

Name: _____ Date: _____ Period: _____

Extra Credit Assignment

Weather radar is used to detect precipitation, both where it is raining and how heavy it is. Images made from radar measurements are commonly shown on television weather reports and are now accessible by everyone over the internet. Since we will not have time to cover weather radar in class, the purpose of this assignment is for you to learn the basics of how weather radar works.

The assignment is to simply explain some of the basics of weather radar as described below. The explanation does not have to be long, but it must be written in your own words. Answer as if a friend asked you and you had to explain it in your own words. You may also draw diagrams if you wish. **Credit will not be given to those who obviously copied material word for word from somewhere.** In your explanation, be sure to cover the three sub-questions listed. You may use any book or web site to find the answers, however, many of them go into too much detail and will be difficult to understand.

A good site to start is [http://ww2010.atmos.uiuc.edu/\(Gh\)/guides/rs/rad/home.rxml](http://ww2010.atmos.uiuc.edu/(Gh)/guides/rs/rad/home.rxml)

- Once connected you will see a menu. Select "radar basics" from the menu. You will then see a list of web pages describing radar basics. Pay special attention to the pages labeled "radar signals", "signal scattering", and "target location".

You may also want to use the following sites:

- http://www.accuweather.com/iwxpage/paws/dopplerfaq.htm#how_convent
- <http://www.angelfire.com/va/emspage/preengineering.html>

In your own words, explain how weather radar works? Your explanation should cover:

- How is a "target" detected?
- How can radar signals be used to distinguish light precipitation from heavy precipitation?
- How is the "target" located with respect to the radar, i.e., how does one tell where it is raining or snowing?
- What is doppler radar?
- Include some images showing how radar works and what it looks like.

Record your response in a brief paper, no more than two pages long, double-spaced with 12 point font.

See me for assistance