NCPR: July 22, 2020

<table>
<thead>
<tr>
<th>Winter Extremes</th>
<th>Today</th>
<th>Earliest Sunrise</th>
<th>Summer Solstice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunrise</td>
<td>7:37:33</td>
<td>5:37:02</td>
<td>5:14:56</td>
</tr>
<tr>
<td>Diff. from Today</td>
<td>2:00:31</td>
<td>0:22:06</td>
<td>0:21:33</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Winter Extremes</th>
<th>Today</th>
<th>Latest Sunset</th>
<th>Summer Solstice</th>
</tr>
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<tbody>
<tr>
<td>Diff. from Today</td>
<td>4:16:18</td>
<td>0:13:15</td>
<td>0:12:39</td>
</tr>
</tbody>
</table>

Whew ... we're gaining dark again!

**Evening Sky:**

**Comet NEOWISE**
25° above NW horizon at 10 pm ... ½ way to horizon from back of B.D. bowl  
Moving left (south) & fading  
Not visible before stars just below it are visible, then a faint vertical blur  
Astronomy Picture of the Day today! (apod.nasa.gov) ... lots of info  
Name: Reactivated (in 9/2013) Wide-field Infrared Survey Explorer (WISE)  
Mission to look for Near-Earth Objects (NEO) hard to spot in visible  
Discovered comet glowing in IR on 3/27/2020, 2 AU from sun, 1.7 AU from Earth  
Closest to Earth tonight at 9:14 pm ... closest to sun on July 3

**Jupiter and Saturn!!**
Both up before sunset, great in binoculars ... look for Galilean moons  
Between Sagittarius and Capricornus ... brightest objects in the area  
Will be lovely through the fall!  
New Moon on July 20 ... look for thin waxing crescent above W horizon setting at 10:18 pm  
Above Regulus, below Algheba in Leo's chest

**Morning Sky:**

**Venus rises at 2:40, 25° above E horizon at 5 am**  
In Taurus, rising away from the sun ... highest (greatest western elongation) on 8/13  
Passed between Earth & Sun on June 3, now moving away in its orbit ... crescent Venus

**Mercury <10° above ENE Horizon at 5:00 am**
In Gemini ... left of Orion at same altitude as Betelgeuse  
Greatest Western Elongation today ... going away from Earth (Zippy!)  
Passes on far side of the sun on August 17

Even I ignore the beginning of Celtic Autumn on Lughnasa ... August 1!