Astrodienst Ephemeris Tables
for the year 1969

MIDPOINTS, Positions modulo 16, tropical zodiac
contains Sun, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto, Moon's Node

Programming
Dieter Koch and Alois Treindl
based on Swiss Ephemeris
Code DSHE

Astrodienst AG, Dammstr. 23, CH-8702 Zollikon / Zürich, Internet: www.astro.com  E-Mail: order@astro.com
### JANUARY 1969

#### MIDPOINTS 00:00 UT, Positions modulo 16

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**Footnote:**

- Delta T = 39.20 sec.
| Day | 0° | 1° | 2° | 3° | 4° | 5° | 6° | 7° | 8° | 9° | 10° | 11° | 12° | 13° | 14° | 15° | 16° | 17° | 18° | 19° | 20° | 21° | 22° |
|-----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| S  | 1 | 15 | 25 | 39 | 53 | 67 | 81 | 95 | 109 | 123 | 137 | 151 | 165 | 179 | 193 | 207 | 221 | 235 | 249 | 263 | 277 | 291 |
| S  | 2 | 14 | 24 | 38 | 52 | 66 | 80 | 94 | 108 | 122 | 136 | 150 | 164 | 178 | 192 | 206 | 220 | 234 | 248 | 262 | 276 | 290 |
| M  | 3 | 13 | 26 | 39 | 52 | 65 | 78 | 91 | 104 | 117 | 130 | 143 | 156 | 169 | 182 | 195 | 208 | 221 | 234 | 247 | 260 | 273 |
| T  | 4 | 12 | 25 | 38 | 51 | 64 | 77 | 90 | 103 | 116 | 129 | 142 | 155 | 168 | 181 | 194 | 207 | 220 | 233 | 246 | 259 | 272 |
| W  | 5 | 11 | 24 | 37 | 50 | 63 | 76 | 89 | 102 | 115 | 128 | 141 | 154 | 167 | 180 | 193 | 206 | 219 | 232 | 245 | 258 | 271 |
| T  | 6 | 10 | 23 | 36 | 49 | 62 | 75 | 88 | 101 | 114 | 127 | 140 | 153 | 166 | 179 | 192 | 205 | 218 | 231 | 244 | 257 | 270 |
| F  | 7 | 9 | 22 | 35 | 48 | 61 | 74 | 87 | 100 | 113 | 126 | 139 | 152 | 165 | 178 | 191 | 204 | 217 | 230 | 243 | 256 | 269 |
| S  | 8 | 8 | 21 | 34 | 47 | 60 | 73 | 86 | 99 | 112 | 125 | 138 | 151 | 164 | 177 | 190 | 203 | 216 | 229 | 242 | 255 | 268 |
| M  | 9 | 7 | 20 | 33 | 46 | 59 | 72 | 85 | 98 | 111 | 124 | 137 | 150 | 163 | 176 | 189 | 202 | 215 | 228 | 241 | 254 | 267 |
| T  | 10 | 6 | 19 | 32 | 45 | 58 | 71 | 84 | 97 | 110 | 123 | 136 | 149 | 162 | 175 | 188 | 201 | 214 | 227 | 240 | 253 | 266 |
| W  | 11 | 5 | 18 | 31 | 44 | 57 | 70 | 83 | 96 | 109 | 122 | 135 | 148 | 161 | 174 | 187 | 200 | 213 | 226 | 239 | 252 | 265 |
| T  | 12 | 4 | 17 | 30 | 43 | 56 | 69 | 82 | 95 | 108 | 121 | 134 | 147 | 160 | 173 | 186 | 199 | 212 | 225 | 238 | 251 | 264 |
| F  | 13 | 3 | 16 | 29 | 42 | 55 | 68 | 81 | 94 | 107 | 120 | 133 | 146 | 159 | 172 | 185 | 198 | 211 | 224 | 237 | 250 | 263 |
| S  | 14 | 2 | 15 | 28 | 41 | 54 | 67 | 80 | 93 | 106 | 119 | 132 | 145 | 158 | 171 | 184 | 197 | 210 | 223 | 236 | 249 | 262 |
| M  | 15 | 1 | 14 | 27 | 40 | 53 | 66 | 79 | 92 | 105 | 118 | 131 | 144 | 157 | 170 | 183 | 196 | 209 | 222 | 235 | 248 | 261 |
| T  | 16 | 0 | 13 | 26 | 39 | 52 | 65 | 78 | 91 | 104 | 117 | 130 | 143 | 156 | 169 | 182 | 195 | 208 | 221 | 234 | 247 | 260 |
| W  | 17 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 |

Delta T = 39.28 sec.

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**APRIL 1969**

**MIDPOINTS 00:00 UT, Positions modulo 16**

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| Day | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 |
| Day | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 |

**JULY 1969**

**MIDPOINTS 00:00 UT, Positions modulo 16**

**Delta T = 39.68 sec.**

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**Delta T = 39.77 sec.**

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Delta $T = 40.10$ sec.

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