

TECHNICAL TALKS
Saturday, August 7th, in the Pavilion

2:00 to 2:45 p.m.

Title: **"Schiaparelli's classic study of Mercury, in the light of CCD imagery."**

By William Sheehan, John Boudreau, and Alessandro Manara

In the 1880s, Giovanni Schiaparelli, director of the Brera Observatory in Milan and already famous for his mapping of Mars, undertook a long and careful study of the innermost planet, Mercury. He had a keen eye, a good telescope, and introduced the daylight study of the planet. He was able to make out delicate features on the planet's surface and after a series of observations occurring over a period of seven years, produced a planisphere, announced that the rotation period of the planet was the same as the orbital period, 88 days, and also that the surface was obscured by dust or vapors leading to his conclusion that the planet had an atmosphere more substantial than that of Mars.

His work would be confirmed and re-confirmed by later observers of the visual era. But, as was first discovered by radio astronomers in 1965, Schiaparelli got the rotation period and everything else all wrong. The anatomy of what led to Schiaparelli's magnificent failure is presented through a detailed reevaluation of the original drawings recorded in his observing logs in the light of CCD images of the planet obtained under nearly identical observing conditions. The result is to fundamentally vindicate Schiaparelli's data while at the same time showing how the problems he set himself to resolve exceeded the threshold of human capability for an observer equipped with eye, sketchpad, and telescope.

2:45 to 3:30 p.m.

"Which Way is Up"

By Bob Bower

The talk will describe the very colorful history of the two 16 inch glass blanks which will be used in Bower's next telescope construction project, a Newtonian-binocular. It will include Royalty, a sea battle, "The Man who bought a Navy", and the Orkney Islands.

3:30 to 4:15 p.m.

“Re-Constructing the Weight Drive for the 8 1/4 Inch Alvan Clark at Seagrave Obs.”

By Allen Hall

By the year 1980, many of the components to the Weight Drive for the Grand Old Alvan Clark refractor at Seagrave Memorial Observatory, in North Scituate, RI, had been lost or destroyed. This talk will chronicle efforts to restore the original weight drive system to the telescope, and the steps taken to reverse engineer all of the original system components from old photographs.

4:15 to 5:00 p.m.

“Best Targets for Astrophotography at Stellafane”

By Ruben Kier

Ruben Kier’s lecture will focus on the choice of celestial objects for astrophotography, especially objects situated for imaging at this year’s Stellafane convention. In choosing targets for imaging, amateur astro-photographers should seek out compositions that inspire the viewer. Furthermore, the object should be bright enough to image with an average CCD camera through a backyard telescope during a single evening. The target needs to be large enough to show detail and high enough in the sky to be captured from northern latitudes. Some of the best compositions include a second object to create a more dynamic image. With careful planning and proper choice of targets, amateur astronomers can obtain excellent images rivaling those obtained by professionals.