



## Presidents Message – March 2014

Science writer Mike Hall wrote this piece on a study published by the Royal Astronomical Society:

The vast majority of stars in our Milky Way galaxy host planets, many of which may be capable of supporting life as we know it, as a new study suggests.

Astronomers have detected eight new exoplanet candidates circling nearby red dwarf stars, which make up at least 75 percent of the galaxy's 100 billion or so stars. Three of these worlds are just slightly bigger than Earth and orbit in the "habitable zone", the range of distances from a parent star where liquid water could exist on a planet's surface. The new finds imply that virtually all red dwarfs throughout the Milky Way have planets, and at least 25 percent of these stars in the sun's own neighborhood host habitable-zone "super-Earths," researchers said.

"We are clearly probing a highly abundant population of low-mass planets, and can readily expect to find many more in the near future, even around the very closest stars to the sun," study lead author Mikko Tuomi, of the University of Hertfordshire in the United Kingdom, said in a statement. Tuomi and his colleagues spotted the exoplanet candidates after combining data gathered by two instruments, the High Accuracy Radial velocity Planet Searcher (HARPS) and the Ultraviolet and Visual Echelle Spectrograph (UVES), both of which are operated by the European Southern Observatory in Chile. Both HARPS and UVES employ the radial-velocity technique, which detects exoplanets by noticing the tiny wobbles they induce in their parent stars' motion toward or away from Earth.

"We were looking at the data from UVES alone, and noticed some variability that could not be explained by random noise," Tuomi said. "By combining those with data from HARPS, we managed to spot this spectacular haul of planet candidates." The eight new found candidates circle stars located between 15 and 80 light-years away from Earth. The worlds orbit their parent stars at distances ranging from 0.05 to four times the Earth-sun distance, one AU or about 93 million miles, researchers said.

The new detections bolster observations made by NASA's prolific Kepler Space Telescope, which launched in 2009 to hunt for alien worlds around stars that lie considerably farther away from Earth. "This result is somewhat expected in the sense that studies of distant red dwarfs with the Kepler mission indicate a significant population of small-radius planets," said study co-author Hugh Jones, also from the University of Hertfordshire. "So it is pleasing to be able to confirm this result with a sample of stars that are among the brightest in their class. In 1980 the astronomer Carl Sagan launched "Cosmos," an epic TV series that brought science to the public like never before, and opened up all of space and time to exploration. A generation later, Sagan's legacy lives again in "**Cosmos: A Space-Time Odyssey**", a 21st-century remake premiering on Fox and the National Geographic networks. The new "Cosmos" updates its predecessor with a blend of spectacular visual effects and the latest astronomical discoveries.

The all-new 13-episode series is hosted by astrophysicist Neil deGrasse Tyson, a fitting successor to Sagan for reasons the first episode makes clear. It stays true to Sagan's goal, which is to share the wonder of the universe and science with viewers. The people behind the new series **think Sagan would be proud.**

"He'd be thrilled that this new 'Cosmos' is going to be the largest roll out of a television series in history, and he would be absolutely thrilled and very proud that his flame is still burning so brightly," said series executive producer Ann Druyan, a co-writer on both Cosmos series and the widow of Carl Sagan.

Mike Thomas.

*Jan 2014 Meeting Minutes:* The bulk of the business meeting was a discussion of proposed changes for our Astronomical Society.

In brief: President Mike and Observatory Director Robert, and the Board of Governors, feel that there is no need to have officers for the Society (ie; Pres. Mike & Vice-President Robert), as that just adds an additional infrastructure that is not needed to serve the needs of the Observatory. The Observatory Director, with the advice of the board, can provide direction and oversee programs. We will be looking into the scheduling, and frequency of meetings.

### **WNAS Officers**

**President** Mike Thomas, [mnethomas@sbcglobal.net](mailto:mnethomas@sbcglobal.net)  
**Vice President** Robert Collier, [collier@wnc.edu](mailto:collier@wnc.edu)  
**Newsletter Editor** James Bean, [chsdarkmatter@sbcglobal.net](mailto:chsdarkmatter@sbcglobal.net)  
**Webmaster** Doug George, [doug\\_george@msn.com](mailto:doug_george@msn.com)




Monthly Membership Meeting Tuesday, March 18th, 7:00 PM

## **"Project RECON, a Student's Perspective"**





By Zoey Gray, et al

Facilitated by James Bean, Physics & Astronomy Teacher, Carson High School

~ March 2014 ~

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1 Star Party New Moon 
2	3	4	5	6	7	8 Star Party Moon 1 <sup>st</sup> Qtr 
9	10	11	12	13	14	15 Star Party
16 Full Moon 	17	18 WNAS Meeting @JCDO 7pm	19	20 Equinox 16:57 UTC	21 RECON 21:00 - Midnight	22 Star Party Messier Mini Marathon
23	24 Moon Last Qtr 	25	26	27	28	29 Dark Skies Star Party
30 New Moon 	31	<b>Notes:</b>				

~ April 2014 ~

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5 Star Party
6	7 Moon 1 <sup>st</sup> Qtr 	8 Mars at <b>Opposition</b> The red planet will be at its closest approach to Earth	9	10	11	12 Star Party
13	14 <b>Lunar Eclipse</b> See times below	15 WNAS Meeting @JCDO 7pm Full Moon 	16	17	18	19 Star Party
20	21	22 Moon Last Qtr  <b>Lyrid meteors</b>	23 <b>Lyrid meteors</b>	24	25	26 Star Party
27	28	29 New Moon 	30	<b>April 15 UT</b> Penumbral Eclipse Begins: 04:53:37 UT /21:57:37 PDT Partial Eclipse Begins: 05:58:19 UT/22:58:19 PDT Total Eclipse Begins: 07:06:47 UT/00:06:47 PDT <b>Greatest Eclipse: 07:45:40 UT/00:45:40 PDT</b> Total Eclipse Ends: 08:24:35 UT/01:24:35 PDT Partial Eclipse Ends: 09:33:04 UT/02:33:04 PDT Penumbral Eclipse Ends: 10:37:37 UT/03:37:37 PDT		

