CORRECTION FOR PRECESSION AND NUTATION

LHA ϒ	North latitudes N 80°	N 70°	N 60°	N 50°	N 40°	N 20°	0°	South latitudes S 20°	S 40°	S 50°	S 60°	S 70°	S 80°	LHA ϒ
							2004							
0	0.3 221	0.4 231	0.4 237	0.5 241	0.5 244	0.6 247	0.6 247	0.5 243	0.4 236	0.3 228	0.3 217	0.2 199	0.2 176	0
30	0.3 244	0.4 249	0.5 252	0.5 254	0.6 255	0.6 256	0.6 255	0.5 251	0.3 242	0.2 231	0.2 210	0.1 174	0.2 142	30
60	0.3 266	0.4 267	0.5 268	0.5 268	0.6 268	0.6 268	0.5 268	0.4 267	0.2 265	0.1 262	0.1 245	0.1 110	0.2 098	60
90	0.3 289	0.4 285	0.5 283	0.5 282	0.6 281	0.6 281	0.5 282	0.4 285	0.3 293	0.2 303	0.1 329	0.1 018	0.2 051	90
120	0.3 312	0.4 303	0.4 298	0.5 295	0.5 293	0.6 291	0.6 292	0.5 295	0.4 304	0.3 312	0.3 326	0.2 348	0.2 014	120
150	0.3 336	0.3 322	0.4 312	0.4 305	0.5 301	0.6 297	0.6 296	0.6 297	0.5 303	0.4 308	0.4 316	0.3 328	0.3 344	150
180	0.2 004	0.2 341	0.3 323	0.3 312	0.4 304	0.5 297	0.6 293	0.6 293	0.5 296	0.5 299	0.4 303	0.4 309	0.3 319	180
210	0.2 038	0.1 006	0.2 330	0.2 309	0.3 298	0.5 289	0.6 285	0.6 284	0.6 285	0.5 286	0.5 288	0.4 291	0.3 296	210
240	0.2 082	0.1 070	0.1 295	0.1 278	0.2 275	0.4 273	0.5 272	0.6 272	0.6 272	0.5 272	0.5 272	0.4 273	0.3 274	240
270	0.2 129	0.1 162	0.1 211	0.2 237	0.3 247	0.4 255	0.5 258	0.6 259	0.6 259	0.5 258	0.5 257	0.4 255	0.3 251	270
300	0.2 166	0.2 192	0.3 214	0.3 228	0.4 236	0.5 245	0.6 248	0.6 249	0.5 247	0.5 245	0.4 242	0.4 237	0.3 228	300
330	0.3 196	0.3 212	0.4 224	0.4 232	0.5 237	0.6 243	0.6 244	0.6 243	0.5 239	0.4 235	0.4 228	0.3 218	0.3 204	330
360	0.3 221	0.4 231	0.4 237	0.5 241	0.5 244	0.6 247	0.6 247	0.5 243	0.4 236	0.3 228	0.3 217	0.2 199	0.2 176	360
							2005							
0	0.2 329	0.1 351	0.1 015	0.2 035	0.2 048	0.3 061	0.3 066	0.4 068	0.3 067	0.3 066	0.3 064	0.3 060	0.2 054	0
30	0.2 001	0.2 017	0.2 031	0.2 041	0.3 048	0.3 056	0.4 059	0.4 059	0.3 056	0.3 052	0.3 047	0.2 040	0.2 029	30
60	0.2 029	0.2 039	0.3 047	0.3 052	0.3 055	0.4 059	0.4 059	0.3 056	0.3 048	0.2 041	0.2 031	0.2 018	0.2 002	60
90	0.2 054	0.3 060	0.3 063	0.3 066	0.3 067	0.4 068	0.3 066	0.3 061	0.2 048	0.2 035	0.1 016	0.1 351	0.2 330	90
120	0.2 078	0.3 080	0.3 081	0.3 082	0.4 082	0.4 082	0.3 081	0.2 077	0.1 067	0.1 049	0.1 354	0.1 307	0.1 292	120
150	0.2 102	0.3 100	0.3 099	0.3 098	0.4 098	0.4 098	0.3 099	0.2 102	0.1 112	0.1 130	0.0 —	0.1 235	0.1 249	150
180	0.2 126	0.3 120	0.3 116	0.3 114	0.3 113	0.4 112	0.3 114	0.3 119	0.2 132	0.2 145	0.1 165	0.1 189	0.2 211	180
210	0.2 151	0.2 140	0.3 133	0.3 128	0.3 124	0.4 121	0.4 121	0.3 124	0.3 132	0.2 139	0.2 149	0.2 163	0.2 179	210
240	0.2 178	0.2 162	0.2 149	0.2 139	0.3 132	0.3 124	0.4 121	0.4 121	0.3 125	0.3 128	0.3 133	0.2 141	0.2 151	240
270	0.2 210	0.1 189	0.1 164	0.2 145	0.2 132	0.3 119	0.3 114	0.4 112	0.3 113	0.3 114	0.3 117	0.3 120	0.2 126	270
300	0.1 248	0.1 233	0.1 186	0.1 131	0.1 113	0.2 103	0.3 099	0.4 098	0.4 098	0.3 098	0.3 099	0.3 100	0.2 102	300
330	0.1 291	0.1 305	0.0 —	0.1 050	0.1 068	0.2 078	0.3 081	0.4 082	0.4 082	0.3 082	0.3 081	0.3 080	0.2 078	330
360	0.2 329	0.1 351	0.1 015	0.2 035	0.2 048	0.3 061	0.3 066	0.4 068	0.3 067	0.3 066	0.3 064	0.3 060	0.2 054	360
							2006							
0	0.5 007	0.6 027	0.7 042	0.8 052	0.9 058	1.2 064	1.3 067	1.2 066	1.1 063	1.0 060	0.9 054	0.7 047	0.6 034	0
30	0.6 033	0.7 045	0.9 054	1.0 059	1.1 062	1.2 066	1.3 066	1.2 064	1.0 058	0.8 052	0.7 043	0.6 029	0.5 009	30
60	0.7 056	0.8 063	1.0 067	1.1 070	1.2 071	1.3 073	1.2 072	1.0 069	0.8 060	0.6 051	0.5 035	0.4 008	0.4 337	60
90	0.7 078	0.9 081	1.0 082	1.1 083	1.2 083	1.3 083	1.2 083	0.9 081	0.6 076	0.4 068	0.2 045	0.2 332	0.3 296	90
120	0.7 100	0.9 098	1.0 097	1.1 096	1.2 096	1.3 096	1.2 096	0.9 098	0.6 103	0.4 110	0.2 132	0.2 213	0.3 247	120
150	0.7 122	0.8 116	1.0 112	1.1 109	1.2 108	1.3 107	1.2 107	1.0 111	0.7 119	0.6 129	0.4 145	0.4 173	0.4 205	150
180	0.6 146	0.7 133	0.9 126	1.0 120	1.1 117	1.2 114	1.3 113	1.2 116	0.9 122	0.8 128	0.7 138	0.6 153	0.5 173	180
210	0.5 171	0.6 151	0.7 137	0.8 128	1.0 122	1.2 116	1.3 114	1.2 114	1.1 118	1.0 121	0.9 126	0.7 135	0.6 147	210
240	0.4 203	0.4 172	0.5 145	0.6 129	0.8 120	1.0 111	1.2 108	1.3 107	1.2 109	1.1 110	1.0 113	0.8 117	0.7 124	240
270	0.3 244	0.2 208	0.2 135	0.4 112	0.6 104	0.9 099	1.2 097	1.3 097	1.2 097	1.1 097	1.0 098	0.9 099	0.7 102	270
300	0.3 293	0.2 327	0.2 048	0.4 070	0.6 077	0.9 082	1.2 084	1.3 084	1.2 084	1.1 084	1.0 083	0.9 082	0.7 080	300
330	0.4 335	0.4 007	0.4 035	0.6 051	0.7 061	1.0 069	1.2 073	1.3 073	1.2 072	1.1 071	1.0 068	0.8 064	0.7 058	330
360	0.5 007	0.6 027	0.7 042	0.8 052	0.9 058	1.2 064	1.3 067	1.2 066	1.1 063	1.0 060	0.9 054	0.7 047	0.6 034	360

The above table gives the correction to be applied to a position line or a fix for the effects of precession and nutation from the mean equinox of 2005.0. Each entry consists of the distance (in bold type) in nautical miles, and the direction (true bearing) in which the position line or fix is to be moved. The table is entered firstly by the year, then by choosing the column nearest the latitude and finally the entry nearest the LHA ϒ of observation; no interpolation is necessary, though in extreme cases near the beginning or end of a year (but not the end of 2004 or the beginning of 2005 when the corrections are zero) values midway towards those of the previous or following years may be taken.

Example. Early in 2006 a fix is obtained in latitude S 46° when LHA ϒ is 247°. Entering the table with the year 2006, latitude S 50°, and LHA ϒ 240° gives **1.1′** 110° as compared with **0.3′** 128° for 2005 which indicates that the fix is to be transferred 0.7 miles in true bearing 119°.