

# **Hybrid Model Wind Forecasts for Contaminant Transport**

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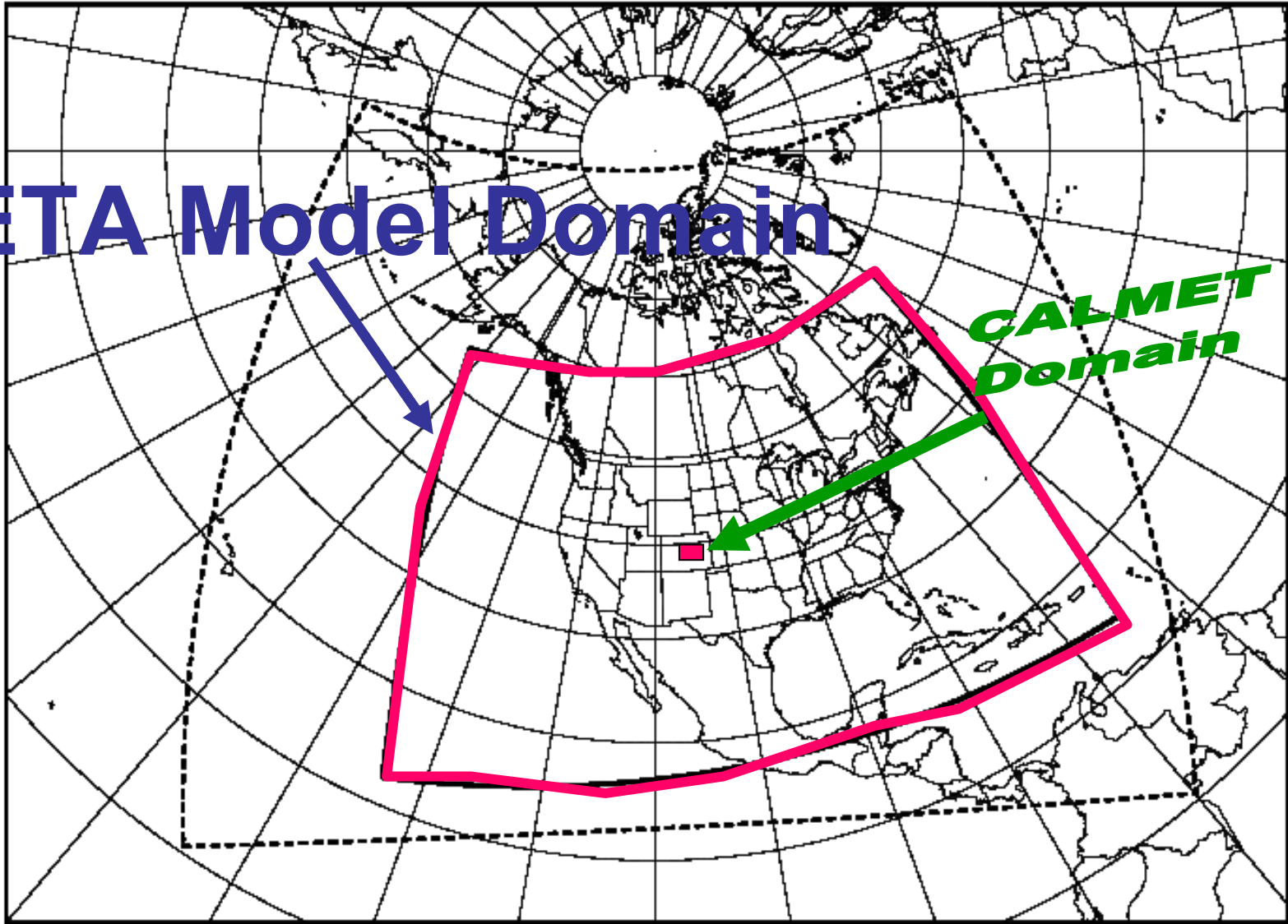
# Objectives

- **Develop a Hybrid Wind Model to Predict Wind Dispersion of Airborne Contaminants**
- **Compose the Hybrid Model with the ETA Model and the CALMET Model**
- **Make 24-hour Forecasts Daily**
- **Verify Wind Fields**

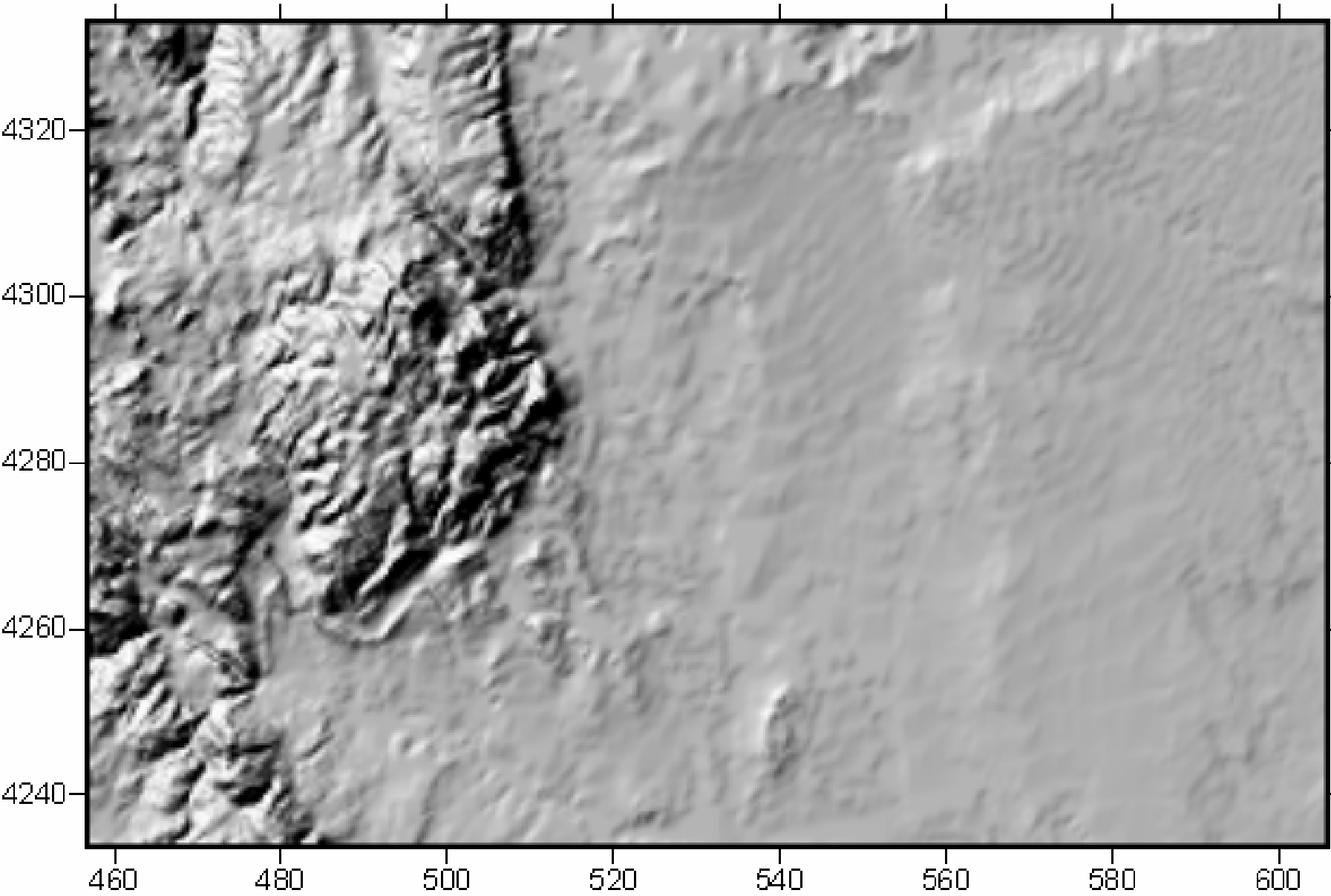
DASHED = ETA-32 ; SOLID = GRID 211.212.215

**ETA Model Domain**

**CALMET  
Domain**

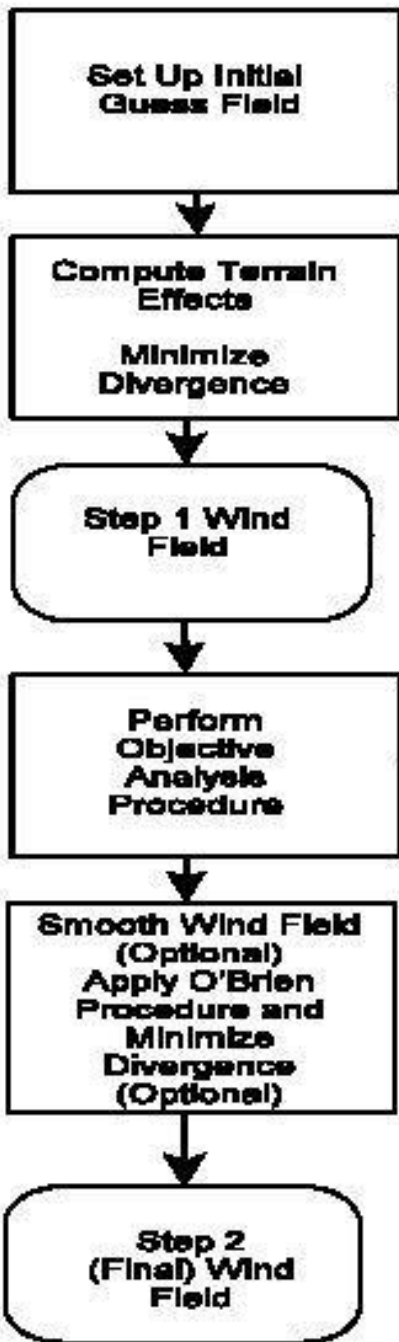


# Colorado Spring Metropolitan Area Modeling Domain



# ETA INITIALIZES CALMET

ETA = Mesocale

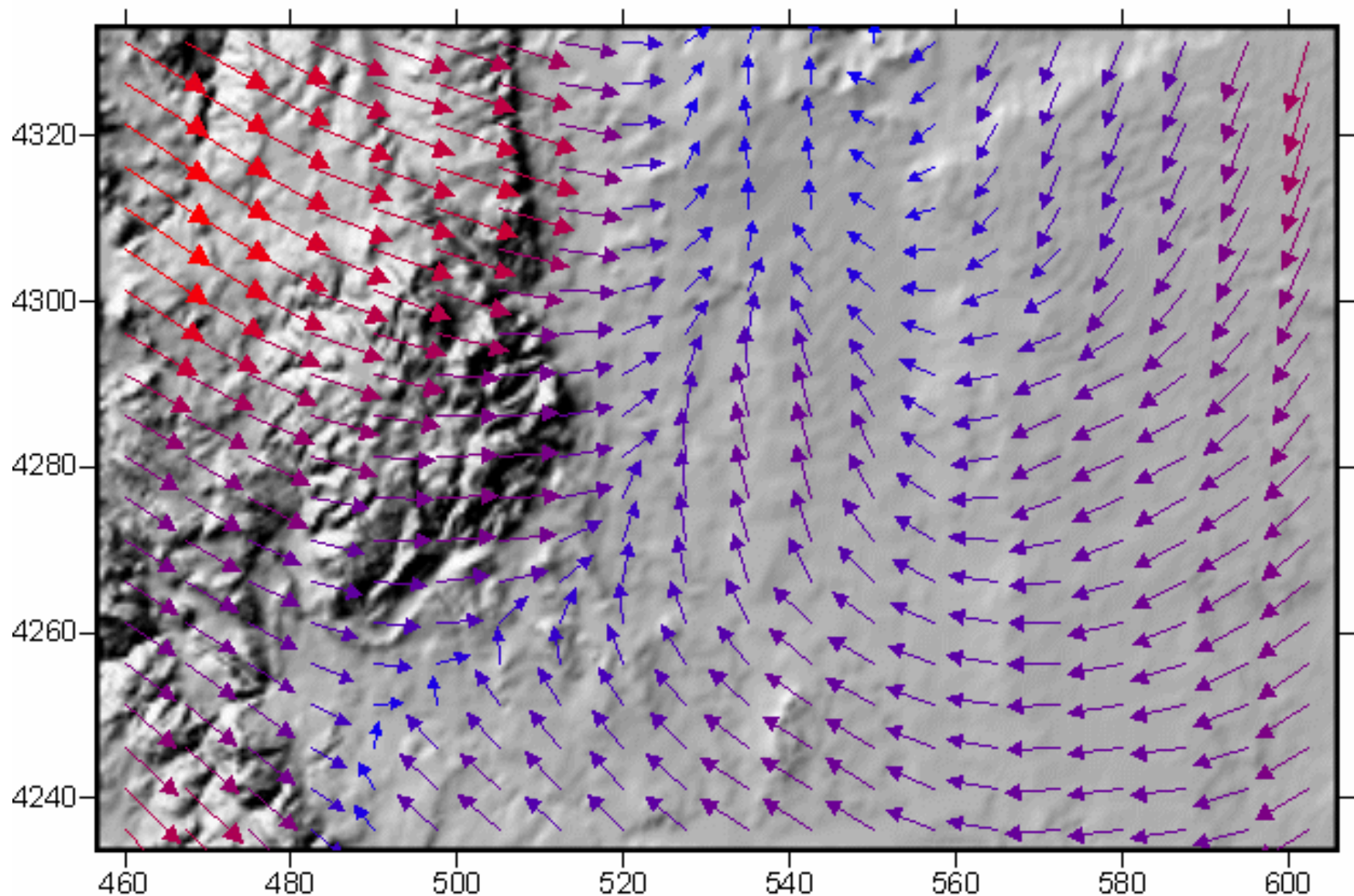


Eta Model

CALMET = Micrometeorology 24-Hr Forecast

# Colorado Springs Metro Area Wind Forecast

## September 26, 2003 Hour = 2 P.M.



**UCCS**

**Weather Station**

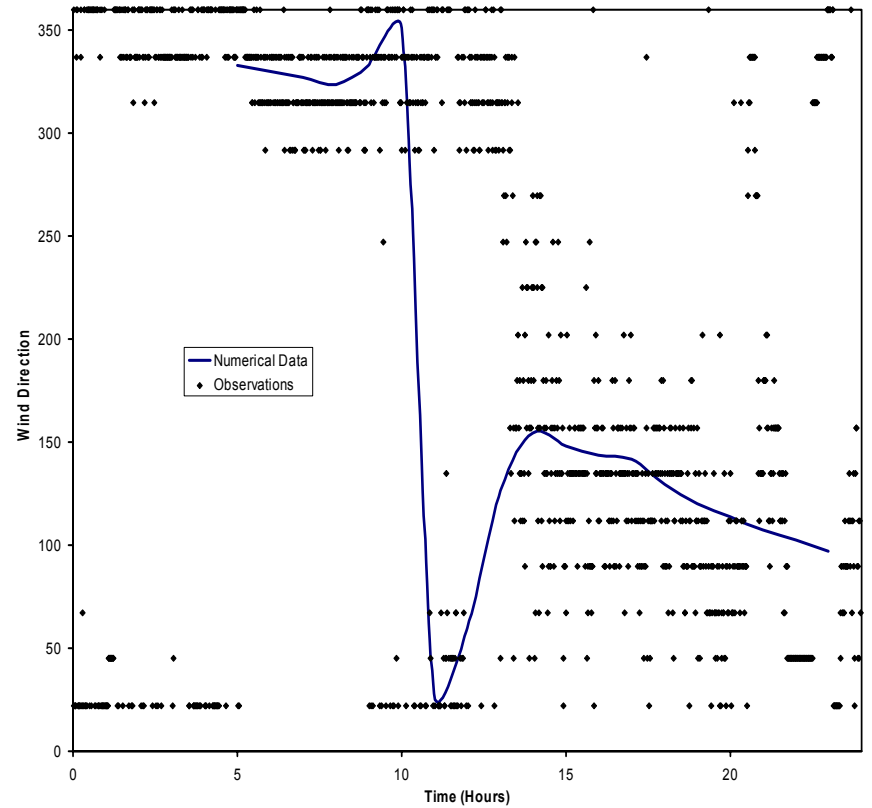
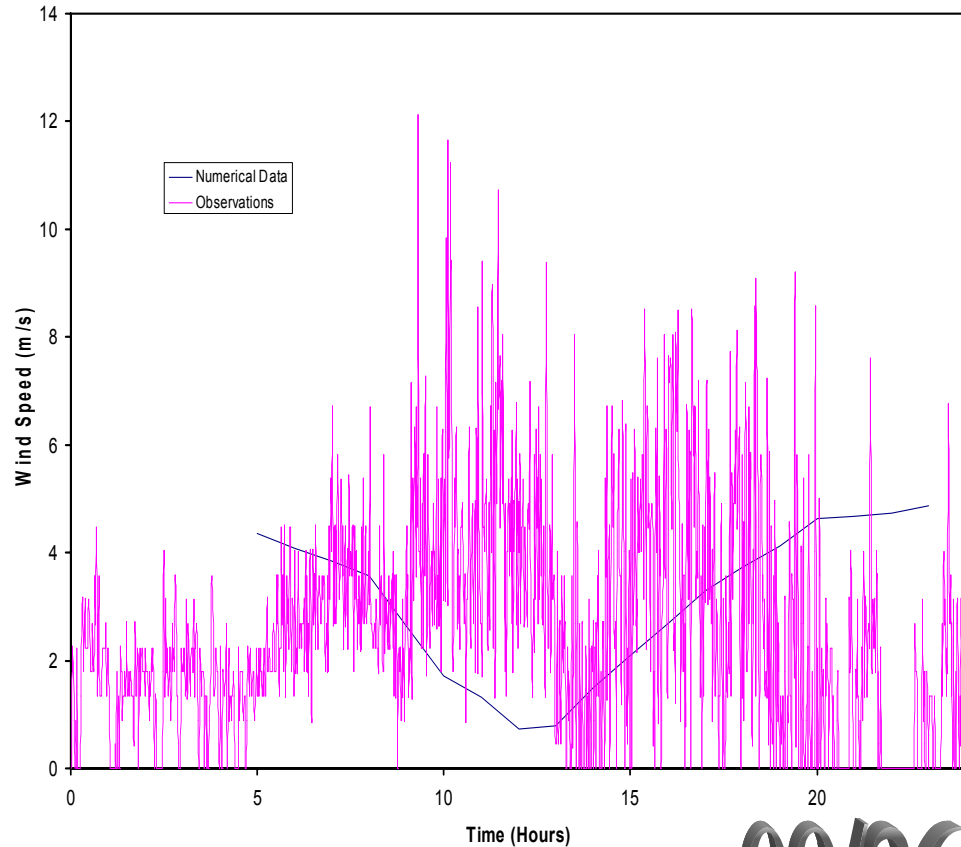
**Set-up for Verification**



# Initial Comparisons at UCCS

Wind Speed  
**Wind Speed**

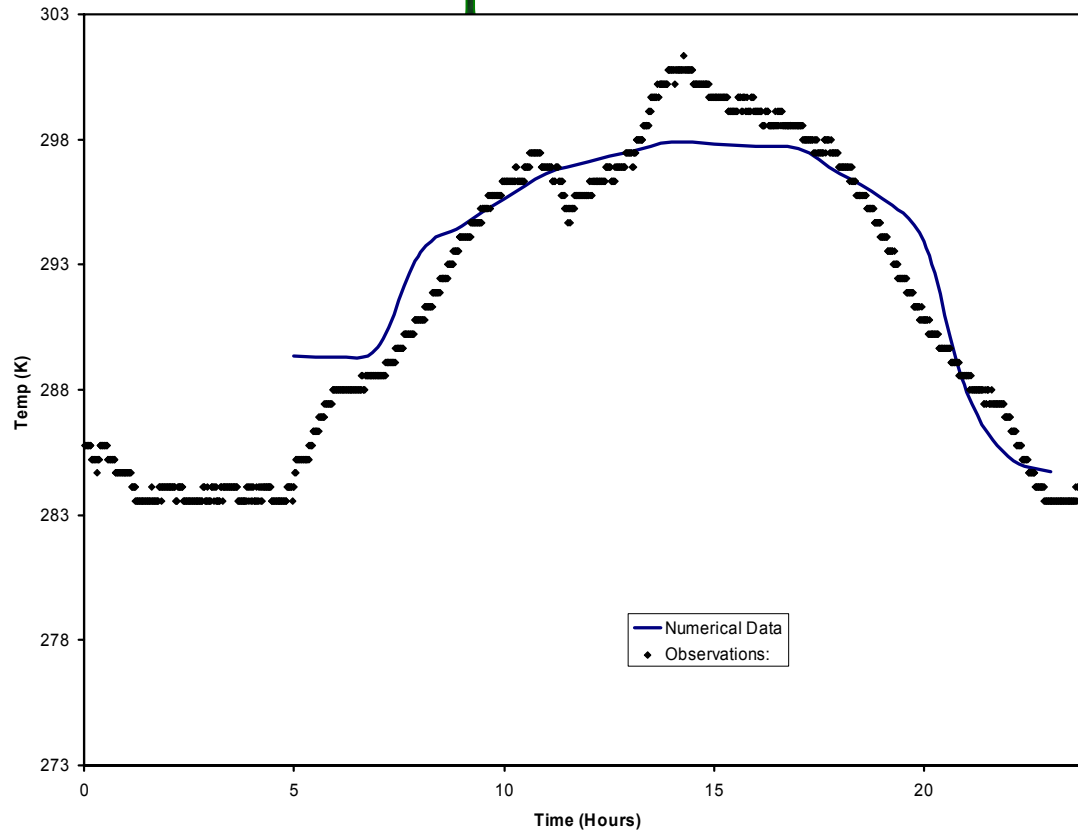
Wind Direction  
**Wind Direction**



**09/26/2003**

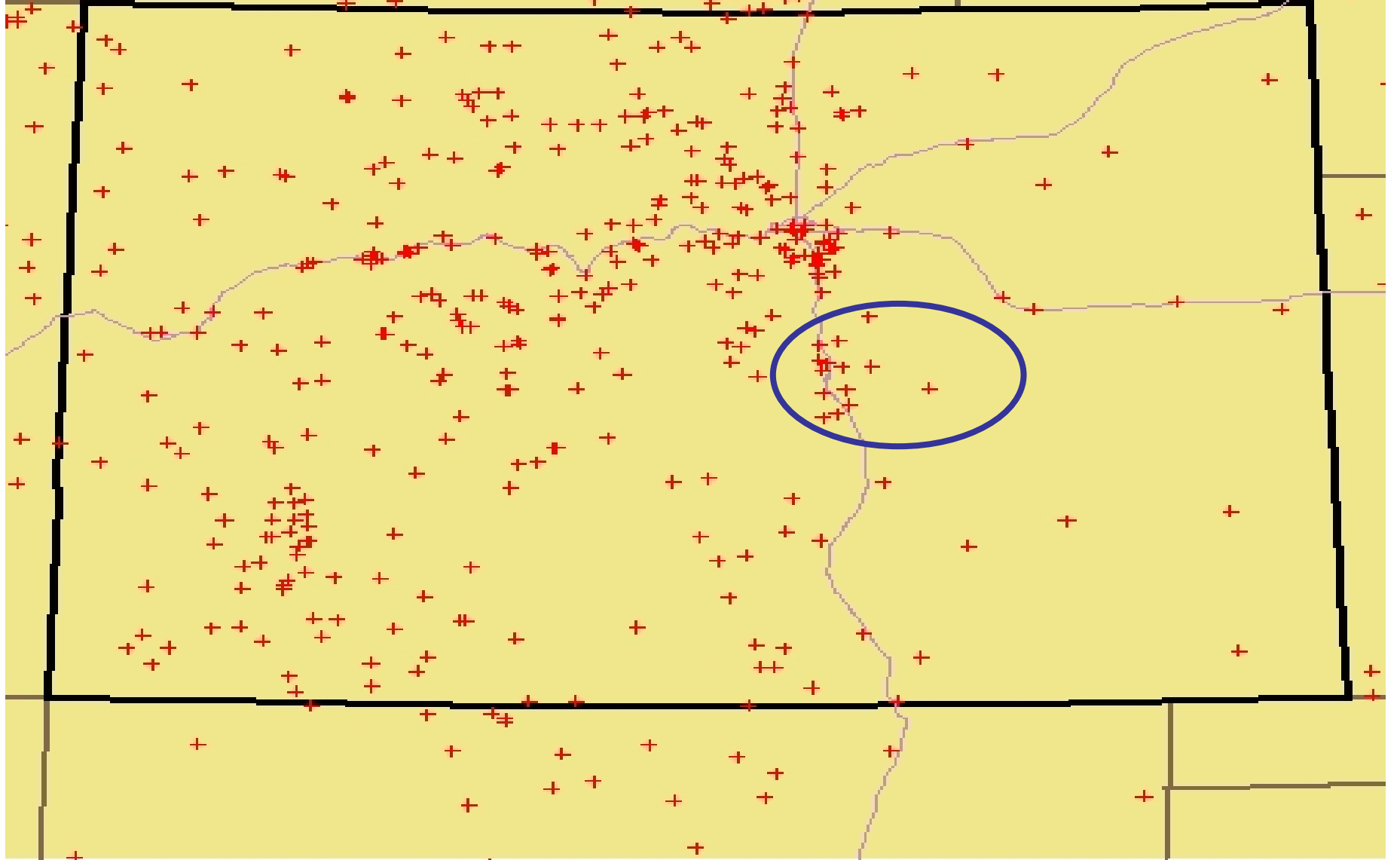
# Initial Comparisons at UCCS

## Temperature Temperature



09/26/2003

# Other Stations for Verification



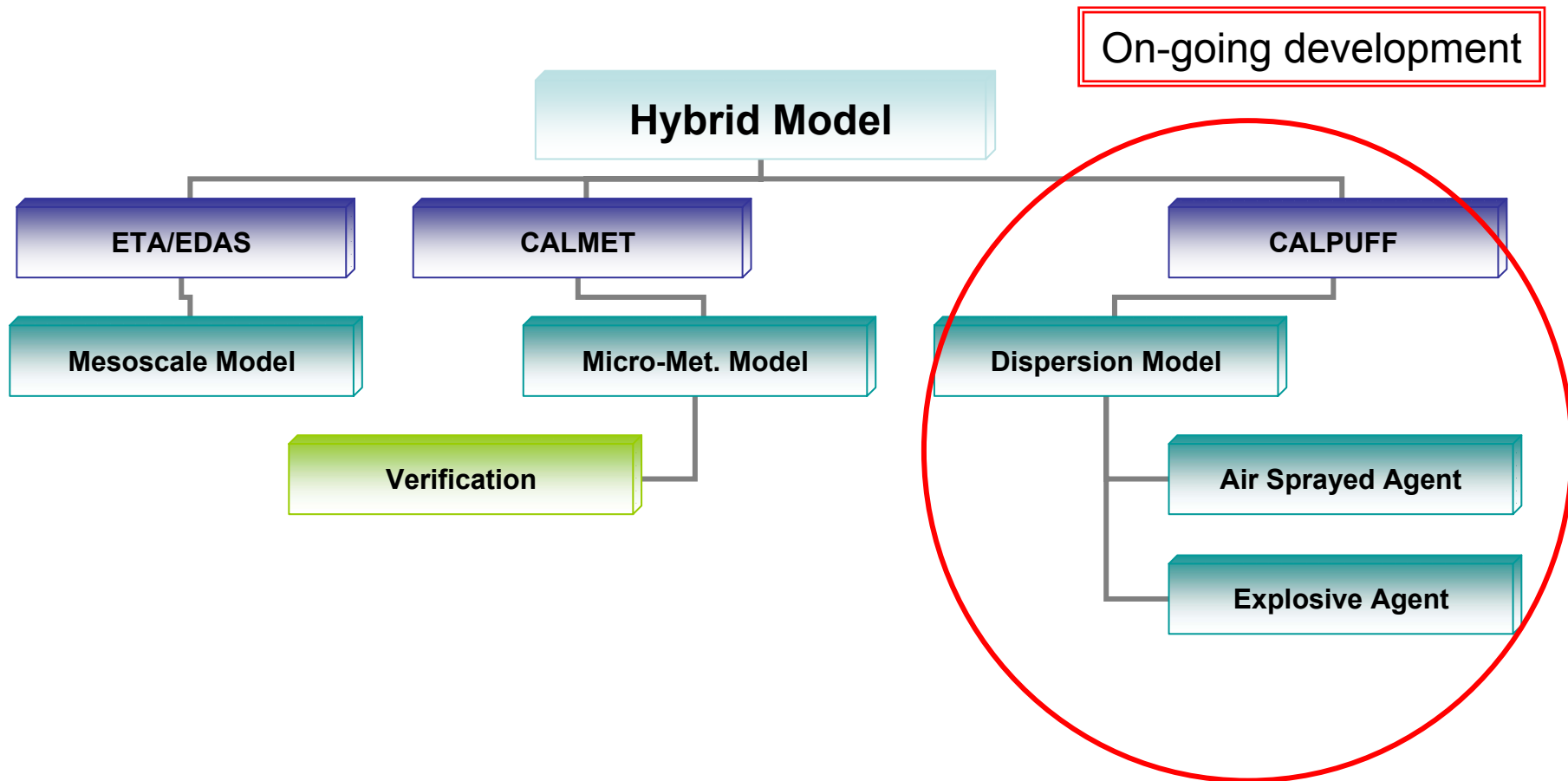
# CALPUFF Model: Dispersion Model



**Incorporate Non-Traditional Sources:**



# Final Hybrid Model



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