

Re: Night Sky 101

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- *From:* Odysseus <odysseus1479-at-xxxxxxxxxxxx>
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In article <1188044445.578325.80010@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>, "wm.king@xxxxxxxxxxxx" <wm.king@xxxxxxxxxxxx> wrote:

A few very basic questions; I am quite clumsy with this sort of thing and would be very grateful for nutshell answers:

1. Are the constellations unchanging? I.e., are those we see from a given time and place (allowing for environmental conditions) the same (or not perceptively different) than they would have been in 1984 or 1892?

Yes, if you're only considering decades. Over several millennia some constellations will be noticeably different (and accordingly, the ancient ones are a little different now than they were when first delineated); in a few million years they all will become unrecognizable. Many nearby stars can be seen to move over shorter time-scales, but almost all of them are too faint to be included in any patterns of naked-eye stars. An exception is Sirius, the brightest star in the sky (only about eleven light-years away, and somewhat larger and therefore intrinsically more luminous than our Sun): its motion against the background stars was noticed in classical times by comparing contemporary observations with ancient records.

2. Is there a website or reference book that will show you the night sky from a given time and place and identify the constellations?

Yes, many, including some websites from which you can download software to run locally. For books there's the caveat that "proper motion" is rarely shown in printed maps -- if that's at all relevant to your purposes: see above -- but star-catalogues will often provide that information in their tables.

3. How much effect do the stars (excluding the moon (which I know is not a star anyway, and again leaving aside environmental conditions)

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have on how light it is at night?

Compared to city lights: almost none, excepting supernovae in our own galaxy, of which we haven't had any for several centuries. From remote sites under clear skies: almost all, but with several bright planets up at once, a fairly rare occurrence, I suppose the stars' contribution could be as low as 90%. (Excuse the flippancy, but I'm not sure what you're asking.)

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Odysseus

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