

TITLE Development of the Centralized Storm Information System (CSIS) for Use in Severe Weather Prediction

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A recent capability of CSIS is the display of radar data. The system is capable of ingesting and remapping radar scope presentations on a satellite projection. This can be color enhanced and superposed on other data types. Presentations from more than one radar can be composited on a single image. As with most other data sources, a simple macro establishes the loops and scheduling of the radar ingestions as well as the autodialing. There are approximately 60 NWS network 10 cm radars that can be interrogated. NSSFC forecasters have found this data source to be extremely helpful in severe weather situations. After thunderstorms have developed and matured, it is frequently difficult to locate the most intense thunderstorm cells using satellite data since there tends to be a considerable amount of cirrus "debris" associated with the cloud tops. The radar data complement the satellite picture and provide detail that would otherwise not be available. More experience with this new data source will be obtained with time so that even greater benefits should be realized. It has already proved helpful in severe weather diagnosis, watch preparation and clearance of watch areas no longer threatened.

The capability to access lightning frequency data stored in a National Weather Service computer in Boise, Idaho has been added. Currently, locations of lightning strikes can be displayed. Future plans call for more detailed analyses of these data to relate them to severe weather occurrences as well as increased display capabilities.

Future plans call for an interface with the National Meteorological Center (NMC) to receive and display prognostic fields from operational computer forecast models. Also, programs are to be developed to plot and display locations of reported severe local storm events.

In FY-85 VAS data will be accessed by the CSIS system. Further development of programs for display and analysis of the VAS data are planned.

List of Publications since June 1983:

"CSIS Test and Evaluation -- Final Report" by A.L. Siebers et al., unpublished report available at National Severe Storms Forecast Center, 70 pp.

"Use of CSIS in Severe Weather Prediction" by F P. Ostby, Proceedings of Society of Photo-Optical Instrumentation Engineers Technical Symposium East '84, 6 pp.