

## Delmarva Stargazers Meeting 2006-02-07

24 people.

When was the last time you were observing?

Most people didn't observe since Xmas. George DeLong new and wanting to get started.

Rick Barnes has club telescope.

The new bylaws passed.

Jerry Truitt: outreach 10:15 –11:15 on a Monday - wants a program for a school. Don Surlles has volunteered to do it.

- Several other people have requests for courses.
- Night sky network kit for outreach. Kits are great for classes but Truitt prefers to get them out with a telescope.
- Device to show how light reacts to curved mirrors. A flexible block with sticks perpendicular.
- Has a color bar that is easy to see in good light but is all grey under dim light as our eyes fail to see color in darkness.
- Bombay Hook has a good place to set up & we may do an outreach class.
- The planetarium in Philly? Will exchange a show for us for some outreach.

Yahoo groups have been showing good pictures lately – wants to build calendars from our own pictures. 25 calendars would be \$15. Need people to work and sell the calendars. Need to pre-sell the calendars. Since we can sell 15 foreign calendars we should be able to sell at least 25. Doug Miller, Dave Wells, Don Surles, Jeremy will help.

Mirror making: glass is here. Grit is here. This Saturday 9AM open the boxes and check the contents for completeness. Package the grit in pill bottles. Build a couple of grinding tables and mirror testing tables.

- Need newspapers, newsprint B&W. The event has been sold out. St Jones Reserve. We have 16 people to grind mirrors.
  - 514 Maryland (marylyn) Road, Dover.

Newsletter: now have JPL newsletter articles.

Treasurer's (Kathy Sheldon) report: Finances: \$6200.00.

Upcoming event in April: Presentation on sundials by Don Surles.

Presentation on Telescope optics by Dr. Hanigan:

This was a very detailed and complete description of telescope testing techniques. (Ed. I was fascinated by the talk so these notes seem distracted and incomplete because it was hard to write and learn at the same time.)

- Optical problems with telescopes and their cures. Rayleigh Ray-Lee.  $\frac{1}{4}$  wave optics are the limit of quality

- Maréchal criterion Measured many places and the RMS much be less than  $\frac{1}{4}$  wave.
- Strehl Ratio fraction of energy in the airy disk. Should be 84% Ideal is 80% or better
- The cost of  $\frac{1}{10}$  wave optics is worth about 4" more in aperture.
- Contrast transfer grid  $20 \times$  Rayleigh resolution. The area between the bars will blur. Higher spatial frequency (closer grating).
- 20% obstruction is still OK, very little lose of contrast transfer. In your description of 20% was it diameter or area? SCT's are about 33%. 1:6 ratio is good enough for three support points. PLOP is a program that shows mirror deformation by gravity.
- Coulter cut costs at all places – three point support for 17" mirrors. Striae – (pronunciation: Str iii ee)
- The error on the secondary is  $\frac{1}{2}$  the error at the bottom.