

The Observer

September 2009 (#20)



Great Astronomy Exhibits – Both Near and Far



THE UNIVERSE
YOURS TO DISCOVER

INTERNATIONAL YEAR OF
ASTRONOMY
2009

Thanks to the ongoing IYA 2009, there are a lot of excellent astronomy-related activities going on all around the country. The focus of this newsletter is on two really cool museum exhibits – one right here in Kentuckiana; one a little further away, in Chicago.



Fathers of Astronomy Frazier International History Museum (Louisville, Kentucky)



From the start of August through the end of 2009 the Frazier International History Museum will be hosting the exhibit “Fathers of Astronomy”, featuring the two books that literally changed the world as we know it – Nicolaus Copernicus’s *On the Revolutions of Heavenly Spheres* and Galileo Galilei’s *Dialogue Concerning the two Chief World Systems*. The exhibit also features a pre-Copernican book, the *Nuremberg Chronicle*, and interpretive panels discussing the scientific debate that occurred over whether or not the Earth moved. The books are from the University of Louisville’s William Marshall Bullitt Collection of Rare Mathematics and Astronomy. The panels were provided by your very own Otter Creek-South Harrison Observatory.

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Visit the Observatory web page at
www.jefferson.kctcs.edu/observatory

Schedule of Public Programs:

Nighttime programs:

Aug. 22nd 9 – 11 pm
Sept 26th 8:30 – 10:30 pm
Oct. 17th 8:00 – 10:00 pm
Nov. 21st 6:30 – 8:30 pm
Dec. 12th 6:30 – 8:30 pm
Jan. 23rd 6:30 – 8:30 pm
Feb. 20th 7:30 – 9:30 pm

Daytime programs:

Sept. 5th 11 am to 1 pm
Oct. 10th 11 am to 1 pm
Nov. 7th 11 am to 1 pm
Dec. 5th 11 am to 1 pm
Jan. 9th 11 am to 1 pm
Feb. 6th 11 am to 1 pm
Mar. 6th 11 am to 1 pm

All programs at South Harrison Park are open rain or shine. Check with Park Astronomer, Park office, or websites below for updates.

Contacts: Park Astronomer – Henry Sipes – 270-668-2103
Harrison County Park Office – 812-738-8236

Websites: <http://www.harrisoncoparks.com/Observatory.html>
<http://www.jefferson.kctcs.edu/observatory/>
<http://astronomy2009.us/>

All times are Eastern time zone.

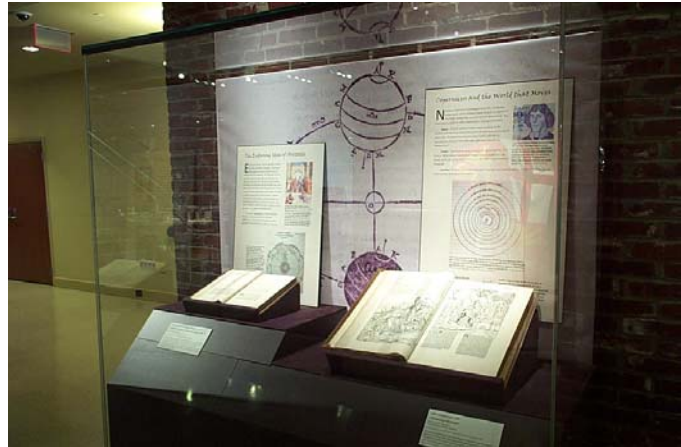
Nighttime programs: Join the observatory staff for a tour of what is visible in the night sky, including the moon, stars, and planets.

Daytime programs: Daytime programs are "open house" at the observatory. Come safely observe the Sun, with its prominences and sunspots. 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.

Copernicus published his *On the Revolutions of Heavenly Spheres* in 1543. And yes, the book featured in the exhibit is a “first edition”, one of the original books printed. It is over 460 years old! In this book Copernicus laid out his theory that the Earth circled the Sun. This Sun-centered, or “heliocentric” theory marks the beginning of modern astronomy, for prior to Copernicus astronomers thought that the Sun circled the Earth.

However, let’s face it, common sense tells us that the Sun *does* circle the Earth – we see the Sun rise in the east every morning and set in the west every evening, only to rise in the east again the next day.

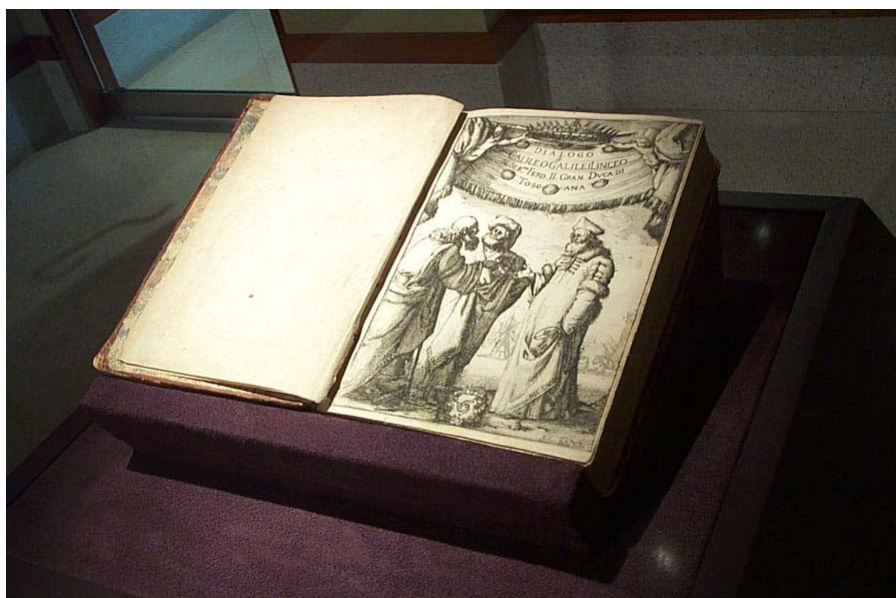
Copernicus’s theory probably would never have gotten past basic common-sense objections were it not for the work of Galileo Galilei, who used his telescope to argue that Copernicus was right. Galileo wanted to prove Copernicus was right, and wrote the *Dialogue Concerning the Two Chief World Systems* in an attempt to do just that. While



“Fathers of Astronomy” is located right at the front of the Frazier International History Museum. The museum is located in downtown Louisville, at the corner of 9th and Main. Admission to the museum is normally \$9 (\$6 for kids), but August 26 is “Nickel Day” where admission is a nickel, and September 5 is “Founder’s Day”, where admission is free. Visit www.fraziermuseum.org or call (502) 753-5663 for more information.



The 460-year-old *On the Revolutions of Heavenly Spheres*, the book that started modern astronomy, is on display at the Frazier International History Museum in Louisville.



The *Dialogue* of Galileo Galilei – perhaps one of the most famous and most controversial books ever written – at the Frazier in Louisville.

Galileo did not succeed in proving Copernicus right, he did prove that the old ideas that dominated astronomy for so long were wrong, and thus was a key figure in the history of science. The *Dialogue*, which Galileo published in 1632, is one of the most famous books ever printed – and one of the most controversial! And, yes again, the book featured in the Frazier exhibit is one of the originals, over 370 years old.

“Fathers of Astronomy” discusses both why scientists were initially reluctant to embrace Copernicus’s and Galileo’s ideas, and why those ideas eventually triumphed and became the stuff every kid learns in school – that the Earth is a planet that circles the Sun.

Telescopes: Through the Looking Glass Adler Planetarium (Chicago, Illinois)



If the exhibit at the Frazier in Louisville whets your appetite for astronomy exhibits, you might want to make the drive to Chicago to see the Adler Planetarium’s exhibit of “Telescopes: Through the Looking Glass”.

The Adler features an amazing collection of telescopes – the Adler says that this exhibit is the most comprehensive exhibition of its kind to date.

The exhibit presents the technology used to gather information about the Universe, from Galileo's first observations in the 17th century to the leading-edge technology employed by the Hubble Space Telescope and to the adaptive optics used in the telescopes of today and tomorrow. The exhibition illustrates how these instruments have changed our

concepts of the Universe and of our place in it. It includes hands-on, kid-friendly “interactive” features. The exhibition explores the extraordinary beauty and technology of telescopes and the objects telescopes enable us to discover.

One of the observatory staff, Chris Graney, was able to visit this exhibit in July and highly recommends it! Of course there is lots more to see at the Adler, too – probably more than you would want to attempt in a single day!



This large telescope was built for the University of Mississippi in the 1860's, but the Civil War prevented the telescope from ever making it to Mississippi. The telescope was one of the largest in the world at the time, and no doubt would have helped make Mississippi a prominent name in astronomical research. However, during the war Mississippi went from being one of the richest states in the U.S. to being one of the poorest, and never became the home of cutting-edge astronomy.



A telescope built by William Herschel, a German musician turned astronomer. Herschel used a telescope identical to this seven-foot-long reflector to discover the planet Uranus in 1781.



Heath's Grand Orrery, built around 1740. This was a mechanical model of the universe, which showed the motions of planets. It was also a work of art, and an example of fine craftsmanship.



An 1843 Dollond telescope. This elaborately decorated piece is made out of gold-plated sterling silver. The main tube shows raised scrollwork and foliate decoration, its case red Moroccan leather with elaborate fold tooling.

All images are from the Adler Planetarium. Some of the text is adapted from the Adler as well. For more information, visit www.adlerplanetarium.org.