



# East Valley Astronomy Club

April

Newsletter

1995

## EVAC MEETING HIGHLIGHTS

The meeting started at 7:30 PM with about 50 members and several guests in attendance.

### EVAC Cookout/Public Star Party

As coordinator for the April 8th event, Don Farley gave us details and said to expect a large crowd. As it turned out, there were about 30 EVAC members there for the cookout by Ted Heckens and the Board of Directors meeting. Both were great successes—many thanks to those who brought sodas or a salad. The star party was well organized and the Club set up twenty or so telescopes but the expected crowd didn't materialize, perhaps due to the high clouds in the Phoenix area all day. The next opportunity to get involved with the public is coming soon on May 6th, which is **Astronomy Day**. Don Wrigley is organizing a public star party that night at Scottsdale Community College. Please contact Don or sign up at the upcoming meeting if you can help.

### Home Videos

Pierre Schwaar showed about 10 minutes of video taken through his telescopes of Mars and the occultation of Spica earlier this year. Seasonal change was clearly evident in the footage of Mars and the occultation was quite dramatic.

### Featured Presentation

Dr. Brian Skiff from Lowell Observatory spent an hour going over the creation of the Hubble Space Telescope *Guide Star Catalog (GSC)* and some of the follow-on catalogs in the works. The information covered would fill the entire newsletter. I will try and summarize as many of the main points as I can.

The true field of view in Hubble's sensors is quite small. The three pointing/tracking sensors need at least two guide stars in their even smaller fields of view. In star poor regions of our sky (near the Galactic

poles in Coma Berenices and Sculptor) the catalog would have to go down to at least 14.5 magnitude to fill the two star requirement. Not so in star rich areas of the sky. The original plan was to create target star fields for each object to be studied and transmit the data up as necessary. This would require a lot of manpower and was scrapped when extra time was created by the Challenger setback.

It was then decided to digitally scan all the sky survey plates for star positions and magnitude and create a database for the entire sky. A second, more up-to-date survey of the northern sky was then done by the Palomar Schmidt and used with the southern sky survey taken with UK Schmidt Telescope in Australia. The result was 250 gigabytes of data! Even so the GSC is incomplete.

The digital scans classified any elongated objects detected (such as close binary stars) as non-stellar. In terms of the GSC, they are not stars! This itself eliminates about 20% of the stars on the plates. Then in star rich regions of the sky, stars unnecessary for pointing/tracking were thrown out. The result is the GSC is far from complete below 12th magnitude or so.

As expected, plates had overlapping areas and the dual scans of objects were compared. Sometimes magnitudes differed by 1.0 magnitude! When compared to more accurate photometric measurements, the GSC has no better than 0.4 magnitude accuracy. With variable>

## UPCOMING CLUB EVENTS

EVAC Club Meeting, Apr. 19, 7:30 PM  
SCC, Physical Sci. Bldg, Room PS 172

Local Star Parties, Apr. 22, Sunset 7:01 PM  
Carefree and Florence Junction Sites

Deep Sky Star Party, Apr. 29, Sunset 7:06 PM  
Sentinel, AZ























