-21.20	0.00	3.09	187	-23	-8.2	7.8	3253	0.8	Moon	Vesta
121.	-10	-13	1554/05/24	09:34:48	0.06635	1.24618	0.00000	351.00	-9.09	0.00	2.18	21	-84	7.4	3381	0.9	Moon	Vesta	
122.	-10	-13	1555/02/23	22:46:20	0.45438	1.28262	0.00000	19.95	3.37	0.00	3.28	24	35	-9.1	8.3	3088	0.3	Moon	Vesta
123.	-10	-13	1556/02/19	18:57:32	0.15431	1.21480	0.00000	95.99	25.60	0.00	1.88	182	115	7.1	3381	0.9	Moon	Vesta	
124.	-10	-13	1556/04/15	05:03:53	0.25130	1.22681	0.00000	109.12	25.88	0.00	2.53	356	72	7.7	3378	0.8	Moon	Vesta	
125.	-10	-13	1556/09/03	18:29:02	0.12096	1.17520	0.00000	172.37	8.40	0.00	3.28	335	5	-4.6	8.0	3607	1.0	Moon	Vesta
126.	-10	-13	1558/02/18	01:55:07	0.20970	1.17048	0.00000	338.48	-13.51	0.00	3.33	205	-6	-5.0	8.1	3579	0.9	Moon	Vesta
127.	-10	-13	1561/05/05	13:59:00	0.09194	1.21917	0.00000	318.83	-17.14	0.00	1.82	203	-98	6.9	3443	0.9	Moon	Vesta	
128.	-10	-13	1564/11/06	14:31:03	0.37890	1.17571	0.00000	261.97	-23.00	0.00	3.00	182	29	-8.5	7.7	3443	0.7	Moon	Vesta
129.	-10	-13	1568/03/19	20:56:37	0.19095	1.18394	0.00000	271.74	-18.33	0.00	1.78	182	-97	6.8	3526	0.9	Moon	Vesta	
130.	-10	-13	1568/04/16	16:20:36	0.13530	1.18867	0.00000	277.70	-18.09	0.00	1.48	4	-119	6.3	3478	0.9	Moon	Vesta	
131.	-10	-13	1570/01/14	22:05:30	0.37205	1.14889	0.00000	41.12	11.09	0.00	2.25	15	98	7.6	3457	0.7	Moon	Vesta	
132.	-10	-13	1571/08/24	07:52:55	0.08099	1.19751	0.00000	202.35	-4.06	0.00	2.80	340	42	-9.3	7.6	3560	1.0	Moon	Vesta
133.	-10	-13	1572/02/10	22:56:37	0.20983	1.28449	0.00000	293.73	-20.82	0.00	2.86	4	-39	-9.4	7.7	3271	0.8	Moon	Vesta
134.	-10	-13	1572/03/10	06:00:51	0.29843	1.27376	0.00000	308.18	-19.37	0.00	2.63	189	-54	7.6	3247	0.7	Moon	Vesta	
135.	-10	-13	1572/05/05	07:54:29	0.28644	1.25622	0.00000	331.20	-14.82	0.00	2.07	196	-86	7.2	3270	0.7	Moon	Vesta	

136.	-10	-13	1573/02/04 23:15:15	0.44355	1.28819	0.00000	3.95	-3.80	0.00	3.22	23	36	-9.2	8.2	3087	0.4	Moon	Vesta
137.	-10	-13	1573/03/05 05:34:50	0.13848	1.29668	0.00000	15.39	1.15	0.00	3.42	23	21	-8.0	8.3	3246	0.8	Moon	Vesta
138.	-10	-13	1573/04/02 12:40:00	0.16778	1.29410	0.00000	27.05	6.13	0.00	3.52	23	7	-5.6	8.3	3241	0.8	Moon	Vesta
139.	-10	-13	1573/04/30 19:13:53	0.48078	1.28125	0.00000	38.83	10.81	0.00	3.53	21	-11	-6.5	8.4	3058	0.2	Moon	Vesta
140.	-10	-13	1574/01/31 22:04:37	0.05510	1.23934	0.00000	78.47	22.70	0.00	1.91	10	117		7.2	3330	0.9	Moon	Vesta
141.	-10	-13	1574/02/28 09:34:53	0.36232	1.23963	0.00000	82.24	23.50	0.00	2.24	188	93		7.6	3233	0.6	Moon	Vesta
142.	-10	-13	1574/03/28 04:37:53	0.18703	1.24786	0.00000	90.19	24.58	0.00	2.58	185	73		7.8	3347	0.8	Moon	Vesta
143.	-10	-13	1576/03/27 11:13:49	0.44604	1.16846	0.00000	345.95	-10.75	0.00	3.09	206	-34	-8.8	8.0	3374	0.5	Moon	Vesta
144.	-10	-13	1577/12/27 09:55:40	0.29130	1.24445	0.00000	138.96	20.01	0.00	1.55	159	-150		6.5	3164	0.7	Moon	Vesta
145.	-10	-13	1579/08/04 03:04:23	0.47061	1.27118	0.00000	286.05	-26.77	0.00	1.34	190	144		6.1	2981	0.3	Moon	Vesta
146.	-10	-13	1579/08/31 10:36:28	0.29236	1.25563	0.00000	286.44	-26.72	0.00	1.61	10	118		6.6	3215	0.7	Moon	Vesta
147.	-10	-13	1581/07/01 04:53:16	0.35013	1.16499	0.00000	113.62	22.33	0.00	3.50	165	3	-3.8	8.3	3476	0.7	Moon	Vesta
148.	-10	-13	1586/07/25 09:00:46	0.03243	1.22758	0.00000	238.39	-17.08	0.00	1.49	172	118		6.4	3383	0.9	Moon	Vesta
149.	-10	-13	1588/03/02 14:35:34	0.01196	1.15761	0.00000	40.40	11.37	0.00	2.93	194	59		8.1	3671	1.0	Moon	Vesta
150.	-10	-13	1589/10/10 15:29:53	0.18317	1.19866	0.00000	209.15	-6.89	0.00	3.13	342	13	-6.9	7.8	3517	0.9	Moon	Vesta
151.	-10	-13	1590/03/01 23:59:08	0.34733	1.26287	0.00000	284.99	-20.23	0.00	2.53	1	-57		7.5	3246	0.6	Moon	Vesta
152.	-10	-13	1590/03/30 04:38:17	0.10822	1.25595	0.00000	298.19	-19.61	0.00	2.25	186	-73		7.3	3371	0.9	Moon	Vesta
153.	-10	-13	1590/04/27 04:04:28	0.25267	1.25077	0.00000	308.97	-18.48	0.00	1.94	190	-90		7.0	3305	0.8	Moon	Vesta
154.	-10	-13	1590/05/24 21:11:17	0.25791	1.25310	0.00000	316.17	-17.44	0.00	1.64	12	-110		6.6	3257	0.7	Moon	Vesta
155.	-10	-13	1591/03/25 13:20:13	0.17770	1.30189	0.00000	11.00	-0.60	0.00	3.47	22	7	-5.8	8.3	3220	0.8	Moon	Vesta
156.	-10	-13	1591/04/22 20:36:15	0.07235	1.29912	0.00000	22.95	4.24	0.00	3.48	22	-11	-6.5	8.3	3251	0.8	Moon	Vesta
157.	-10	-13	1591/05/21 02:35:44	0.26949	1.28667	0.00000	34.68	8.76	0.00	3.41	21	-25	-8.3	8.3	3214	0.7	Moon	Vesta
158.	-10	-13	1592/01/24 03:14:50	0.31919	1.25908	0.00000	62.24	18.17	0.00	1.92	15	120		7.2	3169	0.6	Moon	Vesta
159.	-10	-13	1592/05/14 09:32:07	0.08859	1.27772	0.00000	94.35	24.02	0.00	3.18	184	40	-9.4	8.2	3306	0.8	Moon	Vesta
160.	-10	-13	1592/06/11 15:15:42	0.44960	1.27759	0.00000	107.45	24.24	0.00	3.36	358	25	-8.4	8.2	3102	0.4	Moon	Vesta
161.	-10	-13	1592/11/28 05:25:37	0.32555	1.18307	0.00000	184.62	3.57	0.00	2.58	155	-64		7.7	3466	0.7	Moon	Vesta
162.	-10	-13	1594/05/14 16:13:38	0.28391	1.16037	0.00000	351.16	-8.90	0.00	2.55	206	-65		7.7	3563	0.8	Moon	Vesta
163.	-10	-13	1596/06/01 03:06:17	0.23716	1.19260	0.00000	130.67	23.02	0.00	2.77	343	57	-9.9	7.8	3494	0.9	Moon	Vesta
164.	-10	-13	1597/12/12 02:56:01	0.36514	1.28309	0.00000	306.01	-22.53	0.00	2.92	18	43	-9.6	7.8	3176	0.6	Moon	Vesta
165.	-10	-13	1599/08/18 12:38:46	0.26887	1.16533	0.00000	121.94	21.20	0.00	3.37	342	-25	-8.2	8.3	3548	0.9	Moon	Vesta
166.	-10	-13	1601/02/28 23:26:26	0.40954	1.18864	0.00000	295.41	-20.22	0.00	2.74	15	-47	-9.6	7.6	3378	0.6	Moon	Vesta
167.	-10	-13	1606/04/09 19:47:01	0.00935	1.16335	0.00000	45.84	13.37	0.00	3.41	192	28	-8.4	8.4	3650	1.0	Moon	Vesta
168.	-10	-13	1607/11/18 03:44:45	0.07591	1.20060	0.00000	217.61	-9.93	0.00	3.10	163	-18	-7.5	7.8	3549	0.9	Moon	Vesta
169.	-10	-13	1607/12/16 16:31:37	0.41751	1.21856	0.00000	232.44	-13.79	0.00	2.95	346	-31	-8.8	7.7	3294	0.5	Moon	Vesta
170.	-10	-13	1608/02/11 14:43:29	0.36408	1.23513	0.00000	261.62	-18.56	0.00	2.46	354	-60		7.4	3305	0.6	Moon	Vesta
171.	-10	-13	1608/03/10 20:45:16	0.05838	1.23316	0.00000	274.61	-19.41	0.00	2.16	178	-76		7.2	3449	0.9	Moon	Vesta
172.	-10	-13	1608/04/07 21:00:10	0.45678	1.22941	0.00000	285.20	-19.55	0.00	1.84	182	-94		6.9	3189	0.4	Moon	Vesta
173.	-10	-13	1608/05/05 13:43:34	0.43659	1.22952	0.00000	291.97	-19.44	0.00	1.54	184	-114		6.5	3166	0.4	Moon	Vesta

174.	-10	-13	1608/06/01 21:34:23	0.48837	1.23682	0.00000	293.27	-19.55	0.00	1.30	5	-139	6.0	3035	0.2	Moon	Vesta	
175.	-10	-13	1609/05/02 04:16:52	0.32413	1.29561	0.00000	18.56	2.58	0.00	3.36	21	-24	-8.3	8.2	3164	0.6	Moon	Vesta
176.	-10	-13	1609/05/30 09:24:00	0.42058	1.28450	0.00000	30.06	6.83	0.00	3.20	21	-39	-9.3	8.2	3113	0.4	Moon	Vesta
177.	-10	-13	1610/02/01 19:53:57	0.37803	1.25600	0.00000	49.69	13.81	0.00	2.24	198	98	7.6	3172	0.6	Moon	Vesta	
178.	-10	-13	1610/06/21 22:21:58	0.03916	1.29227	0.00000	102.35	23.27	0.00	3.50	180	11	-6.6	8.3	3271	0.8	Moon	Vesta
179.	-10	-13	1610/12/07 22:57:36	0.09935	1.20960	0.00000	175.75	7.57	0.00	2.28	157	-83	7.5	3490	0.9	Moon	Vesta	
180.	-10	-13	1612/06/20 04:47:20	0.41524	1.14911	0.00000	349.06	-10.21	0.00	1.84	25	-103	7.0	3407	0.6	Moon	Vesta	
181.	-10	-13	1614/08/06 14:42:37	0.13392	1.20670	0.00000	150.06	16.47	0.00	3.33	336	13	-6.8	8.1	3498	0.9	Moon	Vesta
182.	-10	-13	1616/01/19 16:52:30	0.45868	1.30116	0.00000	313.99	-20.70	0.00	3.24	200	12	-6.9	7.9	3053	0.3	Moon	Vesta
183.	-10	-13	1621/03/28 22:09:20	0.30768	1.20976	0.00000	73.20	22.11	0.00	2.77	1	66	8.0	3382	0.7	Moon	Vesta	
184.	-10	-13	1624/05/17 04:11:59	0.29407	1.16405	0.00000	53.46	15.61	0.00	3.57	10	-4	-4.1	8.4	3526	0.8	Moon	Vesta
185.	-10	-13	1628/07/29 12:09:32	0.03141	1.28936	0.00000	110.79	22.06	0.00	3.47	177	-18	-7.6	8.3	3278	0.8	Moon	Vesta
186.	-10	-13	1628/08/26 17:11:01	0.49299	1.27259	0.00000	123.90	20.97	0.00	3.30	352	-32	-8.9	8.2	3065	0.1	Moon	Vesta
187.	-10	-13	1628/12/16 12:41:41	0.41691	1.24308	0.00000	163.37	12.01	0.00	1.96	160	-105	7.2	3170	0.5	Moon	Vesta	
188.	-10	-13	1629/08/21 18:14:50	0.30586	1.26268	0.00000	191.63	0.42	0.00	2.83	156	42	-9.4	7.7	3275	0.7	Moon	Vesta
189.	-10	-13	1629/09/19 04:26:08	0.25705	1.25507	0.00000	204.63	-5.52	0.00	3.00	156	29	-8.6	7.7	3325	0.8	Moon	Vesta
190.	-10	-13	1630/06/29 01:14:37	0.44310	1.15420	0.00000	331.67	-17.04	0.00	1.47	200	-129	6.4	3291	0.5	Moon	Vesta	
191.	-10	-13	1635/11/29 01:03:17	0.44174	1.20825	0.00000	132.18	19.39	0.00	1.89	339	-117	7.1	3192	0.4	Moon	Vesta	
192.	-10	-13	1642/07/22 15:24:17	0.04994	1.15749	0.00000	73.04	18.38	0.00	3.17	184	-46	-9.4	8.3	3669	1.0	Moon	Vesta
193.	-10	-13	1644/07/14 08:59:31	0.11364	1.16018	0.00000	227.67	-12.79	0.00	1.50	167	117	6.4	3577	1.0	Moon	Vesta	
194.	-10	-13	1646/02/20 18:05:45	0.43081	1.23447	0.00000	33.31	7.89	0.00	2.89	199	62	8.1	3210	0.5	Moon	Vesta	
195.	-10	-13	1646/09/05 22:36:50	0.02347	1.27328	0.00000	117.87	20.61	0.00	3.10	174	-47	-9.7	8.2	3321	0.8	Moon	Vesta
196.	-10	-13	1646/10/03 23:01:10	0.39369	1.25813	0.00000	129.07	19.39	0.00	2.78	350	-64	8.0	3190	0.5	Moon	Vesta	
197.	-10	-13	1646/11/28 11:59:46	0.02872	1.25644	0.00000	144.86	16.67	0.00	2.03	345	-105	7.3	3321	0.9	Moon	Vesta	
198.	-10	-13	1647/08/31 21:37:07	0.07746	1.28473	0.00000	185.56	3.09	0.00	3.08	157	26	-8.5	7.8	3305	0.8	Moon	Vesta
199.	-10	-13	1647/09/29 07:58:31	0.07561	1.27679	0.00000	198.94	-2.71	0.00	3.16	337	14	-7.1	7.8	3326	0.8	Moon	Vesta
200.	-10	-13	1647/10/27 19:09:27	0.12086	1.25956	0.00000	212.85	-8.52	0.00	3.17	158	4	-4.6	7.8	3363	0.8	Moon	Vesta
201.	-10	-13	1648/12/18 17:49:09	0.31670	1.18681	0.00000	325.77	-18.87	0.00	2.80	17	54	-9.9	7.9	3465	0.8	Moon	Vesta
202.	-10	-13	1649/01/16 03:05:34	0.00554	1.17751	0.00000	338.18	-14.64	0.00	3.09	201	38	-9.1	8.0	3621	1.0	Moon	Vesta
203.	-10	-13	1649/02/13 12:52:15	0.02629	1.16523	0.00000	350.54	-9.52	0.00	3.30	24	23	-8.0	8.1	3654	1.0	Moon	Vesta
204.	-10	-13	1649/03/13 22:09:45	0.37603	1.15378	0.00000	2.64	-3.92	0.00	3.43	26	9	-5.9	8.2	3487	0.7	Moon	Vesta
205.	-10	-13	1654/04/22 15:09:41	0.12139	1.24652	0.00000	110.11	25.78	0.00	2.47	348	76	7.7	3372	0.9	Moon	Vesta	
206.	-10	-13	1655/11/03 09:06:00	0.16042	1.15475	0.00000	280.36	-25.00	0.00	2.59	9	58	-9.9	7.6	3673	1.0	Moon	Vesta
207.	-10	-13	1657/07/10 15:32:01	0.19530	1.22498	0.00000	99.84	22.33	0.00	3.53	171	-10	-6.2	8.4	3411	0.8	Moon	Vesta
208.	-10	-13	1659/01/20 12:29:06	0.20251	1.28109	0.00000	267.94	-21.12	0.00	2.92	184	-32	-9.0	7.7	3281	0.8	Moon	Vesta
209.	-10	-13	1662/08/20 11:26:31	0.19529	1.14852	0.00000	220.21	-11.30	0.00	2.20	346	74	7.2	3671	1.0	Moon	Vesta	
210.	-10	-13	1664/03/01 20:06:38	0.15520	1.21988	0.00000	27.26	6.11	0.00	3.14	19	46	-9.6	8.2	3445	0.9	Moon	Vesta
211.	-10	-13	1664/09/15 02:26:30	0.41953	1.26648	0.00000	110.92	20.12	0.00	2.84	177	-64	8.1	3147	0.5	Moon	Vesta	

212.	-10	-13	1664/10/12 23:12:58	0.06146	1.25638	0.00000	120.21	19.57	0.00	2.47	173	-83	7.8	3344	0.9	Moon	Vesta	
213.	-10	-13	1664/11/09 14:42:34	0.08164	1.25728	0.00000	126.58	19.03	0.00	2.10	171	-104	7.4	3309	0.8	Moon	Vesta	
214.	-10	-13	1665/09/10 02:33:50	0.26427	1.29816	0.00000	179.68	5.18	0.00	3.23	159	11	-6.6	7.9	3203	0.7	Moon	Vesta
215.	-10	-13	1665/10/08 12:32:52	0.02704	1.29057	0.00000	193.15	-0.26	0.00	3.22	338	-6	-5.3	7.9	3291	0.8	Moon	Vesta
216.	-10	-13	1665/11/05 22:36:36	0.01770	1.27330	0.00000	206.85	-5.78	0.00	3.13	158	-18	-7.7	7.8	3339	0.8	Moon	Vesta
217.	-10	-13	1665/12/04 07:48:11	0.41770	1.25064	0.00000	220.77	-10.97	0.00	2.97	160	-31	-8.8	7.7	3209	0.5	Moon	Vesta
218.	-10	-13	1666/07/14 09:37:18	0.11822	1.22743	0.00000	269.16	-22.90	0.00	1.21	175	157	5.8	3281	0.8	Moon	Vesta	
219.	-10	-13	1666/12/28 15:51:58	0.05162	1.21359	0.00000	318.16	-20.29	0.00	3.03	14	37	-9.1	7.9	3509	0.9	Moon	Vesta
220.	-10	-13	1667/01/26 02:31:56	0.34661	1.19864	0.00000	331.98	-16.42	0.00	3.23	198	22	-8.0	8.0	3400	0.7	Moon	Vesta
221.	-10	-13	1667/02/23 12:47:16	0.44401	1.18105	0.00000	345.31	-11.62	0.00	3.35	202	9	-5.9	8.1	3338	0.5	Moon	Vesta
222.	-10	-13	1667/03/23 21:59:53	0.23492	1.16514	0.00000	357.99	-6.31	0.00	3.39	204	-9	-6.0	8.2	3577	0.9	Moon	Vesta
223.	-10	-13	1667/04/21 06:03:26	0.28444	1.15395	0.00000	10.03	-0.88	0.00	3.33	25	-22	-7.9	8.2	3577	0.9	Moon	Vesta
224.	-10	-13	1668/11/27 11:22:03	0.36493	1.17375	0.00000	166.80	10.89	0.00	2.32	335	-83	7.6	3434	0.7	Moon	Vesta	
225.	-10	-13	1672/06/27 01:06:26	0.04117	1.27694	0.00000	126.71	22.16	0.00	3.27	342	28	-8.6	8.1	3317	0.8	Moon	Vesta
226.	-10	-13	1677/03/26 20:42:32	0.04451	1.25373	0.00000	286.05	-19.44	0.00	2.06	11	-81	7.1	3377	0.9	Moon	Vesta	
227.	-10	-13	1679/02/17 13:51:26	0.35753	1.22192	0.00000	56.87	17.46	0.00	2.38	8	89	7.7	3288	0.6	Moon	Vesta	
228.	-10	-13	1680/09/26 11:52:56	0.23328	1.14726	0.00000	223.83	-12.84	0.00	2.80	347	41	-9.2	7.6	3663	0.9	Moon	Vesta
229.	-10	-13	1682/04/09 04:04:46	0.03374	1.22433	0.00000	33.79	8.74	0.00	3.50	17	16	-7.3	8.4	3456	0.9	Moon	Vesta
230.	-10	-13	1682/10/22 19:02:58	0.24755	1.24777	0.00000	108.82	19.55	0.00	2.16	177	-102	7.5	3275	0.8	Moon	Vesta	
231.	-10	-13	1682/11/19 03:48:38	0.47844	1.25636	0.00000	110.78	19.68	0.00	1.82	176	-127	7.1	3021	0.2	Moon	Vesta	
232.	-10	-13	1683/10/18 17:49:23	0.37978	1.29462	0.00000	187.33	1.76	0.00	3.18	159	-20	-7.9	7.9	3136	0.5	Moon	Vesta
233.	-10	-13	1683/11/16 02:21:26	0.29918	1.27851	0.00000	200.61	-3.30	0.00	2.99	159	-34	-9.1	7.8	3233	0.7	Moon	Vesta
234.	-10	-13	1685/01/06 17:32:16	0.21469	1.23905	0.00000	311.48	-20.83	0.00	3.17	11	21	-8.0	7.9	3383	0.8	Moon	Vesta
235.	-10	-13	1685/02/04 04:29:40	0.28622	1.21960	0.00000	326.21	-17.50	0.00	3.28	196	7	-5.7	8.0	3389	0.8	Moon	Vesta
236.	-10	-13	1685/04/01 22:43:00	0.49237	1.17939	0.00000	353.17	-8.30	0.00	3.25	202	-23	-8.0	8.1	3280	0.2	Moon	Vesta
237.	-10	-13	1685/04/30 05:36:16	0.10410	1.16628	0.00000	5.24	-3.29	0.00	3.12	204	-37	-9.0	8.0	3639	1.0	Moon	Vesta
238.	-10	-13	1687/01/03 08:52:09	0.47317	1.14748	0.00000	157.60	14.92	0.00	1.67	158	-129	6.8	3263	0.3	Moon	Vesta	
239.	-10	-13	1688/07/15 01:02:20	0.08905	1.25315	0.00000	319.34	-20.86	0.00	1.27	19	-157	5.9	3217	0.8	Moon	Vesta	
240.	-10	-13	1693/10/22 04:53:19	0.05272	1.18962	0.00000	119.89	19.60	0.00	2.31	343	-91	7.6	3534	1.0	Moon	Vesta	
241.	-10	-13	1695/07/23 07:59:16	0.19148	1.28026	0.00000	261.37	-22.60	0.00	1.29	182	141	6.0	3160	0.7	Moon	Vesta	
242.	-10	-13	1698/11/03 20:16:18	0.01444	1.14693	0.00000	231.71	-15.24	0.00	3.11	350	12	-6.5	7.7	3735	1.1	Moon	Vesta
243.	-10	-13	1700/05/17 15:25:16	0.28438	1.22582	0.00000	41.43	11.39	0.00	3.50	15	-15	-7.1	8.4	3360	0.8	Moon	Vesta
244.	-10	-13	1700/06/14 22:14:49	0.28694	1.24016	0.00000	53.55	14.21	0.00	3.39	193	-29	-8.6	8.3	3323	0.7	Moon	Vesta
245.	-10	-13	1700/09/07 06:29:03	0.35218	1.23848	0.00000	85.40	18.46	0.00	2.56	184	-79	7.9	3264	0.6	Moon	Vesta	
246.	-10	-13	1700/10/04 23:33:13	0.01479	1.23109	0.00000	91.92	18.86	0.00	2.20	2	-100	7.6	3393	0.9	Moon	Vesta	
247.	-10	-13	1700/11/01 08:41:08	0.21185	1.23181	0.00000	94.17	19.11	0.00	1.87	1	-125	7.1	3287	0.8	Moon	Vesta	
248.	-10	-13	1700/11/28 10:00:19	0.22309	1.24235	0.00000	90.98	19.20	0.00	1.63	182	-155	6.7	3198	0.8	Moon	Vesta	
249.	-10	-13	1703/02/15 07:17:10	0.03698	1.23842	0.00000	320.11	-18.16	0.00	3.24	13	-10	-6.3	7.9	3431	0.9	Moon	Vesta

250.	-10	-13	1703/03/15	16:04:45	0.33953	1.21526	0.00000	334.37	-14.44	0.00	3.17	197	-24	-8.2	7.9	3361	0.7	Moon	Vesta
251.	-10	-13	1703/04/12	22:58:27	0.43089	1.19604	0.00000	347.47	-10.15	0.00	3.03	201	-38	-9.1	7.9	3321	0.5	Moon	Vesta
252.	-10	-13	1703/05/11	04:00:10	0.14243	1.18350	0.00000	359.28	-5.72	0.00	2.82	202	-53	-9.7	7.9	3573	0.9	Moon	Vesta
253.	-10	-13	1705/01/11	23:01:34	0.24012	1.14521	0.00000	136.21	21.42	0.00	1.52	345	-159		6.5	3433	0.9	Moon	Vesta
254.	-10	-13	1705/06/25	23:28:37	0.24001	1.15064	0.00000	151.30	17.30	0.00	2.76	160	54	-9.7	7.8	3630	0.9	Moon	Vesta
255.	-10	-13	1705/07/24	08:13:36	0.23868	1.14580	0.00000	163.39	12.49	0.00	2.97	157	39	-9.1	7.9	3650	0.9	Moon	Vesta
256.	-10	-13	1707/01/07	07:52:53	0.01075	1.21555	0.00000	328.82	-17.61	0.00	3.04	22	39	-9.2	8.0	3499	0.9	Moon	Vesta
257.	-10	-13	1710/03/25	18:20:10	0.02721	1.15289	0.00000	318.80	-17.39	0.00	2.74	203	-49	-9.6	7.7	3713	1.0	Moon	Vesta
258.	-10	-13	1712/03/16	01:50:23	0.31974	1.15370	0.00000	93.54	25.10	0.00	2.15	174	98		7.4	3495	0.8	Moon	Vesta
259.	-10	-13	1720/08/09	21:43:33	0.21660	1.25215	0.00000	209.64	-6.57	0.00	2.23	341	73		7.3	3340	0.8	Moon	Vesta
260.	-10	-13	1721/03/24	17:31:58	0.08302	1.23096	0.00000	327.76	-15.47	0.00	2.93	15	-39	-9.3	7.8	3449	0.9	Moon	Vesta
261.	-10	-13	1721/04/21	22:25:32	0.06866	1.21429	0.00000	340.62	-11.88	0.00	2.71	198	-54	-9.9	7.7	3500	0.9	Moon	Vesta
262.	-10	-13	1721/05/20	00:51:47	0.21449	1.20554	0.00000	351.75	-8.22	0.00	2.45	21	-70		7.6	3469	0.9	Moon	Vesta
263.	-10	-13	1722/02/19	11:27:14	0.32626	1.23609	0.00000	19.20	2.65	0.00	3.08	23	49	-9.7	8.2	3312	0.7	Moon	Vesta
264.	-10	-13	1722/03/19	18:08:47	0.09581	1.22897	0.00000	29.99	7.30	0.00	3.34	22	32	-8.8	8.3	3440	0.9	Moon	Vesta
265.	-10	-13	1722/04/17	01:28:42	0.21095	1.21423	0.00000	41.48	11.86	0.00	3.51	21	17	-7.4	8.4	3436	0.8	Moon	Vesta
266.	-10	-13	1723/01/20	09:55:11	0.13250	1.16208	0.00000	110.77	24.37	0.00	1.52	356	169		6.5	3425	0.9	Moon	Vesta
267.	-10	-13	1723/06/07	11:26:11	0.05152	1.17053	0.00000	131.86	22.36	0.00	2.86	348	52	-9.7	7.9	3635	1.0	Moon	Vesta
268.	-10	-13	1723/07/05	19:27:43	0.41310	1.16163	0.00000	144.41	19.23	0.00	3.07	343	38	-9.0	8.0	3431	0.6	Moon	Vesta
269.	-10	-13	1723/08/31	15:07:14	0.28837	1.14511	0.00000	170.35	9.55	0.00	3.27	336	11	-6.3	8.0	3609	0.9	Moon	Vesta
270.	-10	-13	1723/09/29	02:00:13	0.24504	1.14281	0.00000	183.34	3.55	0.00	3.26	154	-6	-5.0	7.9	3653	0.9	Moon	Vesta
271.	-10	-13	1725/03/14	03:00:35	0.37324	1.24241	0.00000	349.32	-8.99	0.00	3.35	26	-8	-5.8	8.1	3258	0.6	Moon	Vesta
272.	-10	-13	1726/11/17	07:54:05	0.45724	1.24972	0.00000	157.24	12.71	0.00	2.40	154	-81		7.6	3140	0.4	Moon	Vesta
273.	-10	-13	1730/05/20	22:11:46	0.34720	1.14557	0.00000	104.50	24.12	0.00	3.11	169	44	-9.3	8.1	3542	0.8	Moon	Vesta
274.	-10	-13	1733/07/09	18:41:03	0.02865	1.26383	0.00000	85.73	21.20	0.00	3.49	357	-22	-8.0	8.4	3342	0.9	Moon	Vesta
275.	-10	-13	1735/02/16	21:01:23	0.42706	1.14927	0.00000	261.96	-19.06	0.00	2.37	180	-65		7.4	3466	0.5	Moon	Vesta
276.	-10	-13	1735/03/17	04:22:25	0.45176	1.14999	0.00000	274.36	-18.53	0.00	2.05	4	-82		7.1	3415	0.4	Moon	Vesta
277.	-10	-13	1739/05/01	20:37:03	0.49703	1.23297	0.00000	332.29	-13.52	0.00	2.34	16	-72		7.4	3151	0.1	Moon	Vesta
278.	-10	-13	1740/02/29	15:26:40	0.24425	1.26190	0.00000	14.09	0.53	0.00	3.28	22	33	-9.0	8.2	3297	0.8	Moon	Vesta
279.	-10	-13	1740/03/28	22:57:55	0.08325	1.25149	0.00000	25.60	5.28	0.00	3.46	202	17	-7.6	8.3	3376	0.9	Moon	Vesta
280.	-10	-13	1740/04/26	06:11:53	0.08783	1.23360	0.00000	37.41	9.85	0.00	3.54	200	5	-4.8	8.4	3422	0.9	Moon	Vesta
281.	-10	-13	1740/05/24	12:21:43	0.17697	1.21309	0.00000	49.41	13.93	0.00	3.53	18	-14	-6.9	8.4	3452	0.9	Moon	Vesta
282.	-10	-13	1741/05/19	03:33:09	0.49415	1.20029	0.00000	112.61	24.08	0.00	2.92	176	52	-9.8	8.0	3226	0.1	Moon	Vesta
283.	-10	-13	1741/06/16	10:29:05	0.09278	1.19090	0.00000	125.26	22.77	0.00	3.15	351	37	-9.0	8.1	3560	1.0	Moon	Vesta
284.	-10	-13	1741/10/07	23:36:46	0.38487	1.14539	0.00000	178.16	6.25	0.00	3.22	336	-19	-7.6	8.0	3513	0.7	Moon	Vesta
285.	-10	-13	1741/11/05	09:59:42	0.34276	1.14395	0.00000	190.86	0.51	0.00	3.04	155	-34	-8.8	7.9	3570	0.8	Moon	Vesta
286.	-10	-13	1743/04/21	15:44:43	0.28151	1.23420	0.00000	356.71	-6.09	0.00	3.08	27	-37	-9.1	8.0	3355	0.7	Moon	Vesta
287.	-10	-13	1744/12/23	13:49:45	0.12082	1.27182	0.00000	149.45	16.69	0.00	1.74	157	-126		6.9	3221	0.8	Moon	Vesta

288.	-10	-13	1748/06/27 04:05:10	0.41443	1.14363	0.00000	112.23	23.50	0.00	3.46	346	15	-7.0	8.3	3466	0.6	Moon	Vesta
289.	-10	-13	1750/01/08 01:44:18	0.16274	1.25193	0.00000	284.61	-22.50	0.00	3.16	11	-4	-4.6	7.8	3370	0.8	Moon	Vesta
290.	-10	-13	1751/09/14 01:12:27	0.38247	1.24091	0.00000	102.91	20.02	0.00	2.75	171	-69		8.0	3235	0.6	Moon	Vesta
291.	-10	-13	1753/07/11 19:53:14	0.32537	1.17333	0.00000	248.26	-18.94	0.00	1.28	176	140		5.9	3345	0.7	Moon	Vesta
292.	-10	-13	1756/09/26 02:50:33	0.34406	1.24937	0.00000	206.57	-6.41	0.00	3.05	162	24	-8.2	7.8	3275	0.6	Moon	Vesta
293.	-10	-13	1758/04/08 04:53:15	0.09093	1.26964	0.00000	21.13	3.57	0.00	3.49	21	6	-5.1	8.3	3325	0.8	Moon	Vesta
294.	-10	-13	1758/05/06 11:35:37	0.05687	1.25011	0.00000	33.12	8.04	0.00	3.49	200	-13	-6.9	8.3	3381	0.9	Moon	Vesta
295.	-10	-13	1758/06/03 16:37:45	0.08637	1.22897	0.00000	44.96	12.02	0.00	3.39	18	-27	-8.4	8.3	3436	0.9	Moon	Vesta
296.	-10	-13	1759/01/10 06:40:44	0.20743	1.21960	0.00000	71.83	19.50	0.00	1.70	11	143		6.9	3282	0.8	Moon	Vesta
297.	-10	-13	1759/06/26 11:58:03	0.21603	1.21312	0.00000	119.23	22.60	0.00	3.37	174	23	-8.0	8.2	3441	0.8	Moon	Vesta
298.	-10	-13	1759/07/24 19:57:16	0.30733	1.19585	0.00000	132.81	20.62	0.00	3.43	349	9	-5.9	8.2	3430	0.8	Moon	Vesta
299.	-10	-13	1759/11/15 04:17:56	0.07125	1.14934	0.00000	184.18	3.82	0.00	2.83	336	-51	-9.7	7.8	3715	1.0	Moon	Vesta
300.	-10	-13	1763/02/24 20:44:41	0.37544	1.26616	0.00000	115.95	26.54	0.00	1.63	350	136		6.7	3083	0.5	Moon	Vesta
301.	-10	-13	1763/03/24 05:58:53	0.25629	1.24593	0.00000	116.09	26.65	0.00	1.90	350	110		7.1	3267	0.7	Moon	Vesta
302.	-10	-13	1763/04/20 21:36:25	0.25422	1.23501	0.00000	121.66	25.67	0.00	2.21	347	88		7.5	3334	0.8	Moon	Vesta
303.	-10	-13	1763/05/18 18:02:27	0.07552	1.23649	0.00000	130.72	23.43	0.00	2.53	344	70		7.7	3415	0.9	Moon	Vesta
304.	-10	-13	1763/06/15 18:09:57	0.38591	1.24805	0.00000	141.62	19.86	0.00	2.80	159	54	-9.9	7.8	3230	0.6	Moon	Vesta
305.	-10	-13	1764/11/27 12:42:01	0.08528	1.24992	0.00000	304.64	-23.71	0.00	2.69	196	56		7.7	3401	0.9	Moon	Vesta
306.	-10	-13	1770/01/10 02:41:28	0.26674	1.29534	0.00000	87.02	22.29	0.00	1.61	356	157		6.7	3057	0.7	Moon	Vesta
307.	-10	-13	1774/12/02 04:11:26	0.37334	1.27304	0.00000	229.68	-13.37	0.00	3.07	347	-20	-7.9	7.7	3199	0.6	Moon	Vesta
308.	-10	-13	1776/05/15 17:43:17	0.32402	1.26205	0.00000	28.74	6.51	0.00	3.35	20	-27	-8.5	8.2	3241	0.7	Moon	Vesta
309.	-10	-13	1776/06/12 21:13:41	0.36891	1.24224	0.00000	40.21	10.27	0.00	3.18	18	-42	-9.4	8.2	3254	0.6	Moon	Vesta
310.	-10	-13	1777/01/18 14:55:23	0.40263	1.23973	0.00000	55.25	14.89	0.00	1.96	196	117		7.3	3152	0.5	Moon	Vesta
311.	-10	-13	1777/08/02 22:59:46	0.15882	1.21422	0.00000	127.51	20.57	0.00	3.48	171	-6	-5.3	8.3	3460	0.9	Moon	Vesta
312.	-10	-13	1777/08/31 05:38:07	0.30324	1.19450	0.00000	140.85	18.07	0.00	3.37	346	-21	-7.8	8.2	3438	0.8	Moon	Vesta
313.	-10	-13	1778/08/27 00:51:58	0.37458	1.17366	0.00000	210.57	-7.98	0.00	2.52	157	58	-9.9	7.5	3459	0.7	Moon	Vesta
314.	-10	-13	1778/09/24 12:18:19	0.34408	1.16424	0.00000	223.55	-13.33	0.00	2.76	159	44	-9.3	7.6	3519	0.7	Moon	Vesta
315.	-10	-13	1781/08/20 09:16:26	0.44698	1.27702	0.00000	160.95	12.23	0.00	3.31	154	11	-6.5	8.0	3110	0.4	Moon	Vesta
316.	-10	-13	1783/02/02 11:07:15	0.42944	1.25849	0.00000	325.94	-16.87	0.00	3.27	24	10	-6.3	8.0	3172	0.4	Moon	Vesta
317.	-10	-13	1784/10/08 22:02:39	0.18008	1.14739	0.00000	138.93	17.18	0.00	2.83	157	-60		8.0	3665	1.0	Moon	Vesta
318.	-10	-13	1789/10/21 15:36:57	0.11391	1.24118	0.00000	247.24	-20.05	0.00	2.83	356	40	-9.3	7.6	3426	0.9	Moon	Vesta
319.	-10	-13	1791/06/01 10:18:36	0.36670	1.14446	0.00000	64.57	17.73	0.00	3.58	186	-6	-5.1	8.4	3515	0.7	Moon	Vesta
320.	-10	-13	1793/02/06 00:26:14	0.26271	1.25003	0.00000	250.44	-16.98	0.00	2.36	173	-67		7.4	3334	0.8	Moon	Vesta
321.	-10	-13	1793/03/06 03:27:04	0.35453	1.24409	0.00000	262.48	-18.03	0.00	2.04	176	-83		7.1	3269	0.6	Moon	Vesta
322.	-10	-13	1793/05/27 18:59:53	0.02469	1.26254	0.00000	275.51	-18.79	0.00	1.21	0	-151		5.8	3215	0.8	Moon	Vesta
323.	-10	-13	1795/01/28 07:19:36	0.43870	1.25183	0.00000	43.08	11.01	0.00	2.28	197	96		7.6	3130	0.4	Moon	Vesta
324.	-10	-13	1795/09/10 07:46:23	0.23951	1.21107	0.00000	135.09	18.32	0.00	3.24	169	-35	-9.0	8.2	3433	0.8	Moon	Vesta
325.	-10	-13	1795/10/08 11:09:16	0.09366	1.19614	0.00000	147.15	15.76	0.00	2.96	345	-51	-9.7	8.0	3542	0.9	Moon	Vesta

326.	-10	-13	1795/11/05 13:03:19	0.10508	1.18881	0.00000	157.97	12.88	0.00	2.62	342	-68	7.8	3561	1.0	Moon	Vesta
327.	-10	-13	1795/12/03 12:46:01	0.43366	1.18971	0.00000	166.87	10.14	0.00	2.25	160	-88	7.5	3311	0.5	Moon	Vesta
328.	-10	-13	1796/08/07 09:36:17	0.45530	1.20876	0.00000	190.55	1.10	0.00	2.63	157	54 -9.8	7.6	3273	0.4	Moon	Vesta
329.	-10	-13	1796/09/04 19:58:16	0.05184	1.19816	0.00000	203.05	-4.37	0.00	2.84	337	40 -9.2	7.7	3565	1.0	Moon	Vesta
330.	-10	-13	1796/10/03 08:07:42	0.12300	1.18338	0.00000	216.56	-10.00	0.00	3.01	339	27 -8.4	7.7	3594	1.0	Moon	Vesta
331.	-10	-13	1796/10/31 21:07:30	0.16243	1.16759	0.00000	231.08	-15.24	0.00	3.11	162	14 -6.9	7.7	3629	1.0	Moon	Vesta
332.	-10	-13	1799/09/27 23:16:55	0.13357	1.27687	0.00000	168.62	9.31	0.00	3.27	153	-19 -7.8	8.0	3306	0.8	Moon	Vesta
333.	-10	-13	1801/03/13 00:29:46	0.04268	1.25254	0.00000	334.14	-14.21	0.00	3.18	205	-22 -8.0	7.9	3388	0.9	Moon	Vesta
334.	-10	-13	1804/07/21 17:27:50	0.46273	1.17981	0.00000	288.51	-24.02	0.00	1.20	13	168	5.7	3133	0.4	Moon	Vesta
335.	-10	-13	1806/05/20 15:14:18	0.04031	1.26730	0.00000	89.67	23.35	0.00	3.35	355	31 -8.8	8.3	3333	0.9	Moon	Vesta
336.	-10	-13	1807/11/30 04:58:54	0.42779	1.25195	0.00000	255.57	-21.33	0.00	3.12	180	10 -6.3	7.7	3197	0.5	Moon	Vesta
337.	-10	-13	1809/07/09 16:49:23	0.28161	1.14522	0.00000	72.24	18.99	0.00	3.35	3	-34 -8.8	8.3	3599	0.9	Moon	Vesta
338.	-10	-13	1813/02/07 05:39:20	0.00090	1.25697	0.00000	34.05	8.25	0.00	2.61	18	77	7.9	3351	0.9	Moon	Vesta
339.	-10	-13	1814/08/18 08:18:59	0.47847	1.23777	0.00000	183.40	3.85	0.00	2.94	158	37 -9.1	7.8	3176	0.3	Moon	Vesta
340.	-10	-13	1814/09/15 19:03:27	0.09689	1.22366	0.00000	196.52	-1.57	0.00	3.08	338	24 -8.2	7.8	3473	0.9	Moon	Vesta
341.	-10	-13	1814/10/14 06:52:58	0.29989	1.20462	0.00000	210.28	-7.16	0.00	3.15	339	11 -6.6	7.8	3430	0.8	Moon	Vesta
342.	-10	-13	1814/11/11 19:04:07	0.15525	1.18433	0.00000	224.73	-12.46	0.00	3.15	341	-5 -4.8	7.8	3575	0.9	Moon	Vesta
343.	-10	-13	1814/12/10 07:10:11	0.29358	1.16670	0.00000	239.84	-17.00	0.00	3.08	164	-17 -7.4	7.7	3550	0.8	Moon	Vesta
344.	-10	-13	1816/02/01 12:47:51	0.23103	1.14397	0.00000	349.17	-10.17	0.00	3.16	22	35 -8.9	8.1	3655	0.9	Moon	Vesta
345.	-10	-13	1816/02/29 21:32:18	0.21234	1.14423	0.00000	1.21	-4.87	0.00	3.35	24	20 -7.7	8.2	3660	1.0	Moon	Vesta
346.	-10	-13	1817/11/05 11:20:43	0.19865	1.25742	0.00000	175.11	6.86	0.00	2.87	153	-50 -9.8	7.9	3339	0.8	Moon	Vesta
347.	-10	-13	1819/04/20 09:29:36	0.21169	1.24330	0.00000	341.11	-11.84	0.00	2.75	206	-51 -9.8	7.7	3367	0.8	Moon	Vesta
348.	-10	-13	1821/04/09 11:08:01	0.05944	1.19695	0.00000	112.45	26.07	0.00	2.20	348	91	7.5	3513	0.9	Moon	Vesta
349.	-10	-13	1822/10/21 13:46:52	0.29950	1.15163	0.00000	280.45	-25.90	0.00	2.33	189	72	7.4	3587	0.8	Moon	Vesta
350.	-10	-13	1827/10/11 14:35:57	0.39320	1.14904	0.00000	91.99	19.05	0.00	2.12	356	-106	7.5	3414	0.6	Moon	Vesta
351.	-10	-13	1827/11/08 00:11:46	0.21860	1.14730	0.00000	92.91	18.98	0.00	1.80	356	-132	7.0	3501	0.9	Moon	Vesta
352.	-10	-13	1827/12/04 22:35:59	0.05433	1.14619	0.00000	88.39	19.29	0.00	1.61	177	-163	6.7	3496	1.0	Moon	Vesta
353.	-10	-13	1831/03/17 08:26:52	0.45150	1.27345	0.00000	37.25	9.63	0.00	3.21	196	42 -9.5	8.3	3104	0.4	Moon	Vesta
354.	-10	-13	1832/09/24 21:28:48	0.23539	1.24620	0.00000	190.80	0.47	0.00	3.22	159	9 -6.2	7.9	3352	0.8	Moon	Vesta
355.	-10	-13	1832/10/23 08:13:07	0.11663	1.22459	0.00000	204.55	-4.87	0.00	3.19	339	-7 -5.7	7.8	3461	0.9	Moon	Vesta
356.	-10	-13	1832/11/20 18:46:18	0.13335	1.20183	0.00000	218.69	-9.98	0.00	3.10	341	-20 -7.8	7.8	3528	0.9	Moon	Vesta
357.	-10	-13	1832/12/19 04:48:35	0.19471	1.18238	0.00000	233.15	-14.48	0.00	2.93	163	-33 -8.9	7.7	3568	0.9	Moon	Vesta
358.	-10	-13	1833/07/02 11:06:42	0.10668	1.16436	0.00000	286.49	-22.60	0.00	1.17	182	-175	5.6	3431	0.9	Moon	Vesta
359.	-10	-13	1834/01/13 00:00:44	0.47314	1.15490	0.00000	330.32	-16.47	0.00	3.09	17	34 -8.9	8.0	3374	0.3	Moon	Vesta
360.	-10	-13	1834/02/10 10:24:33	0.01754	1.14705	0.00000	343.55	-12.04	0.00	3.28	20	19 -7.6	8.1	3719	1.1	Moon	Vesta
361.	-10	-13	1834/03/10 20:16:32	0.12674	1.14295	0.00000	356.36	-6.96	0.00	3.39	203	6 -5.2	8.2	3707	1.0	Moon	Vesta
362.	-10	-13	1834/04/08 05:30:42	0.03862	1.14394	0.00000	8.70	-1.64	0.00	3.40	24	-12 -6.5	8.2	3722	1.1	Moon	Vesta
363.	-10	-13	1837/05/27 07:18:23	0.24025	1.24833	0.00000	342.82	-11.71	0.00	2.08	206	-86	7.2	3316	0.8	Moon	Vesta

364.	-10	-13	1840/12/26 01:28:00	0.31985	1.14697	0.00000	300.36	-22.41	0.00	3.11	17	24	-8.0	7.8	3583	0.8	Moon	Vesta
365.	-10	-13	1842/09/01 22:08:31	0.43842	1.27254	0.00000	118.73	20.19	0.00	3.19	164	-43	-9.5	8.2	3124	0.4	Moon	Vesta
366.	-10	-13	1844/03/13 08:16:49	0.28898	1.22438	0.00000	286.56	-20.26	0.00	2.33	191	-67		7.4	3381	0.8	Moon	Vesta
367.	-10	-13	1849/04/23 19:59:33	0.43804	1.28806	0.00000	44.12	12.01	0.00	3.53	194	12	-6.9	8.4	3086	0.4	Moon	Vesta
368.	-10	-13	1850/11/02 09:46:28	0.46792	1.24171	0.00000	198.22	-2.72	0.00	3.13	160	-22	-8.1	7.9	3172	0.3	Moon	Vesta
369.	-10	-13	1850/11/30 17:57:27	0.33093	1.21910	0.00000	211.75	-7.49	0.00	2.94	161	-36	-9.1	7.8	3365	0.7	Moon	Vesta
370.	-10	-13	1851/07/10 07:28:38	0.39655	1.20174	0.00000	251.25	-18.62	0.00	1.25	349	145		5.8	3200	0.6	Moon	Vesta
371.	-10	-13	1852/02/20 08:38:21	0.17762	1.15547	0.00000	337.80	-13.42	0.00	3.31	18	5	-4.8	8.0	3647	1.0	Moon	Vesta
372.	-10	-13	1852/03/19 18:46:41	0.10620	1.14672	0.00000	351.18	-8.72	0.00	3.32	201	-12	-6.5	8.1	3704	1.0	Moon	Vesta
373.	-10	-13	1852/04/17 04:00:27	0.08569	1.14352	0.00000	3.78	-3.75	0.00	3.25	203	-26	-8.2	8.1	3721	1.0	Moon	Vesta
374.	-10	-13	1852/05/15 12:16:40	0.28482	1.14500	0.00000	15.58	1.12	0.00	3.09	23	-40	-9.1	8.1	3609	0.9	Moon	Vesta
375.	-10	-13	1853/12/21 23:00:57	0.06157	1.18745	0.00000	164.50	12.31	0.00	1.92	337	-109		7.1	3511	1.0	Moon	Vesta
376.	-10	-13	1855/07/03 07:30:43	0.12886	1.27873	0.00000	331.34	-16.95	0.00	1.41	202	-133		6.2	3193	0.8	Moon	Vesta
377.	-10	-13	1857/08/19 09:19:42	0.12406	1.21458	0.00000	146.00	16.79	0.00	3.42	156	-4	-4.5	8.2	3474	0.9	Moon	Vesta
378.	-10	-13	1859/02/02 10:38:21	0.31590	1.14687	0.00000	309.51	-20.62	0.00	3.20	200	-7	-5.4	7.9	3584	0.8	Moon	Vesta
379.	-10	-13	1864/04/10 10:29:56	0.27098	1.20262	0.00000	68.69	20.08	0.00	3.10	183	49	-9.7	8.2	3436	0.8	Moon	Vesta
380.	-10	-13	1867/06/01 10:12:47	0.12916	1.28774	0.00000	52.05	14.26	0.00	3.50	192	-17	-7.6	8.4	3268	0.8	Moon	Vesta
381.	-10	-13	1869/07/18 00:43:54	0.27750	1.23314	0.00000	227.04	-12.22	0.00	1.55	344	113		6.5	3296	0.7	Moon	Vesta
382.	-10	-13	1870/03/29 17:35:02	0.22136	1.15538	0.00000	345.79	-10.09	0.00	3.17	19	-26	-8.2	8.0	3627	0.9	Moon	Vesta
383.	-10	-13	1870/05/25 08:47:30	0.44115	1.14774	0.00000	9.77	-1.25	0.00	2.79	22	-55	-9.8	7.9	3433	0.5	Moon	Vesta
384.	-10	-13	1871/02/24 16:52:45	0.16692	1.15786	0.00000	35.06	9.22	0.00	2.91	21	60		8.1	3634	1.0	Moon	Vesta
385.	-10	-13	1871/03/24 22:29:23	0.01943	1.15262	0.00000	45.28	13.21	0.00	3.21	20	43	-9.3	8.3	3690	1.0	Moon	Vesta
386.	-10	-13	1871/04/22 05:04:45	0.21923	1.14682	0.00000	56.70	17.00	0.00	3.43	17	27	-8.3	8.4	3638	0.9	Moon	Vesta
387.	-10	-13	1871/12/31 00:33:52	0.35250	1.15921	0.00000	147.82	17.96	0.00	1.67	342	-135		6.8	3361	0.7	Moon	Vesta
388.	-10	-13	1872/07/10 09:22:46	0.49113	1.15623	0.00000	162.49	13.03	0.00	2.78	158	51	-9.6	7.8	3346	0.2	Moon	Vesta
389.	-10	-13	1872/08/07 16:48:02	0.41713	1.16316	0.00000	174.54	7.75	0.00	2.98	156	37	-9.0	7.8	3430	0.6	Moon	Vesta
390.	-10	-13	1873/08/07 01:36:57	0.23665	1.27819	0.00000	296.02	-25.84	0.00	1.25	188	158		5.9	3117	0.7	Moon	Vesta
391.	-10	-13	1873/10/28 17:03:49	0.17455	1.23842	0.00000	305.07	-24.83	0.00	2.14	12	86		7.3	3380	0.8	Moon	Vesta
392.	-10	-13	1873/11/25 16:08:27	0.03592	1.24170	0.00000	315.83	-22.30	0.00	2.50	196	68		7.6	3416	0.9	Moon	Vesta
393.	-10	-13	1873/12/23 18:11:01	0.06017	1.25573	0.00000	327.74	-18.40	0.00	2.83	21	52	-9.9	7.9	3377	0.9	Moon	Vesta
394.	-10	-13	1874/01/20 22:54:52	0.49550	1.27536	0.00000	339.95	-13.36	0.00	3.10	24	36	-9.2	8.0	3065	0.1	Moon	Vesta
395.	-10	-13	1875/09/26 19:03:00	0.21228	1.21094	0.00000	153.79	14.33	0.00	3.21	335	-33	-8.8	8.1	3451	0.8	Moon	Vesta
396.	-10	-13	1879/02/04 07:30:50	0.28178	1.21007	0.00000	101.32	25.19	0.00	1.63	351	145		6.7	3262	0.7	Moon	Vesta
397.	-10	-13	1879/03/03 14:30:20	0.48619	1.19900	0.00000	99.70	25.33	0.00	1.89	171	116		7.1	3159	0.2	Moon	Vesta
398.	-10	-13	1882/05/18 19:47:52	0.21007	1.21401	0.00000	75.67	21.25	0.00	3.50	0	19	-7.6	8.4	3435	0.8	Moon	Vesta
399.	-10	-13	1883/12/27 15:50:10	0.34939	1.15879	0.00000	253.42	-19.03	0.00	3.04	357	-22	-7.9	7.7	3524	0.7	Moon	Vesta
400.	-10	-13	1885/08/05 23:40:17	0.22010	1.26216	0.00000	69.65	17.12	0.00	2.84	7	-63		8.1	3297	0.8	Moon	Vesta
401.	-10	-13	1885/09/02 21:01:43	0.14427	1.25246	0.00000	78.59	17.78	0.00	2.51	4	-81		7.8	3336	0.8	Moon	Vesta

402.	-10	-13	1885/09/30	12:23:51	0.33232	1.24842	0.00000	84.61	18.08	0.00	2.16	2	-102	7.5	3217	0.6	Moon	Vesta	
403.	-10	-13	1885/11/23	22:26:47	0.40940	1.27382	0.00000	82.33	18.22	0.00	1.63	3	-158	6.7	3003	0.5	Moon	Vesta	
404.	-10	-13	1889/03/05	14:31:28	0.12599	1.17397	0.00000	29.25	6.62	0.00	3.16	201	45	-9.4	8.2	3601	1.0	Moon	Vesta
405.	-10	-13	1889/04/02	21:49:15	0.34131	1.16399	0.00000	40.37	10.91	0.00	3.39	200	28	-8.5	8.3	3490	0.7	Moon	Vesta
406.	-10	-13	1889/05/01	05:10:24	0.23470	1.15378	0.00000	52.23	14.90	0.00	3.54	197	13	-6.8	8.4	3604	0.9	Moon	Vesta
407.	-10	-13	1889/05/29	12:11:14	0.10698	1.14653	0.00000	64.60	18.26	0.00	3.58	14	-4	-4.1	8.4	3688	1.0	Moon	Vesta
408.	-10	-13	1890/01/07	15:03:19	0.02963	1.14396	0.00000	125.28	22.16	0.00	1.54	171	-165	6.5	3505	1.0	Moon	Vesta	
409.	-10	-13	1890/06/21	21:29:41	0.41495	1.14602	0.00000	143.37	19.12	0.00	2.89	164	49	-9.5	7.9	3472	0.6	Moon	Vesta
410.	-10	-13	1890/07/20	05:08:44	0.03399	1.14629	0.00000	155.79	15.27	0.00	3.09	341	35	-8.8	8.0	3724	1.1	Moon	Vesta
411.	-10	-13	1890/08/17	13:56:56	0.18808	1.15110	0.00000	168.56	10.37	0.00	3.21	338	21	-7.8	8.0	3659	1.0	Moon	Vesta
412.	-10	-13	1890/09/14	23:43:28	0.02482	1.16156	0.00000	181.49	4.71	0.00	3.26	335	9	-5.9	7.9	3673	1.0	Moon	Vesta
413.	-10	-13	1890/10/13	10:31:02	0.46199	1.17712	0.00000	194.58	-1.36	0.00	3.23	155	-8	-5.6	7.9	3333	0.4	Moon	Vesta
414.	-10	-13	1892/02/28	12:11:33	0.09117	1.28835	0.00000	347.34	-10.40	0.00	3.34	205	7	-5.6	8.1	3283	0.8	Moon	Vesta
415.	-10	-13	1893/11/02	21:27:37	0.42155	1.21512	0.00000	158.38	13.05	0.00	2.68	334	-65	7.9	3273	0.5	Moon	Vesta	
416.	-10	-13	1897/05/06	23:35:02	0.27361	1.16609	0.00000	104.18	25.10	0.00	2.90	350	56	-9.8	8.0	3544	0.8	Moon	Vesta
417.	-10	-13	1898/11/16	19:11:13	0.14657	1.27752	0.00000	272.66	-24.05	0.00	2.88	186	38	-9.3	7.7	3309	0.8	Moon	Vesta
418.	-10	-13	1904/01/27	12:17:30	0.33837	1.22201	0.00000	54.72	15.07	0.00	2.07	190	110	7.4	3271	0.7	Moon	Vesta	
419.	-10	-13	1905/09/03	08:02:52	0.20154	1.27497	0.00000	211.78	-7.91	0.00	2.62	343	52	-9.9	7.5	3297	0.8	Moon	Vesta
420.	-10	-13	1907/03/16	15:21:20	0.05721	1.19381	0.00000	24.28	4.68	0.00	3.34	201	29	-8.6	8.3	3553	1.0	Moon	Vesta
421.	-10	-13	1907/04/13	23:13:03	0.40041	1.17902	0.00000	35.98	9.07	0.00	3.50	200	15	-7.0	8.4	3385	0.6	Moon	Vesta
422.	-10	-13	1907/05/12	06:28:39	0.43638	1.16467	0.00000	48.03	13.08	0.00	3.56	198	-5	-4.6	8.4	3378	0.5	Moon	Vesta
423.	-10	-13	1907/06/09	12:58:22	0.21493	1.15391	0.00000	60.29	16.46	0.00	3.52	195	-17	-7.2	8.4	3616	0.9	Moon	Vesta
424.	-10	-13	1907/07/07	18:45:28	0.22777	1.14807	0.00000	72.52	19.06	0.00	3.39	11	-31	-8.6	8.3	3629	0.9	Moon	Vesta
425.	-10	-13	1908/07/01	18:09:15	0.44410	1.14677	0.00000	136.79	19.96	0.00	3.17	167	34	-8.8	8.1	3428	0.5	Moon	Vesta
426.	-10	-13	1908/07/30	02:43:17	0.07411	1.14342	0.00000	149.90	16.60	0.00	3.29	343	20	-7.6	8.1	3722	1.0	Moon	Vesta
427.	-10	-13	1908/08/27	12:04:13	0.35960	1.14452	0.00000	163.07	12.21	0.00	3.34	340	8	-5.5	8.1	3539	0.7	Moon	Vesta
428.	-10	-13	1908/09/24	22:11:54	0.36268	1.15092	0.00000	176.17	7.06	0.00	3.30	337	-9	-5.9	8.0	3519	0.7	Moon	Vesta
429.	-10	-13	1908/10/23	09:08:53	0.03449	1.16181	0.00000	189.17	1.47	0.00	3.17	336	-22	-7.9	7.9	3674	1.0	Moon	Vesta
430.	-10	-13	1910/04/08	03:41:04	0.25491	1.28357	0.00000	355.35	-7.15	0.00	3.22	206	-25	-8.4	8.0	3241	0.7	Moon	Vesta
431.	-10	-13	1911/12/11	11:42:06	0.44022	1.24574	0.00000	156.05	14.63	0.00	2.00	336	-106	7.3	3135	0.4	Moon	Vesta	
432.	-10	-13	1913/06/22	18:41:36	0.47075	1.15726	0.00000	320.99	-18.72	0.00	1.38	202	-133	6.2	3237	0.3	Moon	Vesta	
433.	-10	-13	1915/07/13	09:30:30	0.48687	1.17144	0.00000	123.81	21.32	0.00	3.46	162	12	-6.5	8.3	3297	0.2	Moon	Vesta
434.	-10	-13	1918/08/31	15:59:08	0.07160	1.19844	0.00000	103.43	20.86	0.00	3.01	350	-55	-9.9	8.2	3530	0.9	Moon	Vesta
435.	-10	-13	1920/06/30	01:10:18	0.14461	1.14264	0.00000	263.22	-20.07	0.00	1.16	2	165	5.6	3487	1.0	Moon	Vesta	
436.	-10	-13	1922/03/05	00:42:44	0.29520	1.18462	0.00000	51.10	14.90	0.00	2.75	190	69	8.0	3464	0.8	Moon	Vesta	
437.	-10	-13	1923/10/11	19:11:40	0.29792	1.29547	0.00000	218.37	-10.42	0.00	3.06	345	22	-8.1	7.7	3196	0.7	Moon	Vesta
438.	-10	-13	1925/03/25	17:51:30	0.37739	1.21482	0.00000	19.42	3.15	0.00	3.44	20	15	-7.2	8.3	3318	0.6	Moon	Vesta
439.	-10	-13	1925/04/23	01:35:56	0.11051	1.19598	0.00000	31.50	7.50	0.00	3.51	199	5	-4.7	8.3	3530	0.9	Moon	Vesta

440.	-10	-13	1925/05/21 08:12:25	0.30257	1.17850	0.00000	43.62	11.44	0.00	3.49	197	-16	-7.2	8.3	3480	0.8	Moon	Vesta
441.	-10	-13	1925/06/18 13:39:06	0.21384	1.16544	0.00000	55.63	14.76	0.00	3.37	195	-30	-8.6	8.3	3583	0.9	Moon	Vesta
442.	-10	-13	1925/07/16 17:57:12	0.14374	1.15798	0.00000	67.24	17.34	0.00	3.16	12	-46	-9.4	8.2	3643	1.0	Moon	Vesta
443.	-10	-13	1926/08/09 01:26:32	0.23735	1.14631	0.00000	144.39	17.32	0.00	3.42	165	6	-5.0	8.2	3635	0.9	Moon	Vesta
444.	-10	-13	1926/09/06 10:27:43	0.16587	1.14313	0.00000	157.65	13.52	0.00	3.37	342	-10	-6.0	8.1	3690	1.0	Moon	Vesta
445.	-10	-13	1926/10/04 20:01:04	0.32572	1.14494	0.00000	170.63	8.99	0.00	3.24	339	-24	-8.0	8.1	3575	0.8	Moon	Vesta
446.	-10	-13	1926/11/02 06:03:34	0.15174	1.15063	0.00000	183.22	4.07	0.00	3.03	337	-38	-9.1	7.9	3683	1.0	Moon	Vesta
447.	-10	-13	1926/11/30 16:03:11	0.46196	1.15758	0.00000	195.27	-0.92	0.00	2.75	157	-54	-9.8	7.8	3389	0.4	Moon	Vesta
448.	-10	-13	1927/09/03 00:45:23	0.17058	1.15555	0.00000	232.08	-16.22	0.00	2.20	162	74		7.2	3663	1.0	Moon	Vesta
449.	-10	-13	1927/10/01 08:31:21	0.16589	1.15733	0.00000	244.66	-20.05	0.00	2.50	165	59	-9.9	7.5	3669	1.0	Moon	Vesta
450.	-10	-13	1928/05/15 14:18:47	0.03669	1.26059	0.00000	1.33	-4.84	0.00	2.75	206	-55		7.8	3368	0.9	Moon	Vesta
451.	-10	-13	1931/11/15 06:28:32	0.18343	1.19566	0.00000	304.29	-24.44	0.00	2.44	195	69		7.5	3526	0.9	Moon	Vesta
452.	-10	-13	1933/08/19 18:13:47	0.11206	1.17142	0.00000	132.07	19.68	0.00	3.44	339	-17	-7.4	8.3	3609	1.0	Moon	Vesta
453.	-10	-13	1936/12/01 09:50:43	0.08084	1.25195	0.00000	107.33	20.50	0.00	1.70	348	-143		6.9	3246	0.8	Moon	Vesta
454.	-10	-13	1938/09/01 11:08:28	0.16121	1.16509	0.00000	243.74	-19.95	0.00	1.97	175	87		7.0	3616	1.0	Moon	Vesta
455.	-10	-13	1940/04/11 01:38:21	0.12359	1.17324	0.00000	55.41	16.37	0.00	3.32	189	36	-9.0	8.3	3598	1.0	Moon	Vesta
456.	-10	-13	1941/11/18 10:44:39	0.00544	1.30158	0.00000	226.51	-13.05	0.00	3.14	167	-9	-6.2	7.8	3268	0.8	Moon	Vesta
457.	-10	-13	1943/05/31 10:34:26	0.20400	1.19412	0.00000	39.02	10.04	0.00	3.33	17	-30	-8.6	8.3	3501	0.9	Moon	Vesta
458.	-10	-13	1943/06/28 14:21:46	0.19029	1.18072	0.00000	50.54	13.19	0.00	3.14	15	-45	-9.4	8.2	3550	0.9	Moon	Vesta
459.	-10	-13	1943/07/26 16:25:26	0.49607	1.17392	0.00000	61.22	15.65	0.00	2.88	13	-61		8.1	3278	0.1	Moon	Vesta
460.	-10	-13	1944/01/06 21:14:15	0.28112	1.18878	0.00000	64.00	16.59	0.00	1.74	192	140		6.9	3327	0.8	Moon	Vesta
461.	-10	-13	1944/09/15 08:27:28	0.31206	1.14706	0.00000	151.86	14.47	0.00	3.32	164	-24	-8.0	8.2	3575	0.8	Moon	Vesta
462.	-10	-13	1944/10/13 16:29:30	0.04899	1.14489	0.00000	164.41	10.67	0.00	3.10	161	-39	-9.1	8.0	3726	1.1	Moon	Vesta
463.	-10	-13	1944/11/11 00:24:23	0.12943	1.14628	0.00000	176.21	6.57	0.00	2.80	159	-54	-9.8	7.9	3705	1.0	Moon	Vesta
464.	-10	-13	1945/08/14 03:52:04	0.14844	1.14835	0.00000	210.27	-7.26	0.00	2.29	158	70		7.3	3698	1.0	Moon	Vesta
465.	-10	-13	1945/09/11 13:20:15	0.33943	1.14614	0.00000	222.35	-12.10	0.00	2.56	340	55	-9.8	7.5	3579	0.8	Moon	Vesta
466.	-10	-13	1945/10/10 00:27:49	0.31288	1.14594	0.00000	236.04	-16.79	0.00	2.80	343	42	-9.2	7.6	3606	0.8	Moon	Vesta
467.	-10	-13	1945/11/07 12:16:39	0.06582	1.15029	0.00000	251.11	-20.68	0.00	2.98	168	28	-8.4	7.7	3723	1.0	Moon	Vesta
468.	-10	-13	1948/08/06 16:13:23	0.00944	1.29619	0.00000	159.00	13.66	0.00	3.25	156	22	-8.1	8.0	3271	0.8	Moon	Vesta
469.	-10	-13	1950/01/20 00:35:35	0.18536	1.20205	0.00000	323.93	-18.39	0.00	3.18	202	21	-7.9	7.9	3502	0.9	Moon	Vesta
470.	-10	-13	1953/04/08 19:11:07	0.06401	1.25883	0.00000	311.66	-18.01	0.00	2.31	201	-69		7.4	3372	0.9	Moon	Vesta
471.	-10	-13	1958/05/19 08:47:02	0.21390	1.17243	0.00000	62.99	18.20	0.00	3.57	6	7	-5.4	8.4	3555	0.9	Moon	Vesta
472.	-10	-13	1960/01/24 10:04:11	0.05907	1.27434	0.00000	249.45	-17.13	0.00	2.61	353	-53		7.5	3339	0.8	Moon	Vesta
473.	-10	-13	1960/02/21 14:38:42	0.45466	1.26128	0.00000	263.08	-18.04	0.00	2.31	357	-68		7.3	3145	0.4	Moon	Vesta
474.	-10	-13	1962/01/15 04:00:20	0.06459	1.21566	0.00000	48.15	12.46	0.00	2.00	195	114		7.3	3403	0.9	Moon	Vesta
475.	-10	-13	1963/08/23 18:57:38	0.04546	1.15528	0.00000	201.94	-3.66	0.00	2.65	338	52	-9.7	7.6	3707	1.0	Moon	Vesta
476.	-10	-13	1963/11/17 08:10:39	0.35175	1.14387	0.00000	244.33	-18.26	0.00	3.11	346	12	-6.5	7.7	3566	0.8	Moon	Vesta
477.	-10	-13	1966/09/14 07:17:01	0.35324	1.30120	0.00000	166.95	10.55	0.00	3.34	335	-8	-6.0	8.1	3135	0.6	Moon	Vesta

478.	-10	-13	1971/06/12 14:57:35	0.23329	1.23754	0.00000	308.85	-19.54	0.00	1.34	200	-135	6.1	3251	0.8	Moon	Vesta	
479.	-10	-13	1976/07/24 00:04:58	0.44861	1.18375	0.00000	83.49	19.75	0.00	3.30	179	-38	-9.0	8.3	3317	0.4	Moon	Vesta
480.	-10	-13	1981/09/01 13:08:49	0.21627	1.17093	0.00000	194.46	-0.84	0.00	2.95	159	35	-8.8	7.7	3589	0.9	Moon	Vesta
481.	-10	-13	1981/09/30 01:12:54	0.40562	1.15847	0.00000	207.94	-6.11	0.00	3.08	340	22	-7.9	7.8	3460	0.6	Moon	Vesta
482.	-10	-13	1981/12/24 16:29:02	0.14501	1.14416	0.00000	252.99	-19.22	0.00	3.06	349	-19	-7.5	7.7	3718	1.0	Moon	Vesta
483.	-10	-13	1982/01/22 05:54:15	0.47262	1.15009	0.00000	268.96	-21.33	0.00	2.91	175	-33	-8.8	7.7	3401	0.3	Moon	Vesta
484.	-10	-13	1983/02/15 19:02:13	0.30516	1.17076	0.00000	359.77	-5.63	0.00	3.22	23	31	-8.7	8.1	3511	0.8	Moon	Vesta
485.	-10	-13	1983/03/16 01:57:56	0.24193	1.18637	0.00000	11.62	-0.35	0.00	3.40	24	17	-7.4	8.2	3505	0.9	Moon	Vesta
486.	-10	-13	1983/04/13 09:21:44	0.48979	1.20549	0.00000	23.50	4.95	0.00	3.48	24	5	-4.6	8.3	3214	0.2	Moon	Vesta
487.	-10	-13	1984/10/21 20:47:19	0.40346	1.28702	0.00000	174.00	7.80	0.00	3.08	334	-38	-9.3	8.0	3131	0.5	Moon	Vesta
488.	-10	-13	1988/02/01 15:31:21	0.19003	1.14556	0.00000	121.79	24.55	0.00	1.52	345	166	6.5	3448	0.9	Moon	Vesta	
489.	-10	-13	1988/02/28 11:53:14	0.22605	1.14794	0.00000	116.65	25.79	0.00	1.67	167	135	6.8	3487	0.9	Moon	Vesta	
490.	-10	-13	1988/03/26 19:34:39	0.45319	1.15332	0.00000	117.16	25.69	0.00	1.94	167	108	7.2	3326	0.4	Moon	Vesta	
491.	-10	-13	1991/07/11 17:25:02	0.22989	1.29940	0.00000	109.42	22.34	0.00	3.55	167	-1	-1.7	8.4	3201	0.7	Moon	Vesta
492.	-10	-13	1993/01/20 18:09:49	0.10174	1.17540	0.00000	278.62	-21.69	0.00	3.03	9	-23	-8.0	7.7	3624	1.0	Moon	Vesta
493.	-10	-13	1994/09/28 03:02:28	0.05500	1.16838	0.00000	96.34	19.30	0.00	2.39	174	-89	7.7	3602	1.0	Moon	Vesta	
494.	-10	-13	1998/03/02 17:21:09	0.09312	1.27040	0.00000	36.61	9.80	0.00	2.99	16	56	8.2	3321	0.8	Moon	Vesta	
495.	-10	-13	1999/10/09 23:23:43	0.07608	1.17298	0.00000	202.03	-4.10	0.00	3.20	160	7	-5.6	7.9	3632	1.0	Moon	Vesta
496.	-10	-13	1999/11/07 11:19:09	0.33908	1.15819	0.00000	216.22	-9.09	0.00	3.17	341	-9	-6.0	7.8	3531	0.8	Moon	Vesta
497.	-10	-13	1999/12/05 23:28:02	0.41767	1.14841	0.00000	230.92	-13.56	0.00	3.06	344	-22	-7.9	7.8	3476	0.6	Moon	Vesta
498.	-10	-13	2000/01/03 11:44:53	0.15802	1.14457	0.00000	245.95	-17.15	0.00	2.88	348	-36	-8.9	7.7	3715	1.0	Moon	Vesta
499.	-10	-13	2000/01/31 23:48:05	0.40098	1.14559	0.00000	260.94	-19.60	0.00	2.65	172	-50	-9.6	7.6	3513	0.6	Moon	Vesta
500.	-10	-13	2000/06/19 19:34:14	0.03516	1.14490	0.00000	302.35	-20.62	0.00	1.24	187	-149	5.8	3541	1.0	Moon	Vesta	
501.	-10	-13	2001/02/24 18:57:14	0.22726	1.15786	0.00000	354.69	-7.45	0.00	3.33	21	16	-7.3	8.1	3608	0.9	Moon	Vesta
502.	-10	-13	2001/03/25 03:40:39	0.03789	1.17123	0.00000	7.16	-2.32	0.00	3.42	23	5	-4.7	8.2	3629	1.0	Moon	Vesta
503.	-10	-13	2001/04/22 12:19:00	0.15789	1.18739	0.00000	19.33	2.81	0.00	3.41	23	-15	-7.0	8.2	3545	0.9	Moon	Vesta
504.	-10	-13	2002/03/20 09:57:42	0.46719	1.18485	0.00000	68.16	20.88	0.00	2.72	13	70	8.0	3286	0.3	Moon	Vesta	
505.	-10	-13	2002/11/29 03:05:46	0.04040	1.25951	0.00000	178.28	6.26	0.00	2.52	155	-71	7.7	3361	0.9	Moon	Vesta	
506.	-10	-13	2006/06/28 19:19:25	0.22267	1.16326	0.00000	137.00	20.22	0.00	3.14	159	36	-8.9	8.1	3593	0.9	Moon	Vesta
507.	-10	-13	2007/12/12 21:30:12	0.38211	1.17834	0.00000	298.64	-23.71	0.00	2.96	195	36	-9.0	7.8	3431	0.6	Moon	Vesta
508.	-10	-13	2009/08/18 07:06:49	0.38085	1.28977	0.00000	117.80	21.39	0.00	3.37	344	-30	-8.7	8.3	3132	0.5	Moon	Vesta
509.	-10	-13	2013/02/18 21:31:11	0.34288	1.14887	0.00000	70.38	20.38	0.00	2.17	183	101	7.5	3478	0.7	Moon	Vesta	
510.	-10	-13	2016/04/09 03:42:05	0.02053	1.29424	0.00000	42.41	11.98	0.00	3.43	14	24	-8.3	8.3	3267	0.8	Moon	Vesta
511.	-10	-13	2017/11/16 08:31:50	0.39928	1.17211	0.00000	209.68	-7.08	0.00	3.09	161	-25	-8.2	7.8	3427	0.6	Moon	Vesta
512.	-10	-13	2017/12/14 18:28:47	0.19381	1.15961	0.00000	223.63	-11.33	0.00	2.89	163	-39	-9.1	7.7	3643	1.0	Moon	Vesta
513.	-10	-13	2018/01/12 04:11:00	0.36972	1.15331	0.00000	237.47	-14.85	0.00	2.63	166	-54	-9.8	7.6	3525	0.7	Moon	Vesta
514.	-10	-13	2019/04/04 03:26:34	0.18490	1.15794	0.00000	2.06	-4.13	0.00	3.33	22	-15	-7.0	8.1	3632	1.0	Moon	Vesta
515.	-10	-13	2019/05/02 12:49:44	0.17635	1.16994	0.00000	14.38	0.72	0.00	3.24	22	-29	-8.5	8.1	3598	0.9	Moon	Vesta

516.	-10	-13	2020/03/01 06:13:13	0.09237	1.16359	0.00000	51.82	15.28	0.00	2.69	198	73	8.0	3634	1.0	Moon	Vesta	
517.	-10	-13	2020/03/29 07:29:32	0.14627	1.16516	0.00000	61.42	18.29	0.00	3.03	195	54	-9.8	8.2	3618	1.0	Moon	Vesta
518.	-10	-13	2020/04/26 10:31:51	0.13681	1.17282	0.00000	72.72	21.03	0.00	3.29	12	37	-9.0	8.3	3595	1.0	Moon	Vesta
519.	-10	-13	2020/12/07 22:52:47	0.49177	1.23747	0.00000	168.60	10.63	0.00	2.20	337	-91	7.5	3121	0.2	Moon	Vesta	
520.	-10	-13	2024/08/05 03:09:58	0.49121	1.16535	0.00000	144.42	18.11	0.00	3.42	337	8	-5.8	8.2	3309	0.2	Moon	Vesta
521.	-10	-13	2029/05/31 04:32:06	0.03427	1.22021	0.00000	296.33	-19.41	0.00	1.32	15	-135	6.0	3362	0.9	Moon	Vesta	
522.	-10	-13	2032/11/04 22:22:43	0.17835	1.20147	0.00000	241.61	-17.98	0.00	3.05	354	20	-7.8	7.7	3513	0.9	Moon	Vesta
523.	-10	-13	2034/05/17 18:14:40	0.27485	1.29948	0.00000	50.20	14.38	0.00	3.55	11	-7	-5.5	8.4	3179	0.7	Moon	Vesta
524.	-10	-13	2036/07/04 07:32:11	0.29457	1.18042	0.00000	234.92	-14.25	0.00	1.32	166	133	6.0	3371	0.8	Moon	Vesta	
525.	-10	-13	2038/02/10 23:37:02	0.01125	1.15070	0.00000	36.13	9.10	0.00	2.64	200	74	7.9	3688	1.0	Moon	Vesta	
526.	-10	-13	2038/05/06 11:25:04	0.39963	1.15933	0.00000	67.85	19.10	0.00	3.47	193	23	-8.0	8.4	3438	0.6	Moon	Vesta
527.	-10	-13	2038/06/03 17:11:36	0.01914	1.17158	0.00000	80.52	21.42	0.00	3.57	9	8	-5.7	8.4	3619	1.0	Moon	Vesta
528.	-10	-13	2038/12/17 11:34:24	0.49690	1.20974	0.00000	155.49	15.15	0.00	1.90	341	-114	7.1	3131	0.1	Moon	Vesta	
529.	-10	-13	2039/08/22 15:33:12	0.42314	1.22430	0.00000	185.28	3.03	0.00	2.99	155	34	-8.9	7.8	3262	0.5	Moon	Vesta
530.	-10	-13	2040/07/24 12:54:54	0.19951	1.29829	0.00000	312.43	-22.58	0.00	1.21	14	-172	5.7	3074	0.7	Moon	Vesta	
531.	-10	-13	2040/12/09 02:47:01	0.48700	1.26495	0.00000	327.24	-18.76	0.00	2.57	20	66	7.7	3095	0.2	Moon	Vesta	
532.	-10	-13	2041/01/06 06:26:37	0.47022	1.27779	0.00000	338.79	-14.29	0.00	2.90	23	49	-9.8	7.9	3090	0.3	Moon	Vesta
533.	-10	-13	2044/03/26 05:07:52	0.34392	1.19375	0.00000	329.84	-14.51	0.00	2.91	25	-39	-9.2	7.8	3425	0.7	Moon	Vesta
534.	-10	-13	2045/12/25 21:09:57	0.18582	1.27278	0.00000	121.80	21.58	0.00	1.60	343	-155	6.7	3144	0.8	Moon	Vesta	
535.	-10	-13	2050/12/13 10:27:04	0.30654	1.20501	0.00000	250.86	-19.60	0.00	3.12	177	-10	-6.3	7.7	3425	0.8	Moon	Vesta
536.	-10	-13	2052/07/22 09:48:31	0.13882	1.27237	0.00000	69.51	17.56	0.00	3.08	6	-50	-9.8	8.2	3301	0.8	Moon	Vesta
537.	-10	-13	2052/08/19 08:56:25	0.33304	1.25852	0.00000	79.97	18.11	0.00	2.79	183	-67	8.0	3232	0.6	Moon	Vesta	
538.	-10	-13	2056/02/20 17:46:24	0.08074	1.14700	0.00000	29.14	6.37	0.00	2.93	200	58	-9.9	8.1	3703	1.0	Moon	Vesta
539.	-10	-13	2056/06/12 18:55:42	0.44219	1.15888	0.00000	76.03	19.81	0.00	3.58	190	-6	-5.2	8.4	3385	0.5	Moon	Vesta
540.	-10	-13	2056/07/11 01:50:38	0.03806	1.17111	0.00000	88.90	21.39	0.00	3.50	5	-20	-7.7	8.4	3621	1.0	Moon	Vesta
541.	-10	-13	2056/12/25 14:46:47	0.07727	1.18065	0.00000	137.71	19.20	0.00	1.67	167	-140	6.8	3442	0.9	Moon	Vesta	
542.	-10	-13	2057/08/03 09:25:12	0.19253	1.18891	0.00000	166.93	10.90	0.00	3.09	159	33	-8.7	7.9	3535	0.9	Moon	Vesta
543.	-10	-13	2057/08/31 16:56:06	0.02709	1.20762	0.00000	179.64	5.64	0.00	3.20	337	19	-7.7	7.9	3523	0.9	Moon	Vesta
544.	-10	-13	2057/09/29 02:00:34	0.07954	1.22991	0.00000	192.67	-0.15	0.00	3.24	156	7	-5.6	7.9	3451	0.9	Moon	Vesta
545.	-10	-13	2058/08/02 01:50:19	0.42408	1.28512	0.00000	277.80	-25.28	0.00	1.27	179	147	5.9	2998	0.4	Moon	Vesta	
546.	-10	-13	2058/10/23 23:33:59	0.31684	1.25003	0.00000	293.48	-25.39	0.00	2.19	5	80	7.3	3278	0.7	Moon	Vesta	
547.	-10	-13	2058/11/21 00:03:10	0.19253	1.25848	0.00000	305.69	-23.92	0.00	2.54	190	63	7.6	3335	0.8	Moon	Vesta	
548.	-10	-13	2059/02/13 19:01:07	0.27520	1.29923	0.00000	345.42	-11.56	0.00	3.28	204	17	-7.7	8.1	3191	0.7	Moon	Vesta
549.	-10	-13	2059/03/14 04:00:23	0.32048	1.29629	0.00000	358.01	-5.76	0.00	3.37	26	5	-5.0	8.1	3168	0.6	Moon	Vesta
550.	-10	-13	2062/05/03 08:47:41	0.07454	1.17595	0.00000	334.04	-13.48	0.00	2.30	206	-72	7.4	3619	1.0	Moon	Vesta	
551.	-10	-13	2067/07/10 06:57:11	0.04731	1.15443	0.00000	95.57	22.01	0.00	3.55	172	-13	-6.7	8.4	3674	1.0	Moon	Vesta
552.	-10	-13	2069/02/17 09:18:34	0.38842	1.20871	0.00000	274.02	-19.72	0.00	2.55	5	-56	-9.9	7.5	3352	0.6	Moon	Vesta
553.	-10	-13	2071/01/12 15:05:34	0.12070	1.27578	0.00000	62.19	16.90	0.00	1.82	7	131	7.1	3201	0.8	Moon	Vesta	

554.	-10	-13	2074/03/01 14:42:34	0.25202	1.15258	0.00000	23.26	4.41	0.00	3.17	20	42	-9.3	8.2	3605	0.9	Moon	Vesta
555.	-10	-13	2074/03/29 22:11:00	0.45959	1.14645	0.00000	34.67	8.51	0.00	3.40	199	26	-8.2	8.3	3400	0.4	Moon	Vesta
556.	-10	-13	2074/08/18 08:21:35	0.24130	1.16557	0.00000	95.64	20.89	0.00	3.10	2	-51	-9.6	8.2	3566	0.9	Moon	Vesta
557.	-10	-13	2075/08/13 08:53:56	0.26784	1.17271	0.00000	160.93	12.56	0.00	3.29	161	17	-7.3	8.1	3534	0.8	Moon	Vesta
558.	-10	-13	2075/10/09 03:30:00	0.12100	1.20996	0.00000	187.02	2.41	0.00	3.26	337	-12	-6.6	8.0	3499	0.9	Moon	Vesta
559.	-10	-13	2075/11/06 14:22:49	0.17042	1.22870	0.00000	200.16	-3.13	0.00	3.12	157	-25	-8.3	7.9	3433	0.9	Moon	Vesta
560.	-10	-13	2076/08/09 21:35:33	0.04232	1.23866	0.00000	250.63	-21.07	0.00	1.54	168	114		6.5	3371	0.9	Moon	Vesta
561.	-10	-13	2076/11/01 19:12:32	0.05872	1.23725	0.00000	281.87	-25.03	0.00	2.52	360	60		7.5	3438	0.9	Moon	Vesta
562.	-10	-13	2076/11/30 00:01:34	0.48875	1.25407	0.00000	296.46	-24.43	0.00	2.81	186	45	-9.6	7.7	3125	0.2	Moon	Vesta
563.	-10	-13	2077/04/20 18:36:20	0.24866	1.28662	0.00000	5.70	-2.60	0.00	3.21	26	-27	-8.6	8.1	3232	0.7	Moon	Vesta
564.	-10	-13	2082/06/28 01:39:44	0.27732	1.22037	0.00000	122.27	22.62	0.00	3.38	343	23	-8.1	8.3	3380	0.8	Moon	Vesta
565.	-10	-13	2084/01/08 02:25:38	0.39287	1.29192	0.00000	294.97	-22.03	0.00	3.17	15	5	-5.1	7.8	3135	0.5	Moon	Vesta
566.	-10	-13	2087/05/21 11:54:31	0.02263	1.17261	0.00000	284.09	-18.82	0.00	1.30	189	-137		6.0	3490	1.0	Moon	Vesta
567.	-10	-13	2090/09/26 02:08:22	0.39482	1.27839	0.00000	215.83	-10.21	0.00	2.93	165	33	-9.0	7.7	3169	0.5	Moon	Vesta
568.	-10	-13	2092/04/07 22:06:10	0.09504	1.15362	0.00000	29.98	7.19	0.00	3.48	18	12	-6.6	8.3	3672	1.0	Moon	Vesta
569.	-10	-13	2092/05/06 05:48:38	0.42415	1.14608	0.00000	42.21	11.03	0.00	3.53	197	-6	-5.1	8.4	3446	0.6	Moon	Vesta
570.	-10	-13	2092/07/30 01:15:17	0.32887	1.14912	0.00000	78.31	18.63	0.00	3.11	188	-49	-9.5	8.2	3546	0.8	Moon	Vesta
571.	-10	-13	2092/08/27 05:18:53	0.16641	1.15304	0.00000	88.89	19.69	0.00	2.81	4	-66		8.1	3643	1.0	Moon	Vesta
572.	-10	-13	2092/12/15 05:01:46	0.07605	1.14364	0.00000	98.74	20.81	0.00	1.60	181	-166		6.7	3498	1.0	Moon	Vesta
573.	-10	-13	2093/09/19 18:26:06	0.23125	1.17348	0.00000	168.71	9.19	0.00	3.33	160	-12	-6.6	8.1	3557	0.9	Moon	Vesta
574.	-10	-13	2093/10/18 04:32:56	0.04688	1.18932	0.00000	181.61	4.39	0.00	3.18	158	-26	-8.3	8.0	3580	1.0	Moon	Vesta
575.	-10	-13	2093/11/15 15:01:32	0.21367	1.20329	0.00000	194.25	-0.57	0.00	2.96	158	-41	-9.3	7.9	3489	0.9	Moon	Vesta
576.	-10	-13	2094/11/11 17:53:27	0.25886	1.22187	0.00000	272.88	-23.75	0.00	2.80	356	43	-9.4	7.7	3413	0.8	Moon	Vesta
577.	-10	-13	2094/12/10 01:52:04	0.33656	1.24373	0.00000	288.67	-24.02	0.00	3.01	182	29	-8.6	7.8	3296	0.7	Moon	Vesta
578.	-10	-13	2095/05/01 00:05:01	0.40937	1.28233	0.00000	0.57	-5.32	0.00	2.96	204	-43	-9.5	7.9	3136	0.5	Moon	Vesta
579.	-10	-13	2098/09/05 19:17:02	0.28060	1.14938	0.00000	292.42	-27.07	0.00	1.48	189	126		6.4	3490	0.8	Moon	Vesta
580.	-10	-13	2098/10/03 10:24:58	0.04640	1.15304	0.00000	296.87	-26.44	0.00	1.80	191	103		6.9	3651	1.0	Moon	Vesta
581.	-10	-13	2098/10/31 10:43:05	0.18854	1.15430	0.00000	305.63	-24.54	0.00	2.16	15	84		7.3	3638	1.0	Moon	Vesta
582.	-10	-13	2102/02/15 17:50:07	0.26169	1.28324	0.00000	304.08	-20.58	0.00	3.04	198	-25	-8.4	7.8	3244	0.7	Moon	Vesta
583.	-10	-13	2103/11/18 22:24:11	0.43385	1.18232	0.00000	116.97	19.23	0.00	1.91	165	-121		7.2	3250	0.5	Moon	Vesta
584.	-10	-13	2110/05/17 06:00:38	0.33596	1.15364	0.00000	37.54	9.91	0.00	3.44	16	-18	-7.5	8.3	3527	0.8	Moon	Vesta
585.	-10	-13	2110/06/14 12:25:27	0.03356	1.14769	0.00000	49.64	13.08	0.00	3.31	194	-33	-8.7	8.3	3707	1.0	Moon	Vesta
586.	-10	-13	2110/07/12 17:50:10	0.10491	1.14640	0.00000	61.22	15.55	0.00	3.10	192	-48	-9.5	8.2	3697	1.0	Moon	Vesta
587.	-10	-13	2110/08/09 21:40:06	0.12771	1.14781	0.00000	71.80	17.28	0.00	2.81	9	-65		8.0	3678	1.0	Moon	Vesta
588.	-10	-13	2110/12/24 19:02:34	0.23324	1.14620	0.00000	76.06	18.32	0.00	1.61	188	164		6.7	3427	0.9	Moon	Vesta
589.	-10	-13	2112/07/31 09:29:56	0.25505	1.16593	0.00000	211.17	-7.19	0.00	2.03	159	83		7.1	3565	0.9	Moon	Vesta
590.	-10	-13	2112/12/20 02:51:28	0.03730	1.22793	0.00000	280.90	-23.09	0.00	3.13	359	12	-6.7	7.8	3468	0.9	Moon	Vesta
591.	-10	-13	2113/06/08 03:43:10	0.30949	1.25978	0.00000	3.96	-4.02	0.00	2.34	24	-75		7.5	3254	0.7	Moon	Vesta

592.	-10	-13	2115/02/07 13:30:44	0.22778	1.28046	0.00000	118.68	25.07	0.00	1.56	352	157	6.6	3106	0.7	Moon	Vesta	
593.	-10	-13	2115/03/06 15:54:47	0.38142	1.26182	0.00000	114.89	25.69	0.00	1.75	173	127	6.9	3102	0.5	Moon	Vesta	
594.	-10	-13	2115/04/03 00:56:03	0.26512	1.25185	0.00000	117.04	25.64	0.00	2.05	172	102	7.3	3256	0.7	Moon	Vesta	
595.	-10	-13	2115/04/30 17:08:44	0.09948	1.25493	0.00000	123.95	24.74	0.00	2.37	349	81	7.6	3346	0.8	Moon	Vesta	
596.	-10	-13	2115/05/28 15:27:01	0.38240	1.26443	0.00000	133.80	22.69	0.00	2.68	345	63	7.8	3191	0.6	Moon	Vesta	
597.	-10	-13	2115/06/25 18:22:38	0.42187	1.27257	0.00000	145.21	19.35	0.00	2.94	341	48	-9.7	7.9	3145	0.5	Moon	Vesta
598.	-10	-13	2115/07/24 00:32:52	0.15802	1.27396	0.00000	157.31	14.78	0.00	3.13	337	33	-8.9	8.0	3307	0.8	Moon	Vesta
599.	-10	-13	2115/08/21 08:47:58	0.41428	1.26626	0.00000	169.66	9.23	0.00	3.24	154	20	-7.8	8.0	3169	0.5	Moon	Vesta
600.	-10	-13	2118/10/11 05:44:27	0.38710	1.22517	0.00000	149.45	14.58	0.00	2.99	155	-51	-9.8	8.1	3288	0.6	Moon	Vesta
601.	-10	-13	2122/03/15 12:31:13	0.40268	1.22017	0.00000	87.48	24.68	0.00	2.28	356	93	7.6	3246	0.5	Moon	Vesta	
602.	-10	-13	2127/01/09 16:27:04	0.05403	1.25946	0.00000	247.25	-17.35	0.00	2.81	174	-41	-9.4	7.6	3379	0.9	Moon	Vesta
603.	-10	-13	2129/01/01 14:24:33	0.34411	1.16362	0.00000	56.28	14.56	0.00	1.78	12	136	7.0	3350	0.7	Moon	Vesta	
604.	-10	-13	2130/08/09 21:48:57	0.29314	1.14953	0.00000	201.19	-3.31	0.00	2.42	159	64	7.4	3603	0.9	Moon	Vesta	
605.	-10	-13	2130/12/30 04:15:11	0.46418	1.20890	0.00000	274.15	-21.82	0.00	3.13	357	-5	-4.6	7.7	3259	0.4	Moon	Vesta
606.	-10	-13	2131/01/27 17:00:44	0.14460	1.23020	0.00000	290.66	-21.90	0.00	3.08	183	-18	-7.6	7.7	3443	0.9	Moon	Vesta
607.	-10	-13	2131/06/17 23:04:43	0.46285	1.24318	0.00000	353.81	-8.04	0.00	1.93	22	-95	7.1	3138	0.3	Moon	Vesta	
608.	-10	-13	2133/02/15 20:49:20	0.46294	1.27537	0.00000	97.21	25.43	0.00	1.78	2	129	7.0	2998	0.3	Moon	Vesta	
609.	-10	-13	2133/04/11 21:07:54	0.32782	1.25639	0.00000	105.30	25.87	0.00	2.42	358	82	7.7	3231	0.7	Moon	Vesta	
610.	-10	-13	2135/03/13 17:11:06	0.09247	1.14775	0.00000	343.77	-11.06	0.00	3.26	26	-12	-6.6	8.0	3708	1.0	Moon	Vesta
611.	-10	-13	2136/11/17 05:30:39	0.03361	1.19280	0.00000	151.34	14.54	0.00	2.34	155	-87	7.6	3537	1.0	Moon	Vesta	
612.	-10	-13	2138/05/29 16:20:58	0.16045	1.26309	0.00000	317.94	-17.30	0.00	1.57	202	-113	6.5	3268	0.8	Moon	Vesta	
613.	-10	-13	2140/05/19 13:58:28	0.09201	1.25772	0.00000	99.85	23.94	0.00	3.21	171	40	-9.3	8.2	3359	0.9	Moon	Vesta
614.	-10	-13	2141/11/30 04:23:08	0.13040	1.14613	0.00000	266.73	-22.72	0.00	3.07	184	19	-7.6	7.7	3714	1.0	Moon	Vesta
615.	-10	-13	2147/02/07 10:36:33	0.42065	1.19846	0.00000	45.40	12.07	0.00	2.40	194	88	7.7	3292	0.5	Moon	Vesta	
616.	-10	-13	2148/09/16 00:27:39	0.23836	1.14393	0.00000	206.07	-5.45	0.00	2.96	340	33	-8.7	7.7	3665	0.9	Moon	Vesta
617.	-10	-13	2149/02/05 16:13:08	0.17155	1.20436	0.00000	282.77	-21.07	0.00	2.88	0	-35	-9.0	7.7	3515	0.9	Moon	Vesta
618.	-10	-13	2149/03/06 04:10:13	0.42965	1.21636	0.00000	298.11	-20.44	0.00	2.67	186	-49	-9.7	7.6	3289	0.5	Moon	Vesta
619.	-10	-13	2149/05/29 16:16:33	0.32677	1.21741	0.00000	332.70	-14.46	0.00	1.80	197	-99	6.9	3330	0.7	Moon	Vesta	
620.	-10	-13	2150/03/01 15:48:56	0.25097	1.23719	0.00000	10.12	-1.15	0.00	3.28	23	29	-8.6	8.2	3355	0.8	Moon	Vesta
621.	-10	-13	2150/03/29 22:00:41	0.14499	1.25922	0.00000	21.94	3.94	0.00	3.44	23	14	-7.0	8.3	3339	0.8	Moon	Vesta
622.	-10	-13	2150/04/27 05:03:34	0.34712	1.27719	0.00000	33.91	8.85	0.00	3.50	22	-5	-4.9	8.3	3188	0.6	Moon	Vesta
623.	-10	-13	2151/02/25 10:52:42	0.06000	1.25547	0.00000	81.35	23.15	0.00	2.10	8	106	7.4	3313	0.8	Moon	Vesta	
624.	-10	-13	2151/03/25 01:56:02	0.03994	1.24796	0.00000	87.20	24.11	0.00	2.45	186	83	7.8	3367	0.9	Moon	Vesta	
625.	-10	-13	2153/04/19 23:35:31	0.07579	1.15051	0.00000	350.80	-8.44	0.00	2.93	207	-42	-9.2	7.8	3709	1.0	Moon	Vesta
626.	-10	-13	2156/09/23 14:52:20	0.38247	1.23955	0.00000	284.64	-26.90	0.00	1.78	189	102	6.8	3226	0.6	Moon	Vesta	
627.	-10	-13	2161/09/14 05:15:11	0.08340	1.22005	0.00000	98.68	19.79	0.00	2.67	173	-74	8.0	3456	0.9	Moon	Vesta	
628.	-10	-13	2163/08/08 11:59:55	0.00909	1.25681	0.00000	235.61	-16.50	0.00	1.71	351	101	6.7	3341	0.9	Moon	Vesta	
629.	-10	-13	2166/10/24 08:03:46	0.23342	1.14278	0.00000	213.55	-8.34	0.00	3.18	342	6	-5.0	7.8	3667	0.9	Moon	Vesta

630.	-10	-13	2167/02/15	12:13:06	0.19614	1.17860	0.00000	274.15	-20.00	0.00	2.60	357	-53	-9.8	7.5	3587	0.9	Moon	Vesta
631.	-10	-13	2167/03/15	22:32:38	0.37242	1.18559	0.00000	288.22	-20.12	0.00	2.31	182	-68		7.3	3426	0.7	Moon	Vesta
632.	-10	-13	2167/06/07	17:17:25	0.25592	1.18223	0.00000	313.50	-17.99	0.00	1.41	11	-126		6.2	3413	0.8	Moon	Vesta
633.	-10	-13	2168/04/08	03:45:54	0.07110	1.24347	0.00000	17.62	2.07	0.00	3.44	22	5	-5.0	8.2	3402	0.9	Moon	Vesta
634.	-10	-13	2168/05/06	11:40:55	0.14389	1.26030	0.00000	29.76	6.85	0.00	3.41	21	-17	-7.5	8.2	3340	0.8	Moon	Vesta
635.	-10	-13	2169/02/06	14:29:13	0.00780	1.24318	0.00000	65.06	18.85	0.00	2.09	14	108		7.4	3348	0.9	Moon	Vesta
636.	-10	-13	2169/04/03	01:40:47	0.49305	1.23417	0.00000	78.75	22.04	0.00	2.80	189	66		8.0	3138	0.1	Moon	Vesta
637.	-10	-13	2169/05/01	00:52:04	0.12071	1.24733	0.00000	89.58	23.53	0.00	3.10	185	49	-9.7	8.2	3374	0.9	Moon	Vesta
638.	-10	-13	2169/05/29	02:59:54	0.38040	1.26597	0.00000	101.91	24.18	0.00	3.32	0	33	-8.9	8.3	3185	0.6	Moon	Vesta
639.	-10	-13	2169/11/14	12:11:25	0.43178	1.26035	0.00000	178.10	6.47	0.00	2.78	336	-57		7.9	3160	0.4	Moon	Vesta
640.	-10	-13	2171/05/27	23:58:24	0.20809	1.16243	0.00000	354.80	-7.14	0.00	2.32	27	-74		7.5	3605	0.9	Moon	Vesta
641.	-10	-13	2173/06/14	21:11:55	0.07983	1.14573	0.00000	136.21	21.15	0.00	2.96	341	48	-9.5	8.0	3713	1.0	Moon	Vesta
642.	-10	-13	2180/02/06	14:00:00	0.07850	1.17453	0.00000	76.83	21.52	0.00	1.92	180	120		7.2	3507	1.0	Moon	Vesta
643.	-10	-13	2181/09/14	03:45:35	0.42942	1.24342	0.00000	233.41	-16.84	0.00	2.41	171	64		7.4	3212	0.5	Moon	Vesta
644.	-10	-13	2184/11/30	16:54:41	0.14729	1.14344	0.00000	221.76	-11.04	0.00	3.04	164	-27	-8.3	7.8	3717	1.0	Moon	Vesta
645.	-10	-13	2184/12/29	05:09:58	0.13211	1.14704	0.00000	236.22	-14.55	0.00	2.83	347	-41	-9.2	7.7	3716	1.0	Moon	Vesta
646.	-10	-13	2185/01/26	17:04:33	0.04465	1.15285	0.00000	250.49	-17.12	0.00	2.57	351	-56	-9.9	7.5	3720	1.0	Moon	Vesta
647.	-10	-13	2185/06/14	20:23:51	0.42292	1.15135	0.00000	283.65	-19.97	0.00	1.17	2	-161		5.6	3253	0.5	Moon	Vesta
648.	-10	-13	2186/05/16	16:19:21	0.29980	1.23784	0.00000	24.96	4.94	0.00	3.23	21	-32	-8.8	8.1	3327	0.7	Moon	Vesta
649.	-10	-13	2187/01/19	15:26:35	0.45979	1.22255	0.00000	49.55	13.63	0.00	2.05	18	111		7.4	3153	0.4	Moon	Vesta
650.	-10	-13	2187/06/08	09:16:09	0.12552	1.25649	0.00000	96.82	23.03	0.00	3.49	183	19	-7.7	8.4	3347	0.8	Moon	Vesta
651.	-10	-13	2187/07/06	14:48:53	0.41416	1.27530	0.00000	110.15	23.02	0.00	3.55	357	4	-4.4	8.4	3135	0.5	Moon	Vesta
652.	-10	-13	2191/08/20	10:58:24	0.23796	1.14422	0.00000	155.61	14.00	0.00	3.40	155	6	-5.0	8.2	3642	0.9	Moon	Vesta
653.	-10	-13	2193/02/02	05:55:26	0.14920	1.25405	0.00000	319.50	-18.66	0.00	3.22	202	4	-4.2	7.9	3365	0.8	Moon	Vesta
654.	-10	-13	2194/10/08	23:32:14	0.13847	1.24099	0.00000	133.76	18.15	0.00	2.80	339	-65		8.0	3383	0.9	Moon	Vesta
655.	-10	-13	2196/05/17	20:56:12	0.46031	1.16114	0.00000	305.38	-17.80	0.00	1.54	19	-114		6.4	3301	0.4	Moon	Vesta
656.	-10	-13	2201/06/01	09:07:55	0.27961	1.25117	0.00000	60.93	16.68	0.00	3.55	188	-9	-6.1	8.4	3293	0.7	Moon	Vesta
657.	-10	-13	2205/01/29	05:44:49	0.08773	1.18739	0.00000	38.42	9.57	0.00	2.36	19	90		7.7	3539	1.0	Moon	Vesta
658.	-10	-13	2205/07/16	21:26:35	0.13519	1.25994	0.00000	105.23	22.12	0.00	3.55	179	-10	-6.3	8.4	3337	0.8	Moon	Vesta
659.	-10	-13	2205/08/14	03:57:02	0.41037	1.27139	0.00000	118.31	21.46	0.00	3.43	354	-25	-8.3	8.3	3151	0.5	Moon	Vesta
660.	-10	-13	2205/12/04	08:22:00	0.43731	1.24947	0.00000	159.94	13.09	0.00	2.18	341	-95		7.5	3143	0.4	Moon	Vesta
661.	-10	-13	2206/08/09	00:28:05	0.49688	1.26375	0.00000	183.59	4.04	0.00	2.82	157	46	-9.6	7.7	3091	0.1	Moon	Vesta
662.	-10	-13	2206/09/06	06:35:55	0.29029	1.28154	0.00000	195.94	-1.58	0.00	3.00	156	32	-8.9	7.8	3230	0.7	Moon	Vesta
663.	-10	-13	2206/10/04	15:13:18	0.45661	1.29597	0.00000	209.11	-7.46	0.00	3.11	157	19	-7.9	7.8	3070	0.3	Moon	Vesta
664.	-10	-13	2207/07/13	01:01:08	0.05831	1.24504	0.00000	326.88	-18.48	0.00	1.29	18	-147		6.0	3266	0.8	Moon	Vesta
665.	-10	-13	2209/09/27	18:23:17	0.10230	1.14472	0.00000	163.17	11.31	0.00	3.29	334	-25	-8.1	8.1	3709	1.0	Moon	Vesta
666.	-10	-13	2212/12/13	00:08:36	0.09480	1.27733	0.00000	132.72	19.04	0.00	1.78	159	-131		7.0	3203	0.8	Moon	Vesta
667.	-10	-13	2214/09/12	22:27:01	0.22216	1.19789	0.00000	272.12	-25.34	0.00	1.74	6	102		6.8	3454	0.9	Moon	Vesta

668.	-10	-13	2216/05/19 23:55:16	0.10505	1.14550	0.00000	85.83	22.68	0.00	3.42	356	27	-8.3	8.4	3694	1.0	Moon	Vesta
669.	-10	-13	2219/07/09 19:10:52	0.35939	1.24365	0.00000	68.60	18.06	0.00	3.28	5	-38	-9.2	8.3	3255	0.6	Moon	Vesta
670.	-10	-13	2219/08/06 20:18:28	0.45105	1.22726	0.00000	80.10	18.54	0.00	3.04	182	-54	-9.9	8.2	3206	0.4	Moon	Vesta
671.	-10	-13	2221/07/28 03:01:44	0.12170	1.16855	0.00000	224.68	-11.93	0.00	1.71	346	101		6.7	3591	1.0	Moon	Vesta
672.	-10	-13	2223/02/07 22:52:19	0.23261	1.16310	0.00000	29.86	6.62	0.00	2.67	19	72		7.9	3577	0.9	Moon	Vesta
673.	-10	-13	2223/08/24 09:23:29	0.10548	1.24899	0.00000	112.92	20.84	0.00	3.26	176	-39	-9.3	8.3	3380	0.9	Moon	Vesta
674.	-10	-13	2223/09/21 13:50:31	0.39802	1.24962	0.00000	124.55	19.86	0.00	2.98	352	-56		8.1	3214	0.5	Moon	Vesta
675.	-10	-13	2223/12/13 22:39:13	0.25354	1.23318	0.00000	146.37	16.32	0.00	1.89	165	-118		7.1	3282	0.8	Moon	Vesta
676.	-10	-13	2224/08/18 03:53:23	0.28761	1.25638	0.00000	177.63	6.39	0.00	3.09	158	30	-8.7	7.9	3290	0.7	Moon	Vesta
677.	-10	-13	2224/09/15 11:25:56	0.00289	1.27708	0.00000	190.46	0.96	0.00	3.19	337	17	-7.6	7.9	3325	0.8	Moon	Vesta
678.	-10	-13	2224/10/13 20:52:25	0.04539	1.29330	0.00000	203.79	-4.75	0.00	3.22	157	6	-5.2	7.9	3283	0.8	Moon	Vesta
679.	-10	-13	2224/11/11 07:30:09	0.42704	1.30010	0.00000	217.65	-10.32	0.00	3.17	159	-11	-6.7	7.8	3089	0.4	Moon	Vesta
680.	-10	-13	2225/07/20 12:22:10	0.14824	1.28589	0.00000	294.34	-24.00	0.00	1.17	185	174		5.6	3118	0.8	Moon	Vesta
681.	-10	-13	2225/12/05 12:42:57	0.39984	1.26251	0.00000	318.02	-20.89	0.00	2.60	14	61		7.7	3195	0.5	Moon	Vesta
682.	-10	-13	2226/01/02 18:59:50	0.05722	1.26925	0.00000	330.80	-17.23	0.00	2.91	199	45	-9.6	7.9	3349	0.9	Moon	Vesta
683.	-10	-13	2226/01/31 03:45:20	0.16999	1.26771	0.00000	343.69	-12.43	0.00	3.16	202	30	-8.8	8.0	3322	0.8	Moon	Vesta
684.	-10	-13	2226/02/28 13:19:28	0.06073	1.25587	0.00000	356.32	-6.90	0.00	3.32	25	15	-7.3	8.1	3376	0.9	Moon	Vesta
685.	-10	-13	2227/11/04 23:09:44	0.12148	1.14648	0.00000	169.14	9.21	0.00	2.85	333	-55	-9.8	7.9	3701	1.0	Moon	Vesta
686.	-10	-13	2231/05/08 07:29:30	0.23586	1.25424	0.00000	115.73	24.44	0.00	2.70	166	66		7.9	3306	0.8	Moon	Vesta
687.	-10	-13	2232/11/16 22:22:18	0.24759	1.23265	0.00000	284.05	-24.28	0.00	2.73	11	48	-9.7	7.6	3394	0.8	Moon	Vesta
688.	-10	-13	2236/02/05 00:20:08	0.10613	1.26303	0.00000	272.60	-20.65	0.00	2.77	185	-43	-9.5	7.6	3367	0.8	Moon	Vesta
689.	-10	-13	2237/12/30 18:32:37	0.17994	1.28026	0.00000	73.39	18.57	0.00	1.65	3	155		6.8	3129	0.7	Moon	Vesta
690.	-10	-13	2239/09/03 16:46:57	0.43245	1.19946	0.00000	222.00	-11.68	0.00	2.43	346	63		7.4	3324	0.5	Moon	Vesta
691.	-10	-13	2241/03/16 23:02:32	0.28309	1.15174	0.00000	33.62	8.22	0.00	3.24	198	38	-9.1	8.2	3583	0.9	Moon	Vesta
692.	-10	-13	2241/09/02 12:18:07	0.48265	1.22229	0.00000	106.79	20.14	0.00	3.03	178	-54	-9.9	8.2	3186	0.2	Moon	Vesta
693.	-10	-13	2241/09/30 14:23:56	0.02167	1.22048	0.00000	116.97	19.69	0.00	2.69	175	-72		8.0	3465	0.9	Moon	Vesta
694.	-10	-13	2241/10/28 11:10:45	0.22155	1.21316	0.00000	124.78	19.07	0.00	2.32	352	-92		7.7	3405	0.8	Moon	Vesta
695.	-10	-13	2241/11/25 00:05:37	0.08087	1.20721	0.00000	128.90	18.73	0.00	1.96	170	-116		7.3	3423	0.9	Moon	Vesta
696.	-10	-13	2242/09/25 15:46:10	0.09804	1.26460	0.00000	184.79	3.13	0.00	3.30	158	5	-4.8	8.0	3347	0.8	Moon	Vesta
697.	-10	-13	2242/10/24 01:34:28	0.00234	1.28076	0.00000	198.01	-2.20	0.00	3.22	338	-14	-7.1	7.9	3317	0.8	Moon	Vesta
698.	-10	-13	2242/11/21 11:49:49	0.24502	1.28725	0.00000	211.43	-7.47	0.00	3.08	159	-27	-8.6	7.8	3244	0.7	Moon	Vesta
699.	-10	-13	2243/07/29 00:04:26	0.33106	1.28019	0.00000	259.74	-21.71	0.00	1.32	351	135		6.0	3102	0.6	Moon	Vesta
700.	-10	-13	2243/12/15 13:27:59	0.13585	1.28256	0.00000	309.10	-22.03	0.00	2.87	10	43	-9.6	7.8	3299	0.8	Moon	Vesta
701.	-10	-13	2244/01/12 22:14:06	0.37357	1.29023	0.00000	323.61	-18.84	0.00	3.09	195	29	-8.7	7.9	3154	0.6	Moon	Vesta
702.	-10	-13	2244/04/07 02:36:51	0.12222	1.25264	0.00000	3.90	-3.69	0.00	3.30	205	-16	-7.4	8.1	3370	0.8	Moon	Vesta
703.	-10	-13	2245/12/11 15:59:23	0.22604	1.15463	0.00000	169.23	9.69	0.00	2.19	154	-93		7.5	3584	0.9	Moon	Vesta
704.	-10	-13	2252/08/31 19:15:27	0.23763	1.14927	0.00000	114.21	20.40	0.00	3.16	165	-46	-9.4	8.3	3620	0.9	Moon	Vesta
705.	-10	-13	2254/04/11 05:07:36	0.46611	1.22626	0.00000	286.89	-19.12	0.00	1.81	191	-95		6.8	3185	0.3	Moon	Vesta

706.	-10	-13	2257/10/11 00:49:07	0.45171	1.21755	0.00000	227.70	-13.65	0.00	2.94	348	31	-8.8	7.7	3257	0.4	Moon	Vesta
707.	-10	-13	2259/04/24 05:31:04	0.31164	1.14961	0.00000	40.67	10.75	0.00	3.51	196	9	-6.0	8.3	3559	0.8	Moon	Vesta
708.	-10	-13	2259/10/10 09:52:20	0.15942	1.18971	0.00000	107.54	19.41	0.00	2.37	177	-90		7.7	3505	0.9	Moon	Vesta
709.	-10	-13	2259/11/07 00:14:41	0.04645	1.18236	0.00000	111.92	19.42	0.00	2.01	176	-114		7.3	3507	1.0	Moon	Vesta
710.	-10	-13	2260/11/02 05:51:58	0.31409	1.26012	0.00000	192.34	-0.12	0.00	3.13	159	-29	-8.7	7.9	3269	0.7	Moon	Vesta
711.	-10	-13	2260/11/30 15:12:52	0.45865	1.26508	0.00000	205.10	-4.91	0.00	2.89	159	-44	-9.6	7.8	3137	0.3	Moon	Vesta
712.	-10	-13	2261/12/24 17:42:16	0.32178	1.29236	0.00000	301.81	-22.17	0.00	3.05	7	26	-8.6	7.8	3187	0.6	Moon	Vesta
713.	-10	-13	2262/01/22 03:59:50	0.26535	1.30099	0.00000	317.31	-19.59	0.00	3.19	193	12	-6.9	7.9	3198	0.7	Moon	Vesta
714.	-10	-13	2262/04/17 07:39:35	0.49330	1.26351	0.00000	359.03	-5.91	0.00	3.12	203	-31	-8.8	8.0	3092	0.1	Moon	Vesta
715.	-10	-13	2262/05/15 12:34:44	0.13006	1.24351	0.00000	10.91	-0.86	0.00	2.95	24	-45	-9.5	7.9	3394	0.9	Moon	Vesta
716.	-10	-13	2265/07/29 01:16:49	0.09905	1.15755	0.00000	310.32	-23.38	0.00	1.19	196	-175		5.7	3449	0.9	Moon	Vesta
717.	-10	-13	2267/08/20 06:45:37	0.03926	1.28802	0.00000	141.72	17.73	0.00	3.47	337	-9	-6.2	8.3	3284	0.8	Moon	Vesta
718.	-10	-13	2274/04/11 06:02:46	0.20456	1.27081	0.00000	65.17	18.99	0.00	3.18	185	45	-9.6	8.3	3281	0.8	Moon	Vesta
719.	-10	-13	2275/11/18 13:44:43	0.15012	1.22143	0.00000	236.09	-15.93	0.00	3.15	351	4	-4.4	7.8	3463	0.9	Moon	Vesta
720.	-10	-13	2277/05/31 13:19:36	0.00249	1.14957	0.00000	48.39	13.06	0.00	3.43	14	-21	-7.8	8.3	3699	1.0	Moon	Vesta
721.	-10	-13	2277/06/28 20:31:57	0.41733	1.15759	0.00000	60.59	15.51	0.00	3.28	191	-37	-8.9	8.3	3426	0.6	Moon	Vesta
722.	-10	-13	2277/08/24 06:36:24	0.40637	1.16968	0.00000	82.50	18.18	0.00	2.74	185	-69		8.0	3399	0.6	Moon	Vesta
723.	-10	-13	2277/09/21 06:12:54	0.05234	1.16845	0.00000	90.72	18.68	0.00	2.40	182	-88		7.8	3604	1.0	Moon	Vesta
724.	-10	-13	2277/10/18 22:25:27	0.31338	1.16251	0.00000	95.49	18.94	0.00	2.05	1	-110		7.4	3446	0.8	Moon	Vesta
725.	-10	-13	2277/11/15 04:08:38	0.30427	1.15680	0.00000	95.30	19.15	0.00	1.75	1	-138		7.0	3398	0.8	Moon	Vesta
726.	-10	-13	2280/02/01 09:20:47	0.07880	1.30115	0.00000	310.48	-19.95	0.00	3.18	10	-4	-4.7	7.8	3261	0.8	Moon	Vesta
727.	-10	-13	2280/02/29 20:03:12	0.41255	1.29829	0.00000	325.75	-16.76	0.00	3.14	195	-18	-7.7	7.8	3104	0.5	Moon	Vesta
728.	-10	-13	2280/05/24 13:50:56	0.01301	1.25287	0.00000	4.19	-3.77	0.00	2.60	23	-62		7.7	3384	0.9	Moon	Vesta
729.	-10	-13	2282/01/25 01:51:49	0.18479	1.22320	0.00000	133.13	22.04	0.00	1.52	167	-174		6.5	3245	0.8	Moon	Vesta
730.	-10	-13	2282/06/11 08:29:58	0.12606	1.22611	0.00000	144.73	19.47	0.00	2.71	162	60		7.8	3446	0.9	Moon	Vesta
731.	-10	-13	2282/07/09 14:32:04	0.00682	1.22164	0.00000	156.15	15.46	0.00	2.95	339	45	-9.5	7.9	3482	0.9	Moon	Vesta
732.	-10	-13	2282/08/06 23:00:33	0.19053	1.21003	0.00000	168.18	10.34	0.00	3.13	156	31	-8.7	8.0	3473	0.9	Moon	Vesta
733.	-10	-13	2284/01/21 07:07:54	0.12153	1.14807	0.00000	333.95	-15.42	0.00	3.11	24	30	-8.6	7.9	3704	1.0	Moon	Vesta
734.	-10	-13	2285/09/26 19:44:01	0.45618	1.27497	0.00000	149.03	15.66	0.00	3.20	335	-38	-9.3	8.2	3104	0.3	Moon	Vesta
735.	-10	-13	2287/04/08 16:21:05	0.31692	1.21998	0.00000	322.62	-15.72	0.00	2.52	24	-59		7.5	3373	0.7	Moon	Vesta
736.	-10	-13	2290/10/09 22:27:55	0.41059	1.15850	0.00000	257.50	-23.03	0.00	2.44	181	62		7.4	3461	0.6	Moon	Vesta
737.	-10	-13	2292/05/18 16:42:13	0.21622	1.28579	0.00000	72.34	20.33	0.00	3.54	2	15	-7.3	8.4	3238	0.7	Moon	Vesta
738.	-10	-13	2298/03/11 00:50:43	0.00059	1.28832	0.00000	318.95	-17.41	0.00	2.93	12	-35	-9.1	7.7	3304	0.8	Moon	Vesta
739.	-10	-13	2298/04/08 08:34:09	0.32111	1.27814	0.00000	332.96	-14.07	0.00	2.73	197	-49	-9.8	7.7	3221	0.6	Moon	Vesta
740.	-10	-13	2298/05/06 12:43:44	0.25784	1.26556	0.00000	345.34	-10.37	0.00	2.48	199	-64		7.5	3284	0.7	Moon	Vesta
741.	-10	-13	2298/06/03 12:41:25	0.34997	1.25689	0.00000	355.69	-6.82	0.00	2.20	21	-80		7.3	3230	0.6	Moon	Vesta
742.	-10	-13	2299/03/05 23:56:37	0.24506	1.28501	0.00000	25.38	5.30	0.00	3.18	22	40	-9.4	8.2	3235	0.7	Moon	Vesta
743.	-10	-13	2299/04/03 05:30:08	0.21529	1.29476	0.00000	36.70	9.97	0.00	3.40	21	25	-8.4	8.3	3223	0.7	Moon	Vesta

744.	-10	-13	2299/05/01 12:10:13	0.48812	1.29405	0.00000	48.62	14.31	0.00	3.53	19	9	-6.3	8.4	3026	0.2	Moon	Vesta
745.	-10	-13	2300/02/03 00:28:41	0.20600	1.25190	0.00000	108.78	24.42	0.00	1.61	177	153		6.7	3185	0.8	Moon	Vesta
746.	-10	-13	2300/05/24 05:37:43	0.02955	1.25228	0.00000	125.99	23.36	0.00	2.79	350	60		7.9	3382	0.9	Moon	Vesta
747.	-10	-13	2300/06/21 09:51:13	0.46540	1.25414	0.00000	137.73	20.98	0.00	3.04	346	44	-9.5	8.0	3142	0.3	Moon	Vesta
748.	-10	-13	2300/09/14 10:12:34	0.21460	1.21372	0.00000	175.49	7.24	0.00	3.34	335	5	-4.8	8.1	3445	0.8	Moon	Vesta
749.	-10	-13	2300/10/12 19:20:59	0.47919	1.19321	0.00000	188.12	1.30	0.00	3.27	154	-13	-6.8	8.0	3267	0.3	Moon	Vesta
750.	-10	-13	2302/02/28 15:37:45	0.39926	1.14742	0.00000	342.00	-12.38	0.00	3.28	205	4	-4.4	8.0	3489	0.6	Moon	Vesta
751.	-10	-13	2312/03/30 11:09:17	0.32885	1.21134	0.00000	274.49	-18.39	0.00	1.82	184	-95		6.9	3361	0.7	Moon	Vesta
752.	-10	-13	2312/04/27 06:49:58	0.10605	1.21970	0.00000	281.11	-17.86	0.00	1.51	6	-116		6.4	3407	0.9	Moon	Vesta
753.	-10	-13	2314/01/25 18:43:05	0.20182	1.15391	0.00000	49.40	13.51	0.00	2.12	12	106		7.5	3564	0.9	Moon	Vesta
754.	-10	-13	2315/09/03 22:50:15	0.21283	1.16657	0.00000	204.47	-5.10	0.00	2.80	161	44	-9.3	7.7	3608	0.9	Moon	Vesta
755.	-10	-13	2316/03/21 03:15:53	0.41428	1.26834	0.00000	311.08	-17.89	0.00	2.64	10	-51	-9.9	7.6	3177	0.5	Moon	Vesta
756.	-10	-13	2316/04/18 08:58:39	0.11983	1.26142	0.00000	324.29	-15.41	0.00	2.37	14	-66		7.4	3357	0.8	Moon	Vesta
757.	-10	-13	2316/05/16 09:58:02	0.27679	1.25450	0.00000	335.31	-12.74	0.00	2.08	17	-83		7.2	3289	0.7	Moon	Vesta
758.	-10	-13	2317/03/16 06:18:09	0.07411	1.29089	0.00000	20.42	3.14	0.00	3.34	22	26	-8.5	8.2	3274	0.8	Moon	Vesta
759.	-10	-13	2317/04/13 13:08:19	0.06623	1.30091	0.00000	32.34	7.89	0.00	3.48	201	11	-6.7	8.3	3248	0.8	Moon	Vesta
760.	-10	-13	2317/05/11 20:10:01	0.09650	1.29995	0.00000	44.48	12.27	0.00	3.52	19	-7	-5.6	8.3	3244	0.8	Moon	Vesta
761.	-10	-13	2318/06/03 09:23:14	0.02670	1.27499	0.00000	119.25	23.45	0.00	3.10	353	45	-9.6	8.1	3321	0.8	Moon	Vesta
762.	-10	-13	2318/10/22 20:49:02	0.22422	1.21007	0.00000	183.09	4.09	0.00	3.18	335	-28	-8.5	8.0	3453	0.8	Moon	Vesta
763.	-10	-13	2323/08/15 04:11:13	0.41345	1.28851	0.00000	291.66	-26.27	0.00	1.27	192	148		5.9	2996	0.4	Moon	Vesta
764.	-10	-13	2323/09/11 12:04:21	0.35208	1.26905	0.00000	291.36	-26.36	0.00	1.52	11	121		6.4	3138	0.6	Moon	Vesta
765.	-10	-13	2325/07/11 22:56:20	0.27929	1.19805	0.00000	119.20	21.74	0.00	3.53	163	7	-5.6	8.3	3439	0.8	Moon	Vesta
766.	-10	-13	2327/01/22 23:48:43	0.40923	1.16174	0.00000	289.52	-21.48	0.00	3.10	13	-14	-6.9	7.7	3446	0.6	Moon	Vesta
767.	-10	-13	2328/08/31 21:07:06	0.23354	1.26490	0.00000	99.56	20.55	0.00	2.93	352	-60		8.1	3284	0.8	Moon	Vesta
768.	-10	-13	2332/03/03 07:49:25	0.04068	1.17783	0.00000	46.70	13.38	0.00	2.81	192	65		8.1	3601	1.0	Moon	Vesta
769.	-10	-13	2333/10/11 04:44:42	0.14106	1.16357	0.00000	211.01	-7.82	0.00	3.15	163	15	-7.0	7.8	3646	1.0	Moon	Vesta
770.	-10	-13	2334/04/28 02:26:52	0.40147	1.23485	0.00000	312.10	-16.92	0.00	1.95	11	-87		7.0	3244	0.5	Moon	Vesta
771.	-10	-13	2335/03/26 13:10:18	0.27452	1.28799	0.00000	15.62	1.43	0.00	3.41	21	11	-6.6	8.2	3212	0.7	Moon	Vesta
772.	-10	-13	2335/04/23 20:53:57	0.00733	1.29810	0.00000	27.94	6.12	0.00	3.46	200	-7	-5.7	8.3	3261	0.8	Moon	Vesta
773.	-10	-13	2335/05/22 03:59:14	0.01965	1.29732	0.00000	40.15	10.41	0.00	3.41	19	-20	-7.9	8.3	3262	0.8	Moon	Vesta
774.	-10	-13	2335/06/19 09:22:33	0.34382	1.28729	0.00000	52.10	14.09	0.00	3.28	17	-35	-9.0	8.2	3167	0.6	Moon	Vesta
775.	-10	-13	2336/01/25 13:36:40	0.31926	1.27509	0.00000	72.66	19.59	0.00	1.84	191	130		7.1	3117	0.6	Moon	Vesta
776.	-10	-13	2336/06/12 15:16:03	0.31432	1.29047	0.00000	113.30	23.00	0.00	3.35	176	30	-8.7	8.3	3179	0.6	Moon	Vesta
777.	-10	-13	2336/07/10 21:15:21	0.24159	1.29212	0.00000	126.42	21.63	0.00	3.47	351	15	-7.2	8.3	3216	0.7	Moon	Vesta
778.	-10	-13	2338/05/15 04:28:25	0.47554	1.14783	0.00000	355.21	-7.38	0.00	2.56	206	-61		7.6	3390	0.3	Moon	Vesta
779.	-10	-13	2340/05/04 21:42:13	0.46394	1.16682	0.00000	126.16	24.59	0.00	2.44	346	78		7.7	3332	0.4	Moon	Vesta
780.	-10	-13	2340/06/01 22:50:29	0.11306	1.16758	0.00000	136.02	21.75	0.00	2.74	342	61		7.9	3627	1.0	Moon	Vesta
781.	-10	-13	2341/12/13 00:51:27	0.00905	1.27457	0.00000	309.32	-22.20	0.00	2.82	18	46	-9.7	7.7	3336	0.8	Moon	Vesta

782.	-10	-13	2343/08/19 08:11:04	0.33614	1.19672	0.00000	127.39	20.36	0.00	3.45	341	-21	-7.8	8.3	3398	0.7	Moon	Vesta
783.	-10	-13	2345/03/01 09:10:36	0.32370	1.15934	0.00000	297.92	-20.44	0.00	2.74	196	-44	-9.4	7.6	3552	0.8	Moon	Vesta
784.	-10	-13	2347/01/25 03:53:02	0.17458	1.24274	0.00000	86.50	22.23	0.00	1.71	176	142		6.9	3243	0.8	Moon	Vesta
785.	-10	-13	2350/04/10 13:29:47	0.02841	1.19307	0.00000	51.62	15.06	0.00	3.34	190	33	-8.8	8.3	3555	1.0	Moon	Vesta
786.	-10	-13	2351/11/18 14:59:14	0.40992	1.16451	0.00000	219.39	-10.78	0.00	3.15	165	-16	-7.2	7.8	3435	0.6	Moon	Vesta
787.	-10	-13	2351/12/17 03:39:47	0.27457	1.17937	0.00000	234.15	-14.26	0.00	3.00	348	-30	-8.6	7.8	3527	0.8	Moon	Vesta
788.	-10	-13	2352/03/11 12:02:54	0.39544	1.20544	0.00000	276.82	-18.78	0.00	2.19	360	-74		7.2	3346	0.6	Moon	Vesta
789.	-10	-13	2352/04/08 14:58:02	0.08809	1.20378	0.00000	287.88	-18.62	0.00	1.87	3	-92		6.9	3512	0.9	Moon	Vesta
790.	-10	-13	2352/05/06 10:09:50	0.10850	1.20130	0.00000	295.35	-18.28	0.00	1.56	6	-112		6.5	3466	0.9	Moon	Vesta
791.	-10	-13	2353/05/03 04:13:15	0.39636	1.28664	0.00000	23.39	4.62	0.00	3.35	20	-20	-7.9	8.2	3133	0.5	Moon	Vesta
792.	-10	-13	2353/05/31 11:00:44	0.30715	1.28624	0.00000	35.46	8.72	0.00	3.22	19	-34	-9.0	8.2	3199	0.7	Moon	Vesta
793.	-10	-13	2354/07/21 05:08:37	0.25045	1.29957	0.00000	121.51	21.26	0.00	3.54	173	1	-2.2	8.4	3192	0.7	Moon	Vesta
794.	-10	-13	2354/08/18 11:33:05	0.26192	1.29150	0.00000	134.68	19.28	0.00	3.48	349	-13	-7.0	8.3	3206	0.7	Moon	Vesta
795.	-10	-13	2354/12/08 22:00:02	0.24052	1.23211	0.00000	180.05	5.58	0.00	2.41	157	-79		7.6	3367	0.8	Moon	Vesta
796.	-10	-13	2355/09/10 20:28:54	0.47080	1.25869	0.00000	213.90	-9.41	0.00	2.72	158	47	-9.7	7.6	3143	0.3	Moon	Vesta
797.	-10	-13	2356/06/20 19:53:40	0.33754	1.15225	0.00000	354.57	-7.97	0.00	1.87	25	-98		7.0	3499	0.8	Moon	Vesta
798.	-10	-13	2358/08/07 08:44:42	0.23558	1.17117	0.00000	154.23	15.21	0.00	3.36	336	16	-7.3	8.1	3557	0.9	Moon	Vesta
799.	-10	-13	2363/05/06 12:50:42	0.46015	1.15254	0.00000	311.02	-16.95	0.00	1.80	20	-97		6.8	3367	0.4	Moon	Vesta
800.	-10	-13	2365/03/29 22:40:17	0.15872	1.18600	0.00000	80.49	22.96	0.00	2.68	358	72		8.0	3537	0.9	Moon	Vesta
801.	-10	-13	2366/11/06 00:37:46	0.39337	1.29142	0.00000	251.91	-20.23	0.00	2.95	358	30	-8.8	7.7	3140	0.5	Moon	Vesta
802.	-10	-13	2368/05/17 23:30:17	0.27590	1.19642	0.00000	59.20	17.05	0.00	3.56	7	5	-4.6	8.4	3445	0.8	Moon	Vesta
803.	-10	-13	2372/01/16 07:25:18	0.48217	1.24331	0.00000	42.61	10.81	0.00	2.08	17	108		7.4	3088	0.2	Moon	Vesta
804.	-10	-13	2372/08/27 18:47:47	0.29318	1.29104	0.00000	129.46	19.19	0.00	3.39	171	-28	-8.6	8.3	3190	0.7	Moon	Vesta
805.	-10	-13	2372/09/24 22:46:29	0.13464	1.27631	0.00000	141.62	16.96	0.00	3.15	347	-44	-9.5	8.2	3296	0.8	Moon	Vesta
806.	-10	-13	2372/10/23 00:07:32	0.33013	1.26014	0.00000	152.71	14.30	0.00	2.84	343	-60		8.0	3239	0.6	Moon	Vesta
807.	-10	-13	2372/11/19 22:01:26	0.10326	1.25003	0.00000	162.17	11.60	0.00	2.48	341	-78		7.7	3363	0.9	Moon	Vesta
808.	-10	-13	2373/08/22 13:47:15	0.25496	1.28006	0.00000	194.28	-0.55	0.00	2.83	157	44	-9.5	7.7	3256	0.7	Moon	Vesta
809.	-10	-13	2373/09/19 22:08:43	0.00368	1.28291	0.00000	207.03	-6.07	0.00	3.00	158	30	-8.8	7.8	3318	0.8	Moon	Vesta
810.	-10	-13	2373/10/18 08:36:27	0.13493	1.27643	0.00000	220.75	-11.56	0.00	3.11	159	17	-7.6	7.8	3316	0.8	Moon	Vesta
811.	-10	-13	2374/06/29 17:38:22	0.29406	1.17538	0.00000	337.34	-14.81	0.00	1.47	200	-124		6.3	3407	0.8	Moon	Vesta
812.	-10	-13	2378/03/27 15:16:38	0.39079	1.29122	0.00000	339.41	-11.74	0.00	3.04	27	-30	-8.8	7.8	3137	0.5	Moon	Vesta
813.	-10	-13	2379/11/30 01:41:44	0.10718	1.22980	0.00000	140.26	17.27	0.00	2.03	337	-110		7.3	3371	0.9	Moon	Vesta
814.	-10	-13	2381/08/30 08:27:54	0.43213	1.15345	0.00000	278.33	-25.58	0.00	1.49	8	120		6.4	3342	0.5	Moon	Vesta
815.	-10	-13	2384/12/13 16:04:34	0.17377	1.30248	0.00000	260.82	-21.27	0.00	3.13	182	-2	-2.8	7.7	3237	0.8	Moon	Vesta
816.	-10	-13	2386/07/23 12:12:35	0.24374	1.18052	0.00000	79.49	19.11	0.00	3.24	181	-41	-9.2	8.3	3517	0.9	Moon	Vesta
817.	-10	-13	2390/10/05 02:59:58	0.46102	1.26936	0.00000	134.96	17.34	0.00	2.91	169	-59		8.1	3102	0.3	Moon	Vesta
818.	-10	-13	2390/11/02 00:55:37	0.31092	1.25774	0.00000	144.48	15.54	0.00	2.55	166	-78		7.8	3246	0.7	Moon	Vesta
819.	-10	-13	2391/09/01 17:52:58	0.23196	1.29309	0.00000	188.11	1.90	0.00	3.10	158	28	-8.6	7.9	3231	0.7	Moon	Vesta

820.	-10	-13	2391/09/30 02:52:40	0.12233	1.29759	0.00000	201.22	-3.50	0.00	3.18	338	15	-7.4	7.9	3260	0.8	Moon	Vesta
821.	-10	-13	2391/10/28 13:14:38	0.12702	1.29147	0.00000	214.98	-8.91	0.00	3.20	339	5	-4.9	7.8	3275	0.8	Moon	Vesta
822.	-10	-13	2391/11/25 23:56:47	0.19830	1.27512	0.00000	229.40	-13.90	0.00	3.14	162	-13	-7.0	7.8	3295	0.8	Moon	Vesta
823.	-10	-13	2392/07/07 04:40:30	0.21245	1.22150	0.00000	310.68	-21.17	0.00	1.20	191	-158		5.7	3260	0.8	Moon	Vesta
824.	-10	-13	2393/01/16 18:11:40	0.26033	1.21130	0.00000	342.14	-12.97	0.00	2.98	21	42	-9.4	7.9	3437	0.8	Moon	Vesta
825.	-10	-13	2393/02/14 04:19:39	0.08831	1.19815	0.00000	354.65	-7.82	0.00	3.21	23	27	-8.4	8.1	3543	0.9	Moon	Vesta
826.	-10	-13	2393/03/14 14:16:04	0.26364	1.18159	0.00000	7.01	-2.22	0.00	3.36	25	12	-6.7	8.1	3509	0.8	Moon	Vesta
827.	-10	-13	2396/05/04 01:03:55	0.31485	1.26644	0.00000	345.45	-9.68	0.00	2.53	27	-61		7.6	3250	0.7	Moon	Vesta
828.	-10	-13	2398/04/23 18:44:01	0.10376	1.25516	0.00000	117.05	24.95	0.00	2.43	166	81		7.7	3342	0.8	Moon	Vesta
829.	-10	-13	2399/11/03 18:27:05	0.40322	1.17807	0.00000	283.16	-25.37	0.00	2.49	190	61		7.5	3414	0.6	Moon	Vesta
830.	-10	-13	2401/07/11 11:28:51	0.18833	1.18696	0.00000	105.77	22.14	0.00	3.57	168	-5	-4.7	8.4	3524	0.9	Moon	Vesta
831.	-10	-13	2404/10/23 23:22:07	0.29665	1.20744	0.00000	95.01	18.74	0.00	1.97	355	-116		7.3	3326	0.7	Moon	Vesta
832.	-10	-13	2404/11/20 06:32:11	0.14418	1.21998	0.00000	93.51	18.89	0.00	1.70	356	-145		6.9	3306	0.8	Moon	Vesta
833.	-10	-13	2404/12/17 05:41:30	0.31225	1.22496	0.00000	87.17	19.27	0.00	1.59	178	-176		6.7	3168	0.7	Moon	Vesta
834.	-10	-13	2406/08/20 19:13:49	0.42472	1.15669	0.00000	222.25	-12.39	0.00	2.17	167	76		7.2	3435	0.5	Moon	Vesta
835.	-10	-13	2408/03/02 20:23:15	0.15885	1.18910	0.00000	32.94	8.26	0.00	3.03	17	51	-9.7	8.1	3540	0.9	Moon	Vesta
836.	-10	-13	2409/10/09 08:53:27	0.12297	1.30228	0.00000	195.76	-1.46	0.00	3.27	159	5	-4.9	8.0	3245	0.8	Moon	Vesta
837.	-10	-13	2409/11/06 18:40:11	0.03277	1.29680	0.00000	209.29	-6.59	0.00	3.19	339	-16	-7.4	7.9	3275	0.8	Moon	Vesta
838.	-10	-13	2409/12/05 03:57:49	0.15874	1.28133	0.00000	223.14	-11.38	0.00	3.03	161	-29	-8.8	7.8	3293	0.8	Moon	Vesta
839.	-10	-13	2410/07/15 08:22:41	0.39153	1.26413	0.00000	274.27	-22.28	0.00	1.17	357	161		5.6	3043	0.5	Moon	Vesta
840.	-10	-13	2411/01/26 18:56:11	0.05132	1.23801	0.00000	335.51	-14.81	0.00	3.14	18	26	-8.4	7.9	3435	0.9	Moon	Vesta
841.	-10	-13	2411/02/24 05:39:29	0.22987	1.22007	0.00000	349.05	-9.92	0.00	3.29	201	12	-6.7	8.0	3422	0.8	Moon	Vesta
842.	-10	-13	2411/03/24 15:26:07	0.19376	1.19926	0.00000	2.05	-4.56	0.00	3.34	203	-6	-5.2	8.1	3498	0.9	Moon	Vesta
843.	-10	-13	2411/04/21 23:48:15	0.15912	1.18036	0.00000	14.51	0.87	0.00	3.31	24	-18	-7.5	8.1	3571	0.9	Moon	Vesta
844.	-10	-13	2412/11/28 02:29:48	0.41390	1.15631	0.00000	171.81	8.94	0.00	2.47	335	-77		7.7	3430	0.6	Moon	Vesta
845.	-10	-13	2414/06/10 18:41:45	0.30537	1.23935	0.00000	344.38	-10.85	0.00	1.82	26	-98		6.9	3284	0.7	Moon	Vesta
846.	-10	-13	2416/06/28 00:29:21	0.10393	1.28979	0.00000	132.02	21.18	0.00	3.27	341	32	-8.9	8.2	3271	0.8	Moon	Vesta
847.	-10	-13	2419/08/18 20:38:49	0.48553	1.18372	0.00000	113.77	21.46	0.00	3.35	345	-34	-8.8	8.3	3269	0.2	Moon	Vesta
848.	-10	-13	2423/02/18 19:19:36	0.10793	1.23766	0.00000	65.13	19.15	0.00	2.27	5	97		7.6	3366	0.9	Moon	Vesta
849.	-10	-13	2424/09/26 20:04:40	0.41720	1.16684	0.00000	225.47	-13.82	0.00	2.79	168	43	-9.3	7.6	3429	0.6	Moon	Vesta
850.	-10	-13	2426/04/10 01:48:15	0.04659	1.18687	0.00000	39.04	10.61	0.00	3.44	15	20	-7.8	8.3	3572	1.0	Moon	Vesta
851.	-10	-13	2427/11/16 23:21:23	0.46543	1.29163	0.00000	203.03	-4.41	0.00	3.07	160	-32	-8.9	7.9	3069	0.3	Moon	Vesta
852.	-10	-13	2429/02/04 22:09:05	0.23926	1.26053	0.00000	329.26	-15.94	0.00	3.22	16	10	-6.4	7.9	3312	0.8	Moon	Vesta
853.	-10	-13	2429/03/05 08:42:06	0.16766	1.23953	0.00000	343.51	-11.48	0.00	3.26	199	-6	-5.4	8.0	3397	0.8	Moon	Vesta
854.	-10	-13	2429/04/02 17:41:28	0.28535	1.21652	0.00000	356.92	-6.51	0.00	3.23	202	-19	-7.7	8.0	3397	0.8	Moon	Vesta
855.	-10	-13	2432/07/16 01:54:53	0.14957	1.21631	0.00000	325.43	-19.00	0.00	1.24	20	-153		5.8	3302	0.8	Moon	Vesta
856.	-10	-13	2436/02/16 01:08:36	0.05517	1.17278	0.00000	314.35	-18.92	0.00	3.12	201	-16	-7.2	7.8	3638	1.0	Moon	Vesta
857.	-10	-13	2437/10/23 01:30:05	0.22034	1.17022	0.00000	127.16	18.32	0.00	2.45	161	-85		7.8	3542	0.9	Moon	Vesta

858.	-10	-13	2444/05/17 11:26:06	0.27691	1.18804	0.00000	46.88	13.12	0.00	3.50	13	-10	-6.3	8.3	3472	0.8	Moon	Vesta
859.	-10	-13	2444/06/14 18:49:20	0.45722	1.20405	0.00000	59.43	15.55	0.00	3.42	190	-25	-8.2	8.3	3258	0.4	Moon	Vesta
860.	-10	-13	2447/03/15 12:25:09	0.17596	1.25471	0.00000	337.64	-12.68	0.00	3.14	17	-20	-7.9	7.9	3354	0.8	Moon	Vesta
861.	-10	-13	2447/04/12 20:01:16	0.05762	1.23212	0.00000	351.16	-8.23	0.00	3.02	200	-34	-9.0	7.9	3448	0.9	Moon	Vesta
862.	-10	-13	2447/05/11 01:20:07	0.06600	1.21395	0.00000	3.52	-3.68	0.00	2.83	22	-49	-9.7	7.8	3500	0.9	Moon	Vesta
863.	-10	-13	2448/03/09 12:06:00	0.15797	1.23363	0.00000	40.88	11.44	0.00	3.03	20	53	-9.9	8.2	3411	0.9	Moon	Vesta
864.	-10	-13	2448/04/06 18:04:47	0.20683	1.22826	0.00000	51.84	15.37	0.00	3.30	18	36	-9.1	8.3	3403	0.8	Moon	Vesta
865.	-10	-13	2449/01/12 00:04:58	0.21216	1.15984	0.00000	146.24	18.31	0.00	1.60	163	-149		6.7	3428	0.9	Moon	Vesta
866.	-10	-13	2449/06/25 12:35:12	0.49528	1.16939	0.00000	155.54	15.67	0.00	2.74	160	57	-9.9	7.8	3301	0.1	Moon	Vesta
867.	-10	-13	2449/07/23 20:31:19	0.27982	1.16142	0.00000	167.00	11.09	0.00	2.97	157	42	-9.2	7.9	3566	0.8	Moon	Vesta
868.	-10	-13	2449/08/21 06:08:43	0.41398	1.15237	0.00000	179.07	5.60	0.00	3.13	155	28	-8.4	7.9	3459	0.6	Moon	Vesta
869.	-10	-13	2450/09/16 15:45:47	0.07898	1.17279	0.00000	289.55	-26.68	0.00	1.61	185	113		6.6	3557	1.0	Moon	Vesta
870.	-10	-13	2450/10/14 13:07:20	0.18855	1.17014	0.00000	296.95	-26.05	0.00	1.95	188	93		7.1	3576	0.9	Moon	Vesta
871.	-10	-13	2450/11/11 15:52:45	0.37929	1.16902	0.00000	307.68	-24.24	0.00	2.30	193	75		7.4	3455	0.7	Moon	Vesta
872.	-10	-13	2450/12/09 21:13:52	0.35532	1.17204	0.00000	320.01	-20.99	0.00	2.64	198	58		7.7	3477	0.7	Moon	Vesta
873.	-10	-13	2451/01/07 03:44:36	0.00777	1.18165	0.00000	332.79	-16.38	0.00	2.94	202	42	-9.4	7.9	3613	1.0	Moon	Vesta
874.	-10	-13	2452/10/10 09:15:15	0.46622	1.27746	0.00000	159.40	11.67	0.00	3.13	153	-41	-9.4	8.1	3085	0.3	Moon	Vesta
875.	-10	-13	2456/02/17 11:35:38	0.12293	1.14575	0.00000	101.37	25.11	0.00	1.77	351	132		7.0	3550	1.0	Moon	Vesta
876.	-10	-13	2461/01/09 03:10:07	0.35119	1.15618	0.00000	257.78	-19.09	0.00	2.95	359	-31	-8.7	7.7	3532	0.7	Moon	Vesta
877.	-10	-13	2462/07/23 02:38:50	0.38922	1.19187	0.00000	65.71	16.67	0.00	2.97	8	-54	-9.8	8.1	3367	0.6	Moon	Vesta
878.	-10	-13	2462/08/20 05:47:35	0.17156	1.19416	0.00000	75.89	17.56	0.00	2.67	5	-71		7.9	3510	0.9	Moon	Vesta
879.	-10	-13	2462/09/17 03:52:15	0.26355	1.18995	0.00000	83.75	17.95	0.00	2.33	2	-91		7.7	3447	0.8	Moon	Vesta
880.	-10	-13	2462/12/07 17:30:09	0.17252	1.18090	0.00000	81.13	18.12	0.00	1.59	3	-173		6.7	3356	0.9	Moon	Vesta
881.	-10	-13	2464/08/09 19:19:31	0.03197	1.23148	0.00000	211.93	-7.50	0.00	2.21	162	74		7.3	3449	0.9	Moon	Vesta
882.	-10	-13	2465/04/21 20:56:50	0.44076	1.24496	0.00000	344.03	-9.95	0.00	2.71	18	-51	-9.8	7.7	3195	0.4	Moon	Vesta
883.	-10	-13	2466/02/19 09:56:32	0.21226	1.25888	0.00000	24.69	4.70	0.00	2.96	21	54		8.1	3321	0.8	Moon	Vesta
884.	-10	-13	2466/03/19 15:32:47	0.20509	1.26030	0.00000	35.53	9.01	0.00	3.25	200	37	-9.2	8.2	3319	0.8	Moon	Vesta
885.	-10	-13	2466/04/16 22:37:33	0.23298	1.25162	0.00000	47.20	13.21	0.00	3.45	198	21	-8.0	8.3	3324	0.8	Moon	Vesta
886.	-10	-13	2466/05/15 05:43:12	0.01998	1.23496	0.00000	59.47	16.88	0.00	3.55	15	7	-5.5	8.4	3426	0.9	Moon	Vesta
887.	-10	-13	2466/06/12 11:57:26	0.47295	1.21485	0.00000	72.11	19.77	0.00	3.56	12	-9	-6.1	8.4	3209	0.3	Moon	Vesta
888.	-10	-13	2467/07/05 10:07:25	0.00378	1.19059	0.00000	148.70	17.53	0.00	3.07	163	41	-9.2	8.0	3573	1.0	Moon	Vesta
889.	-10	-13	2467/08/02 18:36:42	0.27111	1.17796	0.00000	161.02	13.33	0.00	3.23	339	27	-8.3	8.1	3517	0.8	Moon	Vesta
890.	-10	-13	2467/08/31 04:03:00	0.24947	1.16422	0.00000	173.56	8.23	0.00	3.31	337	13	-6.8	8.1	3574	0.9	Moon	Vesta
891.	-10	-13	2467/09/28 14:02:04	0.08377	1.15265	0.00000	186.23	2.54	0.00	3.31	155	5	-4.6	8.0	3691	1.0	Moon	Vesta
892.	-10	-13	2469/03/13 21:13:13	0.16087	1.20146	0.00000	353.10	-7.68	0.00	3.30	26	-5	-4.9	8.0	3509	0.9	Moon	Vesta
893.	-10	-13	2470/11/17 12:10:10	0.35549	1.25826	0.00000	162.76	10.87	0.00	2.54	153	-76		7.8	3216	0.6	Moon	Vesta
894.	-10	-13	2474/05/20 13:34:04	0.32302	1.15314	0.00000	110.56	23.79	0.00	3.07	167	49	-9.5	8.2	3540	0.8	Moon	Vesta
895.	-10	-13	2475/12/01 05:52:29	0.14227	1.20455	0.00000	277.66	-23.37	0.00	2.98	9	28	-8.5	7.7	3519	0.9	Moon	Vesta

896.	-10	-13	2477/07/09 20:19:31	0.03647	1.29007	0.00000	92.05	21.49	0.00	3.53	174	-17	-7.5	8.4	3273	0.8	Moon	Vesta
897.	-10	-13	2479/03/16 12:58:35	0.12348	1.16312	0.00000	276.56	-18.71	0.00	2.09	5	-80		7.1	3652	1.0	Moon	Vesta
898.	-10	-13	2482/09/16 21:11:07	0.48557	1.22648	0.00000	215.79	-9.12	0.00	2.81	343	42	-9.4	7.7	3191	0.2	Moon	Vesta
899.	-10	-13	2484/02/29 14:20:45	0.28602	1.28142	0.00000	19.06	2.61	0.00	3.18	21	38	-9.3	8.2	3225	0.7	Moon	Vesta
900.	-10	-13	2484/03/28 21:24:10	0.23118	1.28128	0.00000	30.77	7.10	0.00	3.39	200	23	-8.2	8.3	3252	0.7	Moon	Vesta
901.	-10	-13	2484/04/26 04:51:38	0.39578	1.27043	0.00000	42.89	11.37	0.00	3.51	198	8	-6.0	8.3	3165	0.5	Moon	Vesta
902.	-10	-13	2484/05/24 11:32:08	0.27225	1.25193	0.00000	55.25	15.08	0.00	3.53	196	-9	-6.1	8.4	3297	0.7	Moon	Vesta
903.	-10	-13	2484/06/21 16:44:22	0.09025	1.23084	0.00000	67.67	18.04	0.00	3.45	12	-23	-8.1	8.4	3428	0.9	Moon	Vesta
904.	-10	-13	2485/01/01 16:17:01	0.46606	1.22478	0.00000	106.52	22.57	0.00	1.58	359	-177		6.6	3032	0.3	Moon	Vesta
905.	-10	-13	2485/07/14 11:37:02	0.01062	1.21320	0.00000	142.99	18.45	0.00	3.31	165	27	-8.4	8.2	3499	0.9	Moon	Vesta
906.	-10	-13	2485/08/11 19:53:03	0.37022	1.19666	0.00000	155.81	14.70	0.00	3.39	342	13	-6.8	8.2	3375	0.6	Moon	Vesta
907.	-10	-13	2485/10/07 13:13:52	0.33963	1.16394	0.00000	181.24	4.93	0.00	3.30	336	-17	-7.3	8.1	3502	0.7	Moon	Vesta
908.	-10	-13	2485/11/04 22:03:21	0.17074	1.15349	0.00000	193.74	-0.50	0.00	3.12	156	-31	-8.6	8.0	3663	1.0	Moon	Vesta
909.	-10	-13	2487/04/21 09:08:45	0.08483	1.19817	0.00000	0.90	-4.53	0.00	3.08	26	-33	-8.8	7.9	3548	0.9	Moon	Vesta
910.	-10	-13	2488/12/23 21:08:57	0.30196	1.25458	0.00000	157.22	13.96	0.00	1.87	155	-119		7.1	3195	0.7	Moon	Vesta
911.	-10	-13	2492/06/26 20:02:16	0.46430	1.15479	0.00000	117.92	22.93	0.00	3.47	344	19	-7.5	8.3	3368	0.4	Moon	Vesta
912.	-10	-13	2500/10/25 06:30:50	0.44018	1.23255	0.00000	223.03	-11.65	0.00	3.15	345	13	-6.9	7.8	3226	0.4	Moon	Vesta

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Main Abbreviations

Dm: Minimum *apparent* angular separation (degrees).

Err: Estimated angular uncertainty (degrees) of *Dm*.

r1 & *r2*: Geocentric (or planetocentric) distances (AU) of the two bodies at the epoch of minimum separation.

p : Position angle (degrees) of body #2 with respect to the center of body #1 at the minimum angular separation, measured clockwise from South = 0.

e: Elongation (degrees) from the Sun of body #1.

m1 & *m2*: Approximate visual magnitudes of the two bodies.

tm: Maximum observable occultation time, in seconds (only present in the case of an occultation, when $Dm < DI$).

tw: Approximate time half-window (in hours) within which the angular distance is smaller than the selected value.

We strongly recommend to read with attention the Handbook!

SOLEX 9.12 is used by <http://ephemerides.astronomiques.ifsfrance.com>