P 1.18 10 YEARS OF WEATHER SATELLITE IMAGERY SUPPORT FOR K-12 SCHOOLS

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1. INTRODUCTION

In 2002, **EXPLORES!** (**EXP**loring and **L**earning the **O**perations and **R**esources of **E**nvironmental **S**atellites) (Kloesel, et al., 1999) celebrates its tenth year of providing support in the use of weather satellite imagery to K-12 schools. The program expanded outside the state of Florida in 2000 and now provides opportunities for teachers throughout the United State and beyond to implement the use of weather satellite imagery into the classroom.

2. BACKGROUND

To encourage an enhanced scientific awareness in the State of Florida, the Florida Technological Research and Development Authority (TRDA) created an initiative in 1992 that provided funds to make APT (Automatic Picture Transmission)-capable weather satellite ground stations available to Florida's public schools. In an attempt to prove the feasibility of using meteorology, and specifically satellite imagery as a vehicle for teaching integrated science, four demonstration/training sites were selected in 1992 to test the effectiveness of such an approach.

The original deployment of ground stations coincided with the observance of International Space Year 1992-the 500th anniversary of the voyage and explorations of Columbus. In honor of all scientific explorations past, present, and future, the program was christened EXPLORES! Since the program's inception, 230 ground stations have been installed in elementary, middle, and high schools in Florida, Georgia, Michigan, Montana, and Alaska. The current suite of ground stations is receiving APT imagery from the NOAA polar orbiting satellites. Figure 1 shows an APT image received by an EXPLORES! ground station from the NOAA16 satellite, which was launched from Vandenburg Air Force base in fall 2000. Sites that have demonstrated superior competency with the APT systems are also provided with equipment that enables reception of Weather Facsimile (WEFAX) imagery from the geo-stationary weather satellites. Approximately one third of EXPLORES! schools currently have WEFAX capabilities.

3. CURRENT PROGRAM SUMMARY

EXPLORES! continues its effort to support K-12 schools in the use of weather satellite imagery.

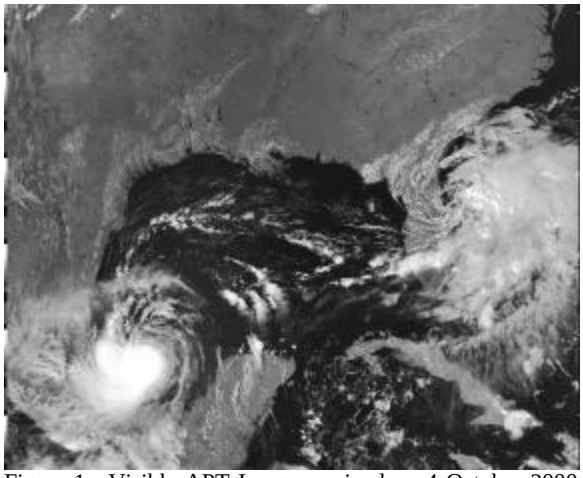

Figure 1. Visible APT Image received on 4 October 2000 from the NOAA 16 polar orbiting satellite. Shown in the image are Hurricane Keith and Tropical Storm Lindsey.

Currently, our training, which consists of a 3-4 day workshop, covers topics in meteorology, the history of weather satellites, image interpretation, as well as different methods of obtaining satellite imagery, e.g., direct-readout vs. Internet-based imagery. Our educational CD-ROM has recently been published and provides K-12 teachers with imagery-based lesson plans that align with the National Science Education Standards (National Research Council, 1996). Our website presents information regarding the history of weather satellites, tracking information, as well as daily image interpretation messages and up-to-date tropical information. Our website can be accessed at http://www.met.fsu.edu/explores.

REFERENCES

K.A. Kloesel, et al., Florida EXPLORES! The effective use of weather satellite imagery in the K-12 classroom, re-print, Eighth Conference on Education, 1999, p 34-35

National Research Council (1996). *National Science Education Standards.* Washington, D.C.: National Academy Press, 262 pp.

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