

Looking Up!

The Newsletter of the Big Bend Astronomical Society, Inc.

<http://www.bigbendastronomy.org>

Volume 12

September/October 2007

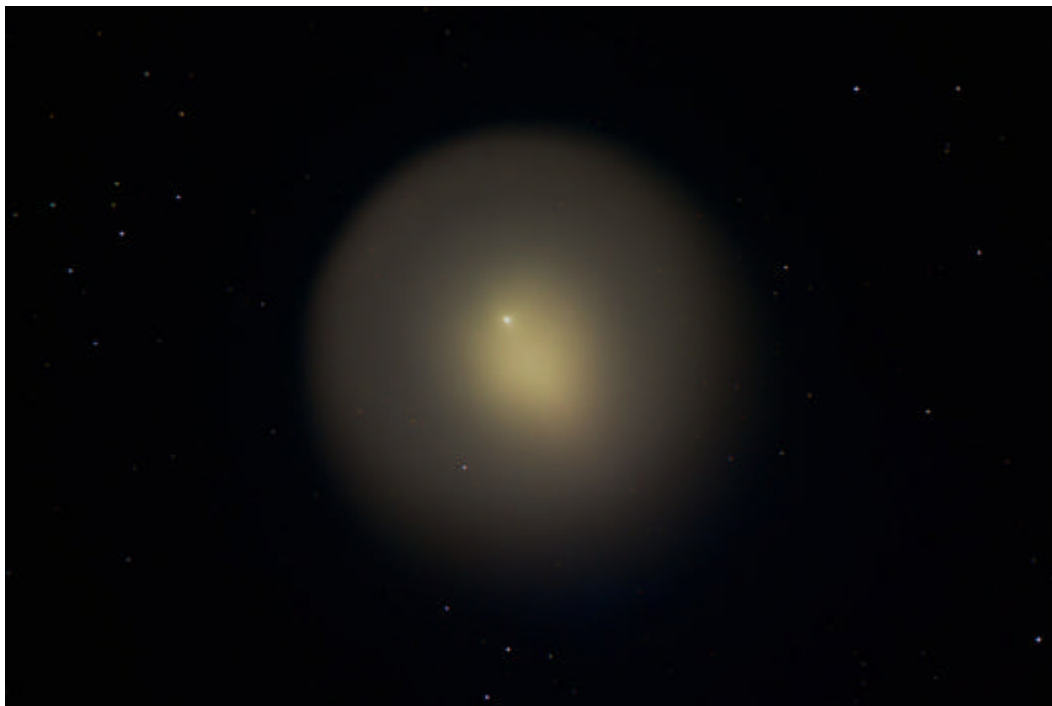
Number 5

November Meeting on the 14th!!

This month's meeting - **our very last** - will be at 7:30 p.m. Wednesday, 14 November 2007 when we return to **Room 309 of Lawrence Hall** on the SRSU Campus where Chuck Dobbins will present a program "What I Viewed Recently" which will give the members and visitors in attendance an opportunity to share with the group which constellations and/or other astronomical bodies they viewed since our meeting in September.

Sadly, only a very few members have paid their dues in 2007. Since our membership has dwindled to only a handful **the Society officers have decided to dissolve the organization at the completion of this month's meeting.** The Society will contribute all remaining funds and other assets to the McDonald Observatory. The greatest portion of the contribution will be the proceeds of the Murray Newman fund proceeds, which will be earmarked as a gift dedicated to future Observatory educational projects in Murray Newman's name.

Several Reports on Comet Holmes



Take a careful look, and you'll see that Comet Holmes has a tail now.

Thanks to Rick J. for the amazing photo. See the full size image at <http://www.universetoday.com/wp-content/uploads/2007/11/2007-1105holmes.jpg>

Comet Holmes' Coma Expands

from the Jet Propulsion Laboratory

http://solarsystem.nasa.gov/news/display.cfm?News_ID=24015

Usually comets are challenging little no-see-um fuzzballs. To see one often requires a dark sky, a good chart or a telescope that can “go-to” the object automatically. This week there is a newly visible comet in the sky and it can be seen with the unaided eye! Last week, Periodic comet Holmes (17P/Holmes), a very faint comet far from the sun experienced an outburst and brightened a million times in just a few hours. The comet puffed up (it’s still expanding), changed color and wowed viewers around the world.

The Astronomy Photo of the day for October 30 shows the comet’s current apparent size in the sky - compared to Jupiter, which you can also see in the west after sunset.

To see the comet, all you have to do is step outside and look to the Northeast. You should be able to see the “W” that is the constellation Cassiopeia - it’s standing on its end. One and a half “fists” away to the right is a bright star in the constellation Perseus. You probably won’t be able to see all the Perseus stars, but the bright one - Mirfak - should be visible. It marks the top of a triangle, which is about the size of your thumb held at arms length away. The triangle’s lower left corner is the comet! Use our chart to the right to help find the comet.

The comet will stay with us for a while, so weather permitting, you’ll get a look this week or next.

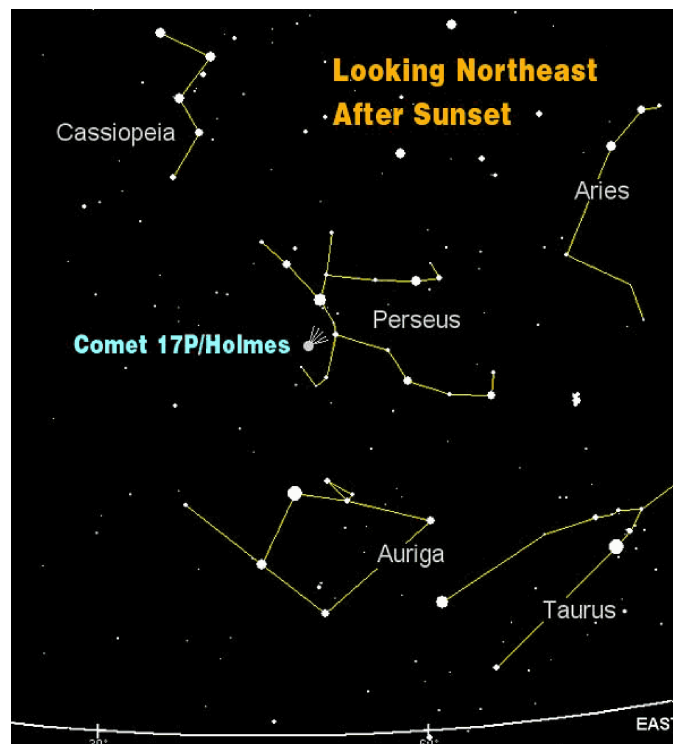
Obscure Comet Explodes Into View

from *Star Date Online*

http://stardate.org/nightsky/comets/comet_holmes.html

A comet that has orbited the Sun in obscurity since its discovery more than a century ago has suddenly turned into a showoff. In just two days, it grew almost a million times brighter -- from a blip far too faint to see without a good-sized telescope, to a fuzzy yellow ball that’s brighter than most of the stars that are visible to the naked eye.

Comet Holmes is passing through the constellation Perseus, the hero, which is high in the northeast



in early evening and passes almost directly overhead in the wee hours of the morning. The comet has not developed a tail, however, because it is too far from the Sun. As a result, it is difficult to distinguish from a true star. Binoculars or a small telescope reveal a bit of fuzziness around its edges.

From October 23 to 25, the comet's brightness increased from 17th magnitude to 2nd or 3rd (a smaller number indicates a brighter source) -- a factor of one million -- but astronomers don't know why.

It flared up at least once before, in 1892, when it was discovered by amateur astronomer Edwin Holmes. It disappeared from view the following year, and was seen only twice more until the 1960s. Other comets have flared up when pockets of gas exploded from beneath their icy crusts, or when the comets split into fragments. So far, there is no evidence that Comet Holmes has undergone either of these events. It is more than 150 million miles from Earth, and no more than a few miles in diameter, so it is difficult for astronomers to see any details.

Because of its erratic behavior, the comet could fade back into obscurity at any time. For now, it is in the sky all night, although it may be tough to see through the glare of the waning Moon. The view should improve as the Moon grows fainter, and rises later each night.

17P/Holmes

from *Wikipedia*, the free encyclopedia

visit <http://en.wikipedia.org/wiki/17P/Holmes> for a fully footnoted version of this article.

Comet 17P/Holmes was discovered by Edwin Holmes on November 6, 1892 while he was conducting regular observations of the Andromeda Galaxy (M31). Its discovery in 1892 was made because of and during magnitude changes similar to the 2007 outburst. 17P/Holmes brightened to an approximate magnitude of 4 or 5 before fading from visibility over a period of several weeks.

The comet's discovery was confirmed by Edward Walter Maunder (Royal Observatory, Greenwich, England), William Henry Maw (England), and Kidd (Bramley, England), and independent discoveries were made by Thomas David Anderson (Edinburgh, Scotland) on November 8 and by John Ewen Davidson (Mackay, Queensland, Australia) on November 9. Also, identified by Michael Brown (Wilkes) (USA).

The first elliptical orbits of 17P/Holmes were calculated independently by Heinrich Kreutz and George Mary Searle. Additional orbits eventually established the perihelion date as June 13 and the orbital period as 6.9 years. These calculations proved that the comet was not a return of 3D/Biela.

The 1899 and 1906 appearances were observed, but the comet was lost after 1906 until recovered on July 16, 1964 by Elizabeth Roemer (US Naval Observatory, Flagstaff, Arizona, USA). Aided by the computer predictions of Brian G. Marsden, the comet has been observed on every subsequent return.

Between October 23-24, 2007, Comet Holmes grew much brighter, going from magnitude 17 to magnitude 2.5 in just a few hours. The first person reportedly to notice a change was J. A. Henríquez Santana on Tenerife in the Canary Islands; minutes later Ramón Naves in Barcelona noticed the comet at magnitude 7.3. It became easily visible to the naked eye as a bright yellow "star" in Perseus, and by October 25 17P/Holmes appeared as the third brightest "star" in that constellation.

While large telescopes showed fine-scale cometary details, naked-eye observations gave a view similar to that of a star until October 26. After that date, 17P/Holmes began to appear more comet-like to naked-eye observers. During the comet's outburst, its orbit took it to near opposition with respect to Earth, and since comet tails point away from the Sun, Earth observers were looking nearly straight down along the tail of 17P/Holmes, making the comet appear as a bright sphere.

Based on orbital computations and luminosity before the 2007 outburst, the comet's nuclear diameter was estimated at 3.4 km. In late October 2007 the coma's diameter increased from 3.3 arcminutes to over 13 arcminutes, about half the diameter that the Moon subtends in the sky. At a distance of around 2 AU, this means that the true diameter of the coma swelled to over 1 million km, or about 70% of the diameter of the Sun. By comparison, the Moon is 380,000 km from Earth. Therefore, during the 2007 outburst of Comet Holmes the coma was a sphere wider than the diameter of the Moon's orbit around Earth.



**** FINAL BBAS Meeting ****

**Wednesday, 14 November 2007
7:30 p.m., in Room 309 of the Lawrence Hall,
on the SRSU Campus**

**“What I Viewed Recently”
by Chuck Dobbins and others in attendance**

Please join us for our **very last**
educational and entertaining program.