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EarthComm Earth System Evolution: Astronomy and Your Community Activity 6

This investigation will help you to:

- The Nature of Electromagnetic Radiation
- Astronomy and the Electromagnetic Spectrum
- Using Electromagnetic Radiation to Understand Celestial Objects
- To learn more about space science missions, visit the following web sites:
- To learn more about using radio waves to study distant objects, visit the following web site:
- To learn more about detection of electromagnetic radiation, visit the following web sites:
- To learn more about technologies that use electromagnetic radiation, visit the following web sites:

The Nature of Electromagnetic Radiation

• The Electromagnetic Spectrum, NASA

This home page provides links to two different topic levels, the second slightly more advanced than the first. The topics for Level One include: Measuring the Electromagnetic Spectrum, A Radio Wave Is Not a Gamma-ray, a Microwave Is Not an X-ray... or Is It?, Why Do We Have to Go to Space to See All of the Electromagnetic Spectrum? The topics for Level Two include: More about the Electromagnetic Spectrum, and Space Observatories in Different Regions of the EM Spectrum.

All About Spectra, University of Illinois
 Try another brief overview on electromagnetic spectrum and electromagnetic wave radiation.

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Astronomy and the Electromagnetic Spectrum

- An Introduction to Radio Astronomy, National Radio Astronomy Observatory
 The NRAO web site offers an education section with various resources including background information and a photo gallery. The Introduction to Radio Astronomy is particular page that offers answers to frequently asked questions about radio astronomy, an article about the VLA and VLBA in New Mexico, and more.
- The Electromagnetic Spectrum

 Offers a good description of important properties of the major regions of the spectrum.

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Using Electromagnetic Radiation to Understand Celestial Objects

Amazing Space, Space Telescope Science Institute
 Explore space with the Hubble Telescope. Learn about what different colors say about stars by clicking on Star Light, Star Bright.

To learn more about space science missions, visit the following web sites:

• Space Science Missions, NASA

This is a comprehensive list of missions either under study, in development, operating, or past missions.

• Historical Archive, NASA

This page includes a list of the manned missions from the earliest programs to the most recent.

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To learn more about using radio waves to study distant objects, visit the following web site:

• Radar, Studyworld

Find out how scientists study distant objects using the VLA and radio waves.

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To learn more about detection of electromagnetic radiation, visit the following web sites:

- NRAO Press Releases, National Radio Astronomy Observatory
 Search through a list of different press releases about scientific discoveries and advancements made with a VLA.
- The Very Large Array and the Very Long Baseline Array, National Radio Astronomy Observatory Read about the radio telescope arrays that allow scientists to look deep into space

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To learn more about technologies that use electromagnetic radiation, visit the following web sites:

• Invention of the Microwave

Learn more about the history and technology of the microwave oven.

• How does an x-ray machine work? Howstuffworks

Get the answer.

• Does the product emit radiation? Device Advice

Get some helpful definitions and insights into the pervasive nature of radiation-based technology.

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