

FRA25 64-mm 2-piece (8-ft. long) Dollond Refracting Telescope, C. 1770-1780  
Adapted an old tripod and created a novel custom altazimuth mount **utilizing original novel hardware existing midway up the upper optical tube**

Original Condition/Issues:

1. Two tapered mahogany optical tubes with a heavy brass screw-together coupler.
2. No mount and no tripod.
3. Telescope did have a brass band with two small cylindrical shape tabs, which suggested a pivot point originally at that location (see photo below left).
4. There were no mounting marks, which suggested perhaps a compression mount or a zenith or quadrant mounting originally.

Restoration: With no tripod or mount the task was to create both

1. Designed and fabricated versatile mount with very little guidance from the literature.
  - a. Decided to use a compression collar mounted in a reverse hook-type mount.
  - b. This was combined with a flat brass sliding strut design for altitude adjustment utilizing the suggestive mounting tabs or knobs halfway up the second optical tube.
  - c. Full 360 degrees horizontally viewing combined with near zenith vertically viewing required raising the mount vertically about the tripod head about 12 inches for clearance of the flat brass struts as the telescope is lowered from the zenith position.
2. Found a suitable tripod that could be adapted to the custom mount and telescope



Original brass band with attachment knobs midway up second tube to which the flat brass struts were later attached.



After restoration with new custom mount and adapted tripod

FRA25 Restoration/Adaptation



Overall side view. Tension bolt on right slider fixes the viewing altitude  
Slider can be indexed in degrees for easy reading of the viewing angle.



Up-the-tub view showing the pivot points  
(utilized 3 wire-knurling stubby Dollond bolts).  
this perspective does not show the taper.

FRA25 Restoration/Adaptation



Compression collar supported by hook-type pivot mount.



Altitude adjuster with tension bolt



Pivot bracket and original collar midway up the second optical tube supports the upper section of the telescope

FRA25 Restoration/Adaptation



Adapted tripod with custom spider



Base of supporting column



Custom spider: folds down when decoupled



Custom spider with Dollond tightener

## FRA25 Restoration/Adaptation



Another originally orphaned telescope laying on the floor transformed into a fully functional beautiful and important telescope without affecting the originality of any component except the legs of the tripod where the brass spider arms are mounted and retract into the recesses.