

**KVAS Meeting Minutes – 3/15/13**  
**Hansford Center, St. Albans, WV**  
**Minutes Taken by John Willson, Secretary**

---

Rodney Waugh, filling in for Bob Frostick, called the meeting to order at 7:35 pm.

**Miscellaneous Updates – Rodney Waugh**

Rodney shared a number of interesting news items and developments in astronomy

- Handout on Mars – the Curiosity rover has discovered a clay-like material on Mars, indicating water and potential life.
- Asteroid fly-by and the recent Russian meteorite. There was significant damage from the shock wave.
- Comet PanSTARRS – viewing should improve later in the next week.
- Spaceweather.com is a useful website, with a lot of information on asteroids
- Green Bank to see potential budget cuts, but the belief is that GB will survive. Dominion Energy, which has contributed to Start Quest in the past, is relocating. This could have a potential impact on their future donations.
- A third Van Allen belt has recently been discovered. The first Van Allen belts were discovered in the 1950's.
- Melissa Thorner discussed a recent solar flare that erupted.

**Planet Report – Ed Connors**

Ed shared an update of the viewing prognosis for the planets. All will be visible in the coming weeks except Venus and Mars. Saturn is improving, rising earlier, making viewing more convenient.

**Experiences in Astronomy – Michael Riggs**

Mike Riggs shared his experiences with KVAS and with astronomy for the group. Mike's involvement dates back to 1964, when the Club met on Elizabeth Street where the Board of Education is now. Later the Club met at the Library, then at Sunrise. One of the most enjoyable aspects for Mike has been his work on mathematical modeling of orbits, which he started with Bill Walker. Mike shared that modeling is difficult, but critically important. Mike shared his work and equations he has developed, along with computer program logic he developed to predict orbits. Mike learned how to do this by reading books and teaching himself. The models can predict the movement of planets, stars, and comets.

Mike pointed out that Astronomy integrates all the other disciplines of science into it – chemistry, physics, mathematics, etc.

Mike recommended a book that has helped him, called "Astronomy in a Nutshell", for anyone who wants to learn more.

We appreciate Mike's contributions to the Club, and his willingness to share his experiences with us.

### **Sharing on Meteorites – Chuck Spann**

Chuck shared several meteorites and descriptions with the group that illustrated different types of meteorites. Examples were from Diablo Canyon and Gold Basin, Arizona. Chuck also talked about the different types of meteorites, explaining the difference in stone and iron meteorites.

### **Grant Update – Chuck Spann**

Chuck gave an update on the status of our grant application. The Foundation Board met last Wednesday, and will communicate results in the coming week. Chuck hosted the chairman of the Foundation at Breezy Point, and also forwarded a recent "thank you" letter we received – to illustrate our impact on the community. We are hopeful for a positive outcome to our proposal.

### **Upcoming Event – Vatican Observatory Astronomer -- Janet Willson**

Janet shared that Father Chris Corbally, SJ, of the Vatican Observatory will be making a presentation entitled "When Astronomy and Religion Meet" on Tuesday, March 26, at 6:30pm at the University of Charleston. Admission is free, although Janet suggested people arrive early because parking is limited.

Janet also passed out some handouts that gave an overview of the Vatican Observatory, including pictures of telescopes from the Observatory.

### **Treasurer's Report – Danny Blair**

Danny stated that we currently have about \$12,000 in our treasury.

### **Blackwater Falls Event – June 21, 2013 – Melissa Thorner**

Melissa volunteered to support the Blackwater Falls event in June, but encouraged others to volunteer. We will need more than one person, assuming there is significant turnout. If you are willing to help, let Melissa or Bob Frostick know.

### **Star Quest Reminder – Rodney Waugh**

Rodney reminded the group that Star Quest will be July 10 – 14. There will be a representative from Sky and Telescope magazine as one of the speakers.

The meeting was adjourned at 9:00 pm.

Minutes submitted by John Willson, Secretary.

**Attendance**

John Willson	Judy Waugh
Janet Willson	Rodney Waugh
Lewis Cook	(illegible)
Robert Dean	Brent Ogle
Rodney Waugh	Michael Riggs
John Dennis	Bryson McCain
Ed Connors	Danny Blair
Carol Hilleary	Sandy Blair
Jane Corothers	Larry Wyner
Ernie Snodgrass	

(Please excuse any typos – some are tough to read!)