



SHENANDOAH ASTRONOMICAL SOCIETY

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Finding Sky Objects in the Day

We all know that the Moon is often seen in the daytime but many have never seen any other sky object when the Sun is out. That does not mean it can't be done. Yes, the brightest planets and even some bright stars can be seen in daytime.

A few years ago, I decided I wanted to see the planets in daytime so I worked at it myself. I rigged up a protractor on a tripod so I could determine azimuth, the number of degrees from north. That way I could zero on south and turn my tripod to any azimuth I desire. For example, if my computer told me that Jupiter was at the azimuth of 170 degrees, I just moved from south 10 degrees east.

I used a carpenter's device that measures altitude from horizontal so I could raise my telescope to the desired altitude. My computer would tell me the altitude of Jupiter as well as the azimuth so I could zero in on it. Then with a little scanning around, I could locate it. I used this method to find Jupiter, Saturn, and Mars in the daytime without too much effort.

You notice I did not mention Venus. Venus is so easy to find in the daytime that just scanning in the general area of the sky with binoculars is all that is needed. I have done that many, many times. I have also located Venus many times by unaided eye.

You can also use right ascension and declination to find objects in the daytime if you polar align your telescope. The scope can be polar aligned at night and left in alignment for daytime use. Also, using a

compass and your latitude, the scope can be aligned in the daytime.

I never did try finding a star in the daytime as Herman Heyn and of course others have done. I don't know why I did not do this also, may still give it a try. So I will give Herman's way of finding things by day.

First I want to point out that an article in S&T February, 1992, gives Herman Heyn the credit for finding Venus in the daytime only about four hours before inferior conjunction. Seems impossible, being so close to the Sun but he did it. The declination of Venus was less than the Sun so that allowed about nine degrees between Venus and the Sun. He even got a photo of the crescent Venus.

To find a star in the daytime, Herman points out that you must prefocus your telescope to an object in the sky and have it polar aligned. Then he starts out at about 80 power magnification. He finds the time the star is to cross the meridian to the south. This can be found in several ways, one is using a planisphere, another is to use a computer planetarium program. Then direct the telescope to the south and set the declination to the declination of the star and search for it. It usually requires a bit of panning around the position to find the star.

So there you are. That is the way it is done. Herman is recognized in S&T once again in the September 1994 issue for finding stars in the daytime. On the next page is a picture in which he is showing folks Arcturus in the daytime.



Herman Heyn showing Arcturus in the Daytime

The sidewalk astronomer not only shows Jupiter and Venus in the daytime hours but as the photo shows, he finds bright stars to show folks.

Photo by a friend Isabel Beichl

**Herman Heyn is known as the
Baltimore Sidewalk Astronomer
and was featured in the August
newsletter.**

September 9 meeting at Lord Fairfax Community College

The meeting will be at 7:00 PM and Alan is going to bring a presentation downloaded from the internet for this meeting. I don't know the title but he will probably have it on the web site.