

# Re: shortest day

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*Source:* <http://sci.tech-archive.net/Archive/sci.physics/2007-12/msg01398.html>

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- *From:* "Androcles" <Engineer@xxxxxxxxxxxxxxxxxxxx>
  - *Date:* Sat, 29 Dec 2007 04:39:45 GMT
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"The Ghost In The Machine" <ewill@xxxxxxxxxxxxxxxxxxxx> wrote in message [news:p7jg45-mec.ln1@xxxxxxxxxxxxxxxxxxxx](mailto:news:p7jg45-mec.ln1@xxxxxxxxxxxxxxxxxxxx)  
: In sci.physics, Androcles  
: <Engineer@xxxxxxxxxxxxxxxxxxxx>  
: wrote  
: on Fri, 21 Dec 2007 05:35:35 GMT  
: <HgIaj.74622\$kt3.42041@xxxxxxxxxxxxxxxxxxxx>:  
: >  
: > "The Ghost In The Machine" <ewill@xxxxxxxxxxxxxxxxxxxx> wrote in  
message  
: > [news:heir35-etk.ln1@xxxxxxxxxxxxxxxxxxxx](mailto:news:heir35-etk.ln1@xxxxxxxxxxxxxxxxxxxx)  
: >: In sci.physics, Androcles  
: >: <Engineer@xxxxxxxxxxxxxxxxxxxx>  
: >: wrote  
: >: on Thu, 20 Dec 2007 19:19:43 GMT  
: >: <jfzaj.80777\$CJ3.9527@xxxxxxxxxxxxxxxxxxxx>:  
: >: >  
: >: > "Uncle Al" <UncleAl0@xxxxxxxxxxxx> wrote in message  
: >: > [news:476ABE06.3F8D07A6@xxxxxxxxxxxxxxxxxxxx](mailto:news:476ABE06.3F8D07A6@xxxxxxxxxxxxxxxxxxxx)  
: >: >: Igor wrote:  
: >: >: >  
: >: >: > On Dec 19, 11:48 pm, aark...@xxxxxxxx wrote:  
: >: >: > > Hi all,  
: >: >: > >  
: >: >: > > I recently read in a book that december 22 is the shortest day  
in  
: > a  
: >: >: > year, to what extent this is true..???  
: >: >: > >  
: >: >: > > 1) is there any scientific basis for this claim ?  
: >: >: > >  
: >: >: > > No day is any shorter than any other. They're all 24 hours long.  
: >: >: > >  
: >: >: >: > Daylight duration is shortest at the solstices, twice/year. One is  
: >: >: >: > ever amazed that Yahweh and his three religions are astoundingly  
: >: >: >: > incapable of assembling a decent calendar.  
: >: >: >: >  
: >: >: >: > Russia's October Revolution was in November, Israel's calendar has

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:> :> whole leap months, and the Muslim calendar is beneath contempt.  
:> :>  
:> :> Gregorian: adjusted solar calendar  
:> :> Russian: unadjusted solar calendar  
:> :> Israel: intercalated lunar  
:> :> Muslim: was intercalated lunar, now pure lunar  
:> :>  
:> :> :>  
:> :> :>  
:> :> > Look out window.  
:> :> > See big white ball in sky.  
:> :> > When big white ball has gone, note time.  
:> :> > Keep looking out window.  
:> :> > When big white ball reappears, note time.  
:> :> > Repeat daily.  
:> :>  
:> :> And how does one note the time without a timepiece?  
:> :>  
:> :> water clock... candle clock... In this case a sundial would  
:> :> be the most appropriate.  
:> :>  
:> :> The base resolution of a sundial is 1 solar day. Finer resolution  
:> :> is possible if one knows a variant of the local analemma and makes  
:> :> appropriate corrective ticks on the dial.  
:> :>  
:> :> :>  
:> :> > I doubt Henri Wilson would agree 22 December was the shortest  
:> :> > day, he'd probably say it was the longest, just to be his usual  
:> :> > cantankerous self. Except where he lives he'd be right. I'm  
:> :> > sure Paul Andersen would, though, his days are shorter than  
:> :> > mine, and so are Eric Gisse's.  
:> :>  
:> :> The shortest day depends on location.

I just said that. Henri Wilson lives near Sydney, I live near London,  
52 degrees North and 0 degrees E/W.

If one happens to be  
: at the point of solstice — which for purposes of argument  
: is the point on the Tropic of Cancer just north of the  
: Tropic of Capricorn

I would hardly call >3000 miles "just north" of anywhere.

: where the sun is directly overhead at  
: that particular moment — one will get a different answer  
: as to which day is shortest than if one is 90 degrees  
: east or west of that point, or at 180 degrees.

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With the International Date Line leading the Greenwich meridian by half a day it is inevitable that the solstice varies between Dec 21 and Dec 22, which are integers, with solstice being measured at noon and not midnight local time. :-)

There was an argument last year over the time of perihelion, Jan 5th 2007 and Jan 2 2008.

Mighty dOG insisted that because the Earth–Moon system revolves about a barycentre located 1000 miles beneath the Earth's surface it necessarily follows that the Earth is closer to the sun when the Moon is full (by 6000 miles from when the Moon is new). The orbit of the system varying between 91,000,000 miles at perihelion and 94 million miles at aphelion, it would seem that the Earth could be marginally closer to the sun on either side of perihelion as measured by the fixed stars, and lawdy knows where it is when precession is taken into account. The debate was not resolved, it degenerated into the usual cry of "You are an idiot".

However, a day is about a degree (365 days a year, 360 degrees per orbit), three degrees is a helluva lot to misplace perihelion with relative to the rest of the universe, especially when attempting to measure distance to local stars in parallax arc seconds.

:>

:>

:> The Romans

:>: in particular didn't know how to make wristwatches or even

:>: grandfather clocks.

:>

:> Really? How about that! Of course grandfather clocks don't

:> work too well on Roman galleys, they had to resort to ringing bells.

:> Out in the Old Wild West the Americans would reset the church

:> clock each day to the gun that fired from the nearby fort. The

:> sergeant–at–arms used to fire the gun at precisely midday by the

:> church clock, so everyone knew it was extremely accurate.

:

: The Wild Wild West was far beyond the Romans — you're comparing

: 2000 years ago with 150 years ago.

Yeah, the Wild Wild West was so wild they had to import guns made from Pittsburgh steel and couldn't afford British made sundials.

It must have been hell having to pay out for British made pocket watches instead, running those iron horses James Watt devised to a railway timetable without time zones the British invented because of a 10 minute difference between local time in Bristol and London as measured by sundial.

:>

:> The Brits knew how to make sundials 3,500 years ago.

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:> Here's a nice big one:  
:> <http://www.arthistory.sbc.edu/sacredplaces/images/stonehenge.jpg>  
:  
: That is not a sundial, though it \*is\* usable as a calendar.

Of course it's a sundial!

:  
:> As you can see, the time of day the photograph was taken is between  
:> 10:00 am and noon. Well... I can. Perhaps you can't. At midday  
:> the shadows will point North.  
:  
: Actually, they won't; it depends on the day. Of course they'll  
: be close to north, but they won't be true north.

Quit your whining, it's a sundial and a very accurate one at that.  
The wooden posts on top have long since rotted away, but  
the post holes are still there. It was built to replace Woodhenge  
when that got woodworm in it.  
<http://tinyurl.com/2xdrwj>

:>  
:> This sketch might help.  
:> [http://web.mit.edu/mna/Public/stonehenge\\_416.gif](http://web.mit.edu/mna/Public/stonehenge_416.gif)  
:>  
:>  
:>: They might have known about clepsydras, which the Egyptians  
:>: invented circa 1400 BC, although Babylon might have had one even  
:>: earlier.  
:>  
:> The pyramid builders of Egypt knew how to make beer, too; those  
:> Romans weren't too bright, were they? The Parisians and Madridians  
:> are just like those Italians, wine drinkers the lot of them. Even the  
:> Berliners are beer drinkers, and the Copenhageners. Skol!  
:> I wonder if the shadow of a pyramid could be used to tell time... hmm...  
:>  
:> But anyway, happy solstice and a merry new perihelion to you and yours  
:> on these holy days.  
:>  
:> On the first day of solstice my true love sent to me...  
:> A chicken in a bare tree...  
:>  
:> Of course what I really wanted was roast beef.  
:>  
:  
: The Romans did know about cattle, as the term is derived  
: from the latin \_caput\_. No doubt they knew about roasting  
: the haunches thereof as well.  
:  
: Sheesh... even Noah knew about cattle, he loaded his ark up

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with FOOD. The reason so many species are on the endangered list today is because they taste good. Mammoth and Dodo must have been delicious.

:>  
:>  
:>  
:>  
:>:>  
:>:> Baron Victor von Frankenstein's personal assistant thinks there are  
no  
:>:> nights.  
:>:>  
:>  
:>  
:>  
:  
:  
:  
:--  
:#191, ewill3@xxxxxxxxxxxxxx  
: Windows. When it absolutely, positively, has to crash.  
:  
:--  
: Posted via a free Usenet account from <http://www.teranews.com>  
:  
:  
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