

***TRACON Collaborative
Convective Fcst Product
Familiarization & Concept of Ops
16 Jul -14 Sep 2007 MSP Area DEMO***

**For: National Business Aviation Association
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TRACON CCFP Demo

Forecast Description - General for Users & Producers

USERS/PURPOSE: Anticipate 2 groups and purposes

- **Dispatchers** for indiv. Flt Fueling Decisions
- **Air Traffic Mgrs** @ Airlines & @ FAA for anticipating traffic flows in & out of TRACON/Airport.

PRODUCT DEFINITION

- **COVERAGE**: Volume of Airspace within approx 100nm radius of KMSP
- **AREA AFFECTED**: Flt path(s) btwn airport & departure/arrival post(s)
- **CONVECTION PROBABILITY***: Moderate Precip (30dBZ or greater/Level 2/Mod Reflectivity or greater &/or Lightning)

Color Coding: Convection Probability*



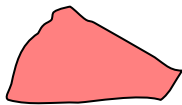
Less than 30% Probability



30% to Less than 50% Probability



50% to Less than 70% Probability



70% and Greater Probability

*1 Hr Time Period instead of a snapshot: Highest probability during the time period

TRACON CCFP Demo

Forecast Description -Detail for Users & Producers

A. Issuance Times

+ 2 Production times

- (Issued at 1515z & at 1815z, Monday-Friday only)

+ 5 Graphics Issued at each Production time

B. Valid Times

+ Each Graphic a “one hr composite”

- Highest probability of Convection during the 1 Hr period

+ All 5 graphics spaced in 1 Hr Increments

- (Valid 1-2, 2-3, 3-4, 4-5, 5-6Hr into the future)
- (1515z Production Valid :16z-17z,17z-18z,18z-19z,19z-20z,20z-21z)
- (1815z Production Valid: 19z-20z,20z-21z,21z-22z,22z-23z,23z-00z)

C. Graphical Format

+ 5km sq. grids of Convection Probability based on both

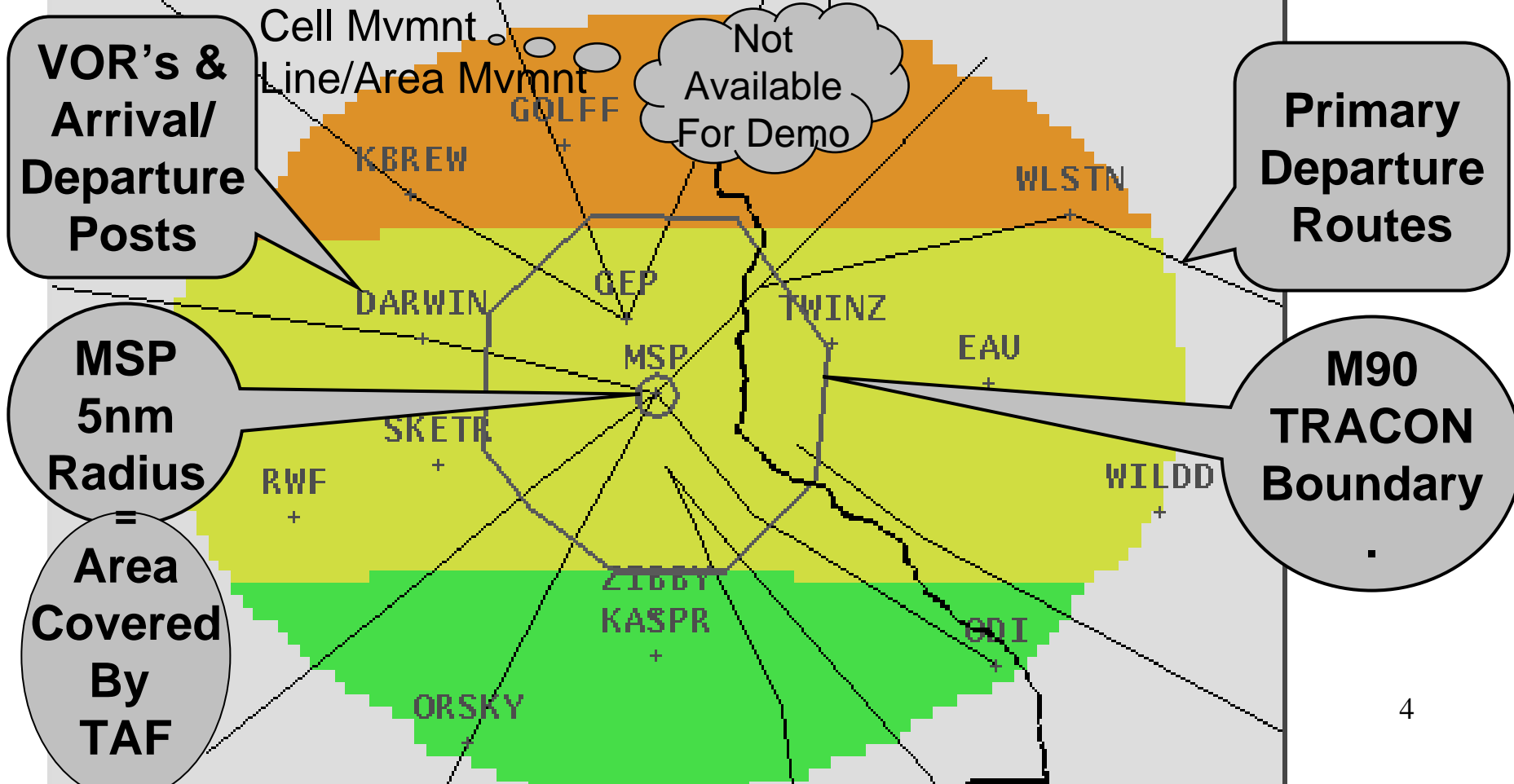
- Computer forecast models &
- Human Forecaster input

+ Info Displayed in 4 Color Coded Probability Ranges.

TRACON CCFP Demo

Base Map Description -Detail

Key:Probability of Convection Scale



TRACON CCFP Demo

Production Process - Info for Users

A. Preliminary Product:

- + 5km sq. grids of Convection Probability from fcst models used as basis.**
- + Info Grouped into 4 Colors (Probability Ranges).**

B. Forecasters Collaborate:

- + Adjustments made by Forecasters.**
- + Three Offices Collaborating**
 - Nat'l Weather Service ZMP (Center Wx Service Unit) CWSU
 - Nat'l Weather Service MPX Forecast Office
 - Northwest Airlines MSP Meteorology Office

C. Final Product Posted on Web Site for Users

- + <http://www.crh.noaa.gov/zmp/tstmTDA.php>**

TRACON CCFP Demo

Production Process - Structure

A. CWSU will create the graphics using GFE

+ CWSU post graphics to

<http://www.crh.noaa.gov/3images/mpx/ZMP/TDA>

B. GoTo Meeting software will be used for collaboration

+ Allows forecasters to “draw in” their suggestions

+ A telcon will be held during this time to facilitate verbal discussion

C. CWSU will lead the discussion

+ CWSU will have final say if agreements cannot be reached

C. Once collaboration is complete, call will end

D. CWSU will then make final edits based on the collaboration and send the images to the web

TRACON CCFP Demo

Questions still to be answered and explored?

- How well did the forecasts verify?
- Is the Time Expended 1, 2, 3,...times a day, or on an 8 hour shift, the best use of time?
- Are there better methods to generate the product?
- Are there better types of formats for the users?
- Will the product continue to be generated?
- Will collaboration continue?

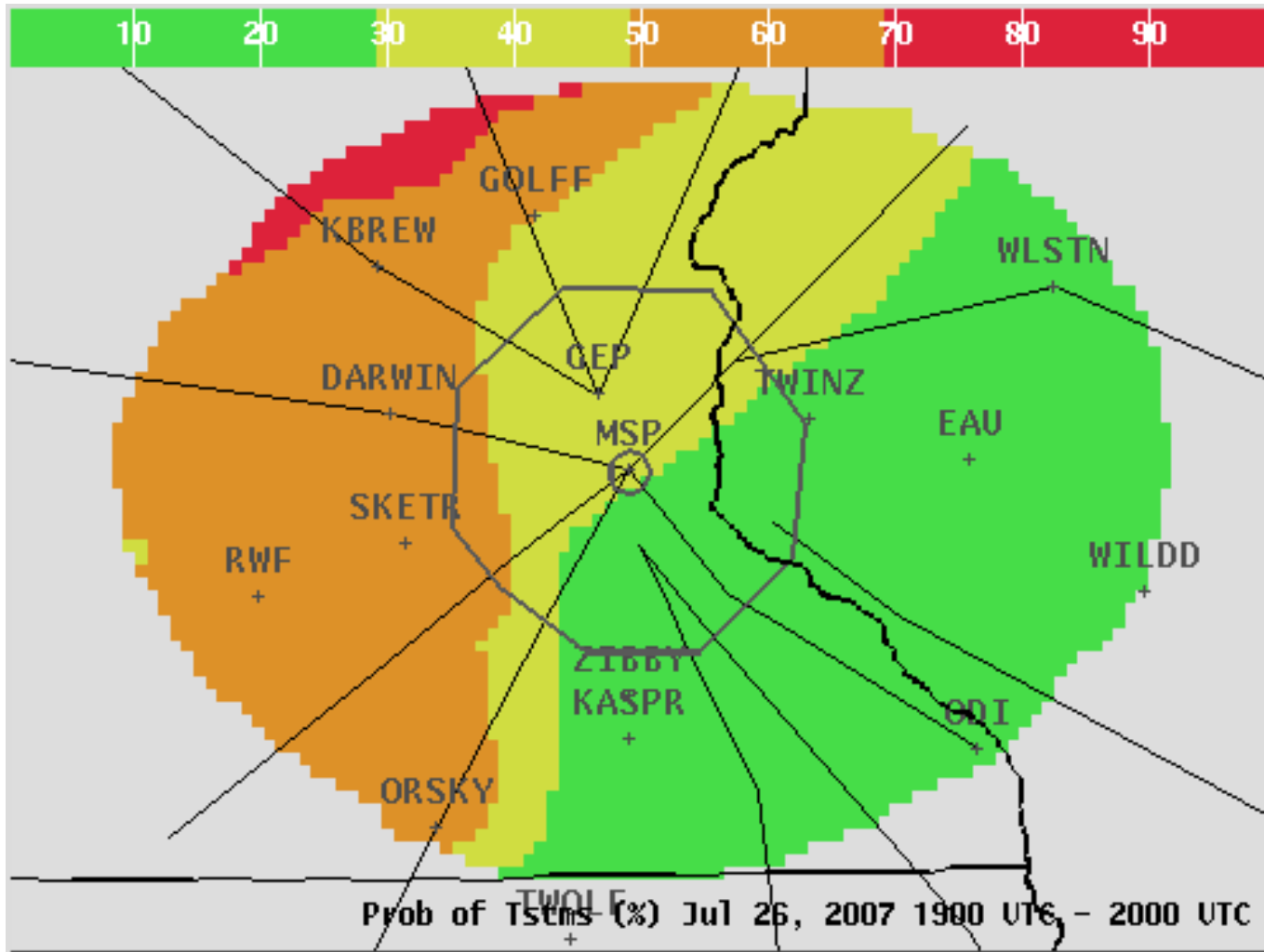
2007 MSP TRACON CCFP Demo

Suggested Product/Process Changes for '08

- Production Times
 - Add a 3rd in Mid PM
 - CWSU Workload issues need addressing
- Add Looping Capability of 5 Valid Times Fcst Panels on ZMP CWSU Web Site
- Additional Info
 - Fcsted Cell & Area/Line Movement
 - Text Description of Triggering Mechanisms & Convection Features (orientation, coverage, etc.)

Actual 5 Panels Fcst Example

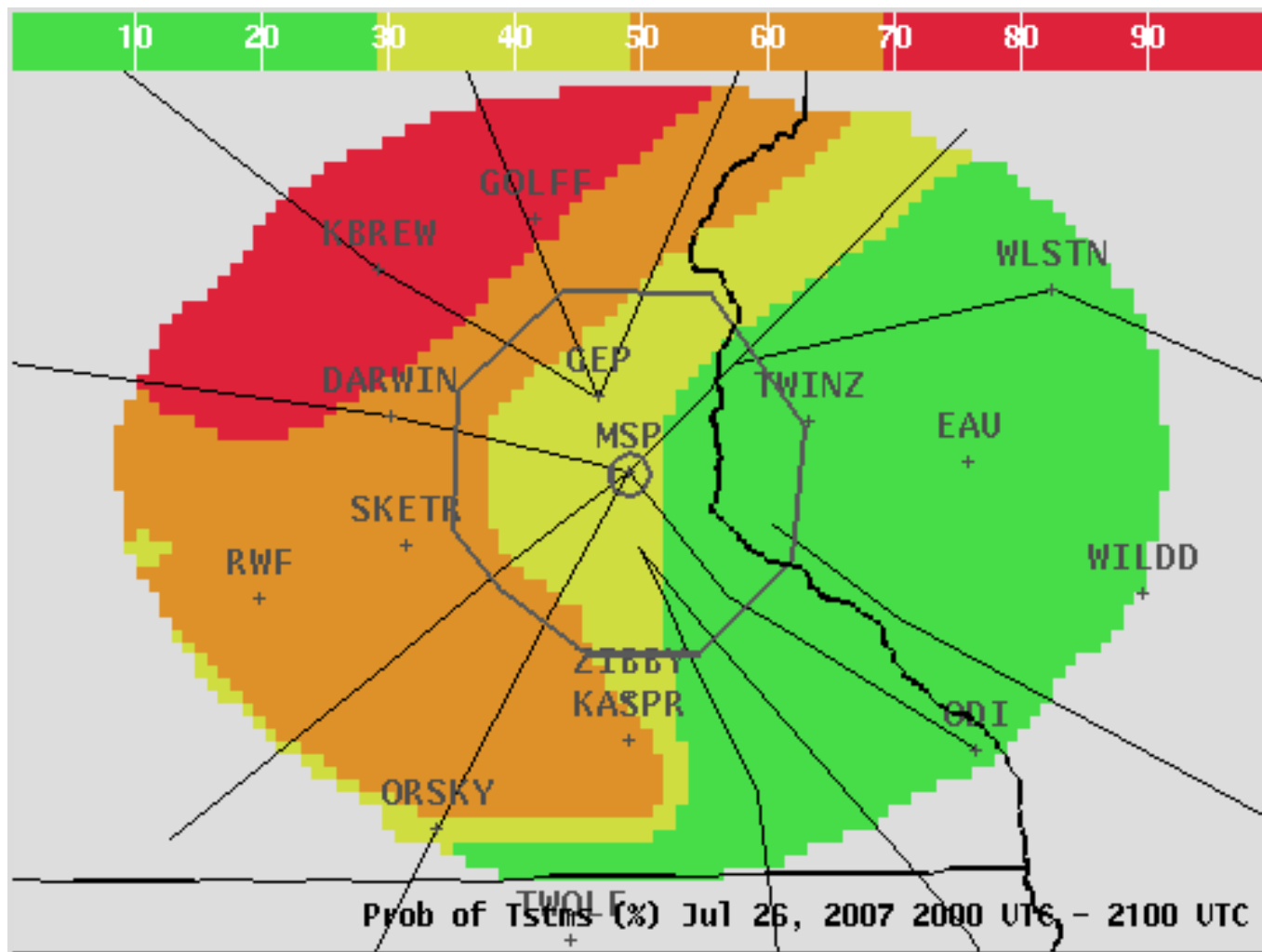
18z Production 26 July '07



7/26/07 19-20z

Actual 5 Panels Fcst Example

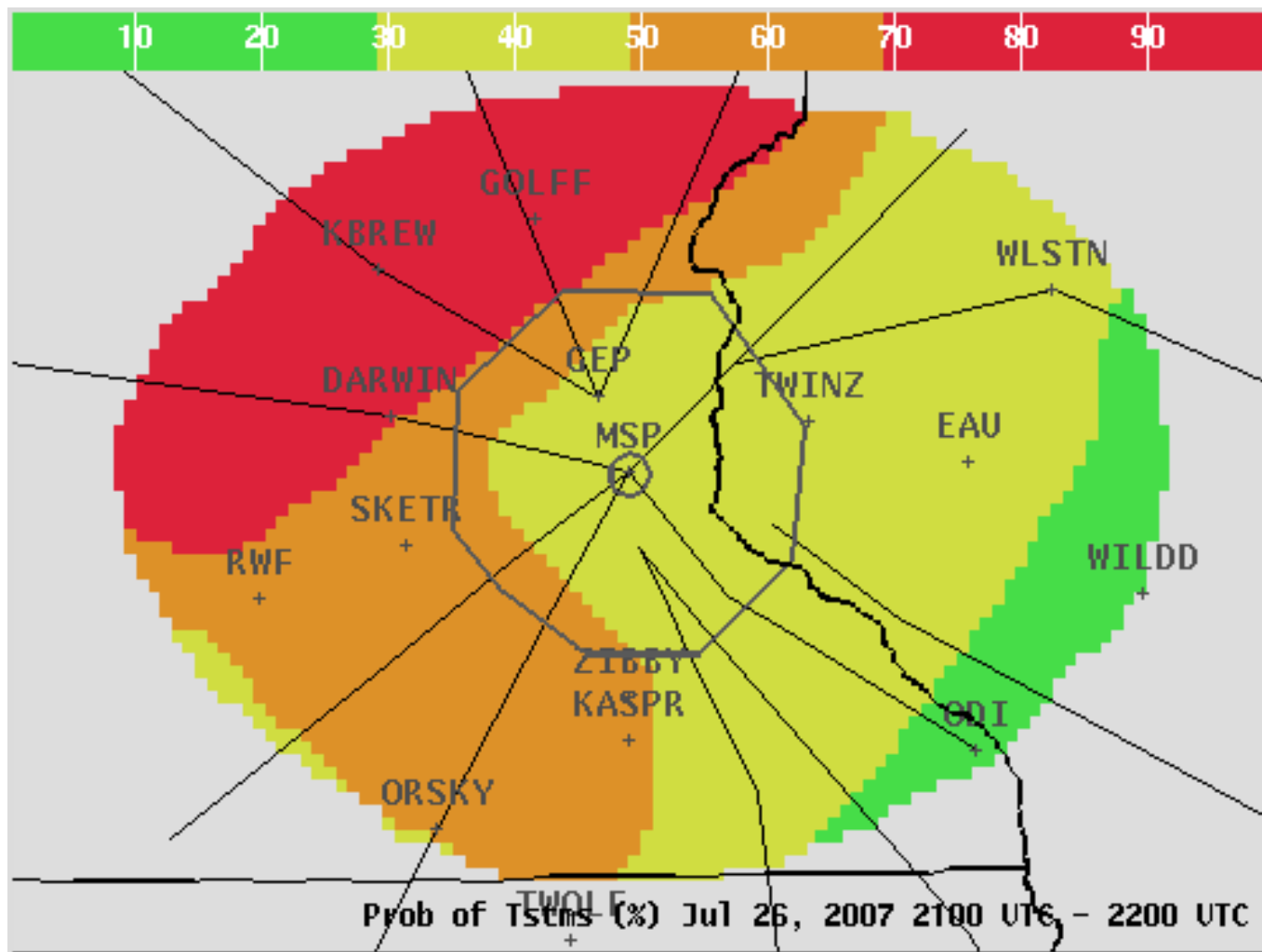
18z Production 26 July '07



7/26/07 20-21z

Actual 5 Panels Fcst Example

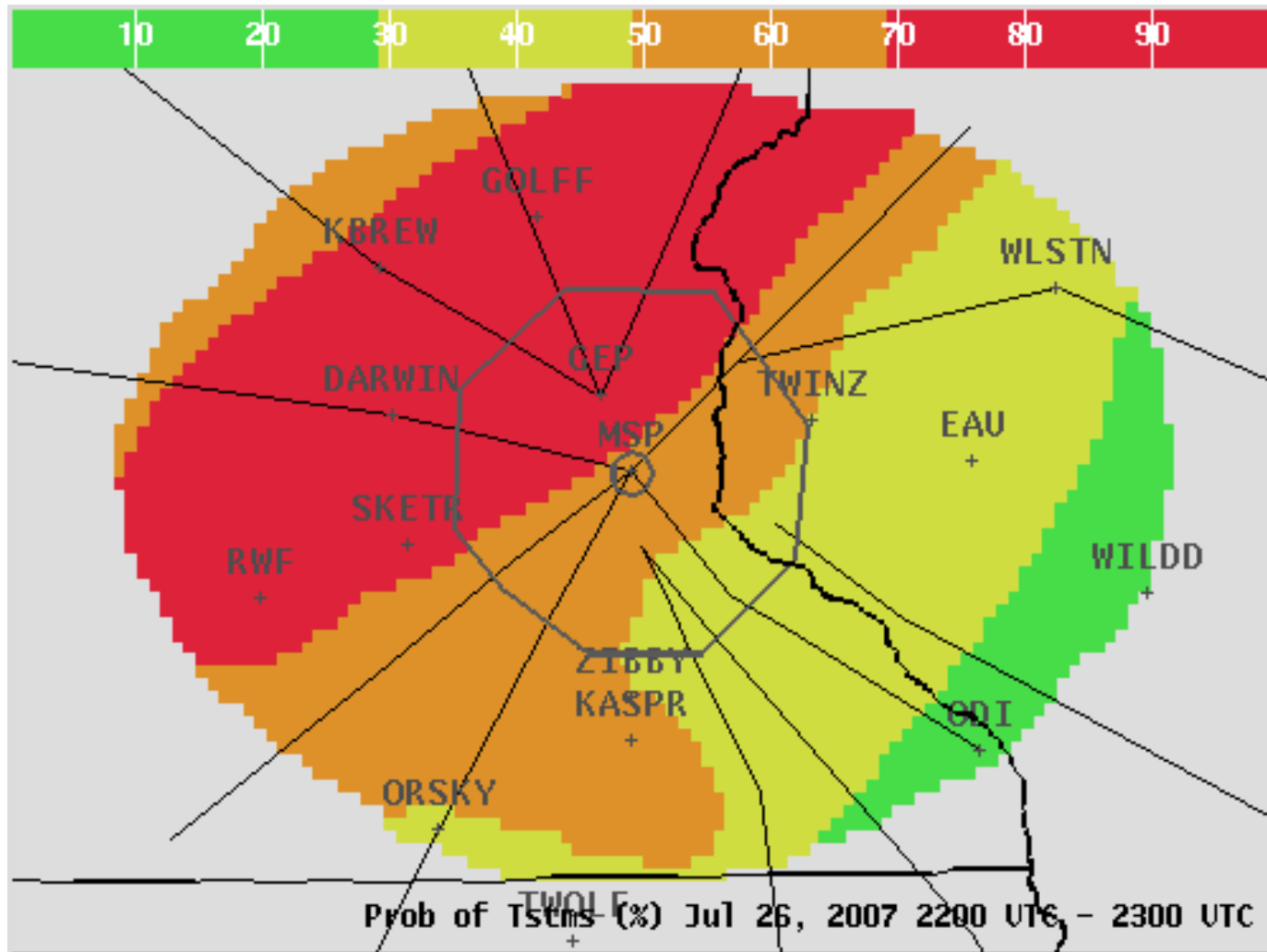
18z Production 26 July '07



7/26/07 21-22z

Actual 5 Panels Fcst Example

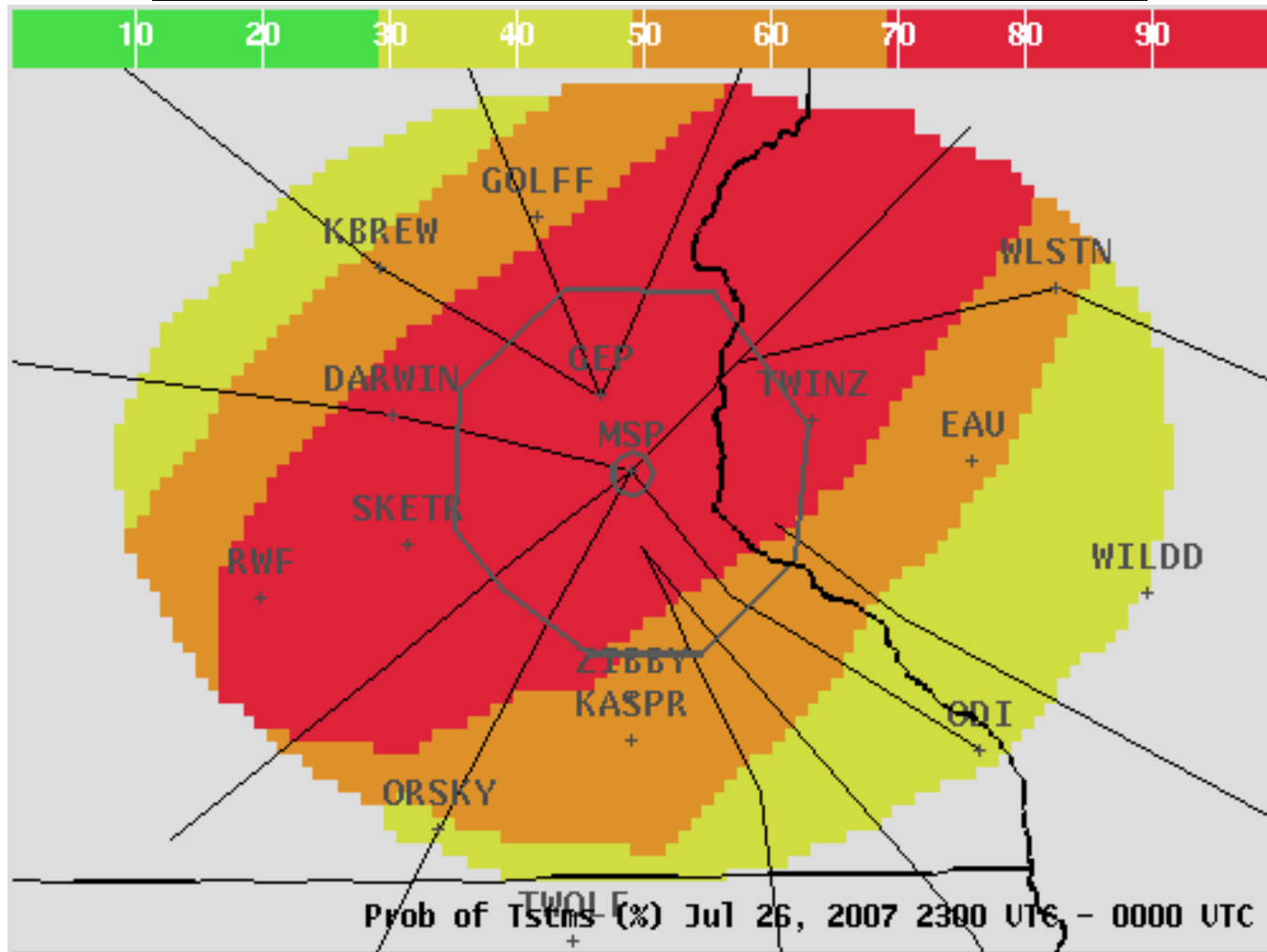
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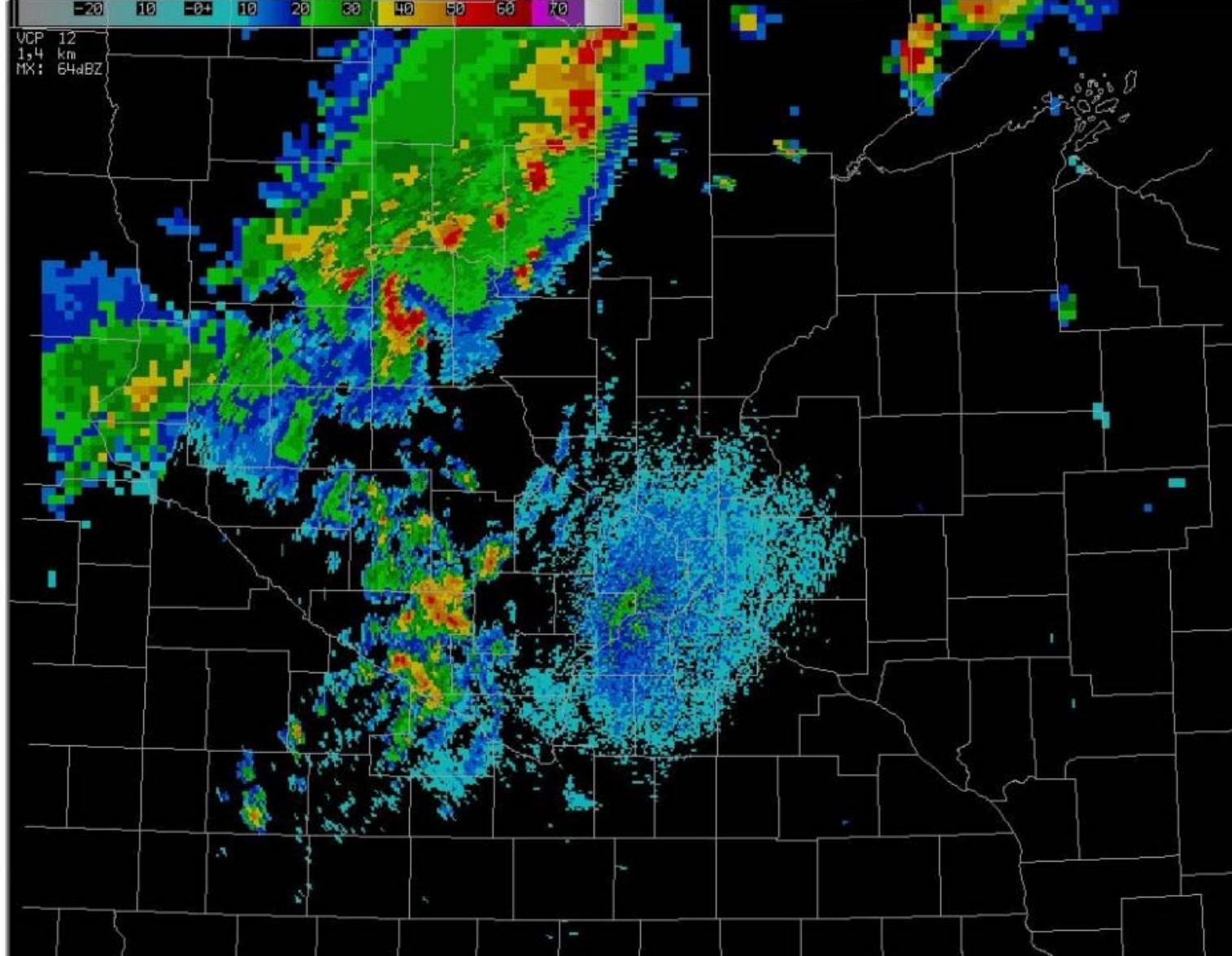
7/26/07 22-23z

Actual 5 Panels Fcst Example

18z Production 26 July '07



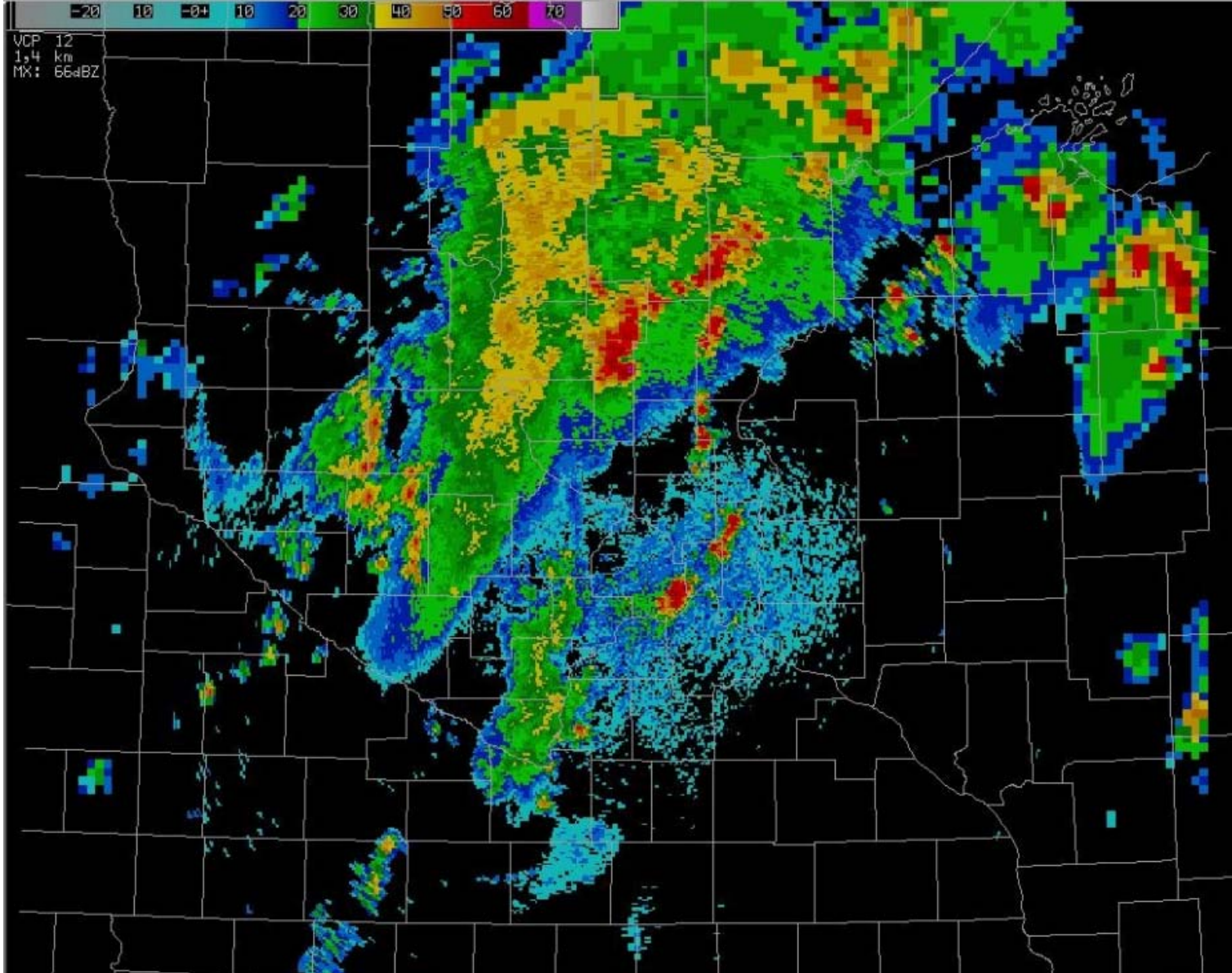
7/26/07 23-00z



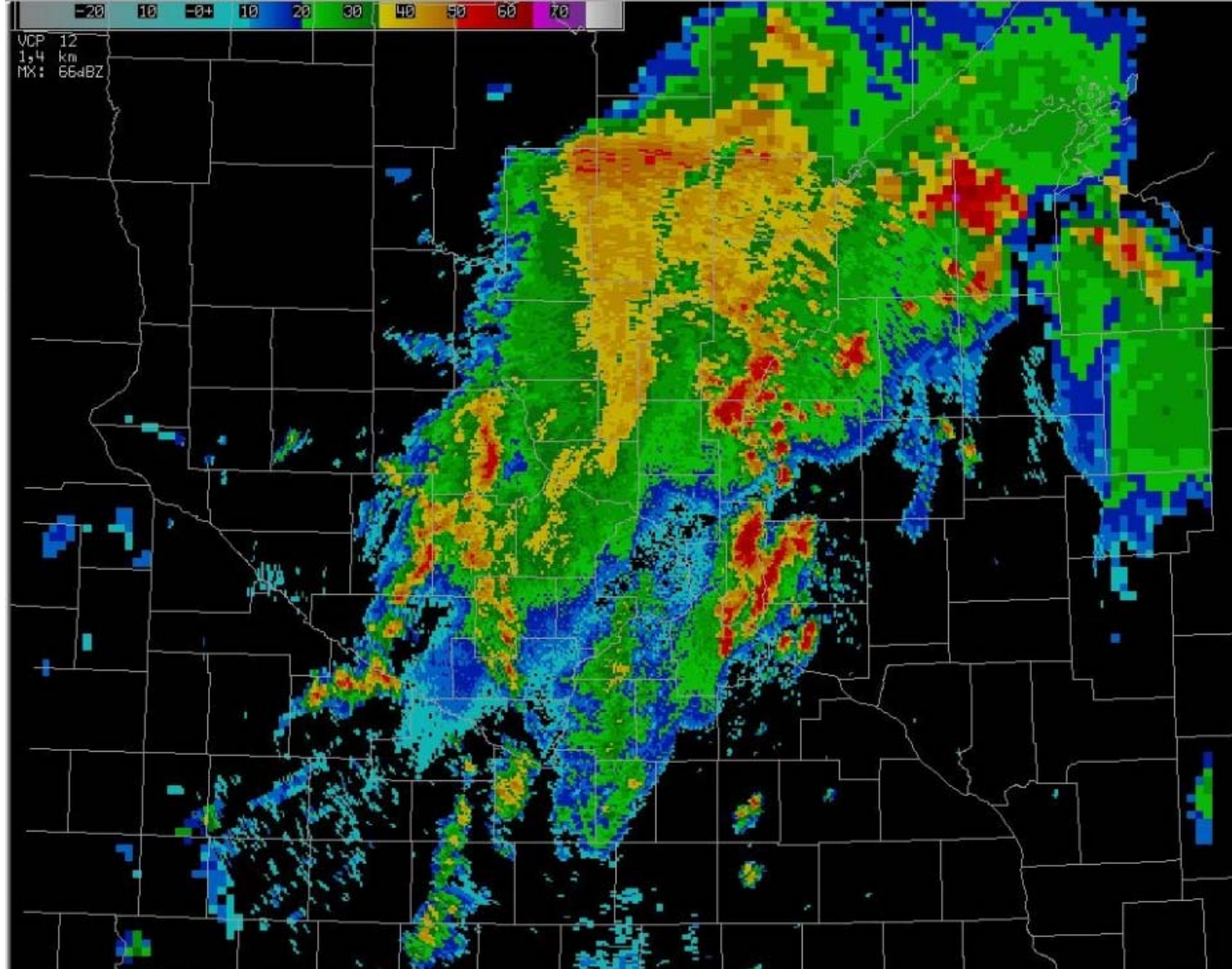
***Actual Composite Reflectivity
26 July 2007 - 18z***



***Actual Composite Reflectivity
26 July 2007 - 19z***



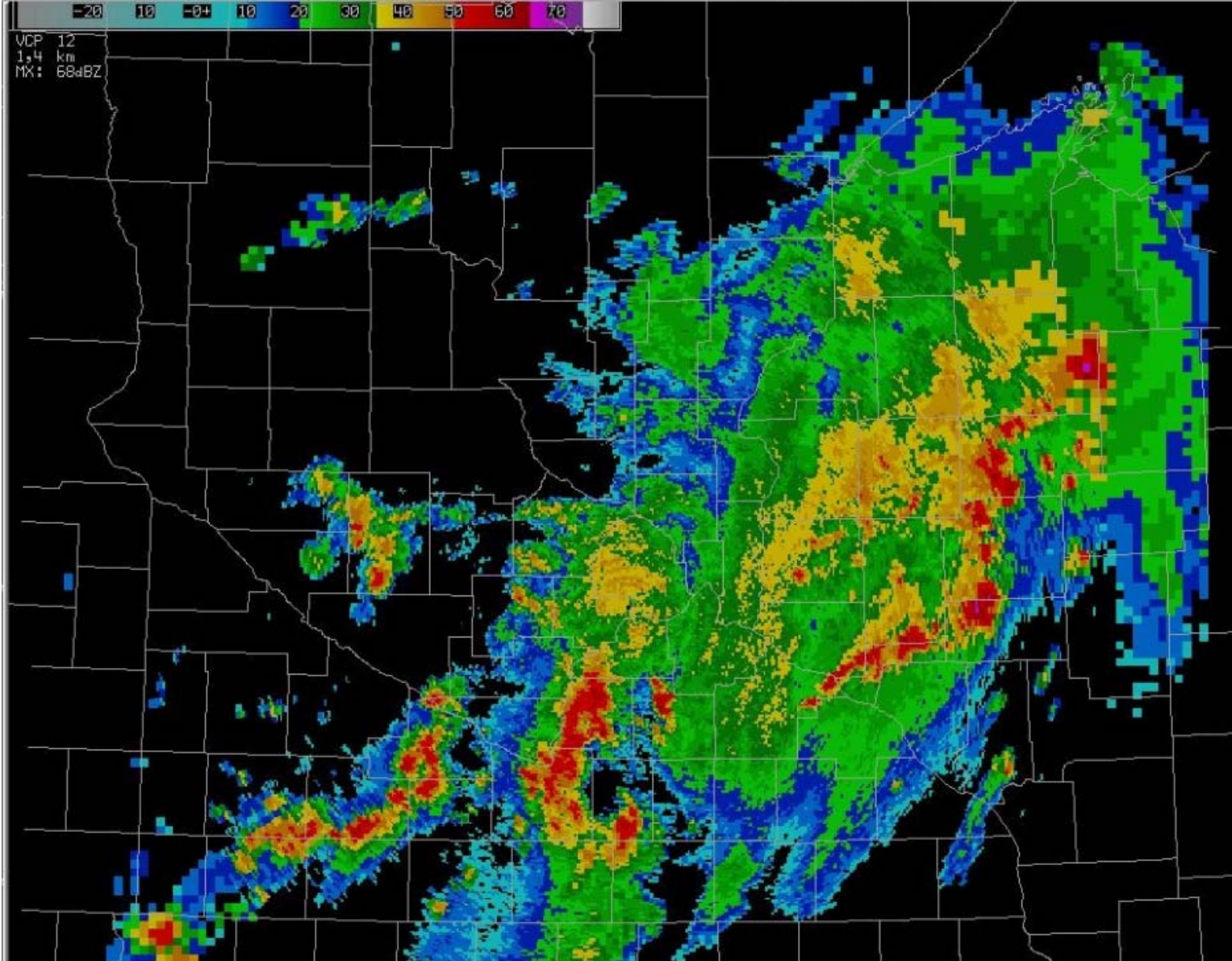
***Actual Composite Reflectivity
26 July 2007 - 20z***



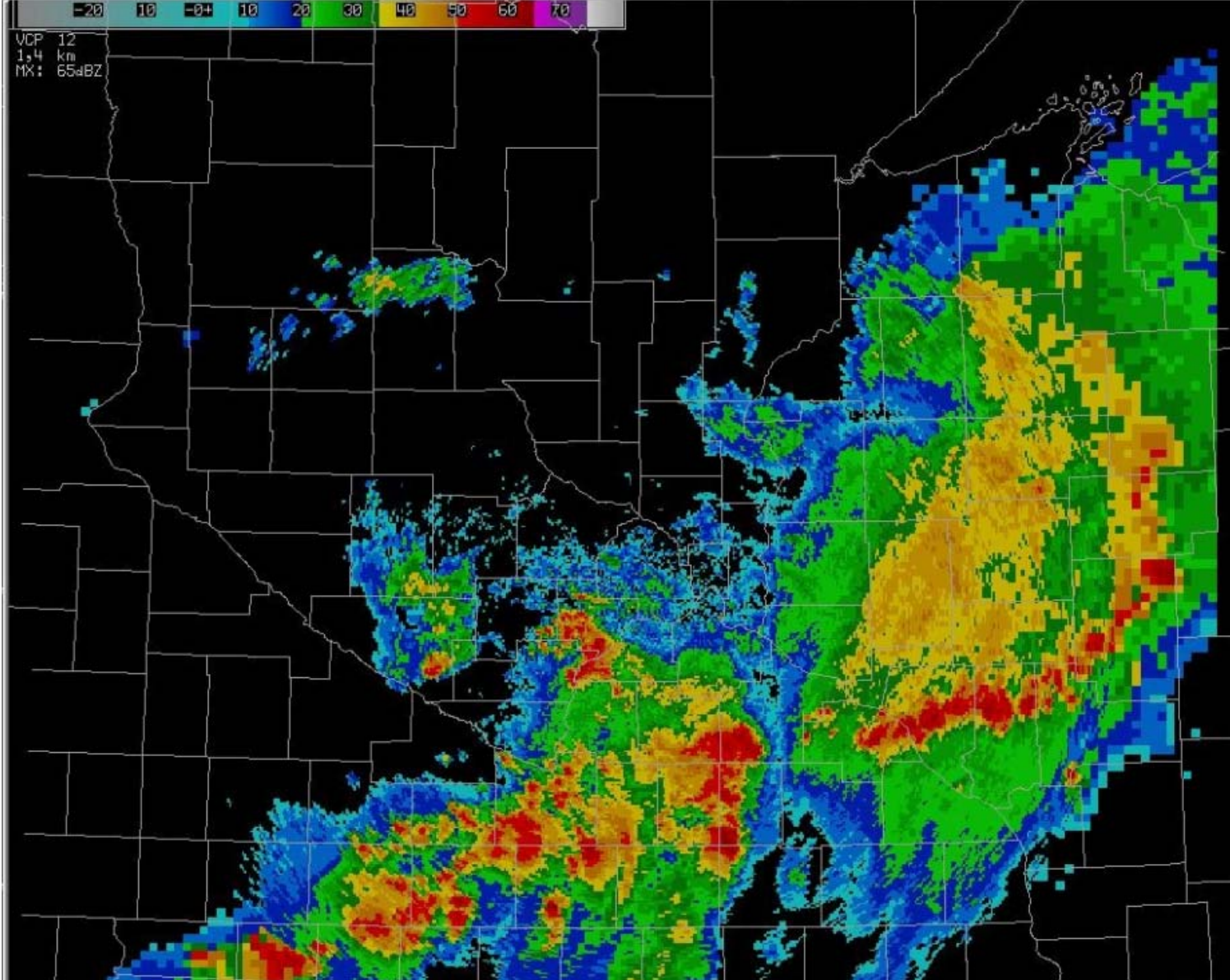
***Actual Composite Reflectivity
26 July 2007 - 21z***



***Actual Composite Reflectivity
26 July 2007 - 22z***



***Actual Composite Reflectivity
26 July 2007 - 23z***



***Actual Composite Reflectivity
26 July 2007 - 24z***