

## ArcGIS 10.1 projection engine tables: geographic and vertical coordinate systems, datums and vertical datums, spheroids, prime meridians, and angular units of measure

*Note: Some numerical values have been rounded for display. The extent values for an area of use are in decimal degrees based on WGS 1984.*

Table 1: Geographic coordinate systems: well-known IDs and areas of use.....	1
Table 2: Geographic coordinate systems: non-Greenwich or non-degree definitions.....	19
Table 3: Geodetic datums: well-known IDs and spheroids.....	19
Table 4: Angular units: well-known IDs and conversion values.....	31
Table 5: Prime meridians: well-known IDs and longitude values .....	31
Table 6: Spheroids: well-known IDs and defining parameters .....	31
Table 7: Vertical coordinate systems: well-known IDs and areas of use.....	36
Table 8: Vertical coordinate systems: gravity-related or ellipsoidal-based and directions.....	39
Table 9: Vertical datums: well-known IDs.....	41

*Table 1: Geographic coordinate systems: well-known IDs and areas of use*

GCS Name	WKID	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
GCS_Abidjan_1987	4143	Cote d'Ivoire (Ivory Coast)	0.840	-8.610	10.740	-2.490
GCS_Accra	4168	Ghana	1.080	-3.900	11.170	1.340
GCS_Adindan	4201	Africa - Eritrea, Ethiopia, South Sudan and Sudan	3.410	21.830	22.230	47.990
GCS_Adrastea_2000	104909	World	-90.000	-180.000	90.000	180.000
GCS_Afgooye	4205	Somalia	-2.390	41.010	13.400	54.980
GCS_Agadez	4206	Niger	11.700	0.170	23.540	16.010
GCS_Ain_el_Abd_1970	4204	Asia - Middle East - Bahrain, Kuwait and Saudi Arabia	16.380	34.570	32.150	55.670
GCS_Airy_1830	4001	Not specified	-90.000	-180.000	90.000	180.000
GCS_Airy_Modified	4002	Not specified	-90.000	-180.000	90.000	180.000
GCS_Alaskan_Islands	37260	USA - Alaska	51.300	172.430	71.400	-129.990
GCS_Albanian_1987	4191	Albania - onshore	39.640	19.220	42.660	21.050
GCS_Amalthea_2000	104910	World	-90.000	-180.000	90.000	180.000
GCS_American_Samoa_1962	4169	American Samoa - 2 main island groups	-14.430	-170.870	-14.120	-169.390
GCS_Amersfoort	4289	Netherlands - onshore	50.750	3.210	53.710	7.210
GCS_Ammassalik_1958	4196	Greenland - Ammassalik area	65.520	-38.860	65.900	-36.820
GCS_Ananke_2000	104911	World	-90.000	-180.000	90.000	180.000
GCS_Anguilla_1957	4600	Anguilla - onshore	18.120	-63.220	18.320	-62.920
GCS_Anna_1_1965	4708	Cocos (Keeling) Islands - onshore	-15.540	93.540	-5.890	102.430
GCS_Antigua_1943	4601	Antigua - onshore	16.940	-61.940	17.210	-61.620

GCS_Aratu	4208	Brazil - Aratu	-35.710	-53.370	4.250	-26.010
GCS_Arc_1950	4209	Africa - Botswana, Malawi, Zambia, Zimbabwe	-26.880	20.000	-8.190	35.920
GCS_Arc_1960	4210	Africa - Kenya, Tanzania and Uganda	-11.740	29.340	4.620	41.910
GCS_Ariel_2000	104945	World	-90.000	-180.000	90.000	180.000
GCS_Ascension_Island_1958	4712	St Helena - Ascension Island	-7.990	-14.420	-7.880	-14.290
GCS_Astro_1952	4711	Japan - Minamitori- shima (Marcus Island)	24.260	153.950	24.320	154.010
GCS_ATF_Paris	4901	France - mainland onshore	42.330	-4.870	51.140	8.230
GCS_Atlas_2000	104926	World	-90.000	-180.000	90.000	180.000
GCS_ATS_1977	4122	Canada - Maritime Provinces	43.420	-69.050	48.070	-59.740
GCS_Australian	4003	Not specified	-90.000	-180.000	90.000	180.000
GCS_Australian_1966	4202	Australasia - Australia and PNG - AGD66	-45.000	108.000	-1.330	156.000
GCS_Australian_1984	4203	Australia - AGD84	-39.000	108.000	-10.000	155.000
GCS_Australian_Antarctic_1998	4176	Antarctica - Australian sector	-90.000	45.000	-60.000	160.000
GCS_Ayabelle	4713	Djibouti	10.940	41.780	12.830	44.050
GCS_Azores_Central_1948	4183	Portugal - Azores C - onshore	38.320	-28.900	39.140	-26.970
GCS_Azores_Central_1995	4665	Portugal - Azores C - onshore	38.320	-28.900	39.140	-26.970
GCS_Azores_Occidental_1939	4182	Portugal - Azores W - onshore	39.300	-31.340	39.760	-31.020
GCS_Azores_Oriental_1940	4184	Portugal - Azores E - onshore	36.880	-25.910	37.960	-24.960
GCS_Azores_Oriental_1995	4664	Portugal - Azores E - onshore	36.880	-25.910	37.960	-24.960
GCS_Bab_South	104112	Palau	0.000	130.660	10.910	146.420
GCS_Barbados_1938	4212	Barbados - onshore	13.000	-59.710	13.390	-59.380
GCS_Batavia	4211	Indonesia - Java and Java Sea	-8.780	105.110	-4.000	115.570
GCS_Batavia_Jakarta	4813	Indonesia - Java	-8.780	105.110	-5.730	115.570
GCS_Beacon_E_1945	4709	Japan - Iwo Jima	24.740	141.280	24.820	141.360
GCS_Beduaram	4213	Niger - southeast	12.600	8.000	16.500	15.500
GCS_Beijing_1954	4214	China - onshore	18.040	73.660	53.590	134.850
GCS_Belge_1950	4215	Belgium - onshore	49.510	2.510	51.500	6.400
GCS_Belge_1950_Brussels	4809	Belgium - onshore	49.510	2.510	51.500	6.400
GCS_Belge_1972	4313	Belgium - onshore	49.510	2.510	51.500	6.400
GCS_Belinda_2000	104946	World	-90.000	-180.000	90.000	180.000
GCS_Bellevue_IGN	4714	Vanuatu - southern islands	-19.700	168.100	-17.400	169.640
GCS_Bermuda_1957	4216	Bermuda - onshore	32.210	-64.880	32.430	-64.620
GCS_Bermuda_2000	4762	Bermuda	28.910	-68.830	35.720	-60.710
GCS_Bern_1898_Bern	4801	Europe - Liechtenstein and Switzerland	45.830	5.970	47.810	10.490
GCS_Bern_1938	4306	Europe - Liechtenstein and Switzerland	45.830	5.970	47.810	10.490
GCS_Bessel_1841	4004	Not specified	-90.000	-180.000	90.000	180.000
GCS_Bessel_Modified	4005	Not specified	-90.000	-180.000	90.000	180.000
GCS_Bessel_Namibia	4006	Not specified	-90.000	-180.000	90.000	180.000
GCS_Bianca_2000	104947	World	-90.000	-180.000	90.000	180.000
GCS_Bissau	4165	Guinea-Bissau -	10.890	-16.730	12.690	-13.650

		onshore				
GCS_Bogota	4218	Colombia - mainland and offshore Caribbean	-4.240	-79.100	13.670	-66.870
GCS_Bogota_Bogota	4802	Colombia - mainland	-4.240	-79.100	12.510	-66.870
GCS_Bukit_Rimpah	4219	Indonesia - Banga & Belitung Islands	-3.250	105.120	-1.490	108.290
GCS_Cadastre_1997	4475	Mayotte - onshore	-13.000	44.970	-12.600	45.320
GCS_Callisto_2000	104912	World	-90.000	-180.000	90.000	180.000
GCS_Calypso_2000	104927	World	-90.000	-180.000	90.000	180.000
GCS_Camacupa	4220	Angola - Angola proper	-18.050	12.110	-5.750	24.100
GCS_Camp_Area	4715	Antarctica - Camp McMurdo area	-78.000	165.500	-77.000	167.000
GCS_Campo_Inchauspe	4221	Argentina	-58.400	-73.580	-21.780	-52.630
GCS_Canton_1966	4716	Kiribati - Phoenix Islands	-4.640	-174.200	-2.720	-171.300
GCS_Cape	4222	Africa - Botswana, Lesotho, South Africa and Swaziland	-46.970	16.480	-17.780	37.890
GCS_Cape_Canaveral	4717	North America - Bahamas and USA - Florida - onshore	20.870	-82.330	30.830	-72.690
GCS_Carne_2000	104913	World	-90.000	-180.000	90.000	180.000
GCS_Carthage	4223	Tunisia	30.250	7.500	38.430	13.740
GCS_Carthage_Grad	37225	Tunisia	30.250	7.500	38.430	13.740
GCS_Carthage_Paris	4816	Tunisia - onshore	30.250	7.500	37.350	11.630
GCS_CGRS_1993	104141	Cyprus - onshore	34.590	32.210	35.740	34.650
GCS_CH1903	4149	Europe - Liechtenstein and Switzerland	45.830	5.970	47.810	10.490
GCS_CH1903+	4150	Europe - Liechtenstein and Switzerland	45.830	5.970	47.810	10.490
GCS_Charon_2000	104970	World	-90.000	-180.000	90.000	180.000
GCS_Chatham_Island_1971	4672	New Zealand - Chatham Islands group	-45.000	-178.000	-43.000	-175.000
GCS_Chatham_Islands_1979	4673	New Zealand - Chatham Islands group	-45.000	-178.000	-43.000	-175.000
GCS_China_Geodetic_Coordinate_System_2000	4490	China	7.160	73.660	53.590	134.850
GCS_Chos_Malal_1914	4160	Argentina - Neuquen province	-41.090	-71.950	-36.150	-68.010
GCS_Chua	4224	South America - Brazil - south of 18~S and west of 54~W + DF; N Paraguay	-31.910	-62.560	-15.380	-47.100
GCS_Clarke_1858	4007	Not specified	-90.000	-180.000	90.000	180.000
GCS_Clarke_1866	4008	Not specified	-90.000	-180.000	90.000	180.000
GCS_Clarke_1866_Michigan	4009	Not specified	-90.000	-180.000	90.000	180.000
GCS_Clarke_1880	4034	Not specified	-90.000	-180.000	90.000	180.000
GCS_Clarke_1880_Arc	4013	Not specified	-90.000	-180.000	90.000	180.000
GCS_Clarke_1880_Benoit	4010	Not specified	-90.000	-180.000	90.000	180.000
GCS_Clarke_1880_IGN	4011	Not specified	-90.000	-180.000	90.000	180.000
GCS_Clarke_1880_RGS	4012	Not specified	-90.000	-180.000	90.000	180.000
GCS_Clarke_1880_SGA	4014	Not specified	-90.000	-180.000	90.000	180.000
GCS_Combani_1950	4632	Mayotte - onshore	-13.000	44.970	-12.600	45.320
GCS_Conakry_1905	4315	Guinea - onshore	7.160	-15.120	12.690	-7.650

GCS_Cordelia_2000	104948	World	-90.000	-180.000	90.000	180.000
GCS_Corrego_Alegre	4225	Brazil - Corrego Alegre 1970-1972	-33.780	-58.160	-2.680	-34.740
GCS_Corrego_Alegre_1961	5524	Brazil - Corrego Alegre 1961	-27.500	-58.160	-15.000	-38.820
GCS_Cote_d_Ivoire	4226	Cote d'Ivoire (Ivory Coast)	0.840	-8.610	10.740	-2.490
GCS_CR05	5365	Costa Rica	2.150	-90.440	11.770	-81.430
GCS_Cressida_2000	104949	World	-90.000	-180.000	90.000	180.000
GCS_CSG_1967	4623	French Guiana - coastal area	3.430	-54.450	5.810	-51.620
GCS_D48	104131	Slovenia	45.430	13.380	46.880	16.610
GCS_Dabola_1981	4155	Guinea - onshore	7.160	-15.120	12.690	-7.650
GCS_Datum_73	4274	Portugal - mainland - onshore	36.960	-9.550	42.150	-6.190
GCS_Datum_Lisboa_Bessel	104105	Portugal	29.250	-35.580	43.070	-6.190
GCS_Datum_Lisboa_Hayford	104106	Portugal	29.250	-35.580	43.070	-6.190
GCS_Dealul_Piscului_1933	4316	Romania - onshore	43.620	20.260	48.260	29.730
GCS_Dealul_Piscului_1970	4317	Romania	43.450	20.260	48.260	31.410
GCS_Deception_Island	4736	Antarctica - Antarctic Peninsula and Deception Island	-64.100	-61.000	-62.860	-60.180
GCS_Deimos_2000	104906	World	-90.000	-180.000	90.000	180.000
GCS_Deir_ez_Zor	4227	Asia - Middle East - Lebanon and Syria onshore	32.310	35.100	37.290	42.380
GCS_Desdemona_2000	104950	World	-90.000	-180.000	90.000	180.000
GCS_Despina_2000	104961	World	-90.000	-180.000	90.000	180.000
GCS_Deutsches_Hauptdreiecksnetz	4314	Germany - West Germany all states	47.270	5.870	55.090	13.830
GCS_DGN_1995	4755	Indonesia	-13.010	91.660	7.920	141.100
GCS_Dione_2000	104928	World	-90.000	-180.000	90.000	180.000
GCS_Dominica_1945	4602	Dominica - onshore	15.150	-61.540	15.680	-61.200
GCS_DOS_1968	37218	Solomon Islands - New Georgia - Ghizo (Gizo)	-8.150	156.700	-8.000	156.900
GCS_DOS_71_4	4710	St Helena - St Helena Island	-16.030	-5.810	-15.880	-5.630
GCS_Douala	4228	Cameroon	1.660	8.380	13.090	16.220
GCS_Douala_1948	4192	Cameroon - coastal area	1.500	8.400	5.000	12.000
GCS_DRUKREF_03	5264	Bhutan	26.700	88.740	28.250	92.130
GCS_Easter_Island_1967	4719	Chile - Easter Island onshore	-27.250	-109.500	-27.020	-109.160
GCS_Egypt_1907	4229	Egypt	21.990	24.710	33.750	36.900
GCS_Egypt_1930	4199	Egypt - onshore	21.990	24.710	31.650	36.900
GCS_Egypt_Gulf_of_Suez_S-650_TL	4706	Egypt - Gulf of Suez	27.300	32.300	29.960	34.250
GCS_Elara_2000	104914	World	-90.000	-180.000	90.000	180.000
GCS_Enceladus_2000	104929	World	-90.000	-180.000	90.000	180.000
GCS_Epimetheus_2000	104930	World	-90.000	-180.000	90.000	180.000
GCS_Estonia_1937	104101	Estonia	57.520	20.370	59.990	28.190
GCS_Estonia_1992	4133	Estonia	57.520	20.370	59.990	28.190
GCS_Estonia_1997	4180	Estonia	57.520	20.370	59.990	28.190
GCS_ETRF_1989	104258	Europe - ETRS89	32.880	-16.100	84.160	39.640
GCS_ETRS_1989	4258	Europe - ETRS89	32.880	-16.100	84.160	39.640
GCS_EUREF_FIN	104129	Finland	58.840	19.080	70.090	31.580
GCS_Europa_2000	104915	World	-90.000	-180.000	90.000	180.000
GCS_European_1950	4230	Europe - ED50 by	25.710	-16.100	84.160	48.610

		country				
GCS_European_1950_ED77	4154	Iran	23.350	44.060	39.800	63.370
GCS_European_1979	4668	Europe - west	34.880	-10.560	71.200	31.580
GCS_European_1987	4231	Europe - west	34.880	-10.560	71.200	31.580
GCS_European_Libyan_Datum_1979	4159	Libya	19.510	9.310	36.000	25.980
GCS_Everest_1830	4042	Not specified	-90.000	-180.000	90.000	180.000
GCS_Everest_Adj_1937	4015	Not specified	-90.000	-180.000	90.000	180.000
GCS_Everest_Bangladesh	37202	Bangladesh	15.090	88.100	26.650	92.720
GCS_Everest_def_1962	4044	Not specified	-90.000	-180.000	90.000	180.000
GCS_Everest_def_1967	4016	Not specified	-90.000	-180.000	90.000	180.000
GCS_Everest_def_1975	4045	Not specified	-90.000	-180.000	90.000	180.000
GCS_Everest_India_Nepal	37203	India	3.120	66.160	35.550	97.450
GCS_Everest_Modified	4018	Not specified	-90.000	-180.000	90.000	180.000
GCS_Everest_Modified_1969	37006	World	-90.000	-180.000	90.000	180.000
GCS_Fahud	4232	Oman - onshore	16.600	51.900	26.400	59.890
GCS_Fatu_Iva_1972	4688	French Polynesia - Marqueses Islands - Fatu Iva	-10.550	-138.700	-10.330	-138.550
GCS_FD_1954	4741	Faroe Islands - onshore	61.340	-7.480	62.410	-6.340
GCS_FD_1958	4132	Iran - FD58	27.250	47.000	33.000	52.700
GCS_Fiji_1956	4721	Fiji - main islands	-18.500	177.000	-16.000	-179.500
GCS_Fiji_1986	4720	Fiji	-25.100	172.870	-9.790	-176.160
GCS_Fischer_1960	37002	World	-90.000	-180.000	90.000	180.000
GCS_Fischer_1968	37003	World	-90.000	-180.000	90.000	180.000
GCS_Fischer_Modified	37004	World	-90.000	-180.000	90.000	180.000
GCS_fk89	4753	Faroe Islands - onshore	61.340	-7.480	62.410	-6.340
GCS_Fort_Desaix	4625	Martinique - onshore	14.350	-61.280	14.930	-60.770
GCS_Fort_Marigot	4621	Guadeloupe - St Martin and St Barthelemy - onshore	17.830	-63.200	18.170	-62.730
GCS_Fort_Thomas_1955	37240	St Kitts and Nevis	16.350	-63.630	17.670	-62.200
GCS_Galatea_2000	104962	World	-90.000	-180.000	90.000	180.000
GCS_Gan_1970	4684	Maldives - onshore	3.900	73.330	4.500	73.700
GCS_Ganymede_2000	104916	World	-90.000	-180.000	90.000	180.000
GCS_Garoua	4234	Cameroon	1.660	8.380	13.090	16.220
GCS_GDA_1994	4283	Australia	-60.040	110.770	-8.860	174.100
GCS_GDBD2009	5246	Brunei	4.000	112.500	6.370	115.360
GCS_GDM_2000	4742	Malaysia	0.850	98.120	10.070	119.680
GCS_GEM_10C	4031	Not specified	-90.000	-180.000	90.000	180.000
GCS_GGRS_1987	4121	Greece - onshore	34.880	19.580	41.750	28.300
GCS_Graciosa_Base_SW_1948	37241	Portugal - Azores C - onshore	38.320	-28.900	39.140	-26.970
GCS_Grand_Cayman_1959	4723	Cayman Islands - Grand Cayman	19.220	-81.450	19.400	-81.040
GCS_Grand_Comoros	4646	Comoros - Njazidja (Grande Comore)	-11.900	43.200	-11.400	43.500
GCS_Greek	4120	Greece - onshore	34.880	19.580	41.750	28.300
GCS_Greek_Athens	4815	Greece - onshore	34.880	19.580	41.750	28.300
GCS_Greenland_1996	4747	Greenland	56.380	-75.000	87.020	8.120
GCS_Grenada_1953	4603	Grenada and southern Grenadines - onshore	11.950	-61.830	12.560	-61.350
GCS_GRS_1967	4036	Not specified	-90.000	-180.000	90.000	180.000
GCS_GRS_1980	4019	Not specified	-90.000	-180.000	90.000	180.000
GCS_Guam_1963	4675	Guam - onshore	13.190	144.580	13.700	145.000
GCS_Gulshan_303	4682	Bangladesh	15.090	88.100	26.650	92.720
GCS_Gunung_Segara	4613	Indonesia -	-5.720	113.690	4.400	119.620

		Kalimantan E				
GCS_Gunung_Segara_Jakarta	4820	Indonesia - Kalimantan E	-5.720	113.690	4.400	119.620
GCS_GUX_1	37221	Solomon Islands - Guadalcanal Island	-9.960	159.560	-9.240	160.910
GCS_Guyane_Francaise	4235	French Guiana	2.110	-54.600	8.880	-49.460
GCS_Hanoi_1972	4147	Vietnam - onshore	8.450	103.800	23.390	109.600
GCS_Hartebeesthoek_1994	4148	South Africa	-50.340	14.030	-22.140	41.160
GCS_HD1909	3819	Hungary	45.750	16.110	48.580	22.890
GCS_Helene_2000	104931	World	-90.000	-180.000	90.000	180.000
GCS_Helle_1954	4660	Jan Mayen - onshore	70.750	-9.170	71.230	-7.880
GCS_Helmert_1906	4020	Not specified	-90.000	-180.000	90.000	180.000
GCS_Herat_North	4255	Afghanistan	29.410	60.540	38.500	74.960
GCS_Hermannskogel	104102	Europe - Austria and FR Yugoslavia	40.860	9.530	51.050	23.030
GCS_Himalia_2000	104917	World	-90.000	-180.000	90.000	180.000
GCS_Hito_XVIII_1963	4254	South America - Tierra del Fuego	-55.950	-74.820	-52.400	-65.060
GCS_Hjorsey_1955	4658	Iceland - onshore	63.350	-24.660	66.580	-13.380
GCS_Hong_Kong_1963	4738	China - Hong Kong	22.160	113.890	22.620	114.570
GCS_Hong_Kong_1963_67	4739	China - Hong Kong	22.160	113.890	22.620	114.570
GCS_Hong_Kong_1980	4611	China - Hong Kong	22.160	113.890	22.620	114.570
GCS_Hough_1960	37005	World	-90.000	-180.000	90.000	180.000
GCS_HTRS96	4761	Croatia	41.620	13.010	46.540	19.430
GCS_Hughes_1980	4054	Not specified	-90.000	-180.000	90.000	180.000
GCS_Hungarian_1972	4237	Hungary	45.750	16.110	48.580	22.890
GCS_Hu_Tzu_Shan	4236	Taiwan - onshore	21.800	119.400	25.400	122.050
GCS_Hyperion_2000	104932	World	-90.000	-180.000	90.000	180.000
GCS_Iapetus_2000	104933	World	-90.000	-180.000	90.000	180.000
GCS_IGC_1962_6th_Parallel_South	4697	Congo DR (Zaire) - 6th parallel south	-7.250	12.210	-5.000	30.600
GCS_IGCB_1955	4701	Congo DR (Zaire) - Bas Congo	-6.100	12.210	-3.950	16.500
GCS_IGM_1995	4670	Italy - including San Marino and Vatican	34.770	5.940	47.090	18.990
GCS_IGN53_Mare	4641	New Caledonia - Mare	-21.700	167.750	-21.300	168.150
GCS_IGN56_Lifou	4633	New Caledonia - Lifou	-21.200	167.000	-20.700	167.500
GCS_IGN63_Hiva_Oa	4689	French Polynesia - Marqueses Islands - Hiva Oa and Tahuata	-10.050	-139.180	-9.670	-138.800
GCS_IGN72_Grande_Terre	4662	New Caledonia - Grande Terre	-22.500	163.900	-20.000	167.100
GCS_IGN72_Nuku_Hiva	4630	French Polynesia - Marqueses Islands - Nuku Hiva, Ua Huka and Ua Pou	-9.500	-140.250	-8.750	-139.450
GCS_IGN_Astro_1960	4700	Mauritania	14.730	-20.410	27.310	-4.810
GCS_IGRS	3889	Iraq	29.060	38.820	37.410	49.400
GCS_IKBD_1992	4667	Asia - Middle East - Iraq-Kuwait boundary	29.050	46.500	30.100	48.000
GCS_Indian_1954	4239	Asia - Myanmar and Thailand onshore	5.630	92.200	28.550	105.640
GCS_Indian_1960	4131	Asia - Cambodia and Vietnam - onshore	8.560	102.140	23.320	109.460
GCS_Indian_1975	4240	Thailand - onshore and offshore Gulf of Thailand	5.630	98.000	20.470	105.700
GCS_Indonesian	4021	Not specified	-90.000	-180.000	90.000	180.000

GCS_Indonesian_1974	4238	Indonesia	-13.010	91.660	7.920	141.100
GCS_International_1924	4022	Not specified	-90.000	-180.000	90.000	180.000
GCS_Io_2000	104918	World	-90.000	-180.000	90.000	180.000
GCS_IRENET95	4173	Europe - Ireland (Republic and Ulster) - on- and offshore	51.330	-10.600	55.400	-5.330
GCS_ISN_1993	4659	Iceland	59.960	-30.860	69.580	-5.560
GCS_ISN_2004	5324	Iceland	59.960	-30.860	69.580	-5.560
GCS_Israel	4141	Asia - Middle East - Israel and Palestine Territory onshore	29.490	34.220	33.270	35.680
GCS_ISTS_061_1968	4722	South Georgia	-55.220	-38.460	-53.800	-34.630
GCS_ISTS_073_1969	4724	British Indian Ocean Territory - Diego Garcia	-7.490	72.340	-7.210	72.500
GCS_ITRF_1988	104115	World	-90.000	-180.000	90.000	180.000
GCS_ITRF_1989	104116	World	-90.000	-180.000	90.000	180.000
GCS_ITRF_1990	104117	World	-90.000	-180.000	90.000	180.000
GCS_ITRF_1991	104118	World	-90.000	-180.000	90.000	180.000
GCS_ITRF_1992	104119	World	-90.000	-180.000	90.000	180.000
GCS_ITRF_1993	104120	World	-90.000	-180.000	90.000	180.000
GCS_ITRF_1994	104121	World	-90.000	-180.000	90.000	180.000
GCS_ITRF_1996	104122	World	-90.000	-180.000	90.000	180.000
GCS_ITRF_1997	104123	World	-90.000	-180.000	90.000	180.000
GCS_ITRF_2000	104124	World	-90.000	-180.000	90.000	180.000
GCS_ITRF_2005	104896	World	-90.000	-180.000	90.000	180.000
GCS_ITRF_2008	104257	World (by country)	-90.000	-180.000	90.000	180.000
GCS_JAD_2001	4758	Jamaica	14.080	-80.590	19.360	-74.510
GCS_Jamaica_1875	4241	Jamaica - onshore	17.650	-78.430	18.570	-76.170
GCS_Jamaica_1969	4242	Jamaica - onshore	17.650	-78.430	18.570	-76.170
GCS_Janus_2000	104934	World	-90.000	-180.000	90.000	180.000
GCS_JGD_2000	4612	Japan	19.010	122.490	45.920	160.090
GCS_JGD_2000_touhokutaiheiyuoki2011	104020	Japan	19.010	122.490	45.920	160.090
GCS_Johnston_Island_1961	4725	Johnston Island	16.000	-169.630	16.810	-169.300
GCS_Jordan	104130	Jordan	29.210	34.980	33.400	39.330
GCS_Jouik_1961	4679	Mauritania - north coast	19.360	-17.500	21.250	-16.000
GCS_Juliet_2000	104951	World	-90.000	-180.000	90.000	180.000
GCS_Jupiter_2000	104908	World	-90.000	-180.000	90.000	180.000
GCS_Kalianpur_1880	4243	Asia - Bangladesh; India; Myanmar; Pakistan	6.750	60.870	37.060	101.170
GCS_Kalianpur_1937	4144	Asia - Bangladesh; India; Pakistan	6.750	60.870	37.060	97.380
GCS_Kalianpur_1962	4145	Pakistan - onshore	23.600	60.910	37.080	77.870
GCS_Kalianpur_1975	4146	India - onshore	7.950	68.200	35.550	97.450
GCS_Kandawala	4244	Sri Lanka - onshore	5.850	79.600	9.920	81.950
GCS_Karbala_1979_Polservice	4743	Iraq - onshore	29.060	38.820	37.410	49.400
GCS_Kasai_1953	4696	Congo DR (Zaire) - Kasai - SE	-7.250	21.500	-5.000	24.000
GCS_Katanga_1955	4695	Congo DR (Zaire) - Katanga	-13.460	21.700	-5.000	30.780
GCS_Kerguelen_Island_1949	4698	French Southern Territories - Kerguelen onshore	-49.750	68.500	-48.500	70.600
GCS_Kertau	4245	Asia - Malaysia (west) and Singapore	1.260	99.640	6.710	104.290

GCS_Kertau_RSO	4751	Asia - Malaysia (west) and Singapore	1.260	99.640	6.710	104.290
GCS_KKJ	4123	Finland - onshore	59.760	19.410	70.090	31.580
GCS_Korea_2000	4737	Korea, Republic of (South Korea)	31.600	122.520	39.160	132.100
GCS_Korean_Datum_1985	4162	Korea, Republic of (South Korea) - onshore	33.180	125.800	38.670	129.720
GCS_Korean_Datum_1995	4166	Korea, Republic of (South Korea) - onshore	33.180	125.800	38.670	129.720
GCS_Kousseri	4198	Cameroon - N'Djamena area	12.000	15.000	12.200	15.300
GCS_Krasovsky_1940	4024	Not specified	-90.000	-180.000	90.000	180.000
GCS_KUDAMS	4319	Kuwait - Kuwait City	29.250	47.670	29.450	48.150
GCS_Kusaie_1951	4735	Micronesia - Caroline Islands	4.000	136.660	12.760	168.430
GCS_Kuwait_Oil_Company	4246	Kuwait - onshore	28.560	46.570	30.100	48.450
GCS_La_Canoa	4247	Venezuela - onshore	0.650	-73.380	12.250	-59.800
GCS_Lake	4249	Venezuela - Lake Maracaibo	8.720	-72.390	11.030	-70.790
GCS_Lao_1993	4677	Laos	13.920	100.150	22.510	107.760
GCS_Lao_1997	4678	Laos	13.920	100.150	22.510	107.760
GCS_Larissa_2000	104963	World	-90.000	-180.000	90.000	180.000
GCS_LC5_1961	37243	Cayman Islands - Cayman Brac	19.660	-79.910	19.780	-79.690
GCS_Leda_2000	104919	World	-90.000	-180.000	90.000	180.000
GCS_Leigon	4250	Ghana	1.080	-3.900	11.170	1.340
GCS_Le_Pouce_1934	4699	Mauritius - mainland	-20.500	57.300	-19.950	57.800
GCS_LGD2006	4754	Libya	19.510	9.310	36.000	25.980
GCS_Liberia_1964	4251	Liberia - onshore	4.270	-11.500	8.570	-7.370
GCS_Lisbon	4207	Portugal - mainland - onshore	36.960	-9.550	42.150	-6.190
GCS_Lisbon_1890	4666	Portugal - mainland - onshore	36.960	-9.550	42.150	-6.190
GCS_Lisbon_1890_Lisbon	4904	Portugal - mainland - onshore	36.960	-9.550	42.150	-6.190
GCS_Lisbon_Lisbon	4803	Portugal - mainland - onshore	36.960	-9.550	42.150	-6.190
GCS_Little_Cayman_1961	4726	Cayman Islands - Little Cayman and Cayman Brac	19.640	-80.130	19.780	-79.690
GCS_LKS_1992	4661	Latvia	55.670	19.070	58.080	28.240
GCS_LKS_1994	4669	Lithuania	53.890	19.020	56.450	26.810
GCS_Locodjo_1965	4142	Cote d'Ivoire (Ivory Coast)	0.840	-8.610	10.740	-2.490
GCS_Loma_Quintana	4288	Venezuela - north of 7~45'N	7.750	-73.380	12.250	-59.800
GCS_Lome	4252	Togo	2.450	-0.150	11.150	1.940
GCS_Luxembourg_1930	4181	Luxembourg	49.450	5.730	50.180	6.520
GCS_Luzon_1911	4253	Philippines	2.250	116.090	21.430	140.080
GCS_Lysithea_2000	104920	World	-90.000	-180.000	90.000	180.000
GCS_Madeira_1936	4185	Portugal - Madeira archipelago onshore	32.360	-17.300	33.140	-16.230
GCS_Madrid_1870_Madrid	4903	Spain - mainland onshore	35.960	-9.360	43.810	3.390
GCS_Madzansua	4128	Mozambique - west - Tete province	-17.500	30.230	-14.000	34.500



GCS_MAGNA	4686	Colombia	-4.240	-84.770	15.500	-66.870
GCS_Mahe_1971	4256	Seychelles	-10.610	45.770	-3.010	56.980
GCS_Majuro	104113	Marshall Islands	3.090	157.090	21.010	178.610
GCS_Makassar	4257	Indonesia - Sulawesi SW	-7.900	117.600	2.000	121.000
GCS_Makassar_Jakarta	4804	Indonesia - Sulawesi SW	-7.900	117.600	2.000	121.000
GCS_Malongo_1987	4259	Africa - Angola (Cabinda) and DR Congo (Zaire) - offshore	-6.000	10.850	-5.030	12.430
GCS_Manoca	4260	Cameroon	1.660	8.380	13.090	16.220
GCS_Manoca_1962	4193	Cameroon - coastal area	1.500	8.400	5.000	12.000
GCS_MARCARIO_SOLIS	5371	Panama	5.000	-84.320	12.500	-77.050
GCS_MARGEN	5354	Bolivia	-22.900	-69.660	-9.680	-57.520
GCS_Mars_1979	104904	World	-90.000	-180.000	90.000	180.000
GCS_Mars_2000	104905	World	-90.000	-180.000	90.000	180.000
GCS_Massawa	4262	Eritrea	12.330	36.400	18.570	43.300
GCS_Maupiti_1983	4692	French Polynesia - Society Islands - Maupiti	-16.520	-152.330	-16.330	-152.160
GCS_Mauritania_1999	4702	Mauritania	14.730	-20.410	27.310	-4.810
GCS_Merchich	4261	Morocco - onshore	27.680	-13.770	36.230	-1.010
GCS_Merchich_Degree	104261	Morocco - onshore	27.680	-13.770	36.230	-1.010
GCS_Mercury_2000	104900	World	-90.000	-180.000	90.000	180.000
GCS_Metis_2000	104921	World	-90.000	-180.000	90.000	180.000
GCS_Mexican_Datum_of_1993	4483	Mexico	12.100	-122.180	32.720	-84.640
GCS_MGI	4312	Austria	46.410	9.530	49.020	17.170
GCS_MGI_1901	3906	Europe - former Yugoslavia onshore	40.860	13.380	46.880	23.030
GCS_MGI_Ferro	4805	Europe - Austria and former Yugoslavia onshore	40.860	9.530	49.020	23.030
GCS_Mhast_1951	4703	Angola - Cabinda	-5.770	12.110	-4.390	13.090
GCS_Mhast_Offshore	4705	Africa - Angola (Cabinda) and DR Congo (Zaire) - offshore	-6.000	10.850	-5.030	12.430
GCS_Mhast_Onshore	4704	Africa - Angola (Cabinda) and DR Congo (Zaire) - coastal	-6.000	10.850	-4.370	13.110
GCS_Midway_1961	4727	Midway Islands - Sand and Eastern Islands	28.180	-177.420	28.290	-177.300
GCS_Mimas_2000	104935	World	-90.000	-180.000	90.000	180.000
GCS_Minna	4263	Nigeria	0.930	2.700	13.900	14.680
GCS_Miranda_2000	104952	World	-90.000	-180.000	90.000	180.000
GCS_MOLDREF99	4023	Moldova	45.450	26.630	48.470	30.130
GCS_MONREF_1997	104134	Mongolia	41.560	87.760	52.170	119.980
GCS_Monte_Mario	4265	Italy - including San Marino and Vatican	34.770	5.940	47.090	18.990
GCS_Monte_Mario_Rome	4806	Italy - including San Marino and Vatican	34.770	5.940	47.090	18.990
GCS_Montserrat_1958	4604	Montserrat - onshore	16.620	-62.290	16.860	-62.090
GCS_Moon_2000	104903	World	-90.000	-180.000	90.000	180.000
GCS_Moorea_1987	4691	French Polynesia - Society Islands -	-17.610	-149.960	-17.450	-149.690

		Moorea				
GCS_MOP78	4639	Wallis and Futuna - Wallis	-14.000	-177.000	-13.000	-176.000
GCS_Mount_Dillon	4157	Trinidad and Tobago - Tobago - onshore	11.090	-60.890	11.400	-60.470
GCS_Moznet	4130	Mozambique	-26.880	30.230	-9.560	43.000
GCS_Mporaloko	4266	Gabon	-6.390	5.910	2.330	14.550
GCS_MSK_1942	104135	Mongolia	41.560	87.760	52.170	119.980
GCS_NAD_1927_CGQ77	4609	Canada - Quebec	44.990	-79.850	62.610	-57.110
GCS_NAD_1927_Definition_1976	4608	Canada - Ontario	41.680	-95.160	56.890	-74.360
GCS_NAD_1983_2011	104145	USA - CONUS and Alaska; PRVI	14.930	167.650	74.710	-63.890
GCS_NAD_1983_CORS96	104223	USA - CONUS and Alaska; PRVI	14.930	167.650	74.710	-63.890
GCS_NAD_1983_HARN_Adj_MN_Anoka	104700	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Becker	104701	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Beltrami_North	104702	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Beltrami_South	104703	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Benton	104704	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Big_Stone	104705	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Blue_Earth	104706	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Brown	104707	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Carlton	104708	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Carver	104709	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Cass_North	104710	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Cass_South	104711	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Chippewa	104712	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Chisago	104713	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Cook_North	104714	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Cook_South	104715	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Cottonwood	104716	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Crow_Wing	104717	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Dakota	104718	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Dodge	104719	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Douglas	104720	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Faribault	104721	USA - Minnesota	43.500	-97.240	49.390	-89.470

GCS_NAD_1983_HARN_Adj_MN_Fillmore	104722	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Freeborn	104723	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Goodhue	104724	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Grant	104725	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Hennepin	104726	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Houston	104727	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Isanti	104728	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Itasca_North	104729	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Itasca_South	104730	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Jackson	104731	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Kanabec	104732	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Kandiyohi	104733	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Kittson	104734	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Koochiching	104735	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Lac_Qui_Parle	104736	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Lake_of_the_Woods_North	104737	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Lake_of_the_Woods_South	104738	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Le_Sueur	104739	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Lincoln	104740	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Lyon	104741	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Mahnomen	104743	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Marshall	104744	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Martin	104745	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_McLeod	104742	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Meeker	104746	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Morrison	104747	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Mower	104748	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Murray	104749	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Nicollet	104750	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Nobles	104751	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_	104752	USA - Minnesota	43.500	-97.240	49.390	-89.470

Norman						
GCS_NAD_1983_HARN_Adj_MN_Olmsted	104753	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Ottertail	104754	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Pennington	104755	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Pine	104756	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Pipestone	104757	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Polk	104758	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Pope	104759	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Ramsey	104760	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Red_Lake	104761	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Redwood	104762	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Renville	104763	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Rice	104764	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Rock	104765	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Roseau	104766	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Scott	104770	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Sherburne	104771	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Sibley	104772	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Stearns	104773	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Steele	104774	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Stevens	104775	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_St_Louis	104786	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_St_Louis_Central	104768	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_St_Louis_North	104767	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_St_Louis_South	104769	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Swift	104776	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Todd	104777	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Traverse	104778	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Wabasha	104779	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Wadena	104780	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Waseca	104781	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Watonwan	104782	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_Winona	104783	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_HARN_Adj_MN_	104784	USA - Minnesota	43.500	-97.240	49.390	-89.470

Wright						
GCS_NAD_1983_HARN_Adj_MN_Yellow_Medicine	104785	USA - Minnesota	43.500	-97.240	49.390	-89.470
GCS_NAD_1983_MA11	104286	Pacific Ocean	-78.800	99.300	65.600	-70.000
GCS_NAD_1983_MARP00	104260	Pacific Ocean	-78.800	99.300	65.600	-70.000
GCS_NAD_1983_NSRS2007	4759	USA - CONUS and Alaska; PRVI	14.930	167.650	74.710	-63.890
GCS_NAD_1983_PA11	104287	Pacific Ocean	-78.800	99.300	65.600	-70.000
GCS_NAD_1983_PACP00	104259	Pacific Ocean	-78.800	99.300	65.600	-70.000
GCS_Nahrwan_1934	4744	Asia - Middle East - SE Iraq and SW Iran	29.000	44.300	33.500	50.830
GCS_Nahrwan_1967	4270	Asia - Middle East - Nahrwan	22.630	38.820	37.410	56.380
GCS_Naiad_2000	104964	World	-90.000	-180.000	90.000	180.000
GCS_Nakhl-e_Ghanem	4693	Iran - Kangan district	27.700	51.800	28.200	52.500
GCS_Naparima_1955	4158	Trinidad and Tobago - Trinidad - onshore	9.990	-61.970	10.890	-60.860
GCS_Naparima_1972	4271	Trinidad and Tobago - Tobago - onshore	11.090	-60.890	11.400	-60.470
GCS_NEA74_Noumea	4644	New Caledonia - Grande Terre - Noumea	-22.350	166.300	-22.100	166.500
GCS_Nepal_Nagarkot	104256	Nepal	26.360	80.100	30.460	88.250
GCS_Neptune_2000	104960	World	-90.000	-180.000	90.000	180.000
GCS_Nereid_2000	104965	World	-90.000	-180.000	90.000	180.000
GCS_New_Beijing	4555	China - onshore	18.040	73.660	53.590	134.850
GCS_New_Zealand_1949	4272	New Zealand - onshore and nearshore	-47.400	166.330	-34.000	178.600
GCS_NGN	4318	Kuwait - onshore	28.560	46.570	30.100	48.450
GCS_NGO_1948	4273	Norway - onshore	57.940	4.690	71.200	31.220
GCS_NGO_1948_Oslo	4817	Norway - onshore	57.940	4.690	71.200	31.220
GCS_Nord_de_Guerre_Paris	4902	France - Alsace	47.420	6.850	49.070	8.230
GCS_Nord_Sahara_1959	4307	Algeria - north of 32~N	32.000	-2.920	37.090	9.090
GCS_Nord_Sahara_1959_Paris	4819	Africa - Algeria, Morocco and Tunisia	18.980	-13.170	37.340	11.990
GCS_North_American_1927	4267	North America - NAD27	7.980	167.650	83.160	-47.740
GCS_North_American_1983	4269	North America - NAD83	14.930	167.650	86.450	-47.740
GCS_North_American_1983_CSRS	4617	Canada	40.040	-141.000	86.450	-47.740
GCS_North_American_1983_HARN	4152	USA - HARN	-14.580	144.580	49.380	-64.510
GCS_Nouakchott_1965	4680	Mauritania - central coast	17.300	-16.670	19.360	-15.750
GCS_NSWC_9Z_2	4276	World	-90.000	-180.000	90.000	180.000
GCS_NTF	4275	France - onshore - mainland and Corsica	41.310	-4.870	51.140	9.630
GCS_NTF_Paris	4807	France - onshore - mainland and Corsica	41.310	-4.870	51.140	9.630
GCS_NWL_9D	4025	Not specified	-90.000	-180.000	90.000	180.000
GCS_NZGD_2000	4167	New Zealand	-55.950	157.410	-22.740	-170.890
GCS_Oberon_2000	104953	World	-90.000	-180.000	90.000	180.000
GCS_Observatorio	4129	Mozambique - south	-26.880	31.300	-19.750	35.600
GCS_Observatorio_Meteorologico_1939	37245	Portugal - Azores W - onshore	39.300	-31.340	39.760	-31.020
GCS_Observatorio_Meteorologico_1965	104126	China - Macao	22.090	113.590	22.310	113.690
GCS_Ocotepeque_1935	5451	Costa Rica	2.150	-90.440	11.770	-81.430
GCS_Old_Hawaiian	4135	USA - Hawaii -	18.880	-160.300	22.290	-154.750

		onshore				
GCS_Old_Hawaiian_Intl_1924	104138	USA - Hawaii - onshore	18.880	-160.300	22.290	-154.750
GCS_Oman	37206	Oman	14.010	51.900	26.750	63.050
GCS_Ophelia_2000	104954	World	-90.000	-180.000	90.000	180.000
GCS_OSGB_1936	4277	UK - Great Britain; Isle of Man	49.810	-8.730	60.890	1.830
GCS_OSGB_1970_SN	4278	UK - Great Britain; Isle of Man	49.810	-8.730	60.890	1.830
GCS_OSNI_1952	4188	UK - Northern Ireland - onshore	53.960	-8.170	55.350	-5.350
GCS_OS_SN_1980	4279	Europe - British Isles - UK and Ireland onshore	49.810	-10.560	60.890	1.830
GCS_OSU_86F	4032	Not specified	-90.000	-180.000	90.000	180.000
GCS_OSU_91A	4033	Not specified	-90.000	-180.000	90.000	180.000
GCS_Padang_1884	4280	Indonesia - Sumatra	-6.500	95.000	6.000	108.550
GCS_Padang_1884_Jakarta	4808	Indonesia - Sumatra	-6.500	95.000	6.000	108.550
GCS_Palestine_1923	4281	Asia - Middle East - Israel, Jordan and Palestine onshore	29.190	34.220	33.380	39.300
GCS_Pampa_del_Castillo	4161	Argentina - Comodoro Rivadavia	-46.700	-69.500	-45.200	-67.100
GCS_Pan_2000	104936	World	-90.000	-180.000	90.000	180.000
GCS_Panama-Colon_1911	5467	Panama - onshore	7.160	-83.030	9.670	-77.200
GCS_Pandora_2000	104937	World	-90.000	-180.000	90.000	180.000
GCS_Pasiphae_2000	104922	World	-90.000	-180.000	90.000	180.000
GCS_PD/83	4746	Germany - Thuringen	50.200	9.920	51.640	12.560
GCS_PDO_1993	4134	Oman - onshore	16.600	51.900	26.400	59.890
GCS_Peru96	5373	Peru	-21.050	-84.670	-0.040	-68.670
GCS_Petrels_1972	4636	Antarctica - Adelie Land - Petrels island	-66.900	139.500	-66.500	140.500
GCS_Phobos_2000	104907	World	-90.000	-180.000	90.000	180.000
GCS_Phoebe_2000	104938	World	-90.000	-180.000	90.000	180.000
GCS_Pico_de_Las_Nieves	4728	Spain - Canary Islands onshore	27.590	-18.220	29.290	-13.370
GCS_Pitcairn_1967	4729	Pitcairn - Pitcairn Island	-25.160	-130.180	-25.000	-129.990
GCS_Pitcairn_2006	4763	Pitcairn - Pitcairn Island	-25.160	-130.180	-25.000	-129.990
GCS_Plessis_1817	4027	Not specified	-90.000	-180.000	90.000	180.000
GCS_Pluto_2000	104969	World	-90.000	-180.000	90.000	180.000
GCS_PNG94	5546	Papua New Guinea (PNG)	-12.010	140.930	2.600	164.100
GCS_Pohnpei	104109	Micronesia	0.000	136.660	12.760	168.430
GCS_Point_58	4620	Africa - 12th parallel N	10.000	-16.810	14.000	22.970
GCS_Pointe_Geologie_Perroud_1950	4637	Antarctica - Adelie Land	-68.000	135.000	-66.000	142.000
GCS_Pointe_Noire	4282	Congo	-7.130	8.870	3.720	18.650
GCS_Portia_2000	104955	World	-90.000	-180.000	90.000	180.000
GCS_Porto_Santo_1936	4615	Portugal - Madeira archipelago onshore	32.360	-17.300	33.140	-16.230
GCS_Porto_Santo_1995	4663	Portugal - Madeira archipelago onshore	32.360	-17.300	33.140	-16.230
GCS_POSGAR	4172	Argentina	-58.400	-73.580	-21.780	-52.630
GCS_POSGAR_1994	4694	Argentina	-58.400	-73.580	-21.780	-52.630
GCS_POSGAR_1998	4190	Argentina	-58.400	-73.580	-21.780	-52.630

GCS_POSGAR_2007	5340	Argentina	-58.400	-73.580	-21.780	-52.630
GCS_Principe	4824	Sao Tome and Principe - onshore - Principe	1.300	7.250	1.710	7.490
GCS_Prometheus_2000	104939	World	-90.000	-180.000	90.000	180.000
GCS_Proteus_2000	104966	World	-90.000	-180.000	90.000	180.000
GCS_Provisional_S_American_1956	4248	South America - PSAD56 by country	-45.000	-81.400	12.680	-48.000
GCS_PRS_1992	4683	Philippines	2.250	116.090	21.430	140.080
GCS_PTRO8	5013	Portugal - Azores and Madeira Archipelagoes	32.390	-31.300	39.750	-16.250
GCS_Puck_2000	104956	World	-90.000	-180.000	90.000	180.000
GCS_Puerto_Rico	4139	Caribbean - Puerto Rico and Virgin Islands - onshore	17.630	-67.960	18.770	-64.250
GCS_Pulkovo_1942	4284	Europe - FSU onshore	35.150	19.580	81.900	-169.570
GCS_Pulkovo_1942_Adj_1958	4179	Europe - onshore - eastern - S-42(58)	39.640	9.920	54.890	29.730
GCS_Pulkovo_1942_Adj_1983	4178	Europe - onshore - eastern - S-42(58)	39.640	9.920	54.890	29.730
GCS_Pulkovo_1995	4200	Russia	39.880	18.930	85.190	-168.970
GCS_PZ_1990	4740	World	-90.000	-180.000	90.000	180.000
GCS_Qatar_1948	4286	Qatar - onshore	24.480	50.750	26.180	51.640
GCS_Qatar_1974	4285	Qatar - onshore	24.480	50.750	26.180	51.640
GCS_QND_1995	4614	Qatar - onshore	24.480	50.750	26.180	51.640
GCS_Qornoq_1927	4194	Greenland - west coast	59.740	-73.280	79.000	-42.520
GCS_Rassadiran	4153	Iran - Taheri refinery	27.400	52.500	27.600	52.700
GCS_RD/83	4745	Germany - Sachsen	50.210	11.900	51.660	15.030
GCS_REGCAN95	4081	Spain - Canary Islands	24.600	-21.930	32.750	-11.750
GCS_REGVEN	4189	Venezuela	0.650	-73.380	16.750	-58.950
GCS_Reunion_1947	4626	Reunion - onshore	-21.400	55.200	-20.800	55.800
GCS_Reykjavik_1900	4657	Iceland - onshore	63.350	-24.660	66.580	-13.380
GCS_RGAF09	5489	Caribbean - French Antilles	14.080	-63.660	18.530	-57.530
GCS_RGF_1993	4171	France	41.150	-9.860	51.560	10.380
GCS_RGFG_1995	4624	French Guiana	2.110	-54.600	8.880	-49.460
GCS_RGM_2004	4470	Mayotte	-14.370	44.130	-11.320	45.770
GCS_RGNC_1991	4645	New Caledonia	-23.460	157.090	-17.260	173.890
GCS_RGNC_1991-93	4749	New Caledonia	-23.460	157.090	-17.260	173.890
GCS_RGPF	4687	French Polynesia	-29.000	-155.000	-7.000	-132.000
GCS_RGR_1992	4627	Reunion	-25.920	37.580	-10.600	58.270
GCS_RGRDC_2005	4046	Congo DR (Zaire) - south	-13.460	28.500	-3.300	30.780
GCS_RGSPM_2006	4463	St Pierre and Miquelon	43.420	-57.100	47.370	-55.900
GCS_Rhea_2000	104940	World	-90.000	-180.000	90.000	180.000
GCS_Roma_1940	104127	Italy - including San Marino and Vatican	34.770	5.940	47.090	18.990
GCS_Rosalind_2000	104957	World	-90.000	-180.000	90.000	180.000
GCS_RRAF_1991	4558	Caribbean - French Antilles	14.080	-63.660	18.530	-57.530
GCS_RSRGD2000	4764	Antarctica - Ross Sea Region	-90.000	145.000	-60.000	-140.000
GCS_RT_1990	4124	Sweden	54.960	10.030	69.060	24.170
GCS_RT38	4308	Sweden - onshore	55.290	10.940	69.060	24.170
GCS_RT38_Stockholm	4814	Sweden - onshore	55.290	10.940	69.060	24.170
GCS_S42_Hungary	37257	Hungary	45.750	16.110	48.580	22.890

GCS_SAD_1969_96	5527	Brazil - SAD69	-35.710	-60.570	7.040	-29.030
GCS_Sainte_Anne	4622	Guadeloupe - Grande-Terre and surrounding islands - onshore	15.800	-61.850	16.540	-60.970
GCS_Saint_Pierre_et_Miquelon_1950	4638	St Pierre and Miquelon - onshore	46.700	-56.470	47.180	-56.070
GCS_Samboja	4125	Indonesia - Kalimantan E - Mahakam delta	-1.350	116.900	0.000	118.000
GCS_Santo_DOS_1965	4730	Vanuatu - northern islands	-17.400	166.500	-14.610	168.310
GCS_Sao_Braz	37249	Portugal - Azores E - onshore	36.880	-25.910	37.960	-24.960
GCS_Sao_Tome	4823	Sao Tome and Principe - onshore - Sao Tome	-0.020	6.440	0.450	6.800
GCS_Sapper_Hill_1943	4292	Falkland Islands - onshore	-52.390	-61.230	-51.200	-57.650
GCS_Saturn_2000	104925	World	-90.000	-180.000	90.000	180.000
GCS_Schwarzeck	4293	Namibia	-31.200	8.320	-16.990	25.280
GCS_Scoresbysund_1952	4195	Greenland - Scoresbysund area	68.660	-29.680	74.580	-19.890
GCS_Segora	4294	Indonesia - Kalimantan SE	-5.720	114.000	2.500	118.000
GCS_Selvagem_Grande_1938	4616	Portugal - Selvagens onshore	29.980	-16.100	30.200	-15.790
GCS_Serindung	4295	Indonesia - Kalimantan E	-5.720	113.690	4.400	119.620
GCS_Sibun_Gorge_1922	5464	Belize - onshore	15.890	-89.220	18.490	-87.730
GCS_Sierra_Leone_1924	4174	Sierra Leone - Freetown Peninsula	8.100	-13.330	8.600	-13.000
GCS_Sierra_Leone_1960	104103	Sierra Leone	4.270	-15.680	10.000	-10.270
GCS_Sierra_Leone_1968	4175	Sierra Leone - onshore	6.890	-13.300	10.000	-10.270
GCS_Sinope_2000	104923	World	-90.000	-180.000	90.000	180.000
GCS_SIRGAS	4170	South America - SIRGAS 1995 by country	-59.860	-113.200	16.750	-26.010
GCS_SIRGAS_2000	4674	Latin America - SIRGAS 2000 by country	-59.860	-122.180	32.720	-26.010
GCS_SIRGAS-Chile	5360	Chile	-59.860	-113.200	-17.510	-65.730
GCS_SIRGAS_ES2007.8	5393	El Salvador	9.970	-91.420	14.430	-87.650
GCS_SIRGAS-ROU98	5381	Uruguay	-37.770	-58.490	-30.100	-50.010
GCS_S_JTSK	4156	Europe - Czechoslovakia	47.740	12.090	51.050	22.560
GCS_S_JTSK/05	5228	Czech Republic	48.580	12.090	51.050	18.850
GCS_S_JTSK/05_Ferro	5229	Czech Republic	48.580	12.090	51.050	18.850
GCS_S_JTSK_Ferro	4818	Europe - Czechoslovakia	47.740	12.090	51.050	22.560
GCS_SLD99	5233	Sri Lanka - onshore	5.850	79.600	9.920	81.950
GCS_Slovenia_1996	4765	Slovenia	45.430	13.380	46.880	16.610
GCS_Solomon_1968	4718	Solomon Islands	-13.260	154.090	-3.500	171.100
GCS_South_American_1969	4618	South America - SAD69 by country	-45.000	-81.400	12.510	-29.030
GCS_South_Asia_Singapore	37207	Singapore	1.120	103.620	1.460	104.160
GCS_South_Yemen	4164	Yemen - South Yemen	12.000	42.500	15.000	53.000
GCS_Sphere	4035	Not specified	-90.000	-180.000	90.000	180.000
GCS_Sphere_ARC_INFO	37008	World	-90.000	-180.000	90.000	180.000



GCS_Sphere_Clarke_1866_Authalic	4052	Not specified	-90.000	-180.000	90.000	180.000
GCS_Sphere_EMEP	104128	Europe - LCC & LAEA	24.600	-35.580	84.160	44.820
GCS_Sphere_GRS_1980_Authalic	4047	Not specified	-90.000	-180.000	90.000	180.000
GCS_Sphere_International_1924_Authalic	4053	Not specified	-90.000	-180.000	90.000	180.000
GCS_SREF98	4075	Serbia	41.860	18.820	46.180	23.010
GCS_ST71_Belep	4643	New Caledonia - Belep	-19.850	163.550	-19.540	163.700
GCS_ST84_Ile_des_Pins	4642	New Caledonia - Ile des Pins	-22.750	167.300	-22.500	167.550
GCS_ST87_Ouvea	4750	New Caledonia - Ouvéa	-20.750	166.350	-20.350	166.700
GCS_St_George_Island	4138	USA - Alaska - St. George Island	56.490	-169.870	56.660	-169.380
GCS_St_Kitts_1955	4605	St Kitts and Nevis - onshore	17.070	-62.910	17.460	-62.500
GCS_St_Lawrence_Island	4136	USA - Alaska - St. Lawrence Island	62.900	-171.960	63.830	-168.590
GCS_St_Lucia_1955	4606	St Lucia - onshore	13.660	-61.130	14.160	-60.830
GCS_St_Paul_Island	4137	USA - Alaska - St. Paul Island	57.060	-170.500	57.270	-170.050
GCS_Struve_1860	4028	Not specified	-90.000	-180.000	90.000	180.000
GCS_St_Vincent_1945	4607	St Vincent and the Grenadines - onshore	12.550	-61.510	13.430	-61.070
GCS_Sudan	4296	Sudan	8.750	21.840	22.250	39.410
GCS_SVY21	4757	Singapore	1.120	103.620	1.460	104.160
GCS_SWEREF99	4619	Sweden	54.960	10.030	69.060	24.170
GCS_Swiss_TRF_1995	4151	Europe - Liechtenstein and Switzerland	45.830	5.970	47.810	10.490
GCS_Tahaa_1954	4629	French Polynesia - Society Islands - Bora Bora, Huahine, Raiatea, Tahaa	-16.950	-151.800	-16.620	-150.900
GCS_Tahiti_1952	4628	French Polynesia - Society Islands - Moorea and Tahiti	-17.910	-149.960	-17.450	-149.070
GCS_Tahiti_1979	4690	French Polynesia - Society Islands - Tahiti	-17.910	-149.690	-17.450	-149.070
GCS_Tananarive_1925	4297	Madagascar	-28.890	41.140	-10.600	55.340
GCS_Tananarive_1925_Paris	4810	Madagascar	-28.890	41.140	-10.600	55.340
GCS_Telesto_2000	104941	World	-90.000	-180.000	90.000	180.000
GCS_Tern_Island_1961	4707	USA - Hawaii - Tern Island and Sorel Atoll	23.690	-166.360	23.930	-166.030
GCS_Tete	4127	Mozambique - onshore	-26.880	30.230	-10.400	40.900
GCS_Tethys_2000	104942	World	-90.000	-180.000	90.000	180.000
GCS_Thalassa_2000	104967	World	-90.000	-180.000	90.000	180.000
GCS_Thebe_2000	104924	World	-90.000	-180.000	90.000	180.000
GCS_Timbalai_1948	4298	Asia - Brunei and East Malaysia	0.850	109.550	7.350	119.260
GCS_Titan_2000	104943	World	-90.000	-180.000	90.000	180.000
GCS_Titania_2000	104958	World	-90.000	-180.000	90.000	180.000
GCS_TM65	4299	Europe - Ireland (Republic and Ulster) - onshore	51.400	-10.560	55.430	-5.350
GCS_TM75	4300	Europe - Ireland (Republic and Ulster) -	51.400	-10.560	55.430	-5.350

		onshore				
GCS_Tokyo	4301	Asia - Japan and Korea	24.250	123.680	45.490	145.810
GCS_Trinidad_1903	4302	Trinidad and Tobago - Trinidad	9.830	-62.080	11.500	-60.000
GCS_Tristan_1968	4734	St Helena - Tristan da Cunha	-37.430	-12.730	-37.050	-12.210
GCS_Triton_2000	104968	World	-90.000	-180.000	90.000	180.000
GCS_Trucial_Coast_1948	4303	UAE - Abu Dhabi and Dubai - onshore	22.600	51.570	26.000	54.000
GCS_TUREF	5252	Turkey	34.430	25.620	43.450	44.820
GCS_TWD_1967	3821	Taiwan - onshore	21.800	119.400	25.400	122.050
GCS_TWD_1997	3824	Taiwan	21.430	118.070	26.360	122.490
GCS_Ukraine_2000	5561	Ukraine	43.190	22.150	52.380	40.180
GCS_Umbriel_2000	104959	World	-90.000	-180.000	90.000	180.000
GCS_Uranus_2000	104944	World	-90.000	-180.000	90.000	180.000
GCS_Vanua_Levu_1915	4748	Fiji - Vanua Levu and Taveuni	-17.050	178.250	-16.000	-179.500
GCS_Venus_1985	104901	World	-90.000	-180.000	90.000	180.000
GCS_Venus_2000	104902	World	-90.000	-180.000	90.000	180.000
GCS_Vientiane_1982	4676	Laos	13.920	100.150	22.510	107.760
GCS_Viti_Levu_1912	4752	Fiji - Viti Levu	-18.600	177.020	-17.260	178.870
GCS_Viti_Levu_1916	4731	Fiji - Viti Levu	-18.600	177.020	-17.260	178.870
GCS_VN_2000	4756	Vietnam - onshore	8.450	103.800	23.390	109.600
GCS_Voirol_1875	4304	Algeria - north of 32~N	32.000	-2.920	37.090	9.090
GCS_Voirol_1875_Grad	104139	Algeria - north of 32~N	32.000	-2.920	37.090	9.090
GCS_Voirol_1875_Paris	4811	Algeria - north of 32~N	32.000	-2.920	37.090	9.090
GCS_Voirol_1879	4671	Algeria - north of 32~N	32.000	-2.920	37.090	9.090
GCS_Voirol_1879_Grad	104140	Algeria - north of 32~N	32.000	-2.920	37.090	9.090
GCS_Voirol_1879_Paris	4821	Algeria - north of 32~N	32.000	-2.920	37.090	9.090
GCS_Voirol_Unifie_1960	4305	Africa - Algeria, Morocco and Tunisia	18.980	-13.170	37.340	11.990
GCS_Voirol_Unifie_1960_Degree	104305	Africa - Algeria, Morocco and Tunisia	18.980	-13.170	37.340	11.990
GCS_Voirol_Unifie_1960_Paris	4812	Africa - Algeria, Morocco and Tunisia	18.980	-13.170	37.340	11.990
GCS_Wake_Eniwetok_1960	4732	Marshall Islands - Eniwetok, Kwajalein and Wake islands	8.640	162.030	19.340	168.000
GCS_Wake_Island_1952	4733	Marshall Islands - Wake Island	19.260	166.580	19.340	166.660
GCS_Walbeck	37007	World	-90.000	-180.000	90.000	180.000
GCS_War_Office	4029	Not specified	-90.000	-180.000	90.000	180.000
GCS_WGS_1966	4760	World	-90.000	-180.000	90.000	180.000
GCS_WGS_1972	4322	World	-90.000	-180.000	90.000	180.000
GCS_WGS_1972_BE	4324	World	-90.000	-180.000	90.000	180.000
GCS_WGS_1984	4326	World	-90.000	-180.000	90.000	180.000
GCS_WGS_1984_Major_Auxiliary_Sphere	104199	World	-90.000	-180.000	90.000	180.000
GCS_Xian_1980	4610	China - onshore	18.040	73.660	53.590	134.850
GCS_Yacare	4309	Uruguay	-37.770	-58.490	-30.100	-50.010
GCS_Yemen_NGN_1996	4163	Yemen	11.610	41.440	19.010	55.030

GCS_Yoff	4310	Senegal	9.500	-20.210	16.700	-11.370
GCS_Zanderij	4311	Suriname	1.840	-58.070	9.350	-52.660

*Table 2: Geographic coordinate systems: non-Greenwich or non-degree definitions*

GCS Name	WKID	Prime Meridian	Angular Unit
GCS_ATF_Paris	4901	Paris	Grad
GCS_Batavia_Jakarta	4813	Jakarta	Degree
GCS_Belge_1950_Brussels	4809	Brussels	Degree
GCS_Bern_1898_Bern	4801	Bern	Degree
GCS_Bogota_Bogota	4802	Bogota	Degree
GCS_Carthage_Grad	37225	Greenwich	Grad
GCS_Carthage_Paris	4816	Paris	Grad
GCS_Greek_Athens	4815	Athens	Degree
GCS_Gunung_Segara_Jakarta	4820	Jakarta	Degree
GCS_Lisbon_1890_Lisbon	4904	Lisbon	Degree
GCS_Lisbon_Lisbon	4803	Lisbon	Degree
GCS_Madrid_1870_Madrid	4903	Madrid	Degree
GCS_Makassar_Jakarta	4804	Jakarta	Degree
GCS_Merchich	4261	Greenwich	Grad
GCS_MGI_Ferro	4805	Ferro	Degree
GCS_Monte_Mario_Rome	4806	Rome	Degree
GCS_NGO_1948_Oslo	4817	Oslo	Degree
GCS_Nord_de_Guerre_Paris	4902	Paris	Grad
GCS_Nord_Sahara_1959_Paris	4819	Paris	Grad
GCS_NTF_Paris	4807	Paris	Grad
GCS_Padang_1884_Jakarta	4808	Jakarta	Degree
GCS_RT38_Stockholm	4814	Stockholm	Degree
GCS_S_JTSK/05_Ferro	5229	Ferro	Degree
GCS_S_JTSK_Ferro	4818	Ferro	Degree
GCS_Tananarive_1925_Paris	4810	Paris	Grad
GCS_Voirol_1875_Grad	104139	Greenwich	Grad
GCS_Voirol_1875_Paris	4811	Paris	Grad
GCS_Voirol_1879_Grad	104140	Greenwich	Grad
GCS_Voirol_1879_Paris	4821	Paris	Grad
GCS_Voirol_Unifie_1960	4305	Greenwich	Grad
GCS_Voirol_Unifie_1960_Paris	4812	Paris	Grad

*Table 3: Geodetic datums: well-known IDs and spheroids*

Datum Name	WKID	Spheroid Name
D_Abidjan_1987	6143	Clarke_1880_RGS
D_Accra	6168	War_Office
D_Adindan	6201	Clarke_1880_RGS
D_Adrastea_2000	106909	Adrastea_2000_IAU_IAG
D_Afgooye	6205	Krasovsky_1940
D_Agadez	6206	Clarke_1880_IGN
D_Ain_el_Abd_1970	6204	International_1924
D_Airy_1830	6001	Airy_1830
D_Airy_Modified	6002	Airy_Modified
D_Alaskan_Islands	106260	Clarke_1866
D_Albanian_1987	6191	Krasovsky_1940
D_Amalthea_2000	106910	Amalthea_2000_IAU_IAG
D_American_Samoa_1962	6169	Clarke_1866
D_Amersfoort	6289	Bessel_1841
D_Amassalik_1958	6196	International_1924

<b>Datum Name</b>	<b>WKID</b>	<b>Spheroid Name</b>
D_Ananke_2000	106911	Ananke_2000_IAU_IAG
D_Anguilla_1957	6600	Clarke_1880_RGS
D_Anna_1_1965	6708	Australian
D_Antigua_1943	6601	Clarke_1880_RGS
D_Aratu	6208	International_1924
D_Arc_1950	6209	Clarke_1880_Arc
D_Arc_1960	6210	Clarke_1880_RGS
D_Ariel_2000	106945	Ariel_2000_IAU_IAG
D_Ascension_Island_1958	6712	International_1924
D_Astro_1952	6711	International_1924
D_ATF	6901	Plessis_1817
D_Atlas_2000	106926	Atlas_2000_IAU_IAG
D_ATS_1977	6122	ATS_1977
D_Australian	6003	Australian
D_Australian_1966	6202	Australian
D_Australian_1984	6203	Australian
D_Australian_Antarctic_1998	6176	GRS_1980
D_Ayabelle	6713	Clarke_1880_RGS
D_Azores_Central_Islands_1948	6183	International_1924
D_Azores_Central_Islands_1995	6665	International_1924
D_Azores_Occidental_Islands_1939	6182	International_1924
D_Azores_Oriental_Islands_1940	6184	International_1924
D_Azores_Oriental_Islands_1995	6664	International_1924
D_Bab_South	106269	Clarke_1866
D_Barbados_1938	6212	Clarke_1880_RGS
D_Batavia	6211	Bessel_1841
D_Beacon_E_1945	6709	International_1924
D_Beduaram	6213	Clarke_1880_IGN
D_Beijing_1954	6214	Krasovsky_1940
D_Belge_1950	6215	International_1924
D_Belge_1972	6313	International_1924
D_Belinda_2000	106946	Belinda_2000_IAU_IAG
D_Bellevue_IGN	6714	International_1924
D_Bermuda_1957	6216	Clarke_1866
D_Bermuda_2000	6762	WGS_1984
D_Bern_1898	6217	Bessel_1841
D_Bern_1938	6306	Bessel_1841
D_Bessel_1841	6004	Bessel_1841
D_Bessel_Modified	6005	Bessel_Modified
D_Bessel_Namibia	6006	Bessel_Namibia
D_Bhutan_National_Geodetic_Datum	1058	GRS_1980
D_Bianca_2000	106947	Bianca_2000_IAU_IAG
D_Bissau	6165	International_1924
D_Bogota	6218	International_1924
D_Bukit_Rimpah	6219	Bessel_1841
D_Cadastre_1997	1037	International_1924
D_Callisto_2000	106912	Callisto_2000_IAU_IAG
D_Calypso_2000	106927	Calypso_2000_IAU_IAG
D_Camacupa	6220	Clarke_1880_RGS
D_Camp_Area	6715	International_1924
D_Campo_Inchauspe	6221	International_1924
D_Canton_1966	6716	International_1924
D_Cape	6222	Clarke_1880_Arc
D_Cape_Canaveral	6717	Clarke_1866
D_Carme_2000	106913	Carme_2000_IAU_IAG
D_Carthage	6223	Clarke_1880_IGN

<b>Datum Name</b>	<b>WKID</b>	<b>Spheroid Name</b>
D_CH1903	6149	Bessel_1841
D_CH1903+	6150	Bessel_1841
D_Charon_2000	106970	Charon_2000_IAU_IAG
D_Chatham_Island_1971	6672	International_1924
D_Chatham_Islands_1979	6673	International_1924
D_China_2000	1043	CGCS2000
D_Chos_Malal_1914	6160	International_1924
D_Chua	6224	International_1924
D_Clarke_1858	6007	Clarke_1858
D_Clarke_1866	6008	Clarke_1866
D_Clarke_1866_Michigan	6009	Clarke_1866_Michigan
D_Clarke_1880	6034	Clarke_1880
D_Clarke_1880_Arc	6013	Clarke_1880_Arc
D_Clarke_1880_Benoit	6010	Clarke_1880_Benoit
D_Clarke_1880_IGN	6011	Clarke_1880_IGN
D_Clarke_1880_RGS	6012	Clarke_1880_RGS
D_Clarke_1880_SGA	6014	Clarke_1880_SGA
D_Combani_1950	6632	International_1924
D_Conakry_1905	6315	Clarke_1880_IGN
D_Cordelia_2000	106948	Cordelia_2000_IAU_IAG
D_Corrego_Alegre	6225	International_1924
D_Corrego_Alegre_1961	1074	International_1924
D_Costa_Rica_2005	1065	WGS_1984
D_Cote_d_Ivoire	6226	Clarke_1880_IGN
D_Cressida_2000	106949	Cressida_2000_IAU_IAG
D_Croatian_Terrestrial_Reference_System	6761	GRS_1980
D_CSG_1967	6623	International_1924
D_Cyprus_Geodetic_Reference_System_1993	106225	WGS_1984
D_D48	106278	Bessel_1841
D_Dabola_1981	6155	Clarke_1880_IGN
D_Datum_73	6274	International_1924
D_Datum_Geodesi_Nasional_1995	6755	WGS_1984
D_Datum_Lisboa_Bessel	106262	Bessel_1841
D_Datum_Lisboa_Hayford	106263	International_1924
D_Dealul_Piscului_1933	6316	International_1924
D_Dealul_Piscului_1970	6317	Krasovsky_1940
D_Deception_Island	6736	Clarke_1880_RGS
D_Deimos_2000	106906	Deimos_2000_IAU_IAG
D_Deir_ez_Zor	6227	Clarke_1880_IGN
D_Desdemona_2000	106950	Desdemona_2000_IAU_IAG
D_Despina_2000	106961	Despina_2000_IAU_IAG
D_Deutsches_Hauptdreiecksnetz	6314	Bessel_1841
D_Dione_2000	106928	Dione_2000_IAU_IAG
D_Dominica_1945	6602	Clarke_1880_RGS
D_DOS_1968	106218	International_1924
D_DOS_71_4	6710	International_1924
D_Douala	6228	Clarke_1880_IGN
D_Douala_1948	6192	International_1924
D_Easter_Island_1967	6719	International_1924
D_Egypt_1907	6229	Helmert_1906
D_Egypt_1930	6199	International_1924
D_Egypt_Gulf_of_Suez_S-650_TL	6706	Helmert_1906
D_Elara_2000	106914	Elara_2000_IAU_IAG
D_Enceladus_2000	106929	Enceladus_2000_IAU_IAG
D_Epimetheus_2000	106930	Epimetheus_2000_IAU_IAG
D_Estonia_1937	106101	Bessel_1841

<b>Datum Name</b>	<b>WKID</b>	<b>Spheroid Name</b>
D_Estonia_1992	6133	GRS_1980
D_Estonia_1997	6180	GRS_1980
D_ETRF_1989	106258	WGS_1984
D_ETRS_1989	6258	GRS_1980
D_Europa_2000	106915	Europa_2000_IAU_IAG
D_European_1950	6230	International_1924
D_European_1950_ED77	6154	International_1924
D_European_1979	6668	International_1924
D_European_1987	6231	International_1924
D_European_Libyan_1979	6159	International_1924
D_Everest_1830	6042	Everest_1830
D_Everest_Adj_1937	6015	Everest_Adjustment_1937
D_Everest_Bangladesh	106202	Everest_Adjustment_1937
D_Everest_Def_1962	6044	Everest_Definition_1962
D_Everest_Def_1967	6016	Everest_Definition_1967
D_Everest_Def_1975	6045	Everest_Definition_1975
D_Everest_India_Nepal	106203	Everest_Definition_1962
D_Everest_Modified	6018	Everest_1830_Modified
D_Everest_Modified_1969	106006	Everest_Modified_1969
D_Fahud	6232	Clarke_1880_RGS
D_Faroe_Datum_1954	6741	International_1924
D_Fatu_Iva_1972	6688	International_1924
D_FD_1958	6132	Clarke_1880_RGS
D_Fiji_1956	6721	International_1924
D_Fiji_1986	6720	WGS_1972
D_Fischer_1960	106002	Fischer_1960
D_Fischer_1968	106003	Fischer_1968
D_Fischer_Modified	106004	Fischer_Modified
D_fk89	6753	International_1924
D_Fort_Desaix	6625	International_1924
D_Fort_Marigot	6621	International_1924
D_Fort_Thomas_1955	106240	Clarke_1880_RGS
D_Galatea_2000	106962	Galatea_2000_IAU_IAG
D_Gan_1970	6684	International_1924
D_Ganymede_2000	106916	Ganymede_2000_IAU_IAG
D_Garoua	6234	Clarke_1880_IGN
D_GDA_1994	6283	GRS_1980
D_GDBD2009	1056	GRS_1980
D_GDM_2000	6742	GRS_1980
D_GEM_10C	6031	GEM_10C
D_GGRS_1987	6121	GRS_1980
D_Graciosa_Base_SW_1948	106241	International_1924
D_Grand_Cayman_1959	6723	Clarke_1866
D_Grand_Comoros	6646	International_1924
D_Greek	6120	Bessel_1841
D_Greenland_1996	6747	GRS_1980
D_Grenada_1953	6603	Clarke_1880_RGS
D_GRS_1967	6036	GRS_1967
D_GRS_1980	6019	GRS_1980
D_Guam_1963	6675	Clarke_1866
D_Gulshan_303	6682	Everest_Adjustment_1937
D_Gunung_Segara	6613	Bessel_1841
D_GUX_1	106221	International_1924
D_Guyane_Francaise	6235	International_1924
D_Hanoi_1972	6147	Krasovsky_1940
D_Hartebeesthoek_1994	6148	WGS_1984

<b>Datum Name</b>	<b>WKID</b>	<b>Spheroid Name</b>
D_Helene_2000	106931	Helene_2000_IAU_IAG
D_Helle_1954	6660	International_1924
D_Helmert_1906	6020	Helmert_1906
D_Herat_North	6255	International_1924
D_Hermannskogel	106102	Bessel_1841
D_Himalia_2000	106917	Himalia_2000_IAU_IAG
D_Hito_XVIII_1963	6254	International_1924
D_Hjorsey_1955	6658	International_1924
D_Hong_Kong_1963	6738	Clarke_1858
D_Hong_Kong_1963_67	6739	International_1924
D_Hong_Kong_1980	6611	International_1924
D_Hough_1960	106005	Hough_1960
D_Hughes_1980	6054	Hughes_1980
D_Hungarian_1972	6237	GRS_1967
D_Hungarian_Datum_1909	1024	Bessel_1841
D_Hu_Tzu_Shan	6236	International_1924
D_Hyperion_2000	106932	Hyperion_2000_IAU_IAG
D_Iapetus_2000	106933	Iapetus_2000_IAU_IAG
D_IGC_1962_Arc_of_the_6th_Parallel_South	6697	Clarke_1880_RGS
D_IGM_1995	6670	WGS_1984
D_IGN53_Mare	6641	International_1924
D_IGN56_Lifou	6633	International_1924
D_IGN63_Hiva_Oa	6689	International_1924
D_IGN72_Grande_Terre	6634	International_1924
D_IGN72_Nuku_Hiva	6630	International_1924
D_IGN_Astro_1960	6700	Clarke_1880_RGS
D_Indian_1954	6239	Everest_Adjustment_1937
D_Indian_1960	6131	Everest_Adjustment_1937
D_Indian_1975	6240	Everest_Adjustment_1937
D_Indonesian	6021	Indonesian
D_Indonesian_1974	6238	Indonesian
D_Institut_Geographique_du_Congo_Belge_1955	6701	Clarke_1880_RGS
D_International_1924	6022	International_1924
D_International_1967	6023	International_1967
D_Io_2000	106918	Io_2000_IAU_IAG
D_Iraqi_Geospatial_Reference_System	1029	GRS_1980
D_Iraq_Kuwait_Boundary_1992	6667	WGS_1984
D_IRENET95	6173	GRS_1980
D_Islands_Network_1993	6659	GRS_1980
D_Islands_Network_2004	1060	GRS_1980
D_Israel	6141	GRS_1980
D_ISTS_061_1968	6722	International_1924
D_ISTS_073_1969	6724	International_1924
D_ITRF_1988	6647	GRS_1980
D_ITRF_1989	6648	GRS_1980
D_ITRF_1990	6649	GRS_1980
D_ITRF_1991	6650	GRS_1980
D_ITRF_1992	6651	GRS_1980
D_ITRF_1993	6652	GRS_1980
D_ITRF_1994	6653	GRS_1980
D_ITRF_1996	6654	GRS_1980
D_ITRF_1997	6655	GRS_1980
D_ITRF_2000	6656	GRS_1980
D_ITRF_2005	6896	GRS_1980
D_ITRF_2008	1061	GRS_1980
D_Jamaica_1875	6241	Clarke_1880

<b>Datum Name</b>	<b>WKID</b>	<b>Spheroid Name</b>
D_Jamaica_1969	6242	Clarke_1866
D_Jamaica_2001	6758	WGS_1984
D_Janus_2000	106934	Janus_2000_IAU_IAG
D_JGD_2000	6612	GRS_1980
D_Johnston_Island_1961	6725	International_1924
D_Jordan	106277	International_1924
D_Jouik_1961	6679	Clarke_1880_RGS
D_Juliet_2000	106951	Juliet_2000_IAU_IAG
D_Jupiter_2000	106908	Jupiter_2000_IAU_IAG
D_Kalianpur_1880	6243	Everest_1830
D_Kalianpur_1937	6144	Everest_Adjustment_1937
D_Kalianpur_1962	6145	Everest_Definition_1962
D_Kalianpur_1975	6146	Everest_Definition_1975
D_Kandawala	6244	Everest_Adjustment_1937
D_Karbala_1979_PolSERVICE	6743	Clarke_1880_RGS
D_Kasai_1953	6696	Clarke_1880_RGS
D_Katanga_1955	6695	Clarke_1866
D_Kerguelen_Island_1949	6698	International_1924
D_Kertau	6245	Everest_1830_Modified
D_Kertau_RSO	6751	Everest_Modified_1969
D_KKJ	6123	International_1924
D_Korea_2000	6737	GRS_1980
D_Korean_Datum_1985	6162	Bessel_1841
D_Korean_Datum_1995	6166	WGS_1984
D_Kousseri	6198	Clarke_1880_RGS
D_Krasovsky_1940	6024	Krasovsky_1940
D_Kusaie_1951	6735	International_1924
D_Kuwait_Oil_Company	6246	Clarke_1880_RGS
D_Kuwait_Utility	6319	GRS_1980
D_La_Canoa	6247	International_1924
D_Lake	6249	International_1924
D_Lao_1993	6677	Krasovsky_1940
D_Lao_National_Datum_1997	6678	Krasovsky_1940
D_Larissa_2000	106963	Larissa_2000_IAU_IAG
D_Latvia_1992	6661	GRS_1980
D_LC5_1961	106243	Clarke_1866
D_Leda_2000	106919	Leda_2000_IAU_IAG
D_Leigon	6250	Clarke_1880_RGS
D_Le_Pouce_1934	6699	Clarke_1880_RGS
D_Liberia_1964	6251	Clarke_1880_RGS
D_Libyan_Geodetic_Datum_2006	6754	International_1924
D_Lisbon	6207	International_1924
D_Lisbon_1890	6666	Bessel_1841
D_Lithuania_1994	6126	GRS_1980
D_Little_Cayman_1961	6726	Clarke_1866
D_Locodjo_1965	6142	Clarke_1880_RGS
D_Loma_Quintana	6288	International_1924
D_Lome	6252	Clarke_1880_IGN
D_Luxembourg_1930	6181	International_1924
D_Luzon_1911	6253	Clarke_1866
D_Lysithea_2000	106920	Lysithea_2000_IAU_IAG
D_Madeira_1936	6185	International_1924
D_Madrid_1870	6903	Struve_1860
D_Madzansua	6128	Clarke_1866
D_MAGNA	6686	GRS_1980
D_Mahe_1971	6256	Clarke_1880_RGS



<b>Datum Name</b>	<b>WKID</b>	<b>Spheroid Name</b>
D_Majuro	106270	Clarke_1866
D_Makassar	6257	Bessel_1841
D_Malongo_1987	6259	International_1924
D_Manoca	6260	Clarke_1880_RGS
D_Manoca_1962	6193	Clarke_1880_IGN
D_Marco_Geodesico_Nacional	1063	GRS_1980
D_Mars_1979	106904	Mars_1979_IAU_IAG
D_Mars_2000	106905	Mars_2000_IAU_IAG
D_Massawa	6262	Bessel_1841
D_Maupiti_1983	6692	International_1924
D_Mauritania_1999	6702	GRS_1980
D_Merchich	6261	Clarke_1880_IGN
D_Mercury_2000	106900	Mercury_2000_IAU_IAG
D_Metis_2000	106921	Metis_2000_IAU_IAG
D_Mexican_Datum_of_1993	1042	GRS_1980
D_MGI	6312	Bessel_1841
D_MGI_1901	1031	Bessel_1841
D_Mhast_1951	6703	Clarke_1880_RGS
D_Mhast_Offshore	6705	International_1924
D_Mhast_Onshore	6704	International_1924
D_Midway_1961	6727	International_1924
D_Mimas_2000	106935	Mimas_2000_IAU_IAG
D_Minna	6263	Clarke_1880_RGS
D_Miranda_2000	106952	Miranda_2000_IAU_IAG
D_MOLDREF99	1032	GRS_1980
D_Monte_Mario	6265	International_1924
D_Montserrat_1958	6604	Clarke_1880_RGS
D_Moon_2000	106903	Moon_2000_IAU_IAG
D_Moorea_1987	6691	International_1924
D_MOP78	6639	International_1924
D_Mount_Dillon	6157	Clarke_1858
D_Moznet	6130	WGS_1984
D_Mporaloko	6266	Clarke_1880_IGN
D_NAD_1927_CGQ77	6609	Clarke_1866
D_NAD_1927_Definition_1976	6608	Clarke_1866
D_NAD_1983_2011	106285	GRS_1980
D_NAD_1983_CORS96	106223	GRS_1980
D_NAD_1983_HARN_Adj_MN_Anoka	106700	S_GRS_1980_Adj_MN_Anoka
D_NAD_1983_HARN_Adj_MN_Becker	106701	S_GRS_1980_Adj_MN_Becker
D_NAD_1983_HARN_Adj_MN_Beltrami_North	106702	S_GRS_1980_Adj_MN_Beltrami_North
D_NAD_1983_HARN_Adj_MN_Beltrami_South	106703	S_GRS_1980_Adj_MN_Beltrami_South
D_NAD_1983_HARN_Adj_MN_Benton	106704	S_GRS_1980_Adj_MN_Benton
D_NAD_1983_HARN_Adj_MN_Big_Stone	106705	S_GRS_1980_Adj_MN_Big_Stone
D_NAD_1983_HARN_Adj_MN_Blue_Earth	106706	S_GRS_1980_Adj_MN_Blue_Earth
D_NAD_1983_HARN_Adj_MN_Brown	106707	S_GRS_1980_Adj_MN_Brown
D_NAD_1983_HARN_Adj_MN_Carlton	106708	S_GRS_1980_Adj_MN_Carlton
D_NAD_1983_HARN_Adj_MN_Carver	106709	S_GRS_1980_Adj_MN_Carver
D_NAD_1983_HARN_Adj_MN_Cass_North	106710	S_GRS_1980_Adj_MN_Cass_North
D_NAD_1983_HARN_Adj_MN_Cass_South	106711	S_GRS_1980_Adj_MN_Cass_South
D_NAD_1983_HARN_Adj_MN_Chippewa	106712	S_GRS_1980_Adj_MN_Chippewa
D_NAD_1983_HARN_Adj_MN_Chisago	106713	S_GRS_1980_Adj_MN_Chisago
D_NAD_1983_HARN_Adj_MN_Cook_North	106714	S_GRS_1980_Adj_MN_Cook_North
D_NAD_1983_HARN_Adj_MN_Cook_South	106715	S_GRS_1980_Adj_MN_Cook_South
D_NAD_1983_HARN_Adj_MN_Cottonwood	106716	S_GRS_1980_Adj_MN_Cottonwood
D_NAD_1983_HARN_Adj_MN_Crow_Wing	106717	S_GRS_1980_Adj_MN_Crow_Wing
D_NAD_1983_HARN_Adj_MN_Dakota	106718	S_GRS_1980_Adj_MN_Dakota

<b>Datum Name</b>	<b>WKID</b>	<b>Spheroid Name</b>
D_NAD_1983_HARN_Adj_MN_Dodge	106719	S_GRS_1980_Adj_MN_Dodge
D_NAD_1983_HARN_Adj_MN_Douglas	106720	S_GRS_1980_Adj_MN_Douglas
D_NAD_1983_HARN_Adj_MN_Faribault	106721	S_GRS_1980_Adj_MN_Faribault
D_NAD_1983_HARN_Adj_MN_Fillmore	106722	S_GRS_1980_Adj_MN_Fillmore
D_NAD_1983_HARN_Adj_MN_Freeborn	106723	S_GRS_1980_Adj_MN_Freeborn
D_NAD_1983_HARN_Adj_MN_Goodhue	106724	S_GRS_1980_Adj_MN_Goodhue
D_NAD_1983_HARN_Adj_MN_Grant	106725	S_GRS_1980_Adj_MN_Grant
D_NAD_1983_HARN_Adj_MN_Hennepin	106726	S_GRS_1980_Adj_MN_Hennepin
D_NAD_1983_HARN_Adj_MN_Houston	106727	S_GRS_1980_Adj_MN_Houston
D_NAD_1983_HARN_Adj_MN_Isanti	106728	S_GRS_1980_Adj_MN_Isanti
D_NAD_1983_HARN_Adj_MN_Itasca_North	106729	S_GRS_1980_Adj_MN_Itasca_North
D_NAD_1983_HARN_Adj_MN_Itasca_South	106730	S_GRS_1980_Adj_MN_Itasca_South
D_NAD_1983_HARN_Adj_MN_Jackson	106731	S_GRS_1980_Adj_MN_Jackson
D_NAD_1983_HARN_Adj_MN_Kanabec	106732	S_GRS_1980_Adj_MN_Kanabec
D_NAD_1983_HARN_Adj_MN_Kandiyohi	106733	S_GRS_1980_Adj_MN_Kandiyohi
D_NAD_1983_HARN_Adj_MN_Kittson	106734	S_GRS_1980_Adj_MN_Kittson
D_NAD_1983_HARN_Adj_MN_Koochiching	106735	S_GRS_1980_Adj_MN_Koochiching
D_NAD_1983_HARN_Adj_MN_Lac_Qui_Parle	106736	S_GRS_1980_Adj_MN_Lac_Qui_Parle
D_NAD_1983_HARN_Adj_MN_Lake_of_the_Woods_North	106737	S_GRS_1980_Adj_MN_Lake_of_the_Woods_North
D_NAD_1983_HARN_Adj_MN_Lake_of_the_Woods_South	106738	S_GRS_1980_Adj_MN_Lake_of_the_Woods_South
D_NAD_1983_HARN_Adj_MN_Le_Sueur	106739	S_GRS_1980_Adj_MN_Le_Sueur
D_NAD_1983_HARN_Adj_MN_Lincoln	106740	S_GRS_1980_Adj_MN_Lincoln
D_NAD_1983_HARN_Adj_MN_Lyon	106741	S_GRS_1980_Adj_MN_Lyon
D_NAD_1983_HARN_Adj_MN_Mahnomen	106743	S_GRS_1980_Adj_MN_Mahnomen
D_NAD_1983_HARN_Adj_MN_Marshall	106744	S_GRS_1980_Adj_MN_Marshall
D_NAD_1983_HARN_Adj_MN_Martin	106745	S_GRS_1980_Adj_MN_Martin
D_NAD_1983_HARN_Adj_MN_McLeod	106742	S_GRS_1980_Adj_MN_McLeod
D_NAD_1983_HARN_Adj_MN_Meeker	106746	S_GRS_1980_Adj_MN_Meeker
D_NAD_1983_HARN_Adj_MN_Morrison	106747	S_GRS_1980_Adj_MN_Morrison
D_NAD_1983_HARN_Adj_MN_Mower	106748	S_GRS_1980_Adj_MN_Mower
D_NAD_1983_HARN_Adj_MN_Murray	106749	S_GRS_1980_Adj_MN_Murray
D_NAD_1983_HARN_Adj_MN_Nicollet	106750	S_GRS_1980_Adj_MN_Nicollet
D_NAD_1983_HARN_Adj_MN_Nobles	106751	S_GRS_1980_Adj_MN_Nobles
D_NAD_1983_HARN_Adj_MN_Norman	106752	S_GRS_1980_Adj_MN_Norman
D_NAD_1983_HARN_Adj_MN_Olmsted	106753	S_GRS_1980_Adj_MN_Olmsted
D_NAD_1983_HARN_Adj_MN_Ottertall	106754	S_GRS_1980_Adj_MN_Ottertall
D_NAD_1983_HARN_Adj_MN_Pennington	106755	S_GRS_1980_Adj_MN_Pennington
D_NAD_1983_HARN_Adj_MN_Pine	106756	S_GRS_1980_Adj_MN_Pine
D_NAD_1983_HARN_Adj_MN_Pipestone	106757	S_GRS_1980_Adj_MN_Pipestone
D_NAD_1983_HARN_Adj_MN_Polk	106758	S_GRS_1980_Adj_MN_Polk
D_NAD_1983_HARN_Adj_MN_Pope	106759	S_GRS_1980_Adj_MN_Pope
D_NAD_1983_HARN_Adj_MN_Ramsey	106760	S_GRS_1980_Adj_MN_Ramsey
D_NAD_1983_HARN_Adj_MN_Red_Lake	106761	S_GRS_1980_Adj_MN_Red_Lake
D_NAD_1983_HARN_Adj_MN_Redwood	106762	S_GRS_1980_Adj_MN_Redwood
D_NAD_1983_HARN_Adj_MN_Renville	106763	S_GRS_1980_Adj_MN_Renville
D_NAD_1983_HARN_Adj_MN_Rice	106764	S_GRS_1980_Adj_MN_Rice
D_NAD_1983_HARN_Adj_MN_Rock	106765	S_GRS_1980_Adj_MN_Rock
D_NAD_1983_HARN_Adj_MN_Roseau	106766	S_GRS_1980_Adj_MN_Roseau
D_NAD_1983_HARN_Adj_MN_Scott	106770	S_GRS_1980_Adj_MN_Scott
D_NAD_1983_HARN_Adj_MN_Sherburne	106771	S_GRS_1980_Adj_MN_Sherburne
D_NAD_1983_HARN_Adj_MN_Sibley	106772	S_GRS_1980_Adj_MN_Sibley
D_NAD_1983_HARN_Adj_MN_Stearns	106773	S_GRS_1980_Adj_MN_Stearns
D_NAD_1983_HARN_Adj_MN_Steele	106774	S_GRS_1980_Adj_MN_Steele
D_NAD_1983_HARN_Adj_MN_Stevens	106775	S_GRS_1980_Adj_MN_Stevens

<b>Datum Name</b>	<b>WKID</b>	<b>Spheroid Name</b>
D_NAD_1983_HARN_Adj_MN_St_Louis	106786	S_GRS_1980_Adj_MN_St_Louis
D_NAD_1983_HARN_Adj_MN_St_Louis_Central	106768	S_GRS_1980_Adj_MN_St_Louis_Central
D_NAD_1983_HARN_Adj_MN_St_Louis_North	106767	S_GRS_1980_Adj_MN_St_Louis_North
D_NAD_1983_HARN_Adj_MN_St_Louis_South	106769	S_GRS_1980_Adj_MN_St_Louis_South
D_NAD_1983_HARN_Adj_MN_Swift	106776	S_GRS_1980_Adj_MN_Swift
D_NAD_1983_HARN_Adj_MN_Todd	106777	S_GRS_1980_Adj_MN_Todd
D_NAD_1983_HARN_Adj_MN_Traverse	106778	S_GRS_1980_Adj_MN_Traverse
D_NAD_1983_HARN_Adj_MN_Wabasha	106779	S_GRS_1980_Adj_MN_Wabasha
D_NAD_1983_HARN_Adj_MN_Wadena	106780	S_GRS_1980_Adj_MN_Wadena
D_NAD_1983_HARN_Adj_MN_Waseca	106781	S_GRS_1980_Adj_MN_Waseca
D_NAD_1983_HARN_Adj_MN_Watonwan	106782	S_GRS_1980_Adj_MN_Watonwan
D_NAD_1983_HARN_Adj_MN_Winona	106783	S_GRS_1980_Adj_MN_Winona
D_NAD_1983_HARN_Adj_MN_Wright	106784	S_GRS_1980_Adj_MN_Wright
D_NAD_1983_HARN_Adj_MN_Yellow_Medicine	106785	S_GRS_1980_Adj_MN_Yellow_Medicine
D_NAD_1983_MA11	106286	GRS_1980
D_NAD_1983_MARP00	106210	GRS_1980
D_NAD_1983_NSRS2007	6759	GRS_1980
D_NAD_1983_PA11	106287	GRS_1980
D_NAD_1983_PACP00	106209	GRS_1980
D_Nahrwan_1934	6744	Clarke_1880_RGS
D_Nahrwan_1967	6270	Clarke_1880_RGS
D_Naiad_2000	106964	Naiad_2000_IAU_IAG
D_Nakhl-e_Ghanem	6693	WGS_1984
D_Naparima_1955	6158	International_1924
D_Naparima_1972	6271	International_1924
D_NEA74_Noumea	6644	International_1924
D_Nepal_Nagarkot	106256	Everest_Adjustment_1937
D_Neptune_2000	106960	Neptune_2000_IAU_IAG
D_Nereid_2000	106965	Nereid_2000_IAU_IAG
D_New_Beijing	1045	Krasovsky_1940
D_New_Zealand_1949	6272	International_1924
D_NGN	6318	WGS_1984
D_NGO_1948	6273	Bessel_Modified
D_Nord_de_Guerre	6902	Plessis_1817
D_Nord_Sahara_1959	6307	Clarke_1880_RGS
D_North_American_1927	6267	Clarke_1866
D_North_American_1983	6269	GRS_1980
D_North_American_1983_CSRS	6140	GRS_1980
D_North_American_1983_HARN	6152	GRS_1980
D_North_American_Michigan	6268	Clarke_1866_Michigan
D_Nouakchott_1965	6680	Clarke_1880_RGS
D_NSWC_9Z_2	6276	NWL_9D
D_NTF	6275	Clarke_1880_IGN
D_NWL_9D	6025	NWL_9D
D_NZGD_2000	6167	GRS_1980
D_Oberon_2000	106953	Oberon_2000_IAU_IAG
D_Observatorio	6129	Clarke_1866
D_Observatorio_Meteorologico_1939	106245	International_1924
D_Observatorio_Meteorologico_1965	106274	International_1924
D_Ocotepeque_1935	1070	Clarke_1866
D_Old_Hawaiian	6135	Clarke_1866
D_Old_Hawaiian_Intl_1924	106284	International_1924
D_Oman	106206	Clarke_1880_RGS
D_Ophelia_2000	106954	Ophelia_2000_IAU_IAG
D_OSGB_1936	6277	Airy_1830
D_OSGB_1970_SN	6278	Airy_1830

<b>Datum Name</b>	<b>WKID</b>	<b>Spheroid Name</b>
D_OSNI_1952	6188	Airy_1830
D_OS_SN_1980	6279	Airy_1830
D_OSU_86F	6032	OSU_86F
D_OSU_91A	6033	OSU_91A
D_Padang_1884	6280	Bessel_1841
D_Palestine_1923	6281	Clarke_1880_Benoit
D_Pampa_del_Castillo	6161	International_1924
D_Pan_2000	106936	Pan_2000_IAU_IAG
D_Panama-Colon-1911	1072	Clarke_1866
D_Pandora_2000	106937	Pandora_2000_IAU_IAG
D_Papua_New_Guinea_Geodetic_Datum_1994	1076	GRS_1980
D_Parametrop_Zemp_1990	6740	PZ_1990
D_Pasiphae_2000	106922	Pasiphae_2000_IAU_IAG
D_PDO_1993	6134	Clarke_1880_RGS
D_Peru96	1067	GRS_1980
D_Petrels_1972	6636	International_1924
D_Philippine_Reference_System_1992	6683	Clarke_1866
D_Phobos_2000	106907	Phobos_2000_IAU_IAG
D_Phoebe_2000	106938	Phoebe_2000_IAU_IAG
D_Pico_de_Las_Nieves	6728	International_1924
D_Pitcairn_1967	6729	International_1924
D_Pitcairn_2006	6763	WGS_1984
D_Plessis_1817	6027	Plessis_1817
D_Pluto_2000	106969	Pluto_2000_IAU_IAG
D_Pohnpei	106266	Clarke_1866
D_Point_58	6620	Clarke_1880_RGS
D_Pointe_Geologie_Perroud_1950	6637	International_1924
D_Pointe_Noire	6282	Clarke_1880_IGN
D_Portia_2000	106955	Portia_2000_IAU_IAG
D_Porto_Santo_1936	6615	International_1924
D_Porto_Santo_1995	6663	International_1924
D_POSGAR	6172	GRS_1980
D_POSGAR_1994	6694	GRS_1980
D_POSGAR_1998	6190	GRS_1980
D_POSGAR_2007	1062	GRS_1980
D_Potsdam_1983	6746	Bessel_1841
D_Principe	1046	International_1924
D_Prometheus_2000	106939	Prometheus_2000_IAU_IAG
D_Proteus_2000	106966	Proteus_2000_IAU_IAG
D_Provisional_S_American_1956	6248	International_1924
D_PTRO8	1041	GRS_1980
D_Puck_2000	106956	Puck_2000_IAU_IAG
D_Puerto_Rico	6139	Clarke_1866
D_Pulkovo_1942	6284	Krasovsky_1940
D_Pulkovo_1942_Adj_1958	6179	Krasovsky_1940
D_Pulkovo_1942_Adj_1983	6178	Krasovsky_1940
D_Pulkovo_1995	6200	Krasovsky_1940
D_Qatar	6285	International_1924
D_Qatar_1948	6286	Helmert_1906
D_QND_1995	6614	International_1924
D_Qornoq_1927	6194	International_1924
D_Rassadiran	6153	International_1924
D_Rauenberg_1983	6745	Bessel_1841
D_Red_Geodesica_de_Canarias_1995	1035	GRS_1980
D_REGVEN	6189	GRS_1980
D_Reseau_Geodesique_de_la_Polynesie_Francaise	6687	GRS_1980

<b>Datum Name</b>	<b>WKID</b>	<b>Spheroid Name</b>
D_Reseau_Geodesique_de_la_RDC_2005	1033	GRS_1980
D_Reseau_Geodesique_de_Mayotte_2004	1036	GRS_1980
D_Reseau_Geodesique_de_Nouvelle_Caledonie_1991-93	6749	GRS_1980
D_Reseau_Geodesique_de_St_Pierre_et_Miquelon_2006	1038	GRS_1980
D_Reunion_1947	6626	International_1924
D_Reykjavik_1900	6657	Danish_1876
D_RGF_1993	6171	GRS_1980
D_RGFG_1995	6624	GRS_1980
D_RGNC_1991	6645	International_1924
D_RGR_1992	6627	GRS_1980
D_Rhea_2000	106940	Rhea_2000_IAU_IAG
D_Roma_1940	106275	International_1924
D_Rosalind_2000	106957	Rosalind_2000_IAU_IAG
D_Ross_Sea_Region_Geodetic_Datum_2000	6764	GRS_1980
D_RRAF_1991	1047	GRS_1980
D_RT_1990	6124	Bessel_1841
D_S42_Hungary	106257	Krasovsky_1940
D_Sainte_Anne	6622	International_1924
D_Saint_Pierre_et_Miquelon_1950	6638	Clarke_1866
D_Samboja	6125	Bessel_1841
D_Santo_DOS_1965	6730	International_1924
D_Sao_Braz	106249	International_1924
D_Sao_Tome	1044	International_1924
D_Sapper_Hill_1943	6292	International_1924
D_Saturn_2000	106925	Saturn_2000_IAU_IAG
D_Schwarzeck	6293	Bessel_Namibia
D_Scoresbysund_1952	6195	International_1924
D_Segora	6294	Bessel_1841
D_Selvagem_Grande_1938	6616	International_1924
D_Serbian_Reference_Network_1998	1034	GRS_1980
D_Serindung	6295	Bessel_1841
D_SGNP_MARCARIO_SOLIS	1066	GRS_1980
D_Sibun_Gorge_1922	1071	Clarke_1858
D_Sierra_Leone_1924	6174	War_Office
D_Sierra_Leone_1960	106103	Clarke_1880_RGS
D_Sierra_Leone_1968	6175	Clarke_1880_RGS
D_Sinope_2000	106923	Sinope_2000_IAU_IAG
D_SIRGAS	6170	GRS_1980
D_SIRGAS_2000	6674	GRS_1980
D_SIRGAS-Chile	1064	GRS_1980
D_SIRGAS_ES2007.8	1069	GRS_1980
D_SIRGAS-ROU98	1068	WGS_1984
D_S_JTSK	6156	Bessel_1841
D_S_JTSK_05	1052	Bessel_1841
D_S_JTSK_05_Ferro	1055	Bessel_1841
D_Slovenia_Geodetic_Datum_1996	6765	GRS_1980
D_Solomon_1968	6718	International_1924
D_South_American_1969	6618	GRS_1967_Truncated
D_South_American_Datum_1969_96	1075	GRS_1967_Truncated
D_South_Asia_Singapore	106207	Fischer_Modified
D_South_Yemen	6164	Krasovsky_1940
D_Sphere	6035	Sphere
D_Sphere_ARC_INFO	106008	Sphere_ARC_INFO
D_Sphere_Clarke_1866_Authalic	6052	Sphere_Clarke_1866_Authalic

<b>Datum Name</b>	<b>WKID</b>	<b>Spheroid Name</b>
D_Sphere_EMEP	106276	Sphere_EMEP
D_Sphere_GRS_1980_Authalic	6047	Sphere_GRS_1980_Authalic
D_Sphere_International_1924_Authalic	6053	Sphere_International_1924_Authalic
D_Sri_Lanka_Datum_1999	1053	Everest_Adjustment_1937
D_ST71_Belep	6643	International_1924
D_ST84_Ile_des_Pins	6642	International_1924
D_ST87_Ouvea	6750	WGS_1984
D_St_George_Island	6138	Clarke_1866
D_St_Kitts_1955	6605	Clarke_1880_RGS
D_St_Lawrence_Island	6136	Clarke_1866
D_St_Lucia_1955	6606	Clarke_1880_RGS
D_Stockholm_1938	6308	Bessel_1841
D_St_Paul_Island	6137	Clarke_1866
D_Struve_1860	6028	Struve_1860
D_St_Vincent_1945	6607	Clarke_1880_RGS
D_Sudan	6296	Clarke_1880_IGN
D_SVY21	6757	WGS_1984
D_SWEREF99	6619	GRS_1980
D_Swiss_TRF_1995	6151	GRS_1980
D_Tahaa_1954	6629	International_1924
D_Tahiti_1952	6628	International_1924
D_Tahiti_1979	6690	International_1924
D_Tananarive_1925	6297	International_1924
D_Telesto_2000	106941	Telesto_2000_IAU_IAG
D_Tern_Island_1961	6707	International_1924
D_Tete	6127	Clarke_1866
D_Tethys_2000	106942	Tethys_2000_IAU_IAG
D_Thalassa_2000	106967	Thalassa_2000_IAU_IAG
D_Thebe_2000	106924	Thebe_2000_IAU_IAG
D_Timbalai_1948	6298	Everest_Definition_1967
D_Titan_2000	106943	Titan_2000_IAU_IAG
D_Titania_2000	106958	Titania_2000_IAU_IAG
D_TM65	6299	Airy_Modified
D_TM75	6300	Airy_Modified
D_Tokyo	6301	Bessel_1841
D_Trinidad_1903	6302	Clarke_1858
D_Tristan_1968	6734	International_1924
D_Triton_2000	106968	Triton_2000_IAU_IAG
D_Trucial_Coast_1948	6303	Helmert_1906
D_Turkish_National_Reference_Frame	1057	GRS_1980
D_TWD_1967	1025	GRS_1967_Truncated
D_TWD_1997	1026	GRS_1980
D_Ukraine_2000	1077	Krasovsky_1940
D_Umbriel_2000	106959	Umbriel_2000_IAU_IAG
D_Uranus_2000	106944	Uranus_2000_IAU_IAG
D_Vanua_Levu_1915	6748	Clarke_1880_Intl_Ft
D_Venus_1985	106901	Venus_1985_IAU_IAG_COSPAR
D_Venus_2000	106902	Venus_2000_IAU_IAG
D_Vientiane_1982	6676	Krasovsky_1940
D_Vietnam_2000	6756	WGS_1984
D_Viti_Levu_1912	6752	Clarke_1880_Intl_Ft
D_Viti_Levu_1916	6731	Clarke_1880_RGS
D_Voirol_1875	6304	Clarke_1880_IGN
D_Voirol_1879	6671	Clarke_1880_IGN
D_Voirol_Unifie_1960	6305	Clarke_1880_RGS
D_Wake_Eniwetok_1960	6732	Hough_1960

Datum Name	WKID	Spheroid Name
D_Wake_Island_1952	6733	International_1924
D_Walbeck	106007	Walbeck
D_War_Office	6029	War_Office
D_WGS_1966	6760	WGS_1966
D_WGS_1972	6322	WGS_1972
D_WGS_1972_BE	6324	WGS_1972
D_WGS_1984	6326	WGS_1984
D_WGS_1984_Major_Auxiliary_Sphere	106283	WGS_1984_Major_Auxiliary_Sphere
D_Xian_1980	6610	Xian_1980
D_Yacare	6309	International_1924
D_Yemen_NGN_1996	6163	WGS_1984
D_Yoff	6310	Clarke_1880_IGN
D_Zanderij	6311	International_1924
Reseau_Geodesique_des_Antilles_Francaises_2009	1073	GRS_1980

*Table 4: Angular units: well-known IDs and conversion values*

Angular Unit of Measure Name	WKID	Conversion Value: Radians per Unit
Degree	9102	0.01745329251994
Gon	9106	0.01570796326795
Grad	9105	0.01570796326795
Microradian	9109	0.000001
Mil_6400	9114	0.00098174770425
Minute	9103	0.00029088820867
Minute_Centesimal	9112	0.00015707963268
Radian	9101	1.0
Second	9104	0.00000484813681
Second_Centesimal	9113	0.00000157079633

*Table 5: Prime meridians: well-known IDs and longitude values*

Prime Meridian Name	WKID	Longitude Relative to Greenwich in degrees
Athens	8912	23.7163375
Bern	8907	7.43958333
Bogota	8904	-74.08091667
Brussels	8910	4.367975
Ferro	8909	-17.66666667
Greenwich	8901	0.0
Jakarta	8908	106.80771944
Lisbon	8902	-9.13190611
Madrid	8905	-3.68793889
Oslo	8913	10.72291667
Paris	8903	2.33722917
Paris_RGS	8914	2.33720833
Reference_Meridian	108900	0.0
Rome	8906	12.45233333
Stockholm	8911	18.05827778

*Table 6: Spheroids: well-known IDs and defining parameters*

Spheroid Name	WKID	Semimajor Axis (m)	Semiminor Axis (m)	Inverse Flattening	Eccentricity squared ( $e^2$ )
---------------	------	-----------------------	-----------------------	-----------------------	-----------------------------------

Spheroid Name	WKID	Semimajor Axis (m)	Semiminor Axis (m)	Inverse Flattening	Eccentricity squared ( $e^2$ )
Adrastea_2000_IAU_IAG	107909	8200.000	8200.000	0.0	0.0
Airy_1830	7001	6377563.396	6356256.909	0.00334085	0.00667054
Airy_Modified	7002	6377340.189	6356034.448	0.00334085	0.00667054
Amalthea_2000_IAU_IAG	107910	83500.000	83500.000	0.0	0.0
Ananke_2000_IAU_IAG	107911	10000.000	10000.000	0.0	0.0
Ariel_2000_IAU_IAG	107945	578900.000	578900.000	0.0	0.0
Atlas_2000_IAU_IAG	107926	16000.000	16000.000	0.0	0.0
ATS_1977	7041	6378135.000	6356750.305	0.00335281	0.00669438
Australian	7003	6378160.000	6356774.719	0.00335289	0.00669454
Belinda_2000_IAU_IAG	107946	33000.000	33000.000	0.0	0.0
Bessel_1841	7004	6377397.155	6356078.963	0.00334277	0.00667437
Bessel_Modified	7005	6377492.018	6356173.509	0.00334277	0.00667437
Bessel_Namibia	7006	6377483.865	6356165.383	0.00334277	0.00667437
Bianca_2000_IAU_IAG	107947	21000.000	21000.000	0.0	0.0
Callisto_2000_IAU_IAG	107912	2409300.000	2409300.000	0.0	0.0
Calypso_2000_IAU_IAG	107927	9500.000	9500.000	0.0	0.0
Carme_2000_IAU_IAG	107913	15000.000	15000.000	0.0	0.0
CGCS2000	107038	6378137.000	6356752.314	0.00335281	0.00669438
Charon_2000_IAU_IAG	107970	593000.000	593000.000	0.0	0.0
Clarke_1858	7007	6378293.645	6356617.988	0.00339835	0.00678515
Clarke_1866	7008	6378206.400	6356583.800	0.00339008	0.00676866
Clarke_1866_Michigan	7009	6378450.047	6356826.620	0.00339008	0.00676866
Clarke_1880	7034	6378249.138	6356514.959	0.00340755	0.00680348
Clarke_1880_Arc	7013	6378249.145	6356514.966	0.00340755	0.00680348
Clarke_1880_Benoit	7010	6378300.790	6356566.430	0.00340755	0.00680348
Clarke_1880_IGN	7011	6378249.200	6356515.000	0.00340755	0.00680349
Clarke_1880_Intl_Ft	7055	6378306.370	6356571.996	0.00340755	0.00680348
Clarke_1880_RGS	7012	6378249.145	6356514.870	0.00340756	0.00680351
Clarke_1880_SGA	7014	6378249.200	6356514.997	0.00340755	0.00680349
Cordelia_2000_IAU_IAG	107948	13000.000	13000.000	0.0	0.0
Cressida_2000_IAU_IAG	107949	31000.000	31000.000	0.0	0.0
Danish_1876	7051	6377019.270	6355762.539	0.00333333	0.00665556
Deimos_2000_IAU_IAG	107906	6200.000	6200.000	0.0	0.0
Desdemona_2000_IAU_IAG	107950	27000.000	27000.000	0.0	0.0
Despina_2000_IAU_IAG	107961	74000.000	74000.000	0.0	0.0
Dione_2000_IAU_IAG	107928	560000.000	560000.000	0.0	0.0
Elara_2000_IAU_IAG	107914	40000.000	40000.000	0.0	0.0
Enceladus_2000_IAU_IAG	107929	249400.000	249400.000	0.0	0.0
Epimetheus_2000_IAU_IAG	107930	59500.000	59500.000	0.0	0.0
Europa_2000_IAU_IAG	107915	1562090.000	1562090.000	0.0	0.0
Everest_1830	7042	6377299.360	6356098.352	0.00332445	0.00663785
Everest_1830_Modified	7018	6377304.063	6356103.039	0.00332445	0.00663785
Everest_Adjustment_1937	7015	6377276.345	6356075.413	0.00332445	0.00663785
Everest_Definition_1962	7044	6377301.243	6356100.230	0.00332445	0.00663785
Everest_Definition_1967	7016	6377298.556	6356097.550	0.00332445	0.00663785
Everest_Definition_1975	7045	6377299.151	6356098.145	0.00332445	0.00663785
Everest_Modified_1969	7056	6377295.664	6356094.668	0.00332445	0.00663785
Fischer_1960	107002	6378166.000	6356784.284	0.00335233	0.00669342
Fischer_1968	107003	6378150.000	6356768.337	0.00335233	0.00669342
Fischer_Modified	107004	6378155.000	6356773.320	0.00335233	0.00669342
Galatea_2000_IAU_IAG	107962	79000.000	79000.000	0.0	0.0
Ganymede_2000_IAU_IAG	107916	2632345.000	2632345.000	0.0	0.0
GEM_10C	7031	6378137.000	6356752.314	0.00335281	0.00669438
GRS_1967	7036	6378160.000	6356774.516	0.00335292	0.00669461
GRS_1967_Truncated	7050	6378160.000	6356774.719	0.00335289	0.00669454



Spheroid Name	WKID	Semimajor Axis (m)	Semiminor Axis (m)	Inverse Flattening	Eccentricity squared (e <sup>2</sup> )
GRS_1980	7019	6378137.000	6356752.314	0.00335281	0.00669438
Helene_2000_IAU_IAG	107931	16000.000	16000.000	0.0	0.0
Helmert_1906	7020	6378200.000	6356818.170	0.00335233	0.00669342
Himalia_2000_IAU_IAG	107917	85000.000	85000.000	0.0	0.0
Hough_1960	7053	6378270.000	6356794.343	0.00336700	0.00672267
Hughes_1980	7058	6378273.000	6356889.449	0.00335256	0.00669388
Hyperion_2000_IAU_IAG	107932	133000.000	133000.000	0.0	0.0
Iapetus_2000_IAU_IAG	107933	718000.000	718000.000	0.0	0.0
Indonesian	7021	6378160.000	6356774.504	0.00335293	0.00669461
International_1924	7022	6378388.000	6356911.946	0.00336700	0.00672267
International_1967	7023	6378160.000	6356774.719	0.00335289	0.00669454
Io_2000_IAU_IAG	107918	1821460.000	1821460.000	0.0	0.0
Janus_2000_IAU_IAG	107934	888000.000	888000.000	0.0	0.0
Juliet_2000_IAU_IAG	107951	42000.000	42000.000	0.0	0.0
Jupiter_2000_IAU_IAG	107908	71492000.000	66854000.000	0.06487439	0.12554010
Krasovsky_1940	7024	6378245.000	6356863.019	0.00335233	0.00669342
Larissa_2000_IAU_IAG	107963	104000.000	89000.000	0.14423077	0.26765902
Leda_2000_IAU_IAG	107919	5000.000	5000.000	0.0	0.0
Lysithea_2000_IAU_IAG	107920	12000.000	12000.000	0.0	0.0
Mars_1979_IAU_IAG	107904	3393400.000	3375730.000	0.00520717	0.01038722
Mars_2000_IAU_IAG	107905	3396190.000	3376200.000	0.00588601	0.01173737
Mercury_2000_IAU_IAG	107900	2439700.000	2439700.000	0.0	0.0
Metis_2000_IAU_IAG	107921	30000.000	20000.000	0.33333333	0.55555556
Mimas_2000_IAU_IAG	107935	1986300.000	1986300.000	0.0	0.0
Miranda_2000_IAU_IAG	107952	235800.000	235800.000	0.0	0.0
Moon_2000_IAU_IAG	107903	1737400.000	1737400.000	0.0	0.0
Naiad_2000_IAU_IAG	107964	29000.000	29000.000	0.0	0.0
Neptune_2000_IAU_IAG	107960	24764000.000	24341000.000	0.01708125	0.03387072
Nereid_2000_IAU_IAG	107965	170000.000	170000.000	0.0	0.0
NWL_10D	7026	6378135.000	6356750.520	0.00335278	0.00669432
NWL_9D	7025	6378145.000	6356759.769	0.00335289	0.00669454
Oberon_2000_IAU_IAG	107953	761400.000	761400.000	0.0	0.0
Ophelia_2000_IAU_IAG	107954	15000.000	15000.000	0.0	0.0
OSU_86F	7032	6378136.200	6356751.517	0.00335281	0.00669438
OSU_91A	7033	6378136.300	6356751.617	0.00335281	0.00669438
Pan_2000_IAU_IAG	107936	10000.000	10000.000	0.0	0.0
Pandora_2000_IAU_IAG	107937	41900.000	41900.000	0.0	0.0
Pasiphae_2000_IAU_IAG	107922	18000.000	18000.000	0.0	0.0
Phobos_2000_IAU_IAG	107907	11100.000	11100.000	0.0	0.0
Phoebe_2000_IAU_IAG	107938	110000.000	110000.000	0.0	0.0
Plessis_1817	7027	6376523.000	6355862.933	0.00324002	0.00646954
Pluto_2000_IAU_IAG	107969	1195000.000	1195000.000	0.0	0.0
Portia_2000_IAU_IAG	107955	54000.000	54000.000	0.0	0.0
Prometheus_2000_IAU_IAG	107939	50100.000	50100.000	0.0	0.0
Proteus_2000_IAU_IAG	107966	208000.000	208000.000	0.0	0.0
Puck_2000_IAU_IAG	107956	77000.000	77000.000	0.0	0.0
PZ_1990	7054	6378136.000	6356751.362	0.00335280	0.00669437
Rhea_2000_IAU_IAG	107940	764000.000	764000.000	0.0	0.0
Rosalind_2000_IAU_IAG	107957	27000.000	27000.000	0.0	0.0
Saturn_2000_IAU_IAG	107925	60268000.000	54364000.000	0.09796243	0.18632823
S_GRS_1980_Adj_MN_Anoka	107700	6378418.941	6357033.310	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Becker	107701	6378586.581	6357200.388	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Beltrami_North	107702	6378505.809	6357119.887	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Beltrami_South	107703	6378544.823	6357158.770	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Benton	107704	6378490.569	6357104.698	0.00335281	0.00669438

Spheroid Name	WKID	Semimajor Axis (m)	Semiminor Axis (m)	Inverse Flattening	Eccentricity squared ( $e^2$ )
S_GRS_1980_Adj_MN_Big_Stone	107705	6378470.757	6357084.952	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Blue_Earth	107706	6378403.701	6357018.121	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Brown	107707	6378434.181	6357048.499	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Carlton	107708	6378454.907	6357069.155	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Carver	107709	6378400.653	6357015.083	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Cass_North	107710	6378567.378	6357181.249	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Cass_South	107711	6378546.957	6357160.897	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Chippewa	107712	6378476.853	6357091.028	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Chisago	107713	6378411.321	6357025.715	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Cook_North	107714	6378647.541	6357261.143	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Cook_South	107715	6378647.541	6357261.143	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Cottonwood	107716	6378514.953	6357129.000	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Crow_Wing	107717	6378546.957	6357160.897	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Dakota	107718	6378421.989	6357036.348	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Dodge	107719	6378481.425	6357095.584	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Douglas	107720	6378518.001	6357132.038	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Faribault	107721	6378521.049	6357135.075	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Fillmore	107722	6378464.661	6357078.877	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Freeborn	107723	6378521.049	6357135.075	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Goodhue	107724	6378434.181	6357048.499	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Grant	107725	6378518.001	6357132.038	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Hennepin	107726	6378418.941	6357033.310	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Houston	107727	6378436.619	6357050.929	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Isanti	107728	6378411.321	6357025.715	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Itasca_North	107729	6378574.389	6357188.237	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Itasca_South	107730	6378574.389	6357188.237	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Jackson	107731	6378521.049	6357135.075	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Kanabec	107732	6378472.281	6357086.471	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Kandiyohi	107733	6378498.189	6357112.292	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Kittson	107734	6378449.421	6357063.688	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Koochiching	107735	6378525.621	6357139.632	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Lac_Qui_Parle	107736	6378476.853	6357091.028	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Lake_of_the_Woods_North	107737	6378466.185	6357080.395	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Lake_of_the_Woods_South	107738	6378496.665	6357110.773	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Le_Sueur	107739	6378434.181	6357048.499	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Lincoln	107740	6378643.579	6357257.195	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Lyon	107741	6378559.758	6357173.655	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Mahnomen	107743	6378586.581	6357200.388	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Marshall	107744	6378441.801	6357056.093	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Martin	107745	6378521.049	6357135.075	0.00335281	0.00669438
S_GRS_1980_Adj_MN_McLeod	107742	6378414.369	6357028.753	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Meeker	107746	6378498.189	6357112.292	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Morrison	107747	6378502.761	6357116.849	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Mower	107748	6378521.049	6357135.075	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Murray	107749	6378617.061	6357230.766	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Nicollet	107750	6378403.701	6357018.121	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Nobles	107751	6378624.681	6357238.360	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Norman	107752	6378468.623	6357082.825	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Olmsted	107753	6378481.425	6357095.584	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Ottertail	107754	6378525.621	6357139.632	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Pennington	107755	6378445.763	6357060.042	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Pine	107756	6378472.281	6357086.471	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Pipestone	107757	6378670.401	6357283.927	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Polk	107758	6378445.763	6357060.042	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Pope	107759	6378502.761	6357116.849	0.00335281	0.00669438

Spheroid Name	WKID	Semimajor Axis (m)	Semiminor Axis (m)	Inverse Flattening	Eccentricity squared ( $e^2$ )
S_GRS_1980_Adj_MN_Ramsey	107760	6378418.941	6357033.310	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Red_Lake	107761	6378445.763	6357060.042	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Redwood	107762	6378438.753	6357053.055	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Renville	107763	6378414.369	6357028.753	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Rice	107764	6378434.181	6357048.499	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Rock	107765	6378624.681	6357238.360	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Roseau	107766	6378449.421	6357063.688	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Scott	107770	6378421.989	6357036.348	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Sherburne	107771	6378443.325	6357057.612	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Sibley	107772	6378414.369	6357028.753	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Stearns	107773	6378502.761	6357116.849	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Steele	107774	6378481.425	6357095.584	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Stevens	107775	6378502.761	6357116.849	0.00335281	0.00669438
S_GRS_1980_Adj_MN_St_Louis	107786	6378523.000	6357138.314	0.00335261	0.00669398
S_GRS_1980_Adj_MN_St_Louis_Central	107768	6378605.783	6357219.525	0.00335281	0.00669438
S_GRS_1980_Adj_MN_St_Louis_North	107767	6378543.909	6357157.859	0.00335281	0.00669438
S_GRS_1980_Adj_MN_St_Louis_South	107769	6378540.861	6357154.821	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Swift	107776	6378470.757	6357084.952	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Todd	107777	6378548.481	6357162.416	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Traverse	107778	6378463.746	6357077.965	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Wabasha	107779	6378426.561	6357040.904	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Wadena	107780	6378546.957	6357160.897	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Waseca	107781	6378481.425	6357095.584	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Watonwan	107782	6378514.953	6357129.000	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Winona	107783	6378453.688	6357067.940	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Wright	107784	6378443.325	6357057.612	0.00335281	0.00669438
S_GRS_1980_Adj_MN_Yellow_Medicine	107785	6378530.193	6357144.189	0.00335281	0.00669438
Sinope_2000_IAU_IAG	107923	14000.000	14000.000	0.0	0.0
Sphere	7035	6371000.000	6371000.000	0.0	0.0
Sphere_ARC_INFO	107008	6370997.000	6370997.000	0.0	0.0
Sphere_Clarke_1866_Authalic	7052	6370997.000	6370997.000	0.0	0.0
Sphere_EMEP	107009	6370000.000	6370000.000	0.0	0.0
Sphere_GRS_1980_Authalic	7048	6371007.000	6371007.000	0.0	0.0
Sphere_International_1924_Authalic	7057	6371228.000	6371228.000	0.0	0.0
Struve_1860	7028	6378298.300	6356657.143	0.00339294	0.00677436
Telesto_2000_IAU_IAG	107941	11000.000	11000.000	0.0	0.0
Tethys_2000_IAU_IAG	107942	529800.000	529800.000	0.0	0.0
Thalassa_2000_IAU_IAG	107967	40000.000	40000.000	0.0	0.0
Thebe_2000_IAU_IAG	107924	49300.000	49300.000	0.0	0.0
Titan_2000_IAU_IAG	107943	2575000.000	2575000.000	0.0	0.0
Titania_2000_IAU_IAG	107958	788900.000	788900.000	0.0	0.0
Triton_2000_IAU_IAG	107968	1352600.000	1352600.000	0.0	0.0
Umbriel_2000_IAU_IAG	107959	584700.000	584700.000	0.0	0.0
Uranus_2000_IAU_IAG	107944	25559000.000	24973000.000	0.02292734	0.04532903
Venus_1985_IAU_IAG_COSPAR	107901	6051000.000	6051000.000	0.0	0.0
Venus_2000_IAU_IAG	107902	6051800.000	6051800.000	0.0	0.0
Walbeck	107007	6376896.000	6355834.847	0.00330273	0.00659455
War_Office	7029	6378300.000	6356751.689	0.00337838	0.00674534
WGS_1966	107001	6378145.000	6356759.769	0.00335289	0.00669454
WGS_1972	7043	6378135.000	6356750.520	0.00335278	0.00669432
WGS_1984	7030	6378137.000	6356752.314	0.00335281	0.00669438
WGS_1984_Major_Auxiliary_Sphere	107037	6378137.000	6378137.000	0.0	0.0
Xian_1980	7049	6378140.000	6356755.288	0.00335281	0.00669438

Table 7: Vertical coordinate systems: well-known IDs and areas of use

VCS Name	WKID	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
AHD	5711	Australia - mainland	-39.150	112.910	-10.140	153.620
AHD_Tasmania	5712	Australia - Tasmania mainland onshore	-43.500	144.500	-40.300	149.000
AIOC95_Depth	5734	Azerbaijan - offshore and Sangachal	37.900	48.660	42.580	51.730
AIOC95_Height	5797	Azerbaijan - offshore and Sangachal	37.900	48.660	42.580	51.730
Alicante	5782	Spain - mainland onshore	35.960	-9.360	43.810	3.390
Antalya	5775	Turkey - onshore	35.820	25.620	42.140	44.820
Auckland	5759	New Zealand - North Island - Auckland vcrs	-37.500	174.000	-35.800	176.000
Baltic	5705	Europe - FSU, Czechoslovakia - onshore	35.150	12.090	81.900	-169.570
Baltic_1982	5786	Bulgaria - onshore	41.240	22.370	44.220	28.670
Baltic_depth	5612	Europe - FSU, Czechoslovakia - onshore	35.150	12.090	81.900	-169.570
Bandar_Abbas	5752	Iran - onshore	24.950	44.060	39.800	63.370
Belfast	5732	UK - Northern Ireland - onshore	53.960	-8.170	55.350	-5.350
Black_Sea	5735	Georgia - onshore	41.050	40.000	43.580	46.710
Bluff	5760	New Zealand - South Island - Bluff vcrs	-46.600	168.000	-46.300	168.700
Bora_Bora_SAU_2001	5607	French Polynesia - Society Islands - Bora Bora	-16.650	-152.330	-16.420	-151.650
Cascais	5780	Portugal - mainland - onshore	36.960	-9.550	42.150	-6.190
Caspian	5706	Asia - FSU - Caspian Sea	37.350	46.950	46.960	53.920
Caspian_height	5611	Asia - FSU - Caspian Sea	37.350	46.950	46.960	53.920
CGVD_1928	5713	Canada - CVD28	41.680	-141.000	69.800	-59.740
Chatham_Island	5771	New Zealand - Chatham Island onshore	-45.000	-178.000	-43.000	-175.000
Constanta	5781	Romania - onshore	43.620	20.260	48.260	29.730
Danger_1950	5792	St Pierre and Miquelon - onshore	46.700	-56.470	47.180	-56.070
Dansk_Normal_Nul	5733	Denmark - onshore	54.510	8.000	57.800	15.240
DHHN85	5784	Germany - West Germany all states	47.270	5.870	55.090	13.830
DHHN92	5783	Germany - onshore	47.270	5.870	55.090	15.030
Douglas	5750	Isle of Man - onshore	54.010	-4.830	54.480	-4.250
Dunedin	5761	New Zealand - South Island - Dunedin vcrs	-46.000	168.000	-44.000	171.000
Dunedin_Bluff_1960_height	4458	New Zealand - South Island - Dunedin-Bluff vcrs	-46.700	166.400	-44.700	170.300
Durres	5777	Albania - onshore	39.640	19.220	42.660	21.050
DVR90	5799	Denmark - onshore	54.510	8.000	57.800	15.240
EGM2008_Geoid	3855	World	-90.000	-180.000	90.000	180.000
EGM84_Geoid	5798	World	-90.000	-180.000	90.000	180.000
EGM96_Geoid	5773	World	-90.000	-180.000	90.000	180.000
EOMA_1980	5787	Hungary	45.750	16.110	48.580	22.890
ETRS_1989	115701	Europe - ETRS89	32.880	-16.100	84.160	39.640
EVRF_2007	5621	Europe - EVRF2007	35.260	-9.550	71.200	31.580
EVRS_2000	5730	Europe - EVRF2000	35.260	-9.550	71.200	31.580
Fahud_Height_Datum_1993	5725	Oman - onshore	16.600	51.900	26.400	59.890
Fair_Isle	5741	UK - Fair Isle onshore	59.450	-1.760	59.600	-1.510
Fao	5751	Asia - Middle East -SE Iraq and SW Iran	29.000	44.300	33.500	50.830
Fao_1979	3886	Iraq - onshore	29.060	38.820	37.410	49.400
Flannan_Isles	5748	UK - Flannan Isles onshore	58.220	-7.750	58.350	-7.460
Foula	5743	UK - Foula onshore	60.070	-2.200	60.190	-1.950

VCS Name	WKID	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
FVR09_height	5317	Faroe Islands - onshore	61.340	-7.480	62.410	-6.340
Genoa_height	5214	Italy - mainland and Sicily	36.600	6.620	47.090	18.580
GHA	5778	Austria	46.410	9.530	49.020	17.170
Gisborne	5762	New Zealand - North Island - Gisborne vcrs	-39.000	176.300	-37.500	178.500
Guadeloupe_1951	5795	Guadeloupe - Grande-Terre and Basse-Terre - onshore	15.880	-61.850	16.540	-61.160
Ha_Tien_1960	5726	Asia - Cambodia and Vietnam - onshore	8.560	102.140	23.320	109.460
Hon_Dau_1992	5727	Vietnam - onshore	8.450	103.800	23.390	109.600
Hong_Kong_Chart_Datum	5739	China - Hong Kong - offshore	22.160	113.890	22.620	114.570
Hong_Kong_Principal_Datum	5738	China - Hong Kong - onshore	22.160	113.890	22.620	114.570
Huahine_SAU_2001	5605	French Polynesia - Society Islands - Huahine	-16.850	-151.060	-16.670	-150.930
HVRS_1971	5610	Croatia - onshore	42.350	13.430	46.540	19.430
IGLD_1955	5608	North America - Great Lakes basin and St Lawrence Seaway	41.000	-93.160	52.210	-54.760
IGLD_1985	5609	North America - Great Lakes basin and St Lawrence Seaway	41.000	-93.160	52.210	-54.760
IGN_1966	5601	French Polynesia - Society Islands - Tahiti	-17.910	-149.690	-17.450	-149.070
IGN_1987	5756	Martinique - onshore	14.350	-61.280	14.930	-60.770
IGN_1988	5757	Guadeloupe - Grande-Terre and Basse-Terre - onshore	15.880	-61.850	16.540	-61.160
IGN_1988_LS	5616	Guadeloupe - Les Saintes - onshore	15.800	-61.680	15.930	-61.520
IGN_1988_MG	5617	Guadeloupe - Marie-Galante - onshore	15.800	-61.380	16.040	-61.140
IGN_1988_SB	5619	Guadeloupe - St Barthelemy - onshore	17.830	-62.920	17.980	-62.730
IGN_1988_SM	5620	Guadeloupe - St Martin - onshore	18.020	-63.200	18.170	-62.960
IGN_1989	5758	Reunion - onshore	-21.400	55.200	-20.800	55.800
IGN_1992_LD	5618	Guadeloupe - La Desirade - onshore	16.270	-61.130	16.370	-60.970
Incheon_height	5193	Korea, Republic of (South Korea) - mainland	33.900	125.100	38.640	129.600
Japanese_Standard_Levelling_Datum_1949	5723	Japan - Hokkaido, Honshu, Shikoku, Kyushu - onshore	30.150	128.500	45.920	146.090
KOC_Construction_Datum	5790	Kuwait - onshore	28.560	46.570	30.100	48.450
KOC_WD_depth_ft	5614	Kuwait - onshore	28.560	46.570	30.100	48.450
KOC_Well_Datum	5789	Kuwait - onshore	28.560	46.570	30.100	48.450
Kuwait_PWD	5788	Kuwait - onshore	28.560	46.570	30.100	48.450
Lagos_1955	5796	Nigeria - onshore	4.150	2.700	13.900	14.680
Lerwick	5742	UK - Shetland Islands onshore	59.800	-1.790	60.890	-0.660
LHN95	5729	Europe - Liechtenstein and Switzerland	45.830	5.970	47.810	10.490
LN_1902	5728	Europe - Liechtenstein and Switzerland	45.830	5.970	47.810	10.490
Lyttleton	5763	New Zealand - South Island - Lyttleton vcrs	-45.000	168.200	-41.300	174.000
Malin_Head	5731	Europe - Ireland (Republic and Ulster) - onshore	51.400	-10.560	55.430	-5.350
Maputo	5722	Mozambique - onshore	-26.880	30.230	-10.400	40.900
Martinique_1955	5794	Martinique - onshore	14.350	-61.280	14.930	-60.770
Maupiti_SAU_2001	5604	French Polynesia - Society Islands - Maupiti	-16.520	-152.330	-16.330	-152.160
Mayotte_1950	5793	Mayotte - onshore	-13.000	44.970	-12.600	45.320
Moorea_SAU_1981	5602	French Polynesia - Society Islands -	-17.610	-149.960	-17.450	-149.690

VCS Name	WKID	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
		Moorea				
Moturiki	5764	New Zealand - North Island - Moturiki vcrs	-40.200	174.200	-37.500	177.400
MSL_Depth	5715	World	-90.000	-180.000	90.000	180.000
MSL_Height	5714	World	-90.000	-180.000	90.000	180.000
N2000_height	3900	Finland - onshore	59.760	19.410	70.090	31.580
N60	5717	Finland - onshore	59.760	19.410	70.090	31.580
NAD_1983	115702	North America - NAD83	14.930	167.650	86.450	-47.740
NAP	5709	Netherlands - onshore	50.750	3.210	53.710	7.210
Napier	5765	New Zealand - North Island - Hawkes Bay mc Napier vcrs	-40.600	175.900	-38.900	178.100
NAVD_1988	5703	USA - CONUS and east Alaska - onshore	24.410	-152.000	70.620	-66.920
Nelson	5766	New Zealand - South Island - Nelson vcrs	-42.300	171.500	-40.500	173.600
Newlyn	5701	UK - Great Britain mainland onshore	49.910	-7.080	58.710	1.830
Newlyn_Orkney_Isles	5740	UK - Orkney Islands onshore	58.620	-3.530	59.450	-2.230
NGC_1948	5791	France - Corsica onshore	41.310	8.500	43.060	9.630
NGF_IGN69	5720	France - mainland onshore	42.330	-4.870	51.140	8.230
NGF_IGN78	5721	France - Corsica onshore	41.310	8.500	43.060	9.630
NGF_Lallemand	5719	France - mainland onshore	42.330	-4.870	51.140	8.230
NGG_1977	5755	French Guiana - onshore	2.110	-54.600	5.810	-51.620
NG_L	5774	Luxembourg	49.450	5.730	50.180	6.520
NGNC	5753	New Caledonia - Grande Terre	-22.500	163.900	-20.000	167.100
NGPF	5600	French Polynesia - Society Islands - main islands	-17.910	-152.330	-16.420	-149.070
NGVD_1929	5702	USA - CONUS - onshore	24.410	-124.790	49.380	-66.920
NN54	5776	Norway - onshore	57.940	4.690	71.200	31.220
North_Rona	5745	UK - North Rona onshore	59.070	-5.920	59.190	-5.730
NVN99	5779	Slovenia - onshore	45.430	13.380	46.880	16.610
NZVD2009_height	4440	New Zealand	-55.950	157.410	-22.740	-170.890
One_Tree_Point	5767	New Zealand - North Island - One Tree vcrs	-36.500	172.500	-34.000	175.000
Oostende	5710	Belgium - onshore	49.510	2.510	51.500	6.400
PDO_Height_Datum_1993	5724	Oman - onshore	16.600	51.900	26.400	59.890
Piraeus	5716	Greece - onshore	34.880	19.580	41.750	28.300
Poolbeg	5754	Europe - Ireland (Republic and Ulster) - onshore	51.400	-10.560	55.430	-5.350
Raiatea_SAU_2001	5603	French Polynesia - Society Islands - Raiatea	-16.940	-151.570	-16.690	-151.410
RH1900	5615	Sweden - onshore	55.290	10.940	69.060	24.170
RH2000	5613	Sweden - onshore	55.290	10.940	69.060	24.170
RH70	5718	Sweden - onshore	55.290	10.940	69.060	24.170
SLVD_height	5237	Sri Lanka - onshore	5.850	79.600	9.920	81.950
SNN76	5785	Germany - East Germany all states	50.200	9.920	54.730	15.030
Stewart_Island	5772	New Zealand - Stewart Island	-47.400	167.300	-46.670	168.450
St_Kilda	5747	UK - St. Kilda onshore	57.750	-8.730	57.920	-8.410
St_Marys	5749	UK - Scilly Isles onshore	49.810	-6.490	50.040	-6.160
Stornoway	5746	UK - Outer Hebrides onshore	56.890	-7.650	58.560	-6.050
Sule_Skerry	5744	UK - Sule Skerry onshore	59.050	-4.490	59.130	-4.310
Tahaa_SAU_2001	5606	French Polynesia - Society Islands - Tahaa	-16.690	-151.500	-16.550	-151.340
Taranaki	5769	New Zealand - North Island - Taranaki vcrs	-40.000	173.700	-38.500	175.000
Tararu	5768	New Zealand - North Island -	-37.200	175.400	-36.900	176.000

VCS Name	WKID	Area of Use	Minimum Latitude	Minimum Longitude	Maximum Latitude	Maximum Longitude
		Tararu vcrs				
Trieste_height	5195	Europe - former Yugoslavia onshore	40.860	13.380	46.880	23.030
Wellington	5770	New Zealand - North Island - Wellington vcrs	-41.800	176.300	-40.000	178.500
WGS_1984	115700	World	-90.000	-180.000	90.000	180.000
WGS_1984_Geoid	105700	World	-90.000	-180.000	90.000	180.000
Yellow_Sea_1956	5736	China - onshore	18.040	73.660	53.590	134.850
Yellow_Sea_1985	5737	China - onshore	18.040	73.660	53.590	134.850

*Table 8: Vertical coordinate systems: gravity-related or ellipsoidal-based and directions*

VCS Name	WKID	Model	Positive Direction
AHD	5711	Gravity-related	Positive up
AHD_Tasmania	5712	Gravity-related	Positive up
AIOC95_Depth	5734	Gravity-related	Positive down
AIOC95_Height	5797	Gravity-related	Positive up
Alicante	5782	Gravity-related	Positive up
Antalya	5775	Gravity-related	Positive up
Auckland	5759	Gravity-related	Positive up
Baltic	5705	Gravity-related	Positive up
Baltic_1982	5786	Gravity-related	Positive up
Baltic_depth	5612	Gravity-related	Positive down
Bandar_Abbas	5752	Gravity-related	Positive up
Belfast	5732	Gravity-related	Positive up
Black_Sea	5735	Gravity-related	Positive up
Bluff	5760	Gravity-related	Positive up
Bora_Bora_SAU_2001	5607	Gravity-related	Positive up
Cascais	5780	Gravity-related	Positive up
Caspian	5706	Gravity-related	Positive down
Caspian_height	5611	Gravity-related	Positive up
CGVD_1928	5713	Gravity-related	Positive up
Chatham_Island	5771	Gravity-related	Positive up
Constanta	5781	Gravity-related	Positive up
Danger_1950	5792	Gravity-related	Positive up
Dansk_Normal_Nul	5733	Gravity-related	Positive up
DHHN85	5784	Gravity-related	Positive up
DHHN92	5783	Gravity-related	Positive up
Douglas	5750	Gravity-related	Positive up
Dunedin	5761	Gravity-related	Positive up
Dunedin_Bluff_1960_height	4458	Gravity-related	Positive up
Durres	5777	Gravity-related	Positive up
DVR90	5799	Gravity-related	Positive up
EGM2008_Geoid	3855	Gravity-related	Positive up
EGM84_Geoid	5798	Gravity-related	Positive up
EGM96_Geoid	5773	Gravity-related	Positive up
EOMA_1980	5787	Gravity-related	Positive up
ETRS_1989	115701	Ellipsoidal	Positive up
EVRF_2007	5621	Gravity-related	Positive up
EVRS_2000	5730	Gravity-related	Positive up
Fahud_Height_Datum_1993	5725	Gravity-related	Positive up
Fair_Isle	5741	Gravity-related	Positive up
Fao	5751	Gravity-related	Positive up
Fao_1979	3886	Gravity-related	Positive up
Flannan_Isles	5748	Gravity-related	Positive up

VCS Name	WKID	Model	Positive Direction
Foula	5743	Gravity-related	Positive up
FVR09_height	5317	Gravity-related	Positive up
Genoa_height	5214	Gravity-related	Positive up
GHA	5778	Gravity-related	Positive up
Gisborne	5762	Gravity-related	Positive up
Guadeloupe_1951	5795	Gravity-related	Positive up
Ha_Tien_1960	5726	Gravity-related	Positive up
Hon_Dau_1992	5727	Gravity-related	Positive up
Hong_Kong_Chart_Datum	5739	Gravity-related	Positive down
Hong_Kong_Principal_Datum	5738	Gravity-related	Positive up
Huahine_SAU_2001	5605	Gravity-related	Positive up
HVRS_1971	5610	Gravity-related	Positive up
IGLD_1955	5608	Gravity-related	Positive up
IGLD_1985	5609	Gravity-related	Positive up
IGN_1966	5601	Gravity-related	Positive up
IGN_1987	5756	Gravity-related	Positive up
IGN_1988	5757	Gravity-related	Positive up
IGN_1988_LS	5616	Gravity-related	Positive up
IGN_1988_MG	5617	Gravity-related	Positive up
IGN_1988_SB	5619	Gravity-related	Positive up
IGN_1988_SM	5620	Gravity-related	Positive up
IGN_1989	5758	Gravity-related	Positive up
IGN_1992_LD	5618	Gravity-related	Positive up
Incheon_height	5193	Gravity-related	Positive up
Japanese_Standard_Levelling_Datum_1949	5723	Gravity-related	Positive up
KOC_Construction_Datum	5790	Gravity-related	Positive up
KOC_WD_depth_ft	5614	Gravity-related	Positive down
KOC_Well_Datum	5789	Gravity-related	Positive down
Kuwait_PWD	5788	Gravity-related	Positive up
Lagos_1955	5796	Gravity-related	Positive up
Lerwick	5742	Gravity-related	Positive up
LHN95	5729	Gravity-related	Positive up
LN_1902	5728	Gravity-related	Positive up
Lyttleton	5763	Gravity-related	Positive up
Malin_Head	5731	Gravity-related	Positive up
Maputo	5722	Gravity-related	Positive up
Martinique_1955	5794	Gravity-related	Positive up
Maupiti_SAU_2001	5604	Gravity-related	Positive up
Mayotte_1950	5793	Gravity-related	Positive up
Moorea_SAU_1981	5602	Gravity-related	Positive up
Moturiki	5764	Gravity-related	Positive up
MSL_Depth	5715	Gravity-related	Positive down
MSL_Height	5714	Gravity-related	Positive up
N2000_height	3900	Gravity-related	Positive up
N60	5717	Gravity-related	Positive up
NAD_1983	115702	Ellipsoidal	Positive up
NAP	5709	Gravity-related	Positive up
Napier	5765	Gravity-related	Positive up
NAVD_1988	5703	Gravity-related	Positive up
Nelson	5766	Gravity-related	Positive up
Newlyn	5701	Gravity-related	Positive up
Newlyn_Orkney_Isles	5740	Gravity-related	Positive up
NGC_1948	5791	Gravity-related	Positive up
NGF_IGN69	5720	Gravity-related	Positive up
NGF_IGN78	5721	Gravity-related	Positive up
NGF_Lallemand	5719	Gravity-related	Positive up



VCS Name	WKID	Model	Positive Direction
NGG_1977	5755	Gravity-related	Positive up
NG_L	5774	Gravity-related	Positive up
NGNC	5753	Gravity-related	Positive up
NGPF	5600	Gravity-related	Positive up
NGVD_1929	5702	Gravity-related	Positive up
NN54	5776	Gravity-related	Positive up
North_Rona	5745	Gravity-related	Positive up
NVN99	5779	Gravity-related	Positive up
NZVD2009_height	4440	Gravity-related	Positive up
One_Tree_Point	5767	Gravity-related	Positive up
Oostende	5710	Gravity-related	Positive up
PDO_Height_Datum_1993	5724	Gravity-related	Positive up
Piraeus	5716	Gravity-related	Positive up
Poolbeg	5754	Gravity-related	Positive up
Raiatea_SAU_2001	5603	Gravity-related	Positive up
RH1900	5615	Gravity-related	Positive up
RH2000	5613	Gravity-related	Positive up
RH70	5718	Gravity-related	Positive up
SLVD_height	5237	Gravity-related	Positive up
SNN76	5785	Gravity-related	Positive up
Stewart_Island	5772	Gravity-related	Positive up
St_Kilda	5747	Gravity-related	Positive up
St_Marys	5749	Gravity-related	Positive up
Stornoway	5746	Gravity-related	Positive up
Sule_Skerry	5744	Gravity-related	Positive up
Tahaa_SAU_2001	5606	Gravity-related	Positive up
Taranaki	5769	Gravity-related	Positive up
Tararu	5768	Gravity-related	Positive up
Trieste_height	5195	Gravity-related	Positive up
Wellington	5770	Gravity-related	Positive up
WGS_1984	115700	Ellipsoidal	Positive up
WGS_1984_Geoid	105700	Gravity-related	Positive up
Yellow_Sea_1956	5736	Gravity-related	Positive up
Yellow_Sea_1985	5737	Gravity-related	Positive up

*Table 9: Vertical datums: well-known IDs*

Vertical Datum Name	WKID
AIOC_1995	5133
Alicante	5180
Antalya	5173
Auckland	5157
Australian_Height_Datum	5111
Australian_Height_Datum_Tasmania	5112
Baltic_1980	5185
Baltic_1982	5184
Baltic_Sea	5105
Bandar_Abbas	5150
Belfast	5131
Black_Sea	5134
Bluff	5158
Bora_Bora_SAU_2001	5202
Canadian_Geodetic_Vertical_Datum_of_1928	5114
Cascais	5178

<b>Vertical Datum Name</b>	<b>WKID</b>
Caspian_Sea	5106
Chatham_Island	5169
Constanta	5179
Croatian_Vertical_Reference_System_1971	5207
Danger_1950	5190
Dansk_Normal_Nul	5132
Dansk_Vertical_Reference_1990	5206
Deutches_Haupthohennetz_1985	5182
Deutches_Haupthohennetz_1992	5181
Douglas	5148
Dunedin	5159
Dunedin_Bluff_1960	1040
Durres	5175
EGM2008_Geoid	1027
EGM84_Geoid	5203
EGM96_Geoid	5171
European_Vertical_Reference_Frame_2000	5129
European_Vertical_Reference_Frame_2007	5215
Fahud_Height_Datum	5124
Fair_Isle	5139
Fao	5149
Fao_1979	1028
Faroe_Islands_Vertical_Reference_2009	1059
Flannan_Isles	5146
Foula	5141
Gebrauchshohen_Adria	5176
Genoa	1051
Gisborne	5160
Guadeloupe_1951	5193
Ha_Tien_1960	5125
Helsinki_1960	5116
Hon_Dau_1992	5126
Hong_Kong_Chart_Datum	5136
Hong_Kong_Principal_Datum	5135
Huahine_SAU_2001	5200
IGN_1966	5196
IGN_1987	5154
IGN_1988	5155
IGN_1988_LS	5210
IGN_1988_MG	5211
IGN_1988_SB	5213
IGN_1988_SM	5214
IGN_1989	5156
IGN_1992_LD	5212
Incheon	1049
International_Great_Lakes_Datum_1955	5204
International_Great_Lakes_Datum_1985	5205
Japanese_Standard_Levelling_Datum_1949	5122
KOC_Construction_Datum	5188
KOC_Well_Datum	5187
Kuwait_PWD	5186
Lagos_1955	5194
Landeshohennetz_1995	5128
Landesnivellement_1902	5127
Lerwick	5140
Lyttleton	5161

<b>Vertical Datum Name</b>	<b>WKID</b>
Malin_Head	5130
Maputo	5121
Martinique_1955	5192
Maupiti_SAU_2001	5199
Mayotte_1950	5191
Mean_Sea_Level	5100
Moorea_SAU_1981	5197
Moturiki	5162
N2000	1030
Napier	5163
National_Geodetic_Vertical_Datum_1929	5102
National_Vertical_Network_1999	5177
Nelson	5164
New_Zealand_Vertical_Datum_2009	1039
Nivellement_General_de_la_Corse_1948	5189
Nivellement_General_de_la_France_IGN69	5119
Nivellement_General_de_la_France_IGN78	5120
Nivellement_General_de_la_France_Lallemand	5118
Nivellement_General_de_Nouvelle_Caledonie	5151
Nivellement_General_de_Polynesie_Francaise	5195
Nivellement_General_du_Luxembourg	5172
Nivellement_General_Guyanais_1977	5153
Normaal_Amsterdams_Peil	5109
North_American_Vertical_Datum_1988	5103
North_Rona	5143
Norway_Normal_Nul_1954	5174
One_Tree_Point	5165
Oostende	5110
Ordnance_Datum_Newlyn	5101
Ordnance_Datum_Newlyn_Orkney_Isles	5138
PDO_Height_Datum_1993	5123
Piraeus_Harbour_1986	5115
Poolbeg	5152
Raiatea_SAU_2001	5198
Rikets_Hojdsystem_1900	5209
Rikets_Hojdsystem_1970	5117
Rikets_Hojdsystem_2000	5208
Sea_Level	5113
SNN76	5183
Sri_Lanka_Vertical_Datum	1054
Stewart_Island	5170
St_Kilda	5145
St_Marys	5147
Stornoway	5144
Sule_Skerry	5142
Tahaa_SAU_2001	5201
Taranaki	5167
Tararu	5166
Trieste	1050
Wellington	5168
WGS_1984_Geoid	105100
Yellow_Sea_1956	5104
Yellow_Sea_1985	5137