

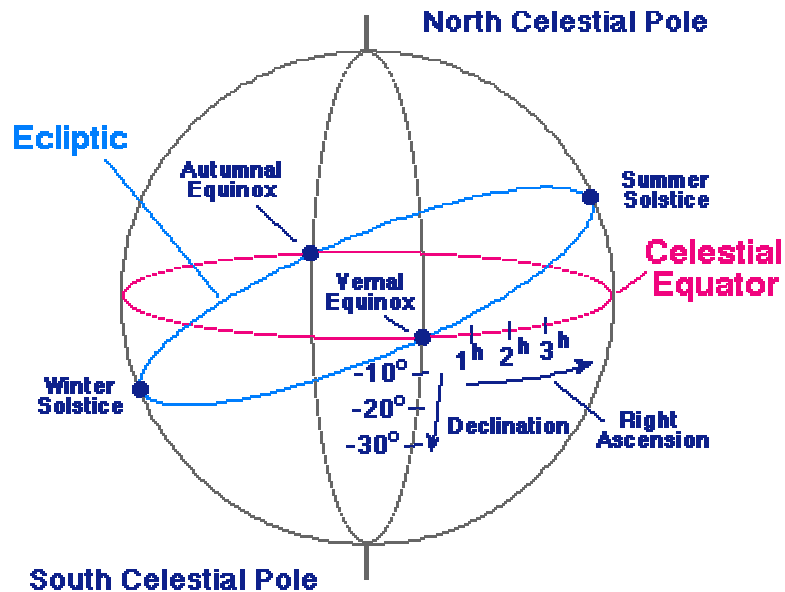
Cape Cod Astronomical Society

Minutes of the March 7 2013, meeting

Attendance: Total: 13 Members: 12 Guests: 1

Vice President Stanley Rivers opened the meeting at 7:30 P.M. and welcomed members and guests. Stan informed members that we will be having a member of The Harvard Smithsonian Center for Astrophysics as a speaker later this year.

The speaker for the evening was former CCAS president Gary Derman. The title for the lecture was "Astronomy- Where is That Star ". The purpose of the lecture was to explain the science behind how automated telescopes with go-to electronics locate the thousands of stars and other celestial objects in their databases. First, a little history regarding locating stars. The objects in the sky are first referred to by their distance from Earth. Far Sky objects refers to stars (double and variable) as well as star clusters. Near Sky objects are closer to home and include planets, the moon and asteroids. The simplest way to locate objects in the sky is star hopping. This is an easy method and works by looking a picture or chart of the sky, locating a bright star and following directions to another star. This works well, but is really only suited for locating bright objects. Better results are obtained by using a telescope with an astronomical mount. The simplest is an altitude/azimuth mount. This allows the viewer to move the telescope in two directions. This works well for the casual observer. A better option is an equatorial mount. This design allows the telescope to track and keep the desired celestial object visible in the eyepiece with the aid of a motor that compensates for the rotation of the Earth. This type of mount has been available for many years, but requires that the observer first locate the object prior to tracking. This mount has adjustments for right ascension and declination.



Recently, a new type of telescope system has been designed. These are called go-to telescopes and after a simple alignment procedure can locate thousands of stars automatically by simply requesting the desired object in the database. Once the object is acquired, the telescope will keep the star, galaxy, nebulae etc visible in the eyepiece. This is a great time saver for both visual and photographic astronomers. To make go-to telescopes work required designers to compensate for many complex physical properties. Some of these include the following: Apparent position of stars as seen from Earth, Refraction, Precession, Proper Motion, Parallax as well as the effects of the atmosphere when observing near the horizon. Even the speed of light must be taken into consideration when viewing objects in our solar system.

Business Meeting

Bernie Young informed members of upcoming events. On March 25th the observatory will be open for an occultation at 7:30 P.M.

Joel Burnett informed us of the upcoming schedule as follows:

March 16- Saturday. 1st Qtr Moon Star Party at 7:30 P.M.

June 25- Girl Scouts of Eastern MA in Brewster 8:30 P.M.

The meeting was adjourned at 9:05 P.M.

Respectfully submitted,

Charles Burke