

Planetary Wonderings
October Focus: Sputnik --- 50th Anniversary
By Mary-Frances Bartels, NASA Solar System Ambassador

This month marks the 50th anniversary of the launch of Sputnik, the first manmade object to reach outer space. In a world whose very existence, it seems, depends heavily on hundreds, if not thousands, of complex artificial satellites, it can be difficult to get excited over the launch of a 183 lb. “basketball” that could only transmit “beep, beep, beep” so long ago. First, read a brief history of the project:

The story begins in 1952, when the International Council of Scientific Unions established July 1, 1957, to December 31, 1958, as the [International Geophysical Year \(IGY\)](#). Two years later, the council adopted a resolution calling for mapping satellites to be launched during the IGY. In September 1955, the Naval Research Laboratory's [Vanguard](#) proposal was chosen to represent the U.S. during the IGY.

The USSR's Sputnik launch on October 4, 1957 changed everything. This technical feat caught the world off-guard. Its size was more impressive than Vanguard's intended 3.5-pound payload. Additionally, the launch fueled the American public's Cold War fears and brought it into everyone's living room. A month later the Soviets launched Sputnik II, carrying a much heavier payload, including a dog named Laika. The Space Race was on, and the Soviets decidedly were in the lead!

On January 31, 1958, the tide changed, when the United States successfully launched Explorer I. This satellite carried a small scientific payload that eventually discovered the magnetic radiation belts around the Earth, named after principal investigator James Van Allen. The Explorer program continued as a successful ongoing series of lightweight, scientifically useful spacecraft.

The Sputnik event changed the future of the world. It led to the creation of National Aeronautics and Space Administration (NASA) a year later. It also led to the beginning of the Advanced Research Projects Agency (ARPA) which developed a primitive computer networking protocol ARPAnet, ancestor to today's internet. Other direct results of the Sputnik launch are too numerous to note here.

Partially in honor of Sputnik, in 1999 the UN declared each October 4 – 10 World Space Week. This year's emphasis is **50 Years in Space**. More info may be found at <http://www.spaceweek.org/>.

Resource of the Month: In 1957 there was just Sputnik. Today there are thousands of satellites. Find out where and when you can see some of them at www.heavens-above.com. Heavens-Above lists the most popular ones such as the International Space Station, Hubble Space Telescope, and even ham radio satellites. Others are available upon request.

Activity of the Month: Celebrate the Sputnik anniversary, as a family if possible! Learn what life was like 50 years ago, and talk about what you think life will be like 50 years from now. Build and fly model rockets. Kits are available from most hobby stores. Visit the Armstrong Air & Space Museum in Wapakoneta (<http://ohiohistory.org/places/armstron>). Learn more about satellites at <http://thetech.org/exhibits/online/satellite>. Listen to a portion of Sputnik's transmission

at <http://tinyurl.com/377f8m> . Make a phone call, program a trip on your car's GPS, check the weather, use an ATM, find overhead images of your house—none of these things would be possible without the many satellites orbiting Earth 50 years after primitive Sputnik led the way. Lastly, check out the following events:

In the presence of Russian dignitaries, watch the annual restaging of the Wright brothers' 1905 demonstration flight at Huffman Prairie Flying Field near Dayton on Oct. 5. [Dayton Aviation Heritage Foundation](#) invited the Russians to visit Ohio during the Sputnik anniversary. In celebration, Russia's ambassador to the United States, Yuri Ushakov, and space attaché Yevgeny Zvedra will visit the Armstrong Air and Space Museum in Wapakoneta, the University of Dayton, and attend a gala event at Carillon Park on Oct. 4.

Those willing to drive a couple of hours may join Shannon Murphy, Solar System Ambassador, for a special event at the Sherzer Observatory in Ypsilanti, MI on the 4th . See <http://www.physics.emich.edu/astclub/index.htm> .

Adventurers can drive about six hours and visit Coalwood, WV's annual October Sky Festival featuring “all the Rocket Boys” as well as former astronaut Bill Readdy on Oct. 6. For more info see http://www.coalwoodwestvirginia.com/october_sky_festival.htm .

Suggestions, questions, and comments about “Planetary Wonderings” are welcomed and may be directed to stargazer @ keeplookingup.net (remove spaces). Past columns may be found at www.keeplookingup.net (click on “Planetary Wonderings” on the right side of opening screen).

Remember to *keep looking up!*

Sources (not already mentioned): <http://history.nasa.gov/sputnik/>
<http://dayton.bizjournals.com/dayton/stories/2007/08/27/daily9.html>