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Managing an Archive of Weather Satellite Images

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The author's experiences are described of building and maintaining an archive of hourly weather satellite pictures at NOAO. This archive has proven very popular with visiting and staff astronomers — especially on windy days and cloudy nights. Given access to a source of such pictures, a suite of simple shell and IRAF CL scripts can provide a great deal of robust functionality with little effort.

These pictures and associated data products such as surface analysis (radar) maps and National Weather Service forecasts are updated hourly at anonymous ftp sites on the Internet, although your local Atmospheric Sciences Department may prove to be a more reliable source. The raw image formats are unfamiliar to most astronomers, but reading them into IRAF is straightforward. Techniques for performing this format conversion at the host computer level are described which may prove useful for other chores.

Pointers are given to sources of data and of software, including a package of example tools. These tools include shell and Perl scripts for downloading pictures, maps, and forecasts, as well as IRAF scripts and host level programs for translating the images into IRAF and GIF formats and for slicing & dicing the resulting images. The author gives hints for displaying the images and for making hardcopies.