



Challenger
LEARNING CENTER
of Hardin County



The Otter Creek Astronomical Observatory

The Observer

September 2007 (#10)

Evening Programs:

September 15 (beginning at sunset)
October 20 (beginning at sunset)
November 17 (beginning at 6 PM EST)
December 15 (beginning at 6 PM EST)

Join the observatory staff for a tour of what is visible in the night sky, including the moon, stars, and planets. *All evening programs are "weather permitting"--if the sky is not clear enough for celestial objects to be visible the observatory will not be open. Evening programs begin at sunset.*

Daytime (solar) Programs:

October 6, November 3, December 1

Daytime programs are "open house" at the observatory. Come safely observe of the Sun, with its prominences and sunspots. Walk the model solar system trail and get a sense of the size of things in space. Check out our telescopes and learn about the observatory -- after all, you can't really see what's in the observatory when it is dark. *Daytime programs are held "rain or shine"--the observatory is open regardless of weather. Daytime programs begin at 11 AM Eastern Time.*

Visit the Otter Creek Observatory web page at

www.ottercreekpark.org

A Big Name in Amateur Astronomy Comes to Louisville

John Dobson, the father of what is known as “sidewalk astronomy” and the inventor of the Dobsonian telescope, will be in Louisville September 24-30, 2007. Sidewalk astronomy involves promoting astronomy in public places, usually by simply setting a telescope up on a sidewalk in an urban area and inviting passers-by to have a look. A “Dobsonian” telescope is a telescope with a very simple mounting mechanism usually made of plywood and other simple materials. Dobsonian telescopes are usually inexpensive for their size. The Dobsonian concept had a big impact on what sort of telescopes were available to the average person who had an interest in astronomy and who might want to purchase or build his or her own telescope. Dobson’s designs made larger telescopes more affordable. Dobson’s visit to Louisville is a rare event



The common telescope before John Dobson – smaller and much more costly.



The common telescope after John Dobson – larger yet much more affordable.

that is likely to be of interest to visitors to Otter Creek Observatory. The information below has been adapted from material provide to OCO by the Louisville Astronomical Society (LAS):

John Dobson will participate in several sidewalk astronomy events, visit the LAS Urban Astronomy Center at E.P. “Tom” Sawyer State Park on September 25 and 28, attend a reception and “star party” (where astronomy enthusiasts set up their telescopes and observe and talk) at Turtle Run Winery in Corydon on Wednesday and lecture at U of L on Friday night, September 28 at 7:00 PM. The LAS, Mark Steven Williams of stargeezerastronomy.com and the Sidewalk Astronomers of America have joined together to co-sponsor Mr. Dobson’s rare visit to Louisville. All events are open to the public:

Tuesday, September 25, 7:00 PM – Workshop with the Master. Join John Dobson at the LAS Urban Astronomy Center at E.P. “Tom” Sawyer State Park in Louisville. Dobson to speak at 9:00 PM. If you have a telescope, bring it! Located in the Root Cellar building at the back of this urban state park, the LAS Urban Astronomy Center features a various telescopes, a virtual solar system tour on the Starship “Unbridled Spirit”, a classroom, restroom, kitchen, computer center, kid’s activities area, a four acre observing field and parking.

Wednesday, September 26, 7:00 PM – Join Mark Steven Williams of StarGeezerAstronomy.com, Lacy Thomas of the Sidewalk Astronomers and the members of the Louisville Astronomical Society as they honor John Dobson at a reception and star party at Turtle Run Winery, Corydon, Indiana.

Friday, September 28, 7:00 PM – Lecture by John at Strickler Hall Room 102 on the U of L campus. Dobson will cover the history of Sidewalk Astronomy in America. At 9:00 PM, there will be a Public Star Party at the Urban Astronomy Center at E.P. "Tom" Sawyer State Park.

Saturday, September 29, 9:00 PM – Mile of Scopes on Bardstown Road. Telescopes set up along one mile of Bardstown Road from Heine Brothers' Coffee at Eastern Parkway to Wick's Pizza at Baxter and Bardstown.

For more information contact Louisville Astronomical Society president Ken Alderson at 939-0324 or megacoach@aol.com.

John Dobson – A Brief Biography

John Dobson has been called the "Pied Piper of Astronomy," the "Star Monk," and the "MacGyver of Astronomy." He is arguably one of the most influential personalities in amateur astronomy in the last 50 years. He has almost single-handedly revolutionized backyard astronomy by bringing it out to the street, making it accessible for anyone who has ever looked up in wonder, and asked "Why?"

John Dobson was born in Peking (Beijing), China, on September 14, 1915. In 1927, John and his family moved to San Francisco. John completed a degree in Chemistry at the University of California at Berkeley in 1943 and joined a Vedanta Monastery in San Francisco in 1944.

Having graduated from the university as a chemist, he wanted to see for himself what the Universe looked like. So John built his first telescope in 1956. It was a small telescope, made from a lens he got in a junk store and an eyepiece from an old pair of binoculars. Through it, he could see the rings of Saturn. One of his fellow monks told him that it was possible to grind a telescope mirror, so John then made his first mirror out of a marine-salvage 12" porthole glass. When he looked at the third-quarter moon with his finished telescope, he was surprised and deeply moved by what he saw. His first thought was, "Everybody's got to see this."

So began John's long commitment to public-service in astronomy.

Since John was a monk and had no money, he had to find a way to make telescopes using scrap materials that could be gathered up at no cost. His telescopes were made from discarded hose reels, lumber core cut-outs from school house doors, and scrap wood.

Such was the humble origin of what has come to be known as the "Dobsonian" telescope. These are Newtonian telescopes. A Dobsonian mount is really a type of alt-azimuth telescope mount. What makes it so unique is its simplicity, it moves up and down, left and right.

John never thought of getting a patent for his design although many suggested it. It's like re-inventing a cup – we've had cups all along, and if you try to patent a cup with a handle, you can't. While patenting his design might have been difficult, it wouldn't have been difficult to copyright the name "Dobsonian", but that was never something John even considered. His mission was to get as many telescopes out there as possible by making it as easy as possible, not making it harder with restrictions.

After leaving the monastic life in the late 1960's, John decided to dedicate the rest of his life to public service astronomy and hitchhiked to San Francisco. He set up telescopes at the corner of Broderick and Jackson streets

in San Francisco every clear night. Thousands of people looked through the telescopes while John talked to them in detail about what they were seeing. (This practice is still an integral part of Sidewalk Astronomy: astronomical information must be supplied by the telescope operator so the viewers can understand what they see).

In 1968, some of the kids who had made telescopes under John's guidance, and who joined him in setting up scopes at Jackson and Broderick, started a public-service organization named the San Francisco Sidewalk Astronomers. As the organization grew, larger telescopes were made and taken out to the streets. By 1970, the Sidewalk Astronomers had a 24-inch telescope which was freeway portable. The possibility of showing deep sky objects to large numbers of people through very large telescopes led the growing band of Sidewalk Astronomers to National Parks and Monuments, Native American reservations, and out of the country to places where "dark skies and the public collide."

Because of his influence, millions of people all over the world have looked through the telescopes of the Sidewalk Astronomers (the San Francisco was dropped when chapters started forming worldwide). John has helped to simplify the art of mirror making enabling thousands of children and adults with no previous experience or special training in optics to experience the joy of turning slabs of glass into powerful eyes into the heavens with their own hands. The "Dobsonian" mount has made large, "user friendly" telescopes affordable and accessible to the general public. Thousands of people have made their own sturdy, low-cost telescopes under John's direction or on their own by using his simple design.

Telescopes with light-weight mirrors previously considered unusable, long focal ratios previously considered unmanageable, and apertures previously considered unthinkable are now in the hands of lovers of astronomy around the globe. With so many home-made Dobsonians showing up everywhere, commercial telescope makers joined the trend and now most offer relatively inexpensive Dobsonians. Timothy Ferris, in his book, *Seeing in the Dark*, states, "The amateur astronomy revolution was incited by three technological innovations - the Dobsonian telescope, CCD light-sensing devices, and the Internet."

John still spends most of his time traveling and spreading the art of telescope making and sharing his views on cosmology to amateur astronomy clubs around the world, as their guest. John and the Sidewalk Astronomers continue to serve the public with large telescopes, providing free "star parties" and slide shows under dark skies and city lights, encouraging the citizens of this planet to think and wonder about the Universe and give them a chance to see its beauty with their own eyes.