Using the ARPS Satellite Data Remapper

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31 July 2000

1. Introduction

In order to use satellite data in the ARPS data analysis system (ADAS), it is necessary to remap the observed McIDAS GVAR AREA file satellite data from the satellite-observed pixels to the ARPS grid.

2.Usage

```
makearps mci2arps

cp ./src/mci2arps/palgrey.hdf .

mci2arps /directory/name_of_satellite_file < arps.input
```

It uses arps.input to know what your ctrlat,ctrlon, nx,ny and dx,dy are. It uses the runname in the input file to construct a filename for the output of the program, so you might change the runname to be something descriptive of these data, otherwise you can leave it exactly the same as for ARPS and ADAS.

mci2arps works with both IR (GOES Channel 4, 10 micron) and vis (GOES Channel 1).

It will figure out what kind of data is in the file by itself. The output has an extension "cttemp", for cloud top temperature, for IR and "albedo" for the visible data. There is an hdf image file created for each that can be converted to gif if you want to visualize the data.

To write hdf formatted data files that are portable between systems, use the –hdf flag.

```
mci2arps /directory/name_of_satellite_file –hdf < arps.input
```

The output data file will have an extension ".hdf4", this is to distinguish it from the hdf image file which has extension .hdf.

The ImageMagick `convert` tool (www.imagemagick.com) or the San Diego Supercomputing Center imconv tool
(http://vis.sdsc.edu/download/downloads.html#ImageTools)
are two programs which can be used to convert the hdf image into a format compatible

with many common image display tools. The hdf image is provided to visualize the result of mci2arps, it is not needed for ADAS.