

# Rappahannock Astronomy Club

## Minutes, March 11, 2009, Meeting

In attendance:

- Barton Billard
- James Bingham
- Scott Busby
- Don Clark
- Brenda Conway
- Joe & Sherry Francis
- Leigh Gettier
- Tom Harmon
- Fernando Kain
- Chris Kaplan
- Daniel Lien
- Michael Masters
- Eric Morgan
- Jon Neasham
- Richard Pasto
- Tim Plunkett
- Chris Reed
- Debbie Sandler
- Nancy Snyder
- Javier & Ruby Valverde

President Scott Busby opened the meeting at 7:01 p.m. with introductions around the room. Seven new visitors joined us: Fernando Kain, Chris Kaplan, Eric Morgan, Richard Pasto, Chris Reed, Debbie Sandler, and Nancy Snyder. In addition, Don Clark, Brenda Conway, and Javier and Ruby Valverde returned tonight.

## Program

Scott Busby presented the program, which was part 1 of “Meteorites, Asteroids, and the Last Great Extinction Event.” In this part, he talked about origins and types of meteorites, and discussed classification, ways of identifying meteorites, and collecting.

Meteorites generally are remnants from the formation of the solar system. It began as a mass of gas and dust that began to spin and condense to form the Sun and planets. Some of the material was once the part of the cores of stars that went supernova. The condensation built up clumps, from dustballs to planetoids, and eventually the planets evolved. The process included many collisions; in some cases, dustballs violently heated, melted, and condensed in droplets called chondrites. In larger planetoids, gravitation resulted in differentiation, the settling of heavier materials, especially iron, into the cores.

Some meteorites were once part of the Moon or Mars, and possibly Mercury. When asked about Venus, Scott explained that its thick atmosphere probably accounts for no known meteorites originating from that planet. Radar imaging of the surface of Venus shows few impacts compared with the Moon, which has no atmosphere. Meteoritic material from the Moon can be identified by comparison of the constituents with rocks brought back by the Apollo missions. Similarly, spectroscopic data from Mars missions provide a means of identifying meteorites that contain material from there.

The main classes of meteorites are Iron, Stony, and Stony/Iron. The last class includes the pallasites, containing an “intimate mixture” of iron-rich metal and silica. They are very attractive when cut and polished, and are in high demand. Questions to ask to help identify meteorites include—

- Is it heavier than it looks?
- Does it have thumbprint-like impressions (regmaglypts)?
- Are there signs of rust?
- If metal, does it pass the nickel test? (Because of nickel allergies, pharmacies sell kits to test for the presence of nickel.)
- Is it angular (defined faces with at least slightly rounded corners)?
- Is a magnet attracted to it?

Identification is more difficult with stony meteorites. One can often find evidence of surface heating and flow caused by the passage through the atmosphere.

Javier asked about the relative effect of speed and mass on impacts. Scott said the website <http://www.spaceweather.com/> includes a calculator to predict impact effects. James mentioned that weather radars sometimes pick up meteor tracks, straight lines usually called noise or clutter.

Scott had samples of his meteorite collection on a table for the audience to examine during the break at the end of the talk

## Treasurer's Report

Treasurer Tim Plunkett presented his report for February. Twelve members had paid dues for 2009, and Tim added that another member paid this month. Members should pay their dues by the end of March each year.

## Old Business

Gallileoscope purchase—Orders are now being taken at a price of \$15. Three members offered to purchase one for the club along with a second for themselves. Scott moved and was seconded by Tom for the purchase of two from Club funds. There were no objections.

Universe DVD series—Some additional research is necessary on the various packages offered (Season 1, Seasons 1 & 2, all three seasons, with and without The Planets, etc.). The consensus was that the Club is interested in purchasing the full set plus The Planets. Tom moved and was seconded to authorize the expenditure of up to \$200 in Club funds to make the purchase when the favorable package price is determined.

Development of Boy Scout merit badge course—Mike reported that July 18 was picked for a clinic for Scouts.

Beginner's book list—There was nothing new to report.

Change from Yahoo to Google for RAC\_GROUP—Mark was absent so the topic was deferred.

Plan for field trip to Green Bank in WV—Mark DeVito was absent so the topic was deferred.

Plan for RAC attendance at regional star parties—Joe Francis is still putting together a survey.

Club meeting and star party announcements in local media—For the April meeting announcement, the topic is part 2 of Scott's presentation. (*This is where Tom made his motion about the DVD series.*) Tom suggested some handouts should be available for visitors and volunteered to print some for next time.

Suggestion for IYA 2009—Mike reported that he suggested need for a low-cost beginners book, which could be an offering similar to the Gallileoscope project. He has not had a response yet.

Meeting room alternatives—The list of alternatives circulated prior to tonight's meeting was discussed. Members also suggested Fredericksburg Academy, the Stafford YMCA, and the Massaponax Red Cross. James offered to ask a friend who could provide a contact for University of Mary Washington, and Jon said he could also be a backup for finding a contact. Scott volunteered to clarify the cost or expected amount of purchases for using the Pizza Hut. Mike asked people making suggestions to try to provide pros and cons assessment to add to the ones we already have in the current list. Except for the small room the Club has been using before this evening and Salem Church Library, the possibilities discussed were deemed worth further consideration. We will continue to use the Cable Room next month.

## **New Business**

Tim raised the issue of whether the Club needs to have a post office box. He reported that a misunderstanding about the end of the renewal period resulted in the lapse of the rental. The location at Spotsylvania Courthouse is also inconvenient. The main use of the box seems to be as a mailing address for the bank statements, and Tim could try banking online or having the statements sent to his home address.

## **Next Meeting**

The next meeting is scheduled for April 8, 2009, 7:00 p.m., at Central Rappahannock Regional Library Headquarters, Fredericksburg, Virginia.

Submitted by Bart Billard, Secretary