

### DIRECTIONS FOR TELESCOPES:

1. Use a Compass and Level to check, and do your best to level the telescope mount (adjust the tripod legs if necessary — work together!)
2. Turn the telescope on. Use the four  $\clubsuit$  arrow keys on hand control to raise the telescope tube up. Remove the cover and place underneath telescope. Check and make sure there is a 40mm eyepiece in the telescope.
3. Press ENTER to begin alignment. Use the 6 and 9 buttons (  $\blacktriangle$  and  $\blacktriangledown$  or up and down) keys until you see "Auto Two Star," then press ENTER to select that method.
4. The hand control will display the last time and location information that was entered or downloaded from GPS. Use the Up and Down buttons to scroll through the information. Press ENTER to accept the downloaded information or press BACK ( or UNDO) to manually edit the information.
5. The handset screen will bring up a menu to select a bright star to begin the alignment. Use your Star Wheel to figure out which star that is. Use the  $\blacktriangle$  and  $\blacktriangledown$  keys to scroll through the stars and pick one that you can see easily with just your eye. I recommend starting with Antares. It is a bright orangish color star in the South/Southwest.
6. Use the four  $\clubsuit$  arrow keys to move the telescope to point at the star. Start by finding it in the finderscope/telrad. Then center it in the eyepiece. The slew rate (or turning speed) of the telescope will be large at first. Once you have the star in your eyepiece hit ENTER and the slew rate will decrease. Now get the star in the center of the eyepiece. You can change the slew (turning) speed by pressing the "SPEED/1" and 1-9 buttons (try 6: "0.5°/sec").
7. When you have the first star the telescope nicely centered in the primary field of view (do be sure to look!), press ALIGN.
8. Select a second star from the list and hit ENTER. I recommend using the star Altair. The telescope should automatically slew to where it thinks the star you selected is.
9. Repeat 4-6. When you have confirmed the position of the second star, the telescope will report "Alignment Successful." You are then ready to find other objects in the sky for the rest of this lab.
10. Check your alignment by going to another bright star or object. You may have to start the alignment over if the object doesn't show up in your eyepiece.

