

## 13 Preparing Cases for SCAN and Fixing Pre-OB5 SCAN Data

**Background:** Section 13.1 contains information on how to set up a case to work with SCAN in OB8.1/WES8.1. Section 13.2 contains information on fixing a pre-OB5 SCAN dataset.

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**Note:** OB5 SCAN data or later will continue to work in OB8.1/WES8.1 with no modifications necessary. If you have OB4 SCAN data or earlier, you will need to fix the data by following Section 13.2.

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### 13.1 Preparing Cases for SCAN

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1. The `/data/awips/<data_case>/tstorm` directory must be copied from `/data/fixa/tstorm` on your real-time AWIPS or from another case from the same AWIPS build in the WES. This `tstorm` directory contains general information for both SCAN and FFMP. Note the data contained in this `tstorm` directory is much different than that in the `tstorm` subdirectory under each individual radar directory.
2. The SCAN SCIT data and the VIL density products are archived in numerous subdirectories under each radar's `tstorm` directory (e.g. `/data/fixa/radar/kabr/tstorm`). This data can be archived from a real-time AWIPS and played back in WES.
3. The data used in the SCAN DMD display is archived from each radar's DMD directory (e.g. `/data/fixa/radar/DMD...` including both the `elev*` and `netcdf` subdirectories). The files under `elev*` are the raw files, which are used in a simulation, and the `netCDF` files are the files used for display in D2D and SCAN.
4. After the `tstorm` directories and data are copied over, the localization needs to be rerun using the "-scan" switch (e.g. `mainScript.csh -scan ABR ABR`). Now you can view SCAN data for case review and simulations.
5. If the SCAN SCIT data were not archived for an event, but all the SCAN SCIT inputs exist (1km CZ, 1km 0.5 degree Z, STI, VIL, TVS, and M), WES creates the create SCAN SCIT data during a regular simulation.

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**Note:** During a simulation, SCAN SCIT files, DMD data and FFMP data are created from the raw input files for each volume scan.

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6. If the raw DMD files do not exist, (/data/awips/2006Aug24test/radar/kabr/DMD/elev\* directories), then DMD will not work in simulation mode. The DMD netCDF files are created from the raw files during a simulation.
7. If the SCAN VIL density data were not archived for an event, but the inputs (VIL, DVIL, ET, EET) exist, then WES creates the products during a regular WES simulation.

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**Note:** The SCAN display filters do not work when using the D2D “Freeze time at this position” tool (selected after double clicking the clock on the bottom right of the D2D).

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## **13.2 Fixing pre-OB5 SCAN and DMD Data Sets for Use with OB8.1**

In OB5.0, both SCAN and DMD data changed format. In a case with pre-OB5 SCAN or DMD data that hasn't been recreated, the SCAN storm cells table will not load, and D2D will not display the DMD data (the radar Graphics submenu).

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**Note:** OB5, OB6, OB7.1 and OB7.2 data will work in OB8.1 without any modification

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The following steps detail how to convert pre-OB5.0 SCAN and DMD data for later versions:

1. Convert the case containing the SCAN and/or DMD data to DRT format if it is not already in DRT format.
2. Verify the existence of the contents of "<data\_case>/tstorm", and "<data\_case>/radar/kxxx/tstorm", where kxxx is your radar

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**Note:** These tstorm directories have much different contents. If you don't have these, then copy both of them from your real-time AWIPS.

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3. Create an OB8.1 localization using `mainScript.csh` in WES8.1
4. Run `mainScript.csh` with the "`-scan`" switch (e.g. `mainScript.csh -scan ABR ABR`)
5. Run a simulation for the time period of interest using WES8.1

6. Verify the new data is being created during the simulation
7. After the simulation is over, verify the new data is visible
8. Run `cp scandmd2a.csh /data/awips/<data_case>` to permanently copy the data into the DRT format "a" files
9. Now your case contains current SCAN and DMD data, and you do not need to do these steps again unless you want a different time period.