

TABLE 2: The initial conditions of the active GNSS satellites for the epoch April 18, 2012, presenting the identification of the satellite (US catalog number and name), semimajor axis (a), eccentricity (e), inclination (I), longitude of the ascending node (Ω), argument of perigee (ω), and mean anomaly (l). The US catalog number is the same number of the NORAD catalog.

Satellite ID	a [km]	e	I [deg]	Ω [deg]	ω [deg]	l [deg]
20959 GPS BIIA-10 (PRN 32)	26560.76605	0.01194	54.5454	241.1649	325.2920	33.8961
22014 GPS BIIA-14 (PRN 26)	26560.16349	0.02070	56.3669	301.0373	67.8160	294.3814
22108 GPS BIIA-15 (PRN 27)	26561.12027	0.02202	56.2641	353.9700	296.8058	61.0016
22700 GPS BIIA-21 (PRN 09)	26559.82731	0.01714	56.4089	355.4836	92.3821	269.6143
22779 GPS BIIA-22 (PRN 30)	26559.98507	0.01074	54.9727	50.3441	89.3106	271.8936
22877 GPS BIIA-23 (PRN 04)	26559.47428	0.00982	53.7281	176.1439	47.6428	313.2418
23027 GPS BIIA-24 (PRN 06)	26560.59892	0.00734	53.7368	112.8676	325.5167	34.0429
23833 GPS BIIA-25 (PRN 03)	26560.76155	0.01493	53.3418	108.4962	67.5763	294.0258
23953 GPS BIIA-26 (PRN 10)	26560.51046	0.01110	54.2158	237.3339	42.3080	318.5046
24876 GPS BIIR-2 (PRN 13)	26560.51152	0.00471	56.5076	301.3609	113.5217	246.9874
25030 GPS BIIA-28 (PRN 08)	26560.50772	0.01216	57.1768	1.7212	191.1965	168.5625
25933 GPS BIIR-3 (PRN 11)	26560.46931	0.01263	50.8831	160.5785	59.3065	302.0055
26360 GPS BIIR-4 (PRN 20)	26560.94351	0.00485	53.3143	233.6311	73.2390	287.2615
26407 GPS BIIR-5 (PRN 28)	26560.69833	0.01812	56.0681	58.9335	255.5129	102.4490
26605 GPS BIIR-6 (PRN 14)	26559.28757	0.00637	56.1005	299.8538	243.2761	116.0784
26690 GPS BIIR-7 (PRN 18)	26560.47700	0.01323	53.2893	236.6979	235.4110	123.2997
27663 GPS BIIR-8 (PRN 16)	26560.04758	0.00660	56.1622	58.5327	355.2423	4.6666
27704 GPS BIIR-9 (PRN 21)	26559.97660	0.01909	53.3659	176.4938	230.6459	127.7068
28129 GPS BIIR-10 (PRN 22)	26560.50101	0.00607	53.1581	236.9148	245.9183	113.4118
28190 GPS BIIR-11 (PRN 19)	26561.32838	0.00807	55.0126	121.1995	6.8089	353.3462
28361 GPS BIIR-12 (PRN 23)	26560.11909	0.00773	55.0416	296.9056	188.5482	171.3252
28474 GPS BIIR-13 (PRN 02)	26560.35825	0.01118	53.7831	175.1699	199.4560	160.1666
28874 GPS BIIRM-1 (PRN 17)	26560.20084	0.00748	55.1631	118.1868	229.0088	130.3835
29486 GPS BIIRM-2 (PRN 31)	26559.76384	0.00810	56.2002	357.1638	308.6808	50.6301
29601 GPS BIIRM-3 (PRN 12)	26558.94206	0.00394	56.1119	57.5001	355.4301	4.5151
32260 GPS BIIRM-4 (PRN 15)	26559.00138	0.00438	54.2008	294.9063	359.9041	0.0971
32384 GPS BIIRM-5 (PRN 29)	26559.66947	0.00254	55.1922	118.6307	290.8636	68.9092
32711 GPS BIIRM-6 (PRN 07)	26559.71493	0.00521	55.9088	356.9812	189.6439	170.2904
35752 GPS BIIRM-8 (PRN 05)	26559.93917	0.00262	54.5104	236.0808	12.2377	347.7894
36585 GPS BIIF-1 (PRN 25)	26560.98360	0.00135	55.4730	55.5546	27.1038	332.9427
37753 GPS BIIF-2 (PRN 01)	26560.17029	0.00052	55.0094	175.8938	9.0525	351.0152
28509 COSMOS 2413 (712)	25507.99400	0.00052	63.3431	244.4346	145.6901	66.0918
28915 COSMOS 2419 (714)	25508.11785	0.00178	64.8965	129.4190	340.5463	72.0616
29670 COSMOS 2425 (716)	25507.76115	0.00235	65.8460	8.1085	348.2693	39.3142
29671 COSMOS 2426 (717)	25507.91851	0.00160	65.8624	8.1742	165.7740	68.3202
29672 COSMOS 2424 (715)	25507.94421	0.00155	65.8477	8.1278	164.7920	299.1805
32275 COSMOS 2433 (720)	25507.98810	0.00047	64.9095	129.1380	271.2384	252.5335
32276 COSMOS 2432 (719)	25508.02082	0.00149	64.9224	129.1791	331.7142	155.3185
32393 COSMOS 2434 (721)	25507.95969	0.00038	65.4709	8.1310	97.6333	55.7476
32394 COSMOS 2435 (722)	25507.86912	0.00212	65.4742	8.1251	0.2504	105.2990
32395 COSMOS 2436 (723)	25507.93296	0.00186	65.4830	8.1524	354.7572	192.0330
33378 COSMOS 2442 (724)	25508.00781	0.00267	64.8241	128.6694	330.2945	123.8221
33379 COSMOS 2443 (725)	25507.98985	0.00199	64.8323	128.7216	190.8534	321.8305
33380 COSMOS 2444 (726)	25507.96799	0.00281	64.8408	128.7465	322.5419	27.9592
33466 COSMOS 2447 (727)	25508.01515	0.00021	64.1873	248.3265	264.7364	132.9052
33467 COSMOS 2449 (729)	25508.03063	0.00023	64.1760	248.2733	299.2114	74.7705
33468 COSMOS 2448 (728)	25508.06471	0.00041	64.1798	248.3152	327.9558	243.7852
36111 COSMOS 2456 (730)	25508.03239	0.00045	64.4154	248.4401	339.5272	27.1477

TABLE 2: Continued.

Satellite ID	a [km]	e	I [deg]	Ω [deg]	ω [deg]	l [deg]
36112 COSMOS 2457 (733)	25508.06072	0.00072	64.3969	248.4053	144.0316	260.8383
36113 COSMOS 2458 (734)	25508.02600	0.00026	64.4026	248.3892	53.2159	291.5204
36400 COSMOS 2459 (731)	25507.97381	0.00325	64.8090	128.5096	349.4180	11.8379
36401 COSMOS 2461 (735)	25507.96935	0.00027	64.8016	128.4959	80.2428	24.9760
36402 COSMOS 2460 (732)	25507.99672	0.00024	64.7918	128.4783	265.3795	198.6674
37137 COSMOS 2466 (738)	25507.97573	0.00204	65.0465	9.0692	152.0633	3.1840
37138 COSMOS 2465 (737)	25507.94836	0.00341	65.0625	9.1042	166.9321	337.0254
37139 COSMOS 2464 (736)	25507.95339	0.00222	65.0647	9.0715	12.8557	24.4004
37372 COSMOS 2471 (701K)	25507.41308	0.00070	64.8028	128.4335	249.1758	138.8823
37829 COSMOS 2474 (742)	25508.03247	0.00063	64.7336	248.2178	271.4956	124.9730
37867 COSMOS 2476 (744)	25508.03741	0.00152	64.7155	248.3493	263.4875	312.9414
37868 COSMOS 2477 (745)	25508.03366	0.00131	64.7233	248.3422	265.3620	114.7440
37869 COSMOS 2475 (743)	25508.02840	0.00195	64.7300	248.3245	284.4241	350.4016
37938 COSMOS 2478 (746)	25507.97270	0.00141	64.8216	128.6027	248.3220	225.8235
28922 GIOVE-A	29716.46180	0.00079	56.2213	130.1371	359.0326	1.0273
32781 GIOVE-B	29544.12728	0.00228	55.9161	164.4876	228.1809	131.6963
37846 GALILEO-PFM (GSAT0101)	29600.25776	0.00049	54.7324	124.8074	290.0592	69.9412
37847 GALILEO-FM2 (GSAT0102)	29600.22222	0.00060	54.7332	124.7907	280.2382	79.7480
26599 26599 2000-069A BEIDOU 1A	42551.78958	0.00200	3.4844	70.0244	266.1599	93.7374
26643 26643 2000-082A BEIDOU 1B	42453.69320	0.00838	4.4896	65.6045	317.7107	41.7041
27813 27813 2003-021A BEIDOU 1C	42165.86357	0.00134	1.4051	80.2039	359.9422	162.1483
30323 30323 2007-003A BEIDOU 1D	42482.29583	0.00557	1.7758	263.1685	339.3604	19.8511
31115 31115 2007-011A BEIDOU 2A	27910.13639	0.00043	56.6975	29.5987	210.5539	302.3601
34779 34779 2009-018A BEIDOU G2	42182.68822	0.00481	1.6384	71.5223	163.5239	197.0051
36287 36287 2010-001A BEIDOU G1	42164.45905	0.00027	1.5550	355.3111	165.0458	2.7948
36590 36590 2010-024A BEIDOU G3	42165.76657	0.00033	1.1444	352.7818	79.0950	155.4016
36828 36828 2010-036A BEIDOU IGSO	42169.06132	0.00280	54.7511	212.2417	191.4996	202.3179
37210 37210 2010-057A BEIDOU G4	42165.13887	0.00060	0.7716	305.1317	138.2682	243.2195
37256 37256 2010-068A BEIDOU IGSO	42167.94674	0.00208	54.9537	332.9232	175.3679	79.2272
37384 37384 2011-013A BEIDOU IGSO	42165.81255	0.00212	55.6720	92.6995	191.2421	0.7374
37763 37763 2011-038A BEIDOU IGSO	42168.61324	0.00215	55.0711	214.3362	173.4566	107.5842
37948 37948 2011-073A BEIDOU IGSO	42160.96788	0.00182	55.0852	332.3159	180.9341	82.5926
38091 38091 2012-008A BEIDOU G5	42165.81619	0.00015	1.7894	300.4793	39.4195	273.8538