

Title: GrADS: A Handy Tool for Data Access, Analysis, and Visualization

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Abstract: The presenter will provide an overview of the Grid Analysis and Display System (GrADS), an interactive desktop tool that is used for easy access, manipulation, and visualization of earth science data. GrADS has two data models for handling both gridded and station data, and supports all commonly used data file formats. GrADS uses a 5-Dimensional data environment: the four conventional dimensions (longitude, latitude, vertical level, and time) plus an optional 5th dimension for grids that is generally implemented but designed to be used for ensembles. Data sets are placed within the 5-D space by use of a data descriptor file. Operations are executed interactively by entering mathematical analysis expressions at the command line, or through a programmable interface that allows for more sophisticated analyses and user-specified displays. A variety of graphical display techniques are supported, including line and bar graphs, scatter plots, smoothed contours, shaded contours, streamlines, wind vectors, grid boxes, shaded grid boxes, and station model plots. Publication quality plots may be exported as images or in vector graphics format. Data can be exported from GrADS in binary, netcdf, ASCII, or GIS-compatible formats. Planned improvements for future releases will also be discussed.