Custom Query Tool Refresher
What is CQT?

- CQT is a desktop application that allows users to query and obtain reports from the 4dwx meteorological data repository.
What kind of data can I fetch with CQT?

- Surface (e.g. SAMS, lightning, mesowest)
- Upper air (e.g. Profiler, Rawinsonde)
- Weather model (e.g. RT-FDDA)
What are the steps to find these data?

1. Choose a query from the list.
2. Specify parameters.
3. Execute Query
Parameters allow users to focus in on data they want.

Example parameters:
- Time range
- Units
- Geographic region

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Parameter Value</th>
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</thead>
<tbody>
<tr>
<td>Query Execution Mode</td>
<td>Execute Query (now)</td>
</tr>
<tr>
<td>Start Date</td>
<td>2005-07-19 21:00:00</td>
</tr>
<tr>
<td>End Date</td>
<td>2005-07-19 21:00:00</td>
</tr>
<tr>
<td>Geographic Region</td>
<td>(-111.38, -114.83, 41.56, 38.68)</td>
</tr>
<tr>
<td>Output Location</td>
<td>CQT Results Table</td>
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What kind of reports can CQT provide me?
Observational data reports.

Some sample output…
Individual Lightning Strike Report

Individual Lightning Strikes

Count = 9013
Lightning Strike Activity

Cloud To Ground Lightning Strike Count @ 0.1 Degree Bins
2005-07-01 00:00:00 to 2005-07-19 23:56:23
Climatology reports.

Example:

- **Surface Climatology**
Reports based on model data.
How much data is in the 4DWX data repository?

• It depends on the type of data, but generally several years.
• SAMS data goes back one decade.
Local query versus web query.

Query results can be returned to you via:
• A web page. CQT sends the URL link via e-mail.

OR
• The CQT application currently running.

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<td>Plot Title</td>
<td>Individual Lightning Strikes</td>
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<td>Output Location</td>
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</table>
When should I run my query as a “web query”?

• If I know my query is going to take a long time to run. Example: Climatology report.
• If my query produces GrADS images.
• When in doubt run queries as web queries.
When should I run my query as a “local query”? 

• If I want the output to be immediately available on my desktop, rather than getting results via e-mail.
1 part versus 2 part queries.

• Some queries have 2 parts.

Examples:

• Virtual Sounding
• Wind Rose
• Typically, in part 1 you will constrain the data you want within a time or geographic region. Part 2 allows you to narrow in on exactly the data you want.
Scheduled queries.

- Queries can also be put on a scheduler for query execution at regular intervals.
Why should I schedule my queries?

• If I want to get CQT output on a regular basis.

Examples:

• I want to get a lightning strike activity e-mail one per hour.

• I want a report of my SAMS data once per hour.

• Scheduled queries only available via web queries.
How do I run CQT?

• Webstart - 4dwx range web page -> Tools tab -> Links under “Webstart”
• From the DAC display (vmet) node.