

Watching and Hearing Meteors

With the summer months quickly approaching some of our thoughts turn towards the meteor showers that will entertain us - especially the Perseids in August. With the warmer weather, it is far more comfortable for us to sit outside, under the stars, and take in the grandeur of the universe with a beautiful peppering of meteors to top the evening's stargazing off.

One aspect of observing meteor showers, that links astronomy with my hobby in radio DXing, is in Meteor Trail DX. Meteor Trail DX mainly occurs with VHF signals - between 50 and 150 Mhz - because these frequencies are usually omnidirectional, line of sight transmissions. Some of the signal is beamed directly into space where it is lost. But during a meteor shower, VHF signals that otherwise would be beamed out into space, are reflected back down to the earth when they encounter the ionized meteor trail. These signals can be redirected hundreds and even thousands of miles beyond their intended service area. Because the meteor is a moving target, the duration of the redirected transmission is rather short. Depending on the degree of ionization of the meteor trail and the angle that the radio transmission contacts it, signals will last between a few and several seconds (between one and sixteen seconds).

So how does Joe or Joan Amateur Astronomer try out this extension to their hobby? Easy. Just take a portable radio or TV out with you when you are going to be observing the meteor shower. Tune to an unused or weak FM station or tune between channels 2 and 6 on a TV. Use rabbit ears or whip antennas - this won't work if you're attached to cable TV. Watch or listen for brief snippets of transmissions that break through. You are hearing, or watching, transmissions that have encountered a meteor trail, somewhere beyond your horizon, that has been redirected to you - sort of a gift from a meteor you can't even see.

So try it out this summer for the Delta Aquarids on June 27/28th and the Perseids on August 11/12th. It might just add something to your enjoyment of astronomy. And the beauty of this aspect of the hobby is that you can still observe the effects of meteors when they seem to be washed out by moonlight, like what will probably happen this year, or even when it's cloudy, or, better still, while the sun is still up.

