

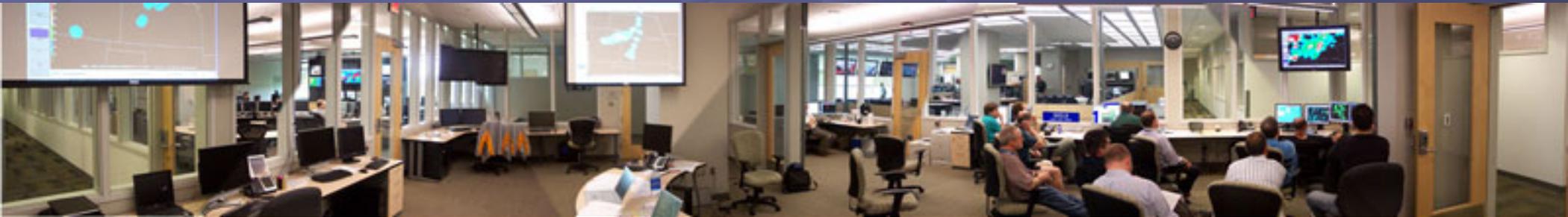
Science Infusion

Jack Kain
Hazardous Weather Forecasts &
Warnings





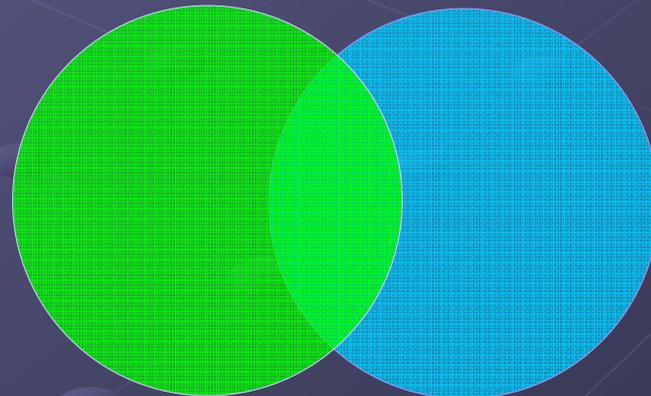
NOAA Hazardous Weather Testbed



- A unique forum for collaboration between researchers and practitioners...

Two Main Program Areas...

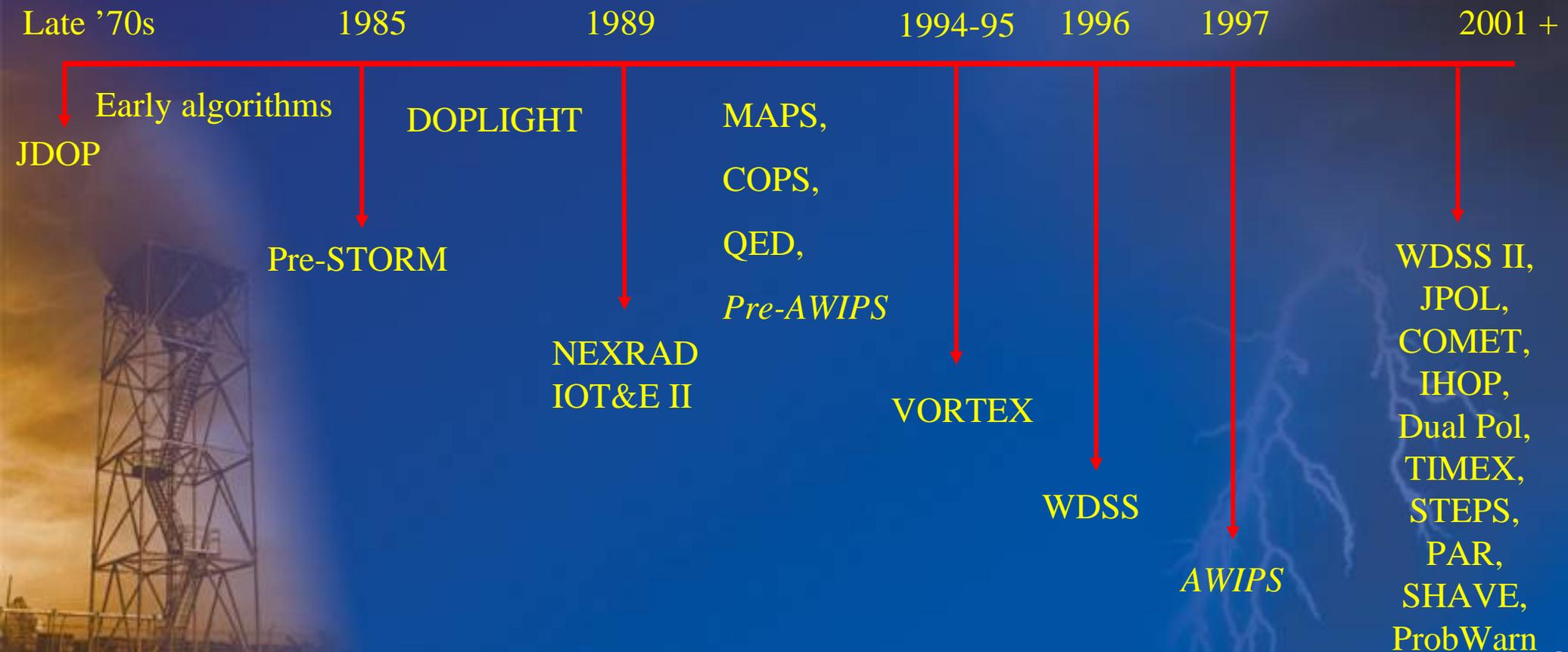
Experimental
Warning
Program



Experimental
Forecast
Program

Establishing the “Culture of Collaboration”

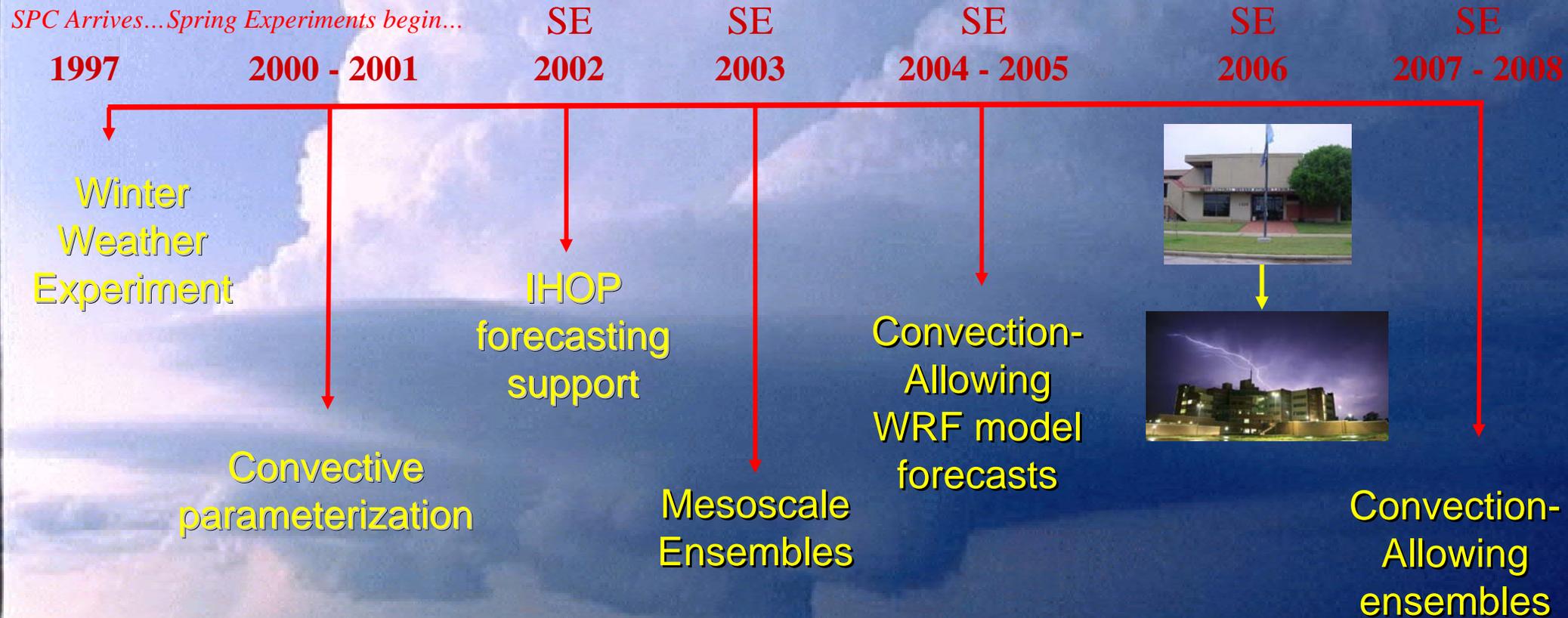
A glance at pioneering Collaborative Projects between NSSL and WFO-OUN...the incipient EWP branch of the HWT



Arrival of the SPC...

Spring Experiments...

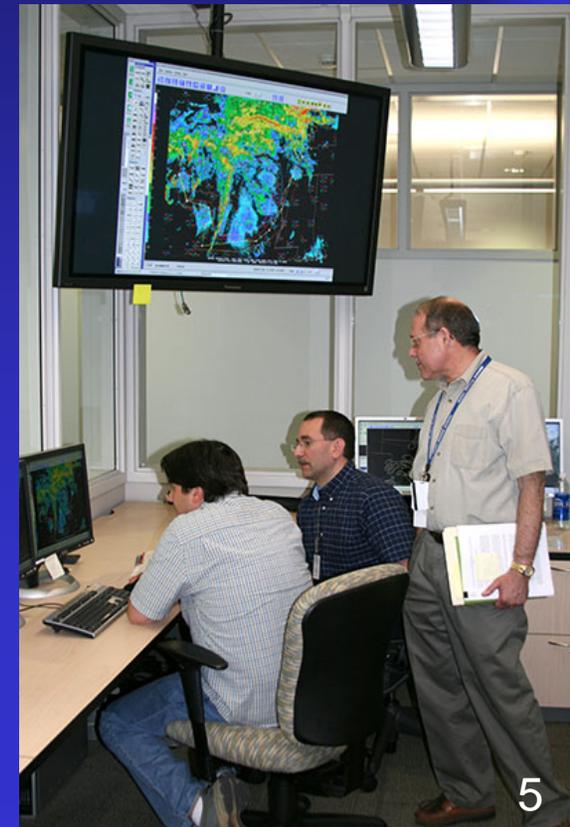
The EFP branch of the HWT



The annual Spring Experiment

- *A 6-8 week experiment conducted each spring to evaluate emerging scientific concepts and tools in a simulated operational forecasting environment*

...Scenes from SE2008...



HWT-EFP Spring Experiment 2007 Participating Institutions:

NOAA Agencies

- NCEP/AWC (2)
- NCEP/EMC (3)
- NCEP/HPC
- NCEP/SPC (9)
- NWS/BTV
- NWS/LWX
- NWS/MAF
- NWS/OCWWS

- NWS/OUN
- NWS/RAP
- NWS/SLC
- NWS/SRH
- OAR/NSSL (5)
- OAR/GSD (3)
- OAR/PSD

Universities

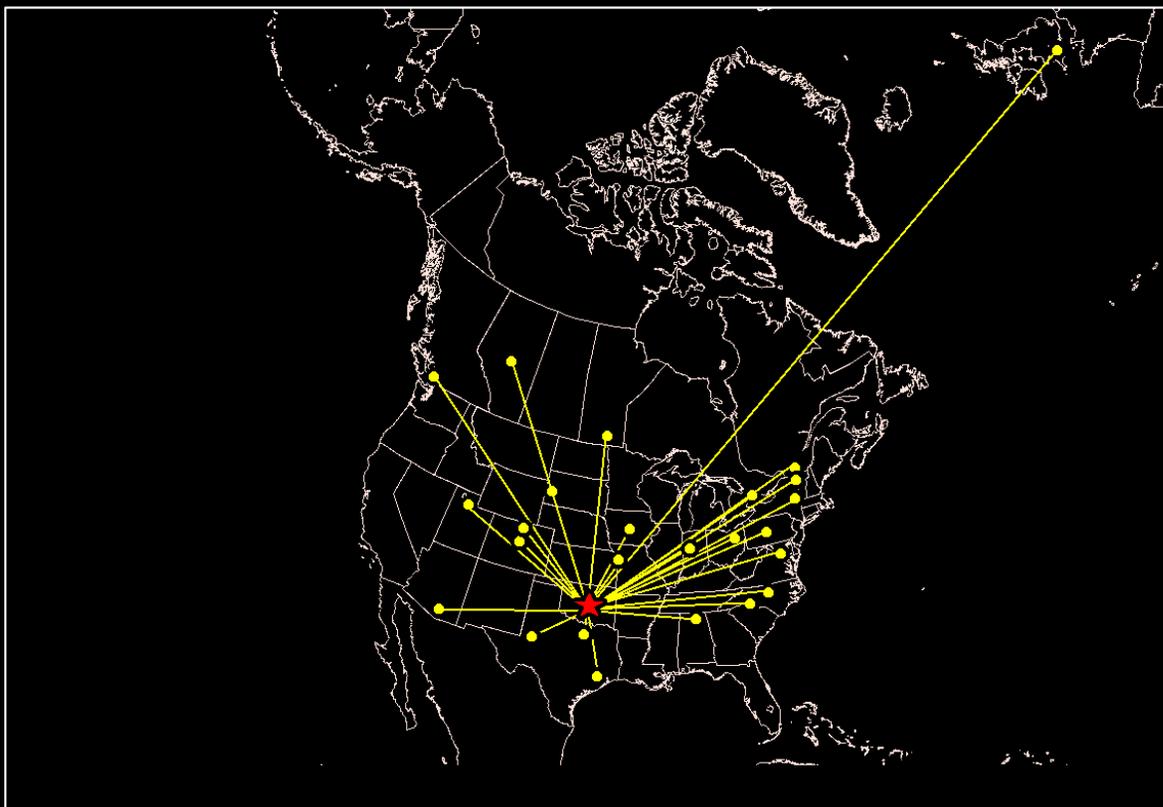
- Albany-SUNY (2)
- Arizona (2)
- Colorado State
- Iowa State
- North Carolina State (4)
- Oklahoma (2)
- Penn State
- Purdue (2)
- UNC-Charlotte
- York (Ontario)

Gov't Agencies

- NCAR (5)
- Environ. Canada (6)
- UK Met Office
- USRA (Huntsville)

Private Sector

- Merrill Lynch
- FirstEnergy



Establishing our own paradigm for science and technology infusion...

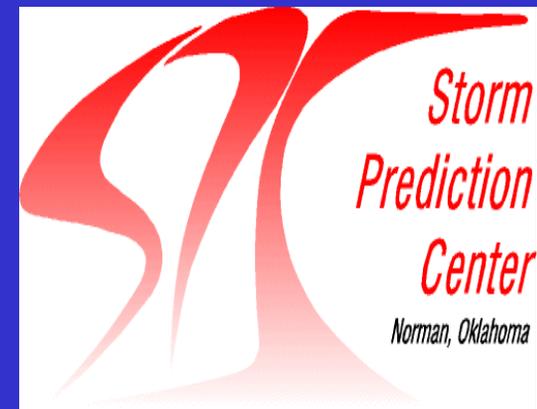
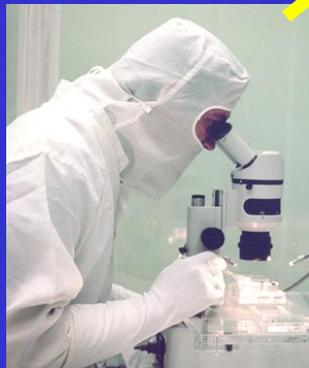
O-to-R :



What do Forecasters need?

Establishing our own paradigm for science and technology infusion...

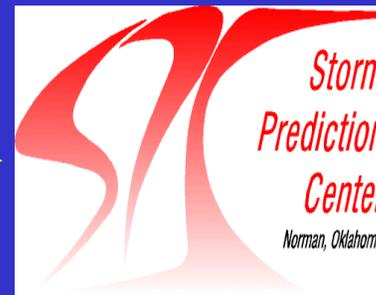
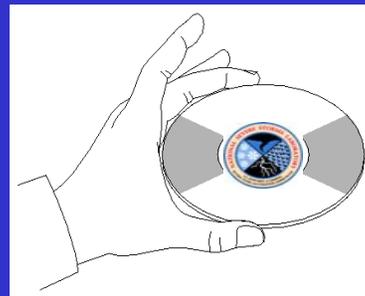
R-to-O :



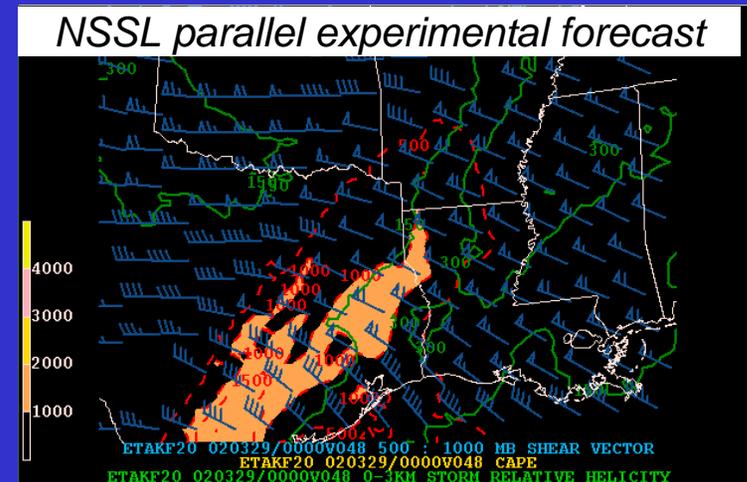
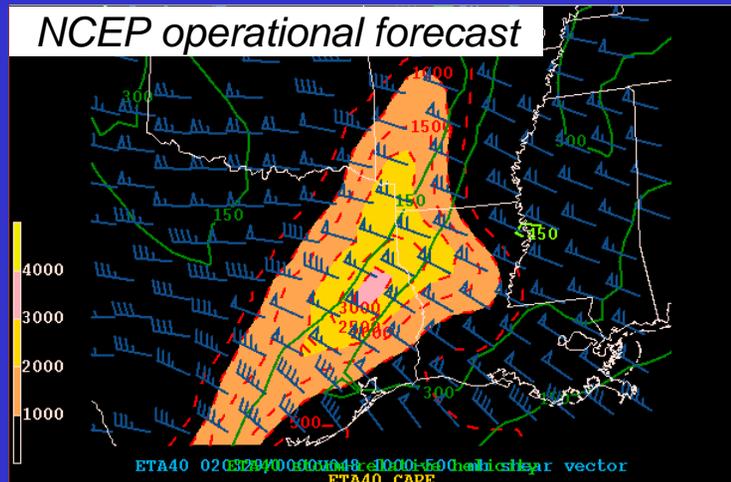
*Perform research,
communicate results...*

Establishing our own paradigm for science and technology infusion...

R-to-O :



e.g.,



Transfer technology...

Establishing a “grass-roots” infusion paradigm...

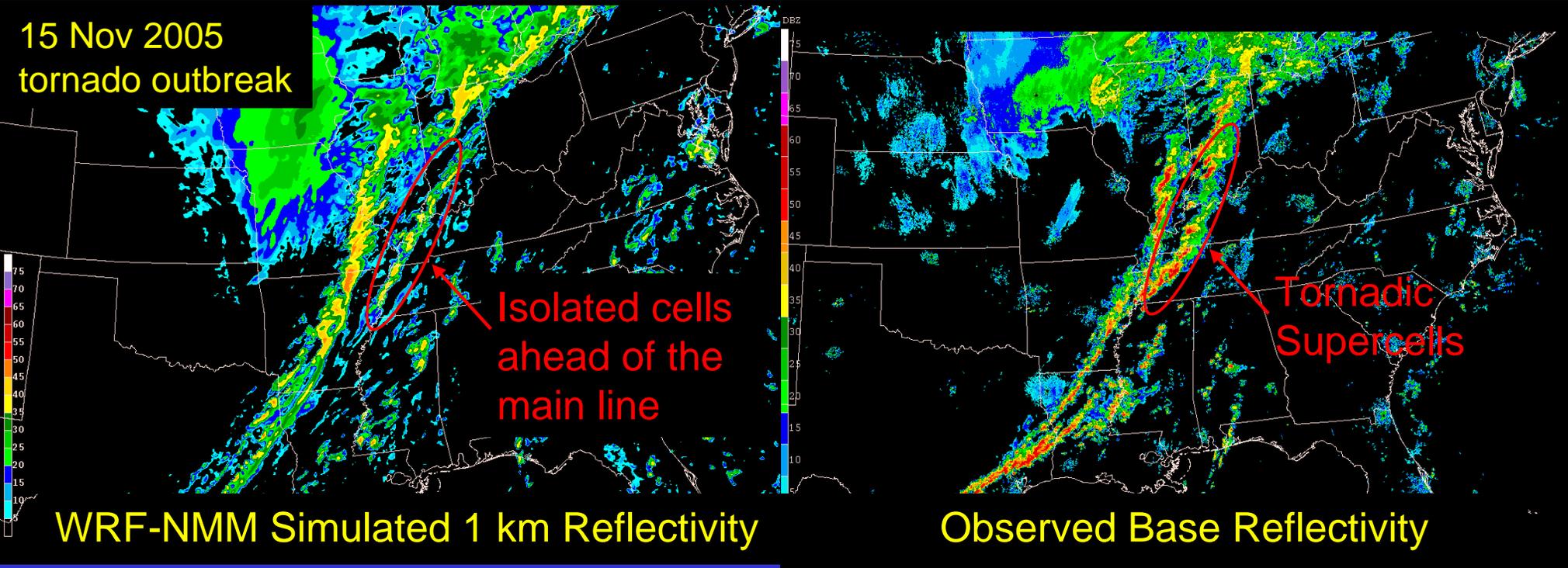


Publish results...

At least 24 NSSL-SPC co-authored, refereed publications since 2000

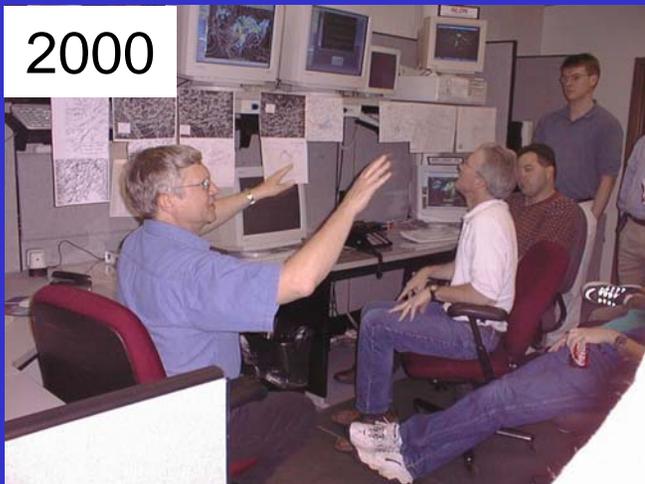
Tangible Operational Impacts

15 Nov 2005
tornado outbreak



“The WRF-NMM4 provided very useful input regarding the mesoscale organization and character of storms...I used it to help delineate where/when watches would be required.” *John Hart - SPC Day Shift Lead Forecaster*

2000



Questions??

2005



2001



2003



2007



2002



2004



2008

