

2009 STELLAFANE CONVENTION  
*TECHNICAL TALK SCHEDULE*

Saturday, August 15<sup>th</sup>, 2009, in the Flanders Pavilion.

**"Autocollimation testing" by Richard Parker, 1:00 - 1:45**

Autocollimation testing provides an easy to interpret null test for a parabolic mirror, or any optical system that brings parallel incoming light to a focus. The test is fast and accurate. Autocollimation testing is not new, but is being used or considered by an increasing number of ATM's today as the interest in better telescope optics and group mirror making workshops is increasing. This talk will show the test concept and discuss: the requirements for an autocollimation flat mirror, important test bench features, how good the test is, and recognizing proper alignment of the test optics, and testing completed telescope assemblies. The similar Hindle sphere test for hyperboloids will also be shown. Whether you are a new or seasoned user of the autocollimation test, you will not want to miss this talk.

**"Recreating Galileo's Original Telescopes to High Precision Museum Quality and the Significance of these Instruments" by Jim and Rhoda Morris, 2:00 - 2:45**

There are only two known telescopes remaining of the 50 or more that Galileo built. This presentation will describe our process for replicating high precision museum quality replicas of both the leather covered "presentation" telescope and the paper covered "working" telescope housed at the IMSS in Florence Italy. We will cover our processes for researching the known information on these instruments, highlight discrepancies and describe their resolution by our visiting the originals to make our own measurements and observations. These replicas are displayed at IMSS and other museum exhibits in many countries especially as celebrations of the International Year of Astronomy. We will also discuss how these telescopes are not just optical levers but truly magnificent instruments that serve as excellent examples of 17<sup>th</sup> century technology and reflect the qualities that are part of our creative heritage and human condition.

**"Exploring the Moon: The Apollo Astronaut Experience" by Andrew Chaikin, 2:45 - 3:30**

Andrew Chaikin, author of "A Man on the Moon," will discuss the experiences of the Apollo lunar astronauts as they became the first humans to explore another world. His newest book, "Voices from the Moon," written with Victoria Kohl, features excerpts from his extensive interviews with 23 of the 24 Apollo lunar astronauts. Chaikin's talk will be illustrated with recent, high-quality scans of mission photography.

**"A Large Refracting Coronagraph for Solar Coronal Studies" by Steven Tomczyk, 3:30 - 4:15**

The detailed study of magnetic fields in the solar corona requires a telescope with an objective of at least 1.5 meters, a very low level of scattered light, and a large field-of-view. We believe that these requirements are best met by a coronagraph with a singlet lens objective which we are now proposing to build. We will discuss science drivers for the large coronagraph and present the results of engineering studies which show that a refracting telescope of this size is feasible with current technology.

**"Construction of a Maksutov-Newtonian as a First Maksutov, and Why" by Gerry Logan, 4:15 - 5:00**

Gerry Logan, who is a long time professional optician and amateur telescope maker, who specializes in complicated telescope designs, will discuss the benefits of constructing a Maksutov telescope and the specific benefits of the Maksutov-Newtonian design.

Please see other side.