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## **Understanding State of Telescope Based on Orientation**

Below are pictures that illustrate common telescope positions. By simply looking at the telescope it is possible to guess a likely state or position on the sky. When the position is on the meridian the hour angle (HA) is 0. The descriptive text is below each picture.



This is the standard "Park" position. At a Declination of -32 degrees, this is 25 degrees from the local horizon and aligns with the Flat Field panel.



This is the southern mechanical limit. It is 8 degrees below the standard Park position. Please compare with the image above. The most common reason for the telescope to be in this position is due to imbalance in the Declination axis with the servos being off. When bringing the telescope up, it must be moved away from mechanical limits. Not doing so will cause a number of unexpected errors from the controller during the initialization process. Look for this position if the telescope was recently put in Lightning Shutdown.



The zenith position is HA,Dec = 0, local latitude. For Mount Lemmon the Declination of the zenith is approximately 32 degrees. Thus the zenith position is a good orientation to verify proper pointing of the telescope. The telescope box and fork arms (bottom edge) should be parallel to the ground. If the fork arms are observed to be rotated slightly there is likely a pointing problem (or a time related issue).

https://lavinia.as.arizona.edu/~tscopewiki/ - MOON

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