



# June 2018 Sky Events

## June 21st, 2018 – Summer Solstice

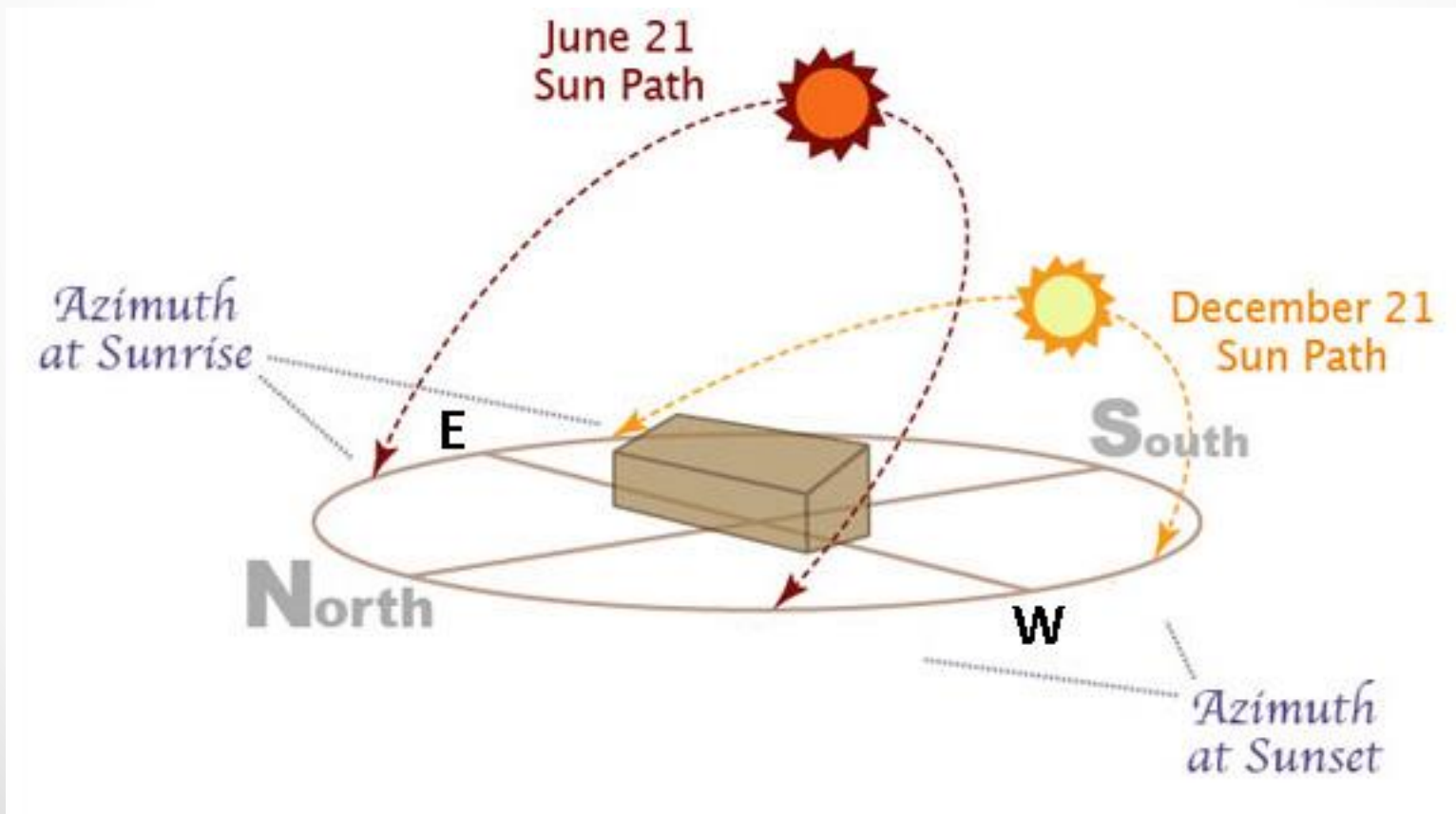
- ★ The northern hemisphere's summer solstice occurs on **Thursday, June 21<sup>st</sup> at 6:07 a.m. EDT.**
- ★ It's the longest day (and shortest night) of the year in the northern hemisphere.
- ★ The Sun's position on the summer solstice in the Asheville area reaches 2 extremes in altitude and azimuth (the following values are rounded):
  1. First the Sun rises  $30^\circ$  north of east and sets  $30^\circ$  north of west on the summer solstice, compared to  $30^\circ$  south of east and  $30^\circ$  south of west on the winter solstice; that's a  $60^\circ$  swing.
  2. Next the Sun rises  $78^\circ$  above the horizon at high solar noon on the summer solstice, compared to only  $31^\circ$  on the winter solstice; that's a  $47^\circ$  swing (Earth's  $23\frac{1}{2}^\circ$  axial tilt times 2).



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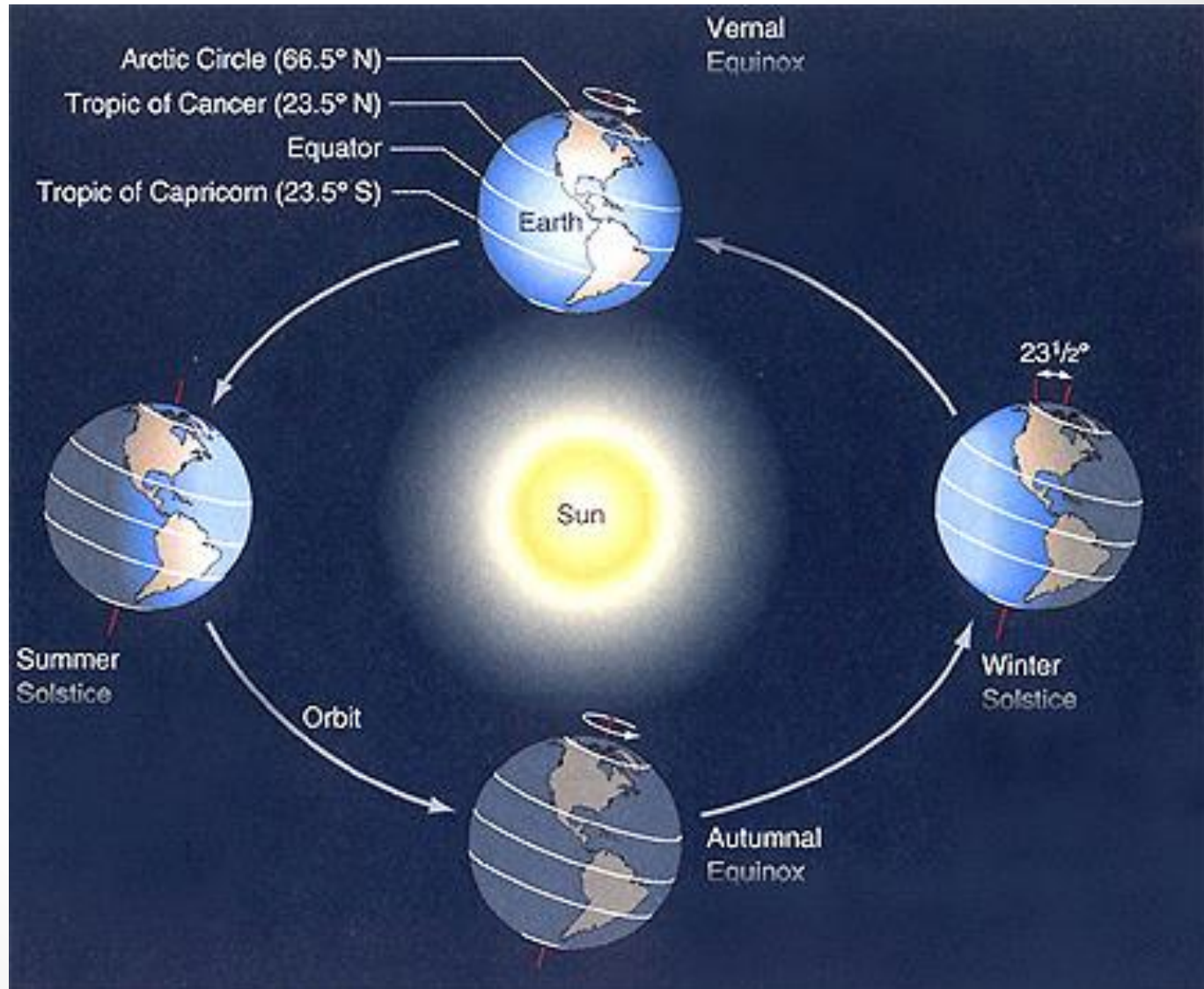
★ **Translation:** At the summer solstice the Sun takes not only a longer path across the sky but also a much higher path across the sky, yielding a much longer daylight period, with the Sun's radiation at a more intense angle.



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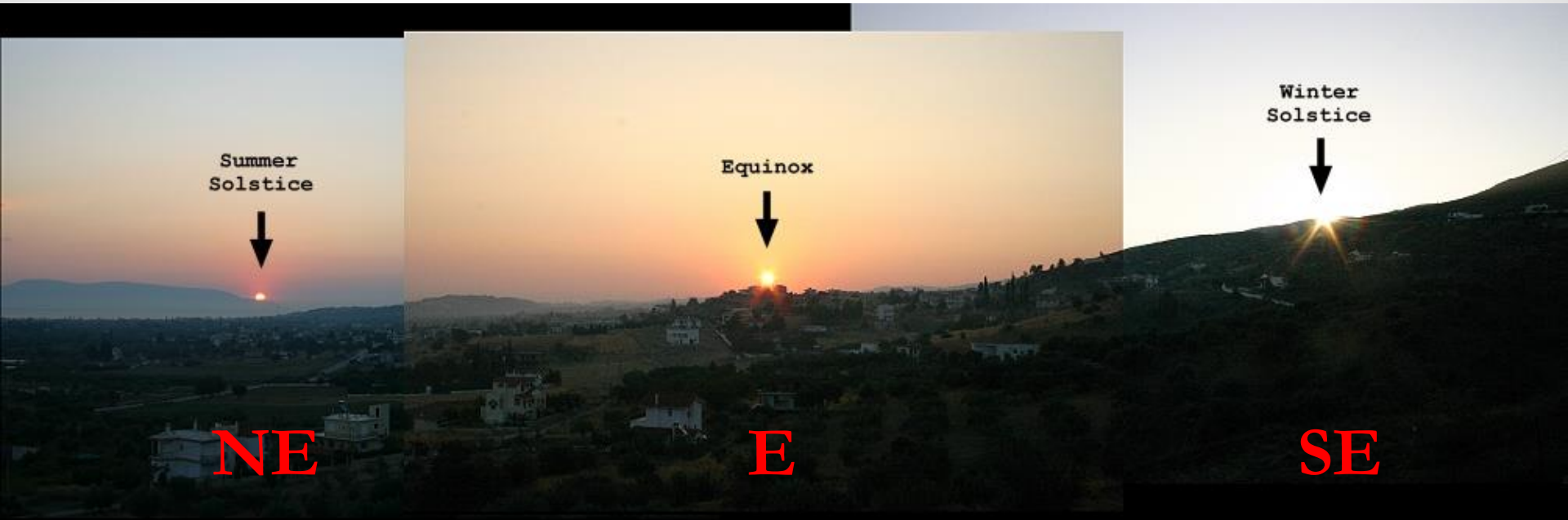
It's both the Earth's  $23\frac{1}{2}^{\circ}$  axial tilt and its orbit about our star that cause the seasons.





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Montage of three sunrises from a small Greek island

**Yes, the Sun rises in the due east and sets in the due west... but only on *two days* per year – on the *equinoxes*!**