The Sidereal Times

NEWSLETTER OF THE ALBUQUERQUE ASTRONOMERS

PRESIDENT: BILL WAMPLER    NOVEMBER 1979    EDITOR: DEREK WALLENTINSEN

OUR NEXT MEETING will be on Saturday, November 17, 7:30 PM at the home of Carl Mora, 9709 Avenida de la Luna NE (821-6759, see map below). Our speaker will be Bill Wampler, who will provide commentary on slides and film about Jupiter, which will depict its cloud motion/structure, Jovian rotation, and satellite transits. This is the film that has enticed you in the ads in Sky and Telescope—don’t miss it! Afterwards, we will have a star party. It better be clear!

AT OUR LAST MEETING, Derek Wallentinsen announced the expected rate hike from Sky and Telescope—from 8 to 9 dollars per year for group subscriptions—and further proposed an across the board $1.50 increase for both regular and associate memberships. After he detailed the club’s expenses and pointed out that we have a near-zero net balance of funds in the treasury, there was only brief discussion before a motion to increase the membership fees was approved and passed unanimously. Membership rates will now be $15 per year for those receiving Sky and Telescope and $8 per year for associates (no subscription). The estimated additional $50 per year will allow the club to purchase current astronomical books for the library, and acquire any equipment or supplies needed for improvement of the observing area at the Tolles’ site.

Derek announced the discovery of Comet Meier in September by Canadian amateur Rolf Meier.

Bill Wampler reminded everyone about the upcoming elections (to be held at the January meeting) and asked for volunteers to be nominated for the club offices of president, vice-president, and secretary-treasurer. These offices don’t just fill themselves: if you are interested in holding a club post, please feel free to talk to the current officers.

Bill highly recommended the book The First Three Minutes by Steven Weinberg, a lucid account of the earliest moments of the Universe. Weinberg, with colleagues Glashow and Salam, recently won the 1979 Nobel Prize for Physics. George Tolles reported that the October 13 star party was cool, windy, and clouded out.

We then enjoyed a very interesting lecture by Klaus Keil of UNM’s Institute of Meteoritics, who spoke about meteorites and what they tell us about the origin and early evolution of the Solar System. Despite the landings on the Moon and Mars, these small bits of extraterrestrial material are still important and recent findings make it “very exciting to work in planetary science with meteorites.” The earliest recorded fall was in Alsace (France) in 1492; in modern times, the Sikhote-Alin event in Russia was an incredible natural phenomenon for those lucky few eyewitnesses. About 2500 meteorite specimens reside in collections around the world, including those displayed in UNM’s geology building. Antarctic finds in the last few years have contributed a thousand or more, as glaciers there naturally gather them against polar mountain ranges.

A quartet of types conveniently classifies the basic kinds of meteorites: irons (95% metallic nickel-iron, NiFe), stony-irons (30-70 percent NiFe), chondritic stones (2-30% NiFe), and achondrites (less than two percent NiFe). Irons are very distinctive: large masses of raw NiFe are not indigenous to the Earth and quickly rust away here. Any magnet can potentially find a scientific treasure. External ablation marks and internal structure—the
Widmannstätten pattern linked to very slow cooling rates—clearly mark these objects as not of the Earth. Stony-irons are noted for their inclusions of silicate minerals. Ablated crusts on stones are reminders of the dozen seconds of harsh entry into our atmosphere at 20 kilometers per second. Chondrules are found in lunar material as well as meteorites and they condensed very rapidly, probably subsequent but close to the primary formation of the Solar System.

To seek information about the earliest moments, we are compelled to use meteorites, as the Earth, Moon, and major planets are all too young and changed to preserve those first impressions. Stored in space since formation approximately 4.55 billion years ago, they alone speak across this time with evidence of the brevity of the cycle from exploded star to orbiting planet—a few tens of millions of years was all that separated supernova from solar system. Further insights are yet to come—eagerly awaited are corroborative data from the meteoritic parents, asteroids and comets. We wish to thank Dr. Keil for a fascinating talk!

STAR PARTY will be held on the evening of November 24 at Bullhead Park near San Pedro and Gibson (see map). We will set up on the east side of the park, which has few streetlights. Our observing session at Aztec Park on October 27 was very much enjoyed by all 12-15 participants. Despite the cool evening, observing continued until 11:30.