CAVE OPTICAL COMPANY
4137 EAST ANAHEIM STREET
LONG BEACH, CALIFORNIA 90804

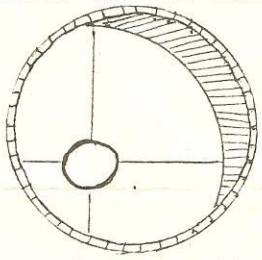
"INSTRUCTIONS ON ASTROLA REFLECTING TELESCOPES"

UNPACKING: Upon receipt of your telescope which has been most carefully packed to insure safe arrival, we advise that you first unpack the entire crate. The tube assembly is normally packed in the longest box or crate. The stand and equatorial mounting with oculars and optics are in the second box.

ASSEMBLING: After carefully unpacking all parts, we suggest that the three detached legs be mounted and locked from the bottom of the upright column. These legs keyway and lock in place to the inside of the column with the two sets of knurled brass nuts on each leg. Next, place the equatorial head on top of the stand and secure firmly with the three Allen Set Screws equally spaced about the top of the column; the polar axis should line up with one of the legs for greatest rigidity. If the primary mirror is not delivered and mounted with the cell in the tube, one of the three cell legs is marked to fit the seam of the telescope tube and ring. Secure the three cell mounting screws in the indicated holder, and the finder brackets are installed when the telescope is shipped and only the finder should be placed within the finder brackets. The focusing device is also installed. Once the primary mirror and cell are installed in the tube, the following steps should be taken to collimate or align the telescope optically.

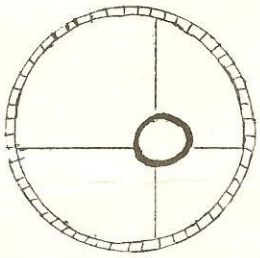
COLLIMATING OR ALIGNMENT OF MIRRORS: When looking into the focuser with the eyepiece or ocular removed, the diagonal mirror should show the primary mirror, four-vane spider, and the diagonal holder. The first step is to adjust the diagonal until the outline of the main mirror is centered within the circle of the smaller mirrors, when this has been accomplished, the picture will appear similar to B. Next, the main mirror is adjusted until all the circles viewed through the focuser are concentric as in drawing C.

A



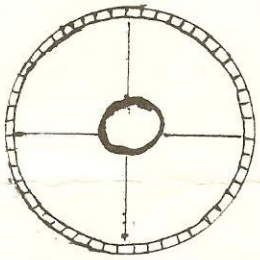
Neither mirror adjusted

B



Small mirror adjusted

C



Small & large mirrors adjusted

COLLIMATING THE FINDER: Since the finderscope or "finder" is nothing more than a field (wide), small optical telescope, it is used for rapid location for celestial objects which otherwise would be most difficult to find in the much smaller, higher power, restricted field of the main telescope. The 8 x 30mm finder which we use on the 6" Student telescope has a field of about 5½ degrees of the actual sky. On our larger telescopes, the 8 x 50mm finder has about a 7 degree field and the 10 x 40mm finder has about 6 degrees. To collimate the finder, first locate the moon or a bright planet or star with the lowest power eyepiece on the main telescope. Place the object as near the middle of the field as