



User Friendly CORS (UFCORS)

National Geodetic Survey

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This utility allows you to obtain a specific block of Global Navigation Satellite System (GNSS) data, in Receiver INdependent EXchange (RINEX) format 2.11, for any site in the Continuously Operating Reference Station (CORS) Network.

NOTICE

Updated: 2014-APR-08, Tuesday, 1414hEDT

Augmented GPS (L2C and L5) and GLONASS is now available for selected sites from 2007:250-present. Earlier data is GPS L1 and L2 only.

Fields marked with an asterisk (*) are required.

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Selection Criteria

*Start Date:

(First available data: Jan 01, 1994)

Year Day of Year

Start Time:

Time Zone:

*Duration in Hour(s):

*Site ID: [CORS Map](#)

Sampling Rate:

*Available Satellite Systems:

Optional Files

Coordinate File :

NGS data sheet :

IGS Orbits in SP3(c) format :

Website Owner: National Geodetic Survey / Last modified by NGS.UFCORS Oct 03 2018

```

                                obs_file
2.11      OBSERVATION DATA      G (GPS)      RINEX VERSION / TYPE
teqc 2018Jun8      root      20180918 19:52:05UTC PGM / RUN BY / DATE
Linux 2.4.21-27.ELsmp|Opteron|gcc|Linux 64|=+      COMMENT
2.11      OBSERVATION DATA      G (GPS)      COMMENT
teqc 2010Oct21      CORS-ADM Account      20111101 19:04:36UTC COMMENT
Solaris x86 5.10|AMD64|cc SC5.8 -xarch=amd64|=+|=+      COMMENT
teqc 2010Oct21      CORS-ADM Account      20111002 03:01:39UTC COMMENT
teqc 2010Oct21      CORS/NGS/NOAA      20111002 03:01:14UTC COMMENT
BIT 2 OF LLI FLAGS DATA COLLECTED UNDER A/S CONDITION      COMMENT
SPIDER      COMMENT
Made by Spider v4.0.1      COMMENT
Project creator:      COMMENT
Derek Fuller      COMMENT
SNR is mapped to RINEX snr flag value [0-9]      COMMENT
L1 & L2: min(max(int(snr_dBHz/6), 0), 9)      COMMENT
Forced Modulo Decimation to 30 seconds      COMMENT
INWL      MARKER NAME
Derek Fuller      Indiana Department of Transportation      OBSERVER / AGENCY
355097      LEICA GRX1200GGPRO 8.20/3.019      REC # / TYPE / VERS
07100016      LEIAX1202GG      NONE      ANT # / TYPE
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0.0000      0.0000      0.0000      ANTENNA: DELTA H/E/N
1 1      WAVELENGTH FACT L1/2
8 L1 L2 C1 C2 P1 P2 S1 S2      # / TYPES OF OBSERV
30.0000      INTERVAL
teqc.w windowed: start @ 2011 Oct 1 00:00:00.000      COMMENT
teqc.w windowed: end @ 2011 Oct 1 05:00:00.000      COMMENT
teqc.w edited: all GLONASS satellites excluded      COMMENT
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                                                                END OF HEADER
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21407775.280 50.000 45.750
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24380343.520 40.250 39.750
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/* cod emr esa gfz grg jpl mit ngs sio
/* REFERENCED TO IGS TIME (IGST) AND TO WEIGHTED MEAN POLE:
/* PCV:IGS08_1648 OL/AL:FES2004 NONE Y ORB:CMB CLK:CMB
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PG06	-14399.946351	20846.469625	7666.319116	-58.791898	7	6	4	136
PG07	22662.835104	6659.946641	12394.977807	29.407232	9	7	11	138
PG08	26619.846134	2048.540233	3146.702990	0.015279	19	18	21	168
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PG10	16971.803662	-852.348552	20277.721133	-14.856759	7	8	7	149
PG11	3505.840738	16649.715118	-20723.333762	-190.613920	8	8	6	110
PG12	-11269.300180	-23488.491701	-5613.392409	25.685799	8	7	8	131
PG13	9565.207046	11910.710881	21581.141080	248.917126	8	9	6	131
PG14	-17849.771891	8269.632396	-17598.599071	174.736017	8	10	9	105
PG15	2338.772816	-24148.237998	-10588.529630	-104.234440	8	7	9	152
PG16	-2995.294937	18528.590661	18682.660758	-200.784293	5	7	9	127
PG17	17885.225457	-8280.974584	-17545.085045	172.808544	9	8	10	140
PG18	-19540.456522	-14522.832524	-10702.271439	159.923718	10	10	9	118
PG19	-6610.832587	23972.920662	-8821.601122	-189.453885	7	6	7	125
PG20	12978.949479	22756.199518	-4730.718731	53.702216	9	9	10	131
PG21	-24802.880975	-5023.467133	9439.908217	-174.940431	8	6	8	130
PG22	-18007.742122	-819.903732	-19359.463933	144.170825	9	10	7	145
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PG25	-17843.085904	-19099.243007	4771.152469	21.213152	7	9	8	143
PG26	12180.254335	-23344.755840	-1359.697501	-175.059399	9	7	7	95
PG27	1547.891408	-14643.994578	-21428.577634	310.558376	16	8	12	155
PG28	18145.542973	5586.282169	-18154.157940	71.809848	10	11	8	125
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PG30	-20612.932755	-8923.664341	13823.767464	77.229133	7	8	4	143
PG31	-23672.659067	8119.504954	9413.818677	148.974241	7	8	6	120
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PG03	-10492.110364	23286.658777	6247.712072	775.280553	7	8	6	126
PG04	25872.860858	-6077.501928	2778.002577	246.994014	11	11	10	106
PG05	5346.609868	-16276.907172	20255.133430	-225.536994	8	7	6	142
PG06	-14345.597380	19784.207093	10227.064415	-58.784629	6	6	4	146
PG07	21153.831471	6981.145975	14657.813530	29.408926	9	6	10	132
PG08	26116.440954	2168.387901	5977.891900	0.016678	18	17	20	158

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PG11	1329.886882	17434.578509	-20289.280494	-190.616954	8	8	5	122
PG12	-10652.192653	-22954.516291	-8341.663630	25.688101	7	6	8	136
PG13	8371.380121	14047.081642	20775.415387	248.915102	7	9	6	124
PG14	-17002.783086	6304.014600	-19178.238117	174.737811	8	10	8	106
PG15	2995.123439	-25041.172729	-8028.054158	-104.233160	7	6	9	136
PG16	-4354.406052	16771.388509	20052.793843	-200.785971	6	7	8	129
PG17	17125.771940	-6285.653754	-19073.885162	172.807412	9	8	10	145
PG18	-19973.035747	-15593.942646	-8217.028679	159.925106	10	9	9	99
PG19	-7253.500362	24606.367129	-6124.754787	-189.457358	7	5	7	122
PG20	12304.127273	22429.858235	-7408.716577	53.703155	8	8	9	130
PG21	-23690.177740	-5393.639781	11841.528564	-174.942744	7	5	8	131
PG22	-19160.986882	-2679.001569	-18062.748005	144.170443	9	10	7	122
PG23	3033.203539	21252.334339	15420.857275	271.669979	7	7	6	112
PG25	-17891.282472	-19550.530849	1941.720935	21.214755	7	8	8	137
PG26	12334.587598	-23176.584506	1569.155517	-175.070549	9	6	7	107
PG27	4079.949721	-15000.549041	-20825.579911	310.561818	15	7	11	156
PG28	19204.695391	7358.604713	-16421.385119	71.812753	10	10	8	135
PG29	-9340.539257	-14264.296406	20440.347654	244.428935	6	8	7	131
PG30	-21469.525460	-10180.669376	11522.362251	77.222935	7	7	3	142
PG31	-24577.168798	8050.992118	6730.740575	148.978972	7	8	6	137
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PG03	-10645.820009	22304.307498	8869.628962	775.286264	7	8	6	127
PG04	26105.634231	-5823.746465	-6.867959	247.004030	11	10	10	79
PG05	6962.547587	-14538.189810	21080.043138	-225.541795	8	7	5	140
PG06	-14261.068982	18454.348328	12610.445140	-58.777584	6	6	4	145
PG07	19426.027339	7426.243369	16671.371669	29.410651	9	5	10	134
PG08	25310.812093	2347.543810	8709.802047	0.016415	17	16	20	125
PG09	-257.739668	-15201.131475	-22331.761276	108.868956	15	11	8	114
PG10	19495.743029	2812.424756	17768.589760	-14.861212	7	8	7	141
PG11	-755.403476	18281.585735	-19514.765837	-190.619985	8	7	5	112
PG12	-9815.935558	-22223.022407	-10927.728368	25.690071	5	6	7	135
PG13	7345.615276	16144.424933	19607.284092	248.913782	7	9	6	118
PG14	-16201.437035	4146.508984	-20421.607454	174.739494	9	10	7	97
PG15	3511.336844	-25682.802210	-5327.944464	-104.231719	7	5	9	136
PG16	-5889.601970	14985.702147	21075.609070	-200.787876	6	7	8	135
PG17	16413.436771	-4110.279785	-20268.228296	172.805779	9	8	10	139
PG18	-20274.905529	-16417.543654	-5591.569135	159.926349	9	9	9	96
PG19	-7733.102615	24986.387985	-3320.261368	-189.461258	7	5	7	117
PG20	11416.961832	21919.360471	-9960.266429	53.703201	8	7	9	126
PG21	-22346.977533	-5860.234903	14049.742967	-174.944558	7	4	8	128
PG22	-20295.295353	-4352.661082	-16451.966761	144.170321	9	10	7	124
PG23	2272.363424	22731.555204	13257.699567	271.667297	6	6	6	80
PG25	-17751.688083	-19755.487828	-921.090820	21.216334	7	8	8	134
PG26	12364.849100	-22708.987528	4470.134389	-175.081818	8	5	7	85
PG27	6500.152996	-15471.280724	-19840.117931	310.563906	15	6	11	155
PG28	20223.890812	8895.725379	-14398.130764	71.815388	10	10	8	129
PG29	-8416.135575	-16326.397027	19264.885169	244.431812	6	8	7	133
PG30	-22191.652979	-11199.261036	9019.171806	77.216674	7	7	3	121
PG31	-25180.762406	7980.027856	3933.938415	148.983888	7	8	6	135
PG32	3106.437404	21625.965070	-15137.090756	-337.839476	9	5	9	87
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PG01	2301.865729	15153.975032	-21701.953657	-4.787508	11	1	12	130
PG02	19250.177729	-14341.021855	10876.101938	358.664720	10	5	9	126
PG03	-10803.085294	21040.630596	11333.547280	775.290448	7	8	6	131
PG04	26047.617363	-5508.241370	-2791.642506	247.014490	10	10	10	71
PG05	8714.576674	-12832.241261	21541.277193	-225.546413	8	7	5	138
PG06	-14182.172194	16873.453245	14775.669799	-58.770346	6	6	4	149
PG07	17518.617407	8015.598772	18401.051811	29.412390	8	5	9	128

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PG08	24222.642431	2622.190051	11296.915253	0.015250	17	15	19	88
PG09	2063.900638	-15812.049147	-21795.984481	108.871471	15	10	8	100
PG10	20721.734828	4354.795578	16040.720977	-14.862451	7	8	7	139
PG11	-2717.443048	19164.943764	-18411.569069	-190.623392	8	7	5	127
PG12	-8747.676782	-21332.746494	-13327.375439	25.692252	5	6	7	141
PG13	6492.999329	18152.716149	18097.132823	248.911973	6	8	6	122
PG14	-15479.217950	1833.922593	-21306.982055	174.741167	9	10	6	95
PG15	3915.310629	-26047.963814	-2535.130976	-104.230681	7	4	8	123
PG16	-7581.838930	13217.316045	21734.240025	-200.789852	7	7	7	140
PG17	15779.195040	-1791.989200	-21107.550065	172.804411	9	8	9	145
PG18	-20411.980115	-17003.852873	-2871.134373	159.928201	9	9	9	100
PG19	-8078.088163	25087.927812	-457.354846	-189.464833	7	6	7	116
PG20	10307.198040	21260.329154	-12342.046786	53.704078	8	7	8	117
PG21	-20804.093208	-6446.016139	16028.761382	-174.947119	7	3	7	131
PG22	-21371.015011	-5824.189543	-14555.680284	144.170300	9	10	8	127
PG23	1662.117496	24000.423627	10862.572508	271.664392	6	6	6	104
PG25	-17395.408080	-19738.165227	-3768.081272	21.217921	6	8	8	140
PG26	12309.153938	-21931.660550	7291.279888	-175.093345	7	5	6	103
PG27	8760.990976	-16031.646479	-18490.175614	310.566752	15	6	11	146
PG28	21159.937512	10186.073228	-12121.702283	71.818478	9	10	8	118
PG29	-7648.497016	-18290.482748	17760.066675	244.434801	7	8	7	126
PG30	-22740.473458	-11986.977210	6358.654053	77.210354	7	7	3	114
PG31	-25477.889372	7867.323194	1070.544484	148.988745	7	8	6	137
PG32	1788.826386	20288.889734	-17010.661034	-337.845416	8	4	9	91
* 2011 10 1 1 0	0.00000000							
PG01	-37.197835	15907.023806	-21280.835803	-4.790381	12		12	108
PG02	20400.801500	-14407.030710	8339.746705	358.666319	9	6	9	131
PG03	-10996.877576	19514.048135	13594.885111	775.293846	7	8	6	133
PG04	25710.934365	-5097.760539	-5529.500217	247.024964	9	10	10	133
PG05	10573.288346	-11197.351730	21631.223550	-225.551095	8	7	5	134
PG06	-14141.975724	15065.775469	16685.939485	-58.763244	6	6	4	137
PG07	15475.302642	8762.237771	19816.949677	29.414273	8	4	9	133
PG08	22879.375217	3024.200106	13695.924461	0.016294	16	13	18	102
PG09	4273.264630	-16529.630277	-20903.408779	108.873846	15	10	8	92
PG10	21868.808004	5684.970604	14036.912126	-14.864097	7	8	7	143
PG11	-4528.617736	20054.211038	-16997.001446	-190.626434	8	6	5	115
PG12	-7442.826460	-20325.565202	-15499.483903	25.694325	6	5	7	149
PG13	5809.865905	20023.085543	16271.385380	248.911180	5	8	5	125
PG14	-14863.407307	-590.895168	-21819.038922	174.742756	8	10	4	103
PG15	4239.226790	-26119.153747	301.799777	-104.229338	7	4	8	135
PG16	-9404.372010	11508.649194	22018.201142	-200.791703	8	7	7	137
PG17	15247.804279	626.601358	-21577.652760	172.802845	9	8	9	143
PG18	-20354.033611	-17370.366566	-102.136468	159.929942	8	8	9	90
PG19	-8321.512870	24893.846485	2413.601005	-189.468391	7	6	7	116
PG20	8972.203950	20491.043511	-14513.709962	53.704733	8	6	8	114
PG21	-19096.990546	-7167.885682	17746.388341	-174.949145	6	2	6	125
PG22	-22347.718042	-7084.919493	-12407.319706	144.170061	9	10	8	124
PG23	1180.461936	25023.014400	8277.020588	271.661629	5	6	5	104
PG25	-16799.905812	-19528.856158	-6550.352022	21.219522	6	8	8	142
PG26	12207.629136	-20844.022027	9981.432824	-175.105211	7	4	6	104
PG27	10821.033041	-16650.336314	-16800.843734	310.570073	14	5	11	152
PG28	21970.162228	11227.358208	-9633.469195	71.821046	9	9	8	123
PG29	-7031.571447	-20111.125556	15951.571723	244.437645	7	7	7	127
PG30	-23081.131498	-12559.414475	3587.677103	77.204179	7	7	2	120
PG31	-25471.868593	7673.939985	-1810.998132	148.993475	6	8	6	162
PG32	267.258604	18875.221092	-18590.702473	-337.851291	8	4	8	92
* 2011 10 1 1 15	0.00000000							
PG01	-2270.539905	16755.246079	-20493.903121	-4.792115	12	2	12	122
PG02	21273.633542	-14413.218318	5656.099402	358.667571	9	6	9	129
PG03	-11256.826343	17751.070182	15612.547045	775.296092	7	8	6	132
PG04	25115.170353	-4562.287770	-8174.603856	247.035486	8	9	10	94
PG05	12503.264034	-9666.580749	21348.686265	-225.555660	8	7	6	139
PG06	-14169.409750	13062.443585	18309.047645	-58.755877	7	6	4	132

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PG07	13342.759663	9671.180203	20894.379803	29.416129	8	4	8	128
PG08	21315.278589	3579.770543	15866.398517	0.014601	15	11	17	109
PG09	6331.230656	-17327.360507	-19668.006022	108.876257	14	9	9	104
PG10	22895.533755	6799.255133	11792.608243	-14.863718	7	7	8	142
PG11	-6167.168041	20915.392257	-15293.720175	-190.629305	8	6	5	115
PG12	-5905.440545	-19244.865108	-17406.718623	25.696294	6	5	7	141
PG13	5284.105023	21709.613254	14162.019113	248.908220	5	7	6	111
PG14	-14374.014280	-3080.547783	-21949.126002	174.744284	8	10	4	96
PG15	4518.081810	-25887.231016	3133.478589	-104.228128	8	5	8	122
PG16	-11323.659523	9897.243196	21923.508673	-200.793658	8	7	7	131
PG17	14836.844051	3098.883710	-21670.930951	172.801483	8	7	9	140
PG18	-20075.914267	-17540.970833	2668.609321	159.931837	7	8	9	90
PG19	-8499.522508	24395.669716	5242.057462	-189.471869	8	6	6	112
PG20	7417.246136	19650.920892	-16438.532793	53.705220	8	6	7	121
PG21	-17264.602003	-8036.123432	19174.457652	-174.951646	6	1	6	134
PG22	-23185.775533	-8134.304150	-10044.557443	144.169807	9	10	8	110
PG23	799.444546	25770.014114	5546.140117	271.658550	5	5	5	103
PG25	-15950.023504	-19162.796767	-9220.143504	21.221110	6	8	8	141
PG26	12100.620120	-19455.497345	12491.295517	-175.117032	6	3	6	110
PG27	12646.444020	-17290.646354	-14803.749478	310.573235	14	5	11	149
PG28	22614.114283	12026.336276	-6978.003243	71.823902	9	9	8	115
PG29	-6551.597067	-21745.989900	13870.251052	244.440657	7	7	7	128
PG30	-23184.150390	-12939.351435	754.635426	77.197939	7	7	3	115
PG31	-25174.736912	7362.953530	-4661.713197	148.998530	6	9	6	146
PG32	-1445.803895	17427.743531	-19848.436157	-337.857370	8	4	8	109
*	2011 10 1 1 30	0.00000000						
PG01	-4358.623571	17671.181517	-19354.664290	-4.793749	13	5	12	121
PG02	21866.483115	-14322.280785	2872.340690	358.669323	8	7	9	121
PG03	-11607.821959	15785.407571	17349.788536	775.301571	7	8	5	136
PG04	24286.583689	-3876.315600	-10682.803736	247.045064	8	9	10	36
PG05	14464.299094	-8266.619443	20698.881922	-225.560720	8	7	6	137
PG06	-14288.053452	10900.391414	19617.886880	-58.748769	7	6	5	134
PG07	11168.999508	10739.077451	21614.320587	29.417993	7	4	8	132
PG08	19570.270187	4308.252102	17771.419949	0.014743	15	10	17	124
PG09	8204.178418	-18172.696760	-18109.176503	108.879199	14	9	10	96
PG10	23762.198388	7702.219998	9347.058028	-14.864375	7	7	8	135
PG11	-7617.862745	21712.195583	-13329.453048	-190.632536	8	5	6	125
PG12	-4148.278776	-18133.863133	-19016.169094	25.698562	7	5	7	147
PG13	4895.816226	23171.015684	11805.976037	248.906751	5	7	6	111
PG14	-14023.014468	-5584.766757	-21695.399073	174.746084	8	10	5	108
PG15	4788.106138	-25351.803336	5910.642205	-104.227096	8	5	8	124
PG16	-13300.530546	8414.461591	21452.686909	-200.795339	9	7	7	138
PG17	14556.061084	5575.899117	-21386.467232	172.800200	8	7	8	140
PG18	-19558.564134	-17544.837967	5394.630910	159.933338	6	7	9	102
PG19	-8649.711810	23594.000725	7978.232335	-189.475593	8	7	6	118
PG20	5655.469661	18778.974307	-18084.004311	53.705551	7	5	7	120
PG21	-15348.031529	-9053.858354	20289.226652	-174.953605	5		5	134
PG22	-23847.902882	-8979.695466	-7508.611275	144.169960	9	10	9	118
PG23	486.461999	26219.860072	2717.761468	271.655843	6	5	5	108
PG25	-14838.725985	-18678.688948	-11731.649234	21.222720	5	9	8	134
PG26	12026.860385	-17785.389769	14774.494317	-175.128556	6	3	5	102
PG27	14212.157716	-17912.098562	-12536.320855	310.577056	13	6	12	146
PG28	23055.158275	12598.224892	-4202.197371	71.826728	9	9	8	114
PG29	-6187.786510	-23157.338105	11551.614627	244.443644	7	7	7	124
PG30	-23026.605117	-13155.607552	-2091.433518	77.191648	7	8	3	109
PG31	-24606.780430	6901.056984	-7432.892575	149.003004	6	9	6	105
PG32	-3329.610583	15987.759560	-20760.468265	-337.863219	8	4	7	106