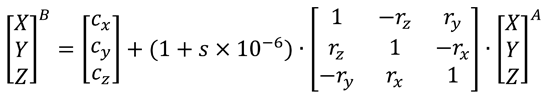
**Details on datums and ellipsoids**

<http://www.geocachingtoolbox.com/?page=datumEllipsoidDetails>

Below you find all parameters used for conversions of coordinates. First the different ellipsoids used, with the length of their axes. Next the different map datums, with the area in which they can be used and the parameters necessary to convert coordinates using the Helmert transform.

The Helmert transformation, also called a seven-parameter transformation, is a transformation method within a three-dimensional space. It is frequently used in geodesy to produce distortion-free transformations from one datum to another. The coordinates of a reference system B are derived from reference system A by the following formula:



with X, Y and Z the carthesian coordinates of system B and A, cx, cy and cz the three translation paramters, s the scale factor and rx, ry and rz the three rotation parameters.

* **Ellipsoids**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Code | Semi-major axis (a) | Semi-minor axis  (b) | Inverse flattening (1/f) |
| Airy 1830 | AA | 6377563.396 | 6356256.9092373 | 299.3249646 |
| Australian National | AN | 6378160 | 6356774.7191953 | 298.25 |
| Bessel 1841 | BR | 6377397.155 | 6356078.9628182 | 299.1528128 |
| Bessel 1841 (Namibia) | BN | 6377483.865 | 6356165.3829663 | 299.1528128 |
| Bessel Modified | BM | 6377492.018 | 6356173.5087127 | 299.1528128 |
| CGCS2000 | SG | 6378137 | 6356752.3141404 | 298.257222101 |
| Clarke 1858 | CA | 6378235.6 | 6356560.1397606 | 294.2606768 |
| Clarke 1866 | CC | 6378206.4 | 6356583.799999 | 294.9786982 |
| Clarke 1880 | CD | 6378249.145 | 6356514.8695498 | 293.465 |
| Clarke 1880 (IGN) | CG | 6378249.2 | 6356515 | 293.46602129363 |
| Clarke 1880 (Benoit) | CF | 6378300.789 | 6356566.435 | 293.46631553898 |
| Everest (Brunei, E. Malaysia (Sabah and Sarawak)) | EB | 6377298.556 | 6356097.5503009 | 300.8017 |
| Everest 1830 | EA | 6377276.345 | 6356075.4131402 | 300.8017 |
| Everest 1956 (India and Nepal) | EC | 6377301.243 | 6356100.2283681 | 300.8017 |
| Everest (Pakistan) | EF | 6377309.613 | 6356108.5705425 | 300.8017 |
| Everest 1948 (W. Malaysia and Singapore) | EE | 6377304.063 | 6356103.0389931 | 300.8017 |
| Everest 1969 (W. Malaysia) | ED | 6377295.664 | 6356094.6679152 | 300.8017 |
| Geodetic Reference System 1967 | RE | 6378160 | 6356774.5160907 | 298.247167427 |
| Geodetic Reference System 1980 | RF | 6378137 | 6356752.3141404 | 298.257222101 |
| Helmert 1906 | HE | 6378200 | 6356818.1696279 | 298.3 |
| Hough 1960 | HO | 6378270 | 6356794.3434343 | 297 |
| Indonesian 1974 | ID | 6378160 | 6356774.5040855 | 298.247 |
| International 1924 | IN | 6378388 | 6356911.946128 | 297 |
| Krassovsky 1940 | KA | 6378245 | 6356863.0187731 | 298.3 |
| Modified Airy | AM | 6377340.189 | 6356034.4479385 | 299.3249646 |
| Modified Fischer 1960 | FA | 6378155 | 6356773.3204827 | 298.3 |
| PZ-90 | SN | 6378136 | 6356751.3617457 | 298.257839303 |
| South American 1969 | SA | 6378160 | 6356774.7191953 | 298.25 |
| WGS 1972 | WD | 6378135 | 6356750.5200161 | 298.26 |
| WGS 1984 | WE | 6378137 | 6356752.3142452 | 298.257223563 |
| War Office | WO | 6378300 | 6356751.6891892 | 296 |

* **Datums**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Name | Code | Location | Ellipsoid | Helmert transform parameters | | | | | | |
| cx | cy | cz | s | rx | ry | rz |
| ACCRA | ACC | Ghana | WO | -199 | 32 | 322 | 0 | 0 | 0 | 0 |
| ADINDAN | ADIE | Burkina Faso | CD | -118 | -14 | 218 | 0 | 0 | 0 | 0 |
| ADINDAN | ADIF | Cameroon | CD | -134 | -2 | 210 | 0 | 0 | 0 | 0 |
| ADINDAN | ADIA | Ethiopa | CD | -165 | -11 | 206 | 0 | 0 | 0 | 0 |
| ADINDAN | ADIC | Mali | CD | -123 | -20 | 220 | 0 | 0 | 0 | 0 |
| ADINDAN | ADIM | Mean | CD | -166 | -15 | 204 | 0 | 0 | 0 | 0 |
| ADINDAN | ADID | Senegal | CD | -128 | -18 | 224 | 0 | 0 | 0 | 0 |
| ADINDAN | ADIB | Sudan | CD | -161 | -14 | 205 | 0 | 0 | 0 | 0 |
| ANTIGUA ISLAND ASTRO 1943 | AIA | Antigua | CD | -270 | 13 | 62 | 0 | 0 | 0 | 0 |
| AIN EL ABD 1970 | AINA | Bahrain | IN | -150 | -250 | -1 | 0 | 0 | 0 | 0 |
| AIN EL ABD 1970 | AINB | Saudi Arabia | IN | -143 | -236 | 7 | 0 | 0 | 0 | 0 |
| AMERICAN SAMOA 1962 | AMA | Samoa Islands | CC | -115 | 118 | 426 | 0 | 0 | 0 | 0 |
| RD. AMERSFOORT | AME-7 | Netherlands | BR | 565 | 49.9 | 465.8 | 4.08 | -0.409 | 0.36 | -1.869 |
| AMERSFOORT | AME | Netherlands | BR | 565 | 49.9 | 465.8 | 4.08 | -0.409 | 0.36 | -1.869 |
| ANNA 1 ASTRO 1965 | ANO | Cocos Islands | AN | -491 | -22 | 435 | 0 | 0 | 0 | 0 |
| ARC 1950 | ARFM | Southern Africa | CD | -143 | -90 | -294 | 0 | 0 | 0 | 0 |
| ARC 1950 | ARFA | Botswana | CD | -138 | -105 | -289 | 0 | 0 | 0 | 0 |
| ARC 1950 | ARFH | Burundi | CD | -153 | -5 | -292 | 0 | 0 | 0 | 0 |
| ARC 1950 | ARFB | Lesotho | CD | -125 | -108 | -295 | 0 | 0 | 0 | 0 |
| ARC 1950 | ARFC | Malawi | CD | -161 | -73 | -317 | 0 | 0 | 0 | 0 |
| ARC 1950 | ARFD | Swaziland | CD | -134 | -105 | -295 | 0 | 0 | 0 | 0 |
| ARC 1950 | ARFE | Zaire | CD | -169 | -19 | -278 | 0 | 0 | 0 | 0 |
| ARC 1950 | ARFF | Zambia | CD | -147 | -74 | -283 | 0 | 0 | 0 | 0 |
| ARC 1950 | ARF-7 | Zimbabwe | CD | -111.16 | -186.64 | -301.34 | 1.776 | -4.023 | -2.838 | 4.899 |
| ARC 1960 | ARS-7 | Kenya | CD | -62.44 | -209.95 | 17.83 | 7.382 | -6.7857 | 7.66 | 7.2059 |
| ARC 1960 | ARSB | Tanzania | CD | -175 | -23 | -303 | 0 | 0 | 0 | 0 |
| ASCENSION ISLAND 1958 | ASC | Ascension | IN | -205 | 107 | 53 | 0 | 0 | 0 | 0 |
| MONTSERRAT IS. ASTRO 1958 | ASM | Montserrat | CD | 174 | 359 | 365 | 0 | 0 | 0 | 0 |
| ASTRO STATION 1952 | ASQ | Marcus Islands | IN | 124 | -234 | -25 | 0 | 0 | 0 | 0 |
| ASTRO BEACON E 1845 | ATF | Iwo Jima | IN | 145 | 75 | -272 | 0 | 0 | 0 | 0 |
| AUSTRALIAN GEODETIC 1966 | AUA | Australia | AN | -133 | -48 | 148 | 0 | 0 | 0 | 0 |
| AUSTRALIAN GEODETIC 1984 | AUG-7 | Australia | AN | -116 | -50.47 | 141.69 | 0.0983 | 0.23 | 0.39 | 0.344 |
| DJAKARTA | BAT | Indonesia | BR | -377 | 681 | -50 | 0 | 0 | 0 | 0 |
| BEKAA BASE SOUTH END | BEK-7 | Lebanon | CG | -465.05 | 440.83 | 41.4 | 15.289 | -3.88771 | -11.3482 | -27.4139 |
| BERMUDA 1957 | BER | Bermuda | CC | -73 | 213 | 296 | 0 | 0 | 0 | 0 |
| BISSAU | BID | Guinea Bissau | IN | -173 | 253 | 27 | 0 | 0 | 0 | 0 |
| BOGOTA OBSERVATORY | BOO | Colombia | IN | 307 | 304 | -318 | 0 | 0 | 0 | 0 |
| BERNE (1898) | BRE | Switzerland | BR | 660.077 | 13.551 | 369.344 | 5.66 | -0.805 | -0.578 | -0.952 |
| BUKIT RIMPAH | BUR | Indonesia | BR | -384 | 664 | -48 | 0 | 0 | 0 | 0 |
| CAPE CANAVERAL | CAC | Florida & Bahamas | CC | -2 | 151 | 181 | 0 | 0 | 0 | 0 |
| CAMPO INCHAUSPE 1969 | CAI | Argentina | IN | -148 | 136 | 90 | 0 | 0 | 0 | 0 |
| CANTON ASTRO 1966 | CAO | Phoenix Islands | IN | 298 | -304 | -375 | 0 | 0 | 0 | 0 |
| CAPE | CAP | South Africa | CD | -136 | -108 | -292 | 0 | 0 | 0 | 0 |
| CAMP AREA ASTRO | CAZ | Antarctica | IN | -104 | -129 | 239 | 0 | 0 | 0 | 0 |
| S-JTSK | CCD-7 | Slovakia | BR | 559 | 68.7 | 451.5 | 5.71 | 7.92 | 4.073 | 4.251 |
| CARTHAGE | CGE | Tunisia | CG | -263 | 6 | 431 | 0 | 0 | 0 | 0 |
| CHATHAM ISLAND ASTRO 1971 | CHI | New Zealand | IN | 175 | -38 | 113 | 0 | 0 | 0 | 0 |
| CHUA ASTRO | CHU | Paraguay | IN | -134 | 229 | -29 | 0 | 0 | 0 | 0 |
| CH1903+ | CHW-7 | Switzerland | BR | 674.4 | 15.1 | 405.3 | 0 | 0 | 0 | 0 |
| CORREGO ALEGRE | COA | Brazil | IN | -206 | 172 | -6 | 0 | 0 | 0 | 0 |
| OBSERVATOROI | CPR-7 | Mozambique South | CC | -153 | -227 | -255 | 16.99 | -1.986 | -0.033 | 3.866 |
| CYPRUS 1935 | CYP-7 | Cyprus | CA | -104.24 | -16.713 | 843.593 | -60.095 | 0.90497 | 0.64131 | 3.01174 |
| ESTONIA 1937 | CSE | Estonia | BR | 374 | 150 | 588 | 0 | 0 | 0 | 0 |
| DABOLA | DAL | Guinea | CD | -83 | 37 | 124 | 0 | 0 | 0 | 0 |
| DECEPTION ISLAND | DID | Antarctica | CD | 260 | 12 | -147 | 0 | 0 | 0 | 0 |
| GUX 1 ASTRO | DOB | Guadalcanal Island | IN | 252 | -209 | -751 | 0 | 0 | 0 | 0 |
| EASTER ISLAND 1967 | EAS | Easter Island | IN | 211 | 147 | 111 | 0 | 0 | 0 | 0 |
| WAKE-ENIWETOK 1960 | ENW | Marshall Islands | HO | 102 | 52 | -38 | 0 | 0 | 0 | 0 |
| EUROPEAN DATUM 1950 | EURM | Europe | IN | -87 | -98 | -121 | 0 | 0 | 0 | 0 |
| EUROPEAN DATUM 1950 | EURA | Western Europe | IN | -87 | -96 | -120 | 0 | 0 | 0 | 0 |
| EUROPEAN DATUM 1950 | EURC | Norway & Finland | IN | -87 | -95 | -120 | 0 | 0 | 0 | 0 |
| EUROPEAN DATUM 1950 | EUR-7 | Oman | IN | -137.34 | -189.51 | -2.6 | -8.017 | -4.5735 | 2.6257 | 0.6849 |
| EUROPEAN DATUM 1950 | EUR | Former Yugoslavia N | IN | -83 | -96 | -117 | 0 | 0 | 0 | 0 |
| EUROPEAN DATUM 1950 | EURD | Portugal and Spain | IN | -84 | -107 | -120 | 0 | 0 | 0 | 0 |
| EUROPEAN DATUM 1950 | EURI | Italy - Sardinia | IN | -97 | -103 | -120 | 0 | 0 | 0 | 0 |
| EUROPEAN DATUM 1950 | EURJ | Italy - Sicily | IN | -97 | -88 | -135 | 0 | 0 | 0 | 0 |
| EUROPEAN DATUM 1950 | EURL | Malta | IN | -107 | -88 | -149 | 0 | 0 | 0 | 0 |
| EUROPEAN DATUM 1950 | EURB | Greece | IN | -84 | -95 | -130 | 0 | 0 | 0 | 0 |
| EUROPEAN DATUM 1950 | EURT | Tunisia | IN | -112 | -77 | -145 | 0 | 0 | 0 | 0 |
| EUROPEAN DATUM 1950 | EURF | Egypt | IN | -130 | -117 | -151 | 0 | 0 | 0 | 0 |
| EUROPEAN DATUM 1950 | EURH | Iran | IN | -117 | -132 | -164 | 0 | 0 | 0 | 0 |
| EUROPEAN DATUM 1950 | EURS | Middle East | IN | -103 | -106 | -141 | 0 | 0 | 0 | 0 |
| EUROPEAN 1979 | EUS | Portugal | IN | -81.548 | -94.168 | -118.729 | 0 | 0 | 0 | 0 |
| ETRF89 | EUT | Europe | RF | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FAHUD | FAH-7 | Oman | CD | -173.69 | -247.71 | 162.08 | 19.727 | -1.141 | -2.7308 | 8.6343 |
| OBSERVATORIO MET. 1939 | FLO | Flores | IN | -425 | -169 | 81 | 0 | 0 | 0 | 0 |
| FORT THOMAS 1955 | FOT | St Kitts-Nevis | CD | -7 | 215 | 225 | 0 | 0 | 0 | 0 |
| GAN 1970 | GAA | Rep. of Maldives | IN | -133 | -321 | 50 | 0 | 0 | 0 | 0 |
| GEOCENTRIC DATUM AUSTRALIA | GDS | Australia | RF | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| GEODETIC DATUM 1949 | GEO-7 | New Zealand | IN | 59.47 | -5.04 | 187.44 | -4.5993 | 0.47 | -0.1 | 1.024 |
| DOS 1968 | GIZ | Gizo Islands | IN | 230 | -199 | -752 | 0 | 0 | 0 | 0 |
| GRACIOSA BASE SW 1948 | GRA | Azores | IN | -104 | 167 | -38 | 0 | 0 | 0 | 0 |
| GGRS87 | GRX | Greece | RF | -199.87 | 74.79 | 246.62 | 0 | 0 | 0 | 0 |
| GUNUNG SEGARA | GSE | Indonesia | BR | -403 | 684 | 41 | 0 | 0 | 0 | 0 |
| GUAM 1963 | GUA | Guam | CC | -100 | -248 | 259 | 0 | 0 | 0 | 0 |
| HELSINKI. KALLIO CHURCH | HEL-7 | Finland | IN | -84.8 | -208 | -96.3 | -0.023 | 2.36 | 1 | 3.09 |
| HERAT NORTH | HEN | Afghanistan | IN | -333 | -222 | 114 | 0 | 0 | 0 | 0 |
| HERMANNSKOGEL | HER-7 | Former Yugoslavia | BR | 515.149 | 186.233 | 511.959 | 0.782 | 5.49721 | 3.51742 | -12.948 |
| HITO XVIII 1963 | HIT | Chile | IN | 16 | 196 | 93 | 0 | 0 | 0 | 0 |
| HJORSEY 1955 | HJO | Iceland | IN | -73 | 46 | -86 | 0 | 0 | 0 | 0 |
| HONG KONG 1963 | HKD | Hong Kong | IN | -156 | -271 | -189 | 0 | 0 | 0 | 0 |
| HONG KONG 1980 | HKE | Hong Kong | IN | -156.8 | -269 | -188.2 | 0 | 0 | 0 | 0 |
| HU-TZU-SHAN | HTN | Taiwan | IN | -637 | -549 | -203 | 0 | 0 | 0 | 0 |
| HUNGARIAN DATUM 1972 | HUY-7 | Hungary | RE | -56.94 | 67.91 | 19.32 | -1.09 | 0.2 | 0.32 | 0.42 |
| BELLEVUE (IGN) | IBE | Efate Island | IN | -127 | -769 | 472 | 0 | 0 | 0 | 0 |
| INDONESIAN 1974 | IDN | Indonesia | ID | -24 | -15 | 5 | 0 | 0 | 0 | 0 |
| IRAQ-KUWAIT BOUNDARY 1992 | IKB | Iraq/ Kuwait | RF | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| INDIAN | IND-7 | Bangladesh | EA | 79.2 | 670.3 | 230 | 11.034 | 0 | 0 | -7.274 |
| INDIAN | INDI | India & Nepal | EC | 295 | 736 | 257 | 0 | 0 | 0 | 0 |
| INDIAN | INDP | Pakistan | EF | 283 | 682 | 231 | 0 | 0 | 0 | 0 |
| INDIAN 1954 | INFA | Thailand | EA | 217 | 823 | 299 | 0 | 0 | 0 | 0 |
| INDIAN 1960 | INGB | Con Son Island | EA | 182 | 915 | 344 | 0 | 0 | 0 | 0 |
| INDIAN 1960 | INGA | Vietnam | EA | 198 | 881 | 317 | 0 | 0 | 0 | 0 |
| 1 INDIAN 1975 | INHA1 | Thailand | EA | 210 | 814 | 289 | 0 | 0 | 0 | 0 |
| IRELAND 1965 | IRL-7 | Ireland | AM | 482.53 | -130.596 | 564.557 | 8.15 | -1.042 | -0.214 | -0.631 |
| ISTS 061 ASTRO 1968 | ISG | South Georgia | IN | -794 | 119 | -298 | 0 | 0 | 0 | 0 |
| ISTS 073 Astro 1969 | IST | Diego Garcia | IN | 208 | -435 | -229 | 0 | 0 | 0 | 0 |
| JOHNSTON ISLAND 1961 | JOH | Johnston Island | IN | 189 | -79 | -202 | 0 | 0 | 0 | 0 |
| KANDAWALA JACKSON? | KAN-7 | Sri Lanka | EA | 33.7 | 886.1 | 105.3 | -20.187 | -0.11 | 0.369 | 3.701 |
| KERTAU 1948 | KEA-7 | Malaysia W & Sing. | EE | -366.94 | 719.29 | -88.93 | 9.093 | 2.498 | 2.142 | -12.057 |
| KERGUELEN ISLAND 1949 | KEG | Kerguelen Island | IN | 145 | -187 | 103 | 0 | 0 | 0 | 0 |
| KOREAN GEODETIC SYSTEM 1995 | KGS | South Korea | WE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| KKJ | KKX-7 | Finland | IN | -90.7 | -106.1 | -119.2 | 1.37 | 4.09 | 0.218 | -1.05 |
| KUSAIE ASTRO 1951 | KUS | Caroline Island | IN | 647 | 1777 | -1124 | 0 | 0 | 0 | 0 |
| LC5 ASTRO 1961 | LCF | Cayman Brac | CC | 42 | 124 | 147 | 0 | 0 | 0 | 0 |
| LEIGON | LEH-7 | Ghana | CD | -135.58 | 13.23 | 364.13 | 0.719 | 2.0168 | -0.0256 | 0.8091 |
| LIBERIA 1964 | LIB | Liberia | CD | -90 | 40 | 88 | 0 | 0 | 0 | 0 |
| LISBON (Castelo di Sao Jorge) D73 | LIS-7 | Portugal | IN | -238.2 | 85.2 | 29.9 | 2.03 | 0.166 | 0.046 | 1.248 |
| LKS94 | LTH | Lithuania | RF | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LUZON | LUZB | Philipines - Mindanao | CC | -133 | -79 | -72 | 0 | 0 | 0 | 0 |
| LUZON | LUZA | Philipines | CC | -133 | -77 | -51 | 0 | 0 | 0 | 0 |
| MASSAWA | MAS | Eritrea | BR | 639 | 405 | 60 | 0 | 0 | 0 | 0 |
| MERCHICH | MER | Morroco | CD | 31 | 146 | 47 | 0 | 0 | 0 | 0 |
| MIDWAY ASTRO 1961 | MID | Midway Islands | IN | 912 | -58 | 1227 | 0 | 0 | 0 | 0 |
| MAHE 1971 | MIK | Seychelles - Mahe Is. | CD | 41 | -220 | -134 | 0 | 0 | 0 | 0 |
| MINNA | MINA | Cameroon | CD | -81 | -84 | 115 | 0 | 0 | 0 | 0 |
| MINNA | MINB | Nigeria | CD | -92 | -93 | 122 | 0 | 0 | 0 | 0 |
| ROME 1940 | MOD-7 | Italy - Sicily | IN | -50.2 | -50.4 | 84.8 | -28.08 | -0.69 | -2.012 | 0.459 |
| M PORALOKO | MPO | Gabon | CD | -74 | -130 | 42 | 0 | 0 | 0 | 0 |
| VITI LEVU 1916 | MVS | Fiji - Viti Levu | CD | 51 | 391 | -36 | 0 | 0 | 0 | 0 |
| NAHRWAN | NAHA | Oman - Masirah Island | CD | -247 | -148 | 369 | 0 | 0 | 0 | 0 |
| NAHRWAN | NAHC | Saudi Arabia | CD | -243 | -192 | 477 | 0 | 0 | 0 | 0 |
| NAHRWAN | NAHB | United Arab Emirates | CD | -249 | -156 | 381 | 0 | 0 | 0 | 0 |
| NAPARIMA | NAP | Trinidad & Tobago | IN | -10 | 375 | 165 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1983 | NARA | US - Alaska | RF | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1983 | NARE | US - Aleutian | RF | -2 | 0 | 4 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1983 | NARB | Canada | RF | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1983 | NARC | US - CONUS | RF | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1983 | NARH | US - Hawaii | RF | 1 | 1 | -1 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1983 | NARD | Mexico | RF | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASD | US - Alaska | CC | -5 | 135 | 172 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASE | Canada | CC | -10 | 158 | 187 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASF | Canada - Alberta/ British Columbia | CC | -7 | 162 | 188 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASV | US - Aleutian East | CC | -2 | 152 | 149 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASW | US - Aleutian West | CC | 2 | 204 | 105 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASQ | Bahamas | CC | -4 | 154 | 178 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASO | Canal Zone | CC | 0 | 125 | 201 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASP | Caribbean | CC | -3 | 142 | 183 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASN | Central America | CC | 0 | 125 | 194 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASC | US - CONUS | CC | -8 | 160 | 176 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NAST | Cuba | CC | -9 | 152 | 178 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASG | Canada East | CC | -22 | 160 | 190 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASA | US - Eastern | CC | -9 | 161 | 179 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASU | Greenland | CC | 11 | 114 | 195 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASH | Canada - Manitoba/ Ontario | CC | -9 | 157 | 184 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASL | Mexico | CC | -12 | 130 | 190 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASI | Canada - NW Territory | CC | 4 | 159 | 188 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASR | San Salvador | CC | 1 | 140 | 165 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASB | US - Western | CC | -8 | 159 | 175 | 0 | 0 | 0 | 0 |
| NORTH AMERICAN 1927 | NASJ | Canada - Yukon | CC | -7 | 139 | 181 | 0 | 0 | 0 | 0 |
| NTF | NFR | France | CG | -168 | -60 | 320 | 0 | 0 | 0 | 0 |
| NGO 1948 | NGO-7 | Norway | BM | 278.3 | 93 | 474.5 | 6.21 | 7.889 | 0.05 | -6.61 |
| NORTH SAHARA 1959 | NSD | Algeria | CD | -186 | -93 | 310 | 0 | 0 | 0 | 0 |
| BELGIUM DATUM 1972 | ODU-7 | Belgium | IN | -99.1 | 53.3 | -112.5 | -1 | 0.419 | -0.83 | 1.885 |
| OLD EGYPTIAN 1907 | OEG | Egypt | HE | -130 | 110 | -13 | 0 | 0 | 0 | 0 |
| ORDNANCE GB 1936 | OGB-7 | GB - Great Britain | AA | 446.448 | -125.157 | 542.06 | -20.49 | 0.15 | 0.247 | 0.8421 |
| OLD HAWAIIAN | OHAM | US - Hawaii Mean | CC | 61 | -285 | -181 | 0 | 0 | 0 | 0 |
| OLD HAWAIIAN | OHAA | US - Hawaii | CC | 89 | -279 | -183 | 0 | 0 | 0 | 0 |
| OLD HAWAIIAN | OHAB | US - Kauai | CC | 45 | -290 | -172 | 0 | 0 | 0 | 0 |
| OLD HAWAIIAN | OHAC | US - Maui | CC | 65 | -290 | -190 | 0 | 0 | 0 | 0 |
| OLD HAWAIIAN | OHAD | US - Oahu | CC | 58 | -283 | -182 | 0 | 0 | 0 | 0 |
| OLD HAWAIIAN | OHIM | US - Hawaii | IN | 201 | -228 | -346 | 0 | 0 | 0 | 0 |
| OLD HAWAIIAN | OHIA | US - Hawaii | IN | 229 | -222 | -348 | 0 | 0 | 0 | 0 |
| OLD HAWAIIAN | OHIB | US - Kauai | IN | 185 | -233 | -337 | 0 | 0 | 0 | 0 |
| OLD HAWAIIAN | OHIC | US - Maui | IN | 205 | -233 | -355 | 0 | 0 | 0 | 0 |
| OLD HAWAIIAN | OHID | US - Oahu | IN | 198 | -226 | -347 | 0 | 0 | 0 | 0 |
| PALESTINE 1928 | PAL | Israel | CF | -223 | -70 | 271 | 0 | 0 | 0 | 0 |
| AYABELLA LIGHTHOUSE | PHA | Djibouti | CD | -79 | -129 | 145 | 0 | 0 | 0 | 0 |
| PITCAIRN ASTRO 1967 | PIT | Pitcairn Island | IN | 185 | 165 | 42 | 0 | 0 | 0 | 0 |
| PICO DE LAS NIEVES. | PLN | Spain - Canary Islands | IN | -307 | -92 | 127 | 0 | 0 | 0 | 0 |
| PORTO SANTO 1936. | POS | Portugal - Maderia | IN | -499 | -249 | 314 | 0 | 0 | 0 | 0 |
| PROV. S AMERICAN 1956 | PRPA | Bolivia | IN | -270 | 188 | -388 | 0 | 0 | 0 | 0 |
| PROV. S AMERICAN 1956 | PRPD | Colombia | IN | -282 | 169 | -371 | 0 | 0 | 0 | 0 |
| PROV. S AMERICAN 1956 | PRPE | Ecuador | IN | -278 | 171 | -367 | 0 | 0 | 0 | 0 |
| PROV. S AMERICAN 1956 | PRPF | Guyana | IN | -298 | 159 | -369 | 0 | 0 | 0 | 0 |
| PROV. S AMERICAN 1956 | PRPB | Chile North | IN | -270 | 183 | -390 | 0 | 0 | 0 | 0 |
| PROV. S AMERICAN 1956 | PRPG | Peru | IN | -279 | 175 | -379 | 0 | 0 | 0 | 0 |
| PROV. S AMERICAN 1956 | PRPM | South America | IN | -288 | 175 | -376 | 0 | 0 | 0 | 0 |
| PROV. S AMERICAN 1956 | PRPC | Chile South | IN | -305 | 243 | -442 | 0 | 0 | 0 | 0 |
| PROV. S AMERICAN 1956 | PRP-7 | Venezuela | IN | -197.43 | 139.39 | -192.8 | -5.109 | 5.266 | 1.238 | -2.381 |
| POINT 58 | PTB | Burkina Faso & Niger | CD | -106 | -129 | 165 | 0 | 0 | 0 | 0 |
| POINT NOIRE 1948 | PTN | Congo | CD | -148 | 51 | -291 | 0 | 0 | 0 | 0 |
| PULKOVO 1942 | PUK | Russia | KA | 28 | -130 | -95 | 0 | 0 | 0 | 0 |
| PULKOVO 1942 | PUK-7 | Estonia | KA | 21.58719 | -97.541 | -60.925 | -4.6121 | 1.01378 | 0.58117 | 0.2348 |
| PUERTO RICO & Virgin Is. | PUR | Puerto Rico & Virgin Islands | CC | 11 | 72 | -101 | 0 | 0 | 0 | 0 |
| QATAR NATIONAL 1974 | QAT-7 | Qatar | IN | -126.44 | -298.86 | -10.92 | 3.73 | 1.23 | 0.27 | 0.85 |
| QATAR NATIONAL 1995 | QAR-7 | Qatar | IN | -119.425 | -303.6587 | -11.00061 | 3.65707 | 1.1643 | 0.17446 | 1.096259 |
| QORNOQ | QUO | Greenland South | IN | 164 | 138 | -189 | 0 | 0 | 0 | 0 |
| DHDN (RAUENBERG) | RAU-7 | Germany | BR | 582 | 105 | 414 | 8.3 | 1.04 | 0.35 | -3.08 |
| REUNION | REU | Mascarene Is | IN | 94 | -948 | -1262 | 0 | 0 | 0 | 0 |
| RT90 | RTS-7 | Sweden | BR | 414.1 | 41.3 | 603.1 | 0 | -0.855 | 2.141 | -7.023 |
| SANTO (DOS) 1965 | SAE | Vanuatu - Espirito Santo | IN | 170 | 42 | 84 | 0 | 0 | 0 | 0 |
| SOUTH AMERICAN 1969 | SANA | Argentina | SA | -62 | -1 | -37 | 0 | 0 | 0 | 0 |
| SOUTH AMERICAN 1969 | SANJ | Galapagos | SA | -47 | 26 | -42 | 0 | 0 | 0 | 0 |
| SOUTH AMERICAN 1969 | SANB | Bolivia | SA | -61 | 2 | -48 | 0 | 0 | 0 | 0 |
| SOUTH AMERICAN 1969 | SANC | Brazil | SA | -60 | -2 | -41 | 0 | 0 | 0 | 0 |
| SOUTH AMERICAN 1969 | SAND | Chile | SA | -75 | -1 | -44 | 0 | 0 | 0 | 0 |
| SOUTH AMERICAN 1969 | SANE | Colombia | SA | -44 | 6 | -36 | 0 | 0 | 0 | 0 |
| SOUTH AMERICAN 1969 | SANF | Ecuador | SA | -48 | 3 | -44 | 0 | 0 | 0 | 0 |
| SOUTH AMERICAN 1969 | SANG | Guyana | SA | -53 | 3 | -47 | 0 | 0 | 0 | 0 |
| SOUTH AMERICAN 1969 | SANH | Paraguay | SA | -61 | 2 | -33 | 0 | 0 | 0 | 0 |
| SOUTH AMERICAN 1969 | SANI | Peru | SA | -58 | 0 | -44 | 0 | 0 | 0 | 0 |
| SOUTH AMERICAN 1969 | SANM | South America | SA | -57 | 1 | -41 | 0 | 0 | 0 | 0 |
| SOUTH AMERICAN 1969 | SANK | Trinidad | SA | -45 | 12 | -33 | 0 | 0 | 0 | 0 |
| SOUTH AMERICAN 1969 | SANL | Venezuela | SA | -45 | 8 | -33 | 0 | 0 | 0 | 0 |
| SAO BRAZ | SAO | Santa Maria Islands | IN | -203 | 141 | 53 | 0 | 0 | 0 | 0 |
| SAPPER HILL 1943 (2000 adj | SAP-7 | Falkland Islands | IN | -120.379 | 126.358 | 95.91 | -0.349 | -0.09247 | 2.49933 | -10.54206 |
| SCHWARZECK | SCK | Namibia | BN | 616 | 97 | -251 | 0 | 0 | 0 | 0 |
| SOUTH EAST ISLAND | SEI-7 | Seychelles | CD | 30.768 | -129.01 | -91.673 | -10.901 | -1.9847 | 7.51328 | 0.64532 |
| SOVIET GEODETIC SYSTEM 85 | SGA-7 | Russia | SG | 0 | 0 | 4 | 0 | 0 | 0 | 0.6 |
| PZ90 (GLONASS) | SGB-7 | Russia | SN | -1.1 | -0.3 | -0.9 | 0 | 0 | 0 | 0.169 |
| SELVAGEM GRANDE 1938 | SGM | Salvage Island | IN | -289 | -124 | 60 | 0 | 0 | 0 | 0 |
| ASTRO DOS 71/4 | SHB | St Helena | IN | -320 | 550 | -494 | 0 | 0 | 0 | 0 |
| SIERRA LEONE DATUM 1960 | SIB | Sierra Leone | CD | -88 | 4 | 101 | 0 | 0 | 0 | 0 |
| SIRGAS | SIR | South America | RF | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SOUTH ASIA | SOA | Singapore | FA | 7 | -10 | -26 | 0 | 0 | 0 | 0 |
| S-42 (PULKOVO 1942) | SPKF | Albania | KA | 24 | -130 | -92 | 0 | 0 | 0 | 0 |
| S-42 (PK42) | SPKC | Czechoslavakia | KA | 26 | -121 | -78 | 0 | 0 | 0 | 0 |
| S-42 (PULKOVO 1942) | SPKA | Hungary | KA | 28 | -121 | -77 | 0 | 0 | 0 | 0 |
| S-42 (PULKOVO 1942) | SPKD | Latvia | KA | 24 | -124 | -82 | 0 | 0 | 0 | 0 |
| S-42 (PK 1942) | SPKE | Kazakhstan | KA | 15 | -130 | -84 | 0 | 0 | 0 | 0 |
| SYSTEM 1942/58 (PULKOVO 1942) | SPK-7 | Poland | KA | 33.4 | -146.6 | -76.3 | -0.84 | -0.359 | -0.053 | 0.844 |
| S-42 (PULKOVO 1942) | SPKB | Poland | KA | 23 | -124 | -82 | 0 | 0 | 0 | 0 |
| S-42 (PULKOVO 1942) | SPKG | Romania | KA | 28 | -121 | -77 | 0 | 0 | 0 | 0 |
| S-42 (PULKOVO 1942) | SPK | Afghanistan | KA | 15 | -130 | -84 | 0 | 0 | 0 | 0 |
| TANANARIVE OBSERVATORY | TAN-7 | Madagascar | IN | -242.75 | -191.8 | -105.56 | 1.149 | 0.913 | 1.137 | -2.698 |
| TRISTAN ASTRO 1968 | TDC | Tristan da Cunha | IN | -632 | 438 | -609 | 0 | 0 | 0 | 0 |
| TETE | TEC-7 | Mozambique | CC | -107 | -167 | -211 | 9.28 | 0.871 | 0.207 | 0.992 |
| TIMBALAI 1948 (Everest) | TIL-7 | Malaysia E & Brunei | EB | -582.33 | 671.57 | -108.15 | 6.495 | 1.744 | 0.56 | 2.876 |
| TIMBALAI 1968. Adj of 1948 | TIM-7 | Malaysia E & Brunei | BR | -528 | 566.18 | -75.24 | 9.216 | 1.137 | 0.194 | 3.034 |
| TIMBALAI 1968. Adj of 1948 | TIN-7 | Malaysia E & Brunei | EB | -541.8 | 667.65 | -63.42 | 9.139 | 0.478 | -0.24 | 4.019 |
| TIMBALAI 1948 (Bessel) | TIV-7 | Malaysia E & Brunei | BR | -496.34 | 580.76 | -44.31 | 8.82 | 0.098 | 0.018 | 4.146 |
| TOKYO | TOYA | Japan | BR | -148 | 507 | 685 | 0 | 0 | 0 | 0 |
| TOKYO | TOYB1 | South Korea | BR | -147 | 506 | 687 | 0 | 0 | 0 | 0 |
| TOKYO | TOYC | Japan - Okinawa | BR | -158 | 507 | 676 | 0 | 0 | 0 | 0 |
| ASTRO TERN ISLAND (FRIG) 1961 | TRN | Antarctica | IN | 114 | -116 | -333 | 0 | 0 | 0 | 0 |
| VOIROL 1875 | VOI | Algeria | CG | -73 | -247 | 227 | 0 | 0 | 0 | 0 |
| WAKE ISLAND ASTRO 1952 | WAK | Wake Island | IN | 276 | -57 | 149 | 0 | 0 | 0 | 0 |
| WORLD GEODETIC SYSTEM 1972 | WGC-7 | World | WD | 0 | 0 | 4.5 | 0.219 | 0 | 0 | 0.554 |
| WORLD GEODETIC SYSTEM 1984 | WGS84 | World | WE | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| YACARE | YAC | Uruguay | IN | -155 | 171 | 37 | 0 | 0 | 0 | 0 |
| ZANDERIJ | ZAN | Suriname | IN | -265 | 120 | -358 | 0 | 0 | 0 | 0 |
| LUXEMBOURG NT | LUX-7 | Luxembourg | IN | -193 | 13.7 | -39.3 | 0.43 | -0.41 | -2.933 | 2.688 |
| HARTEBEESTHOCK 1994 | HAR | South Africa | RF | 0 | 0 | 0 | 0 | 0 | 0 | 0 |