# <pre>

# @(#)solar89 8.2

# This file is in the public domain, so clarified as of

# 2009-05-17 by Arthur David Olson.

# Apparent noon times below are for Riyadh; they're a bit off for other places.

# Times were computed using a formula provided by the U. S. Naval Observatory:

# eqt = -105.8 \* sin(l) + 596.2 \* sin(2 \* l) + 4.4 \* sin(3 \* l)

# -12.7 \* sin(4 \* l) - 429.0 \* cos(l) - 2.1 \* cos (2 \* l)

# + 19.3 \* cos(3 \* l);

# where l is the "mean longitude of the Sun" given by

# l = 279.642 degrees + 0.985647 \* d

# and d is the interval in days from January 0, 0 hours Universal Time

# (equaling the day of the year plus the fraction of a day from zero hours).

# The accuracy of the formula is plus or minus three seconds.

#

# Rounding to the nearest five seconds results in fewer than

# 256 different "time types"--a limit that's faced because time types are

# stored on disk as unsigned chars.

# Rule NAME FROM TO TYPE IN ON AT SAVE LETTER/S

Rule sol89 1989 only - Jan 1 12:03:35s -0:03:35 -

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Rule sol89 1989 only - Jan 3 12:04:30s -0:04:30 -

Rule sol89 1989 only - Jan 4 12:05:00s -0:05:00 -

Rule sol89 1989 only - Jan 5 12:05:25s -0:05:25 -

Rule sol89 1989 only - Jan 6 12:05:50s -0:05:50 -

Rule sol89 1989 only - Jan 7 12:06:15s -0:06:15 -

Rule sol89 1989 only - Jan 8 12:06:45s -0:06:45 -

Rule sol89 1989 only - Jan 9 12:07:10s -0:07:10 -

Rule sol89 1989 only - Jan 10 12:07:35s -0:07:35 -

Rule sol89 1989 only - Jan 11 12:07:55s -0:07:55 -

Rule sol89 1989 only - Jan 12 12:08:20s -0:08:20 -

Rule sol89 1989 only - Jan 13 12:08:45s -0:08:45 -

Rule sol89 1989 only - Jan 14 12:09:05s -0:09:05 -

Rule sol89 1989 only - Jan 15 12:09:25s -0:09:25 -

Rule sol89 1989 only - Jan 16 12:09:45s -0:09:45 -

Rule sol89 1989 only - Jan 17 12:10:05s -0:10:05 -

Rule sol89 1989 only - Jan 18 12:10:25s -0:10:25 -

Rule sol89 1989 only - Jan 19 12:10:45s -0:10:45 -

Rule sol89 1989 only - Jan 20 12:11:05s -0:11:05 -

Rule sol89 1989 only - Jan 21 12:11:20s -0:11:20 -

Rule sol89 1989 only - Jan 22 12:11:35s -0:11:35 -

Rule sol89 1989 only - Jan 23 12:11:55s -0:11:55 -

Rule sol89 1989 only - Jan 24 12:12:10s -0:12:10 -

Rule sol89 1989 only - Jan 25 12:12:20s -0:12:20 -

Rule sol89 1989 only - Jan 26 12:12:35s -0:12:35 -

Rule sol89 1989 only - Jan 27 12:12:50s -0:12:50 -

Rule sol89 1989 only - Jan 28 12:13:00s -0:13:00 -

Rule sol89 1989 only - Jan 29 12:13:10s -0:13:10 -

Rule sol89 1989 only - Jan 30 12:13:20s -0:13:20 -

Rule sol89 1989 only - Jan 31 12:13:30s -0:13:30 -

Rule sol89 1989 only - Feb 1 12:13:40s -0:13:40 -

Rule sol89 1989 only - Feb 2 12:13:45s -0:13:45 -

Rule sol89 1989 only - Feb 3 12:13:55s -0:13:55 -

Rule sol89 1989 only - Feb 4 12:14:00s -0:14:00 -

Rule sol89 1989 only - Feb 5 12:14:05s -0:14:05 -

Rule sol89 1989 only - Feb 6 12:14:10s -0:14:10 -

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Rule sol89 1989 only - Feb 8 12:14:15s -0:14:15 -

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Rule sol89 1989 only - Mar 5 12:11:35s -0:11:35 -

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Rule sol89 1989 only - Mar 7 12:11:05s -0:11:05 -

Rule sol89 1989 only - Mar 8 12:10:50s -0:10:50 -

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Rule sol89 1989 only - Mar 10 12:10:20s -0:10:20 -

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Rule sol89 1989 only - Dec 14 11:54:40s 0:05:20 -

Rule sol89 1989 only - Dec 15 11:55:10s 0:04:50 -

Rule sol89 1989 only - Dec 16 11:55:40s 0:04:20 -

Rule sol89 1989 only - Dec 17 11:56:05s 0:03:55 -

Rule sol89 1989 only - Dec 18 11:56:35s 0:03:25 -

Rule sol89 1989 only - Dec 19 11:57:05s 0:02:55 -

Rule sol89 1989 only - Dec 20 11:57:35s 0:02:25 -

Rule sol89 1989 only - Dec 21 11:58:05s 0:01:55 -

Rule sol89 1989 only - Dec 22 11:58:35s 0:01:25 -

Rule sol89 1989 only - Dec 23 11:59:05s 0:00:55 -

Rule sol89 1989 only - Dec 24 11:59:35s 0:00:25 -

Rule sol89 1989 only - Dec 25 12:00:05s -0:00:05 -

Rule sol89 1989 only - Dec 26 12:00:35s -0:00:35 -

Rule sol89 1989 only - Dec 27 12:01:05s -0:01:05 -

Rule sol89 1989 only - Dec 28 12:01:35s -0:01:35 -

Rule sol89 1989 only - Dec 29 12:02:00s -0:02:00 -

Rule sol89 1989 only - Dec 30 12:02:30s -0:02:30 -

Rule sol89 1989 only - Dec 31 12:03:00s -0:03:00 -

# Riyadh is at about 46 degrees 46 minutes East: 3 hrs, 7 mins, 4 secs

# Before and after 1989, we'll operate on local mean solar time.

# Zone NAME GMTOFF RULES/SAVE FORMAT [UNTIL]

Zone Asia/Riyadh89 3:07:04 - zzz 1989

3:07:04 sol89 zzz 1990

3:07:04 - zzz

# For backward compatibility...

Link Asia/Riyadh89 Mideast/Riyadh89