## FRA6 75-mm Secretan Refractor: Restoration/Adaptations

## **Initial condition:**

Optical accessories came in a paper sack. They include: a star-diagonal, a terrestrial eyepiece, and 3 celestial eyepieces. The top original wood plate on which the worm gear is situated was broken and part of it was missing.

## **Action taken:**

- 1. The bottom wood plate was removed and used to create a new top plate to replace the broken one. A Velcro button was attached to hold the star diagonal.
- 2. The broken top plate was reformed to hold the 3 celestial lenses and reattached where the bottom plate had been removed.
- 3. The terrestrial eyepiece tube was keepered (stored) in a novel compression holder designed to fit inside one of the tripod legs (see photos). The design and implementation of the holder did not affect the originality of the tripod in any way.



Bottom wooden plate removed and reused (in place) as the top plate holding the worm gear for the crank elevator.



The damaged and incomplete original top plate now shown in place after holes were cut with a Forstner bit and the plate attached to the bottom of the central block with wood screws from below. Note the black Velcro button just above the eyepieces for holding the star diagonal.



The terrestrial eyepiece tube holder shown here in black (center top and bottom) is held in place by pressure from the tripod legs as the top and bottom tripod bolts are tightened. The components of the two-piece eyepiece tube holder were made just slightly wider than the space between the tripod legs.

No bolts, screws or holes - just a friction/compression tight fit!