



This is just a reminder that club dues must be paid by the end of September. As Sky and Telescope magazine is included in the dues payment it is important that they be promptly paid to avoid missing an issue. Dues are \$8.00 for a regular membership, \$10.00 for a family membership, and a junior membership open to those under 18 is \$3.00. The junior membership does not include Sky and Telescope. All memberships do include membership in the Astronomical League. For those who do not want to be an official club member but want to receive the newsletter the cost is \$2.00.

If you do not plan to pay at the next meeting Sept. 30, please mail a check or money order to me by the meeting date. My address is: Richard Johnson, 1860 Pawnee St., Lincoln, Nebr. 68502. If you have any questions feel free to give me a call any evening after 5:00 P. M. My phone number is 423-6726. Make the check or money order payable to the Prairie Astronomy Club.

Richard P. Johnson  
Treasurer

### Testing Your Telescope By Observation

An accurate test of a telescope is often attempted by amateurs, however without an optical bench other means must be found.

Resolving power is the acid test of any telescope. For a 6-inch in summer Zeta Herculis is a good test. This is a double of about 1 second of arc separation, the stars being of 3.0 and 6.5 magnitudes. In winter Eta Orionis, magnitudes 4.0 and 5.0 at 1 second is an equally good test. The ultimate test for a 6-in. is Gamma Coronae Borealis, 4.0 and 7.0 magnitudes at 0.7 second. For all of these use about 250-300 power for best results.

Center your telescope on Epsilon Lyrae using about 100x. Any instrument 4-in. or larger should show you two images, split cleanly and without difficulty. If you can't do this check all of the various causes of astigmatism.

Try observing Jupiter or Saturn at about 100x. By examining the detail on the planets surface, looking for zones and belts visible, as well as spots and other markings you can learn about how good your telescope is in the way of color and spherical correction. Remember that any color effect with a reflector must be caused by the ocular, or because the planet is low in the sky.

Next, using a low power ocular of about 25x to 35x, with a field of over 1° look at some rich star fields. In summer look east or west of Gamma Cygni, in winter the field near Iota Orionis is good. Note the number of stars you see, watch for dimming of stars near the edges as you move your telescope slightly, also watch for distortion of the star images as they reach the edge of the field. This test will indicate the field size and vignetting qualities of your telescope, important in observation and photography.

While these tests are not definite and do not separate imperfections in the objective from imperfections in the eyepieces they have proved themselves practical. Try these tests on several nights and if you have a good instrument you will have the satisfaction of having proved its worth by direct observations.

Roger Severns