Boulder/Denver, Colorado as a GRUAN site

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GRUAN site selection criteria	Qualification of Boulder/Denver
Variety of climatic regimes, surface types, and mix of low/high altitude sites	High altitude, Mountain region, complex terrain
Connection with involved scientific institute	NOAA, NCAR, UCAR, CU
Start with a few stations, chosen based on existing observing program and readiness	• NOAA WV/Ozone launch site • Winter weather site • A rich diversity of research instrumentation • Expertise in instrumentation, field deployment, DM, climate science
Next focus on sites with existing upper-air capabilities as candidates	• NOAA-FPH, CU-CFH, ozone sonde capabilities • >28-year of WV/ozone climate record

NCAR Marshall Field Site

Programs:

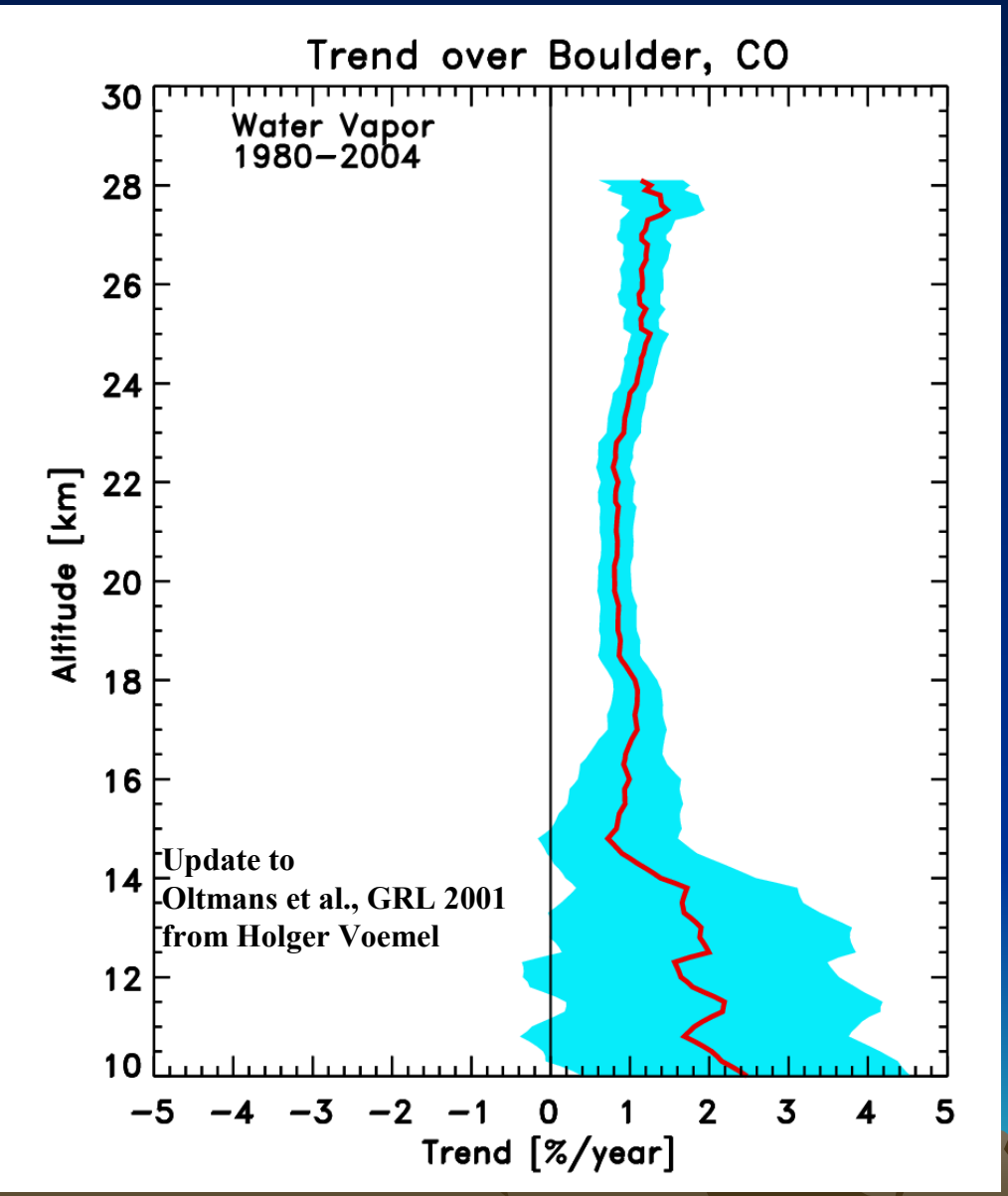
2. NOAA ozone/WV long-term climate monitoring site
3. NCAR winter weather experimental site
4. Plate Boundary Observatory site (GPS)
5. Testing site for various NCAR/EOL instruments

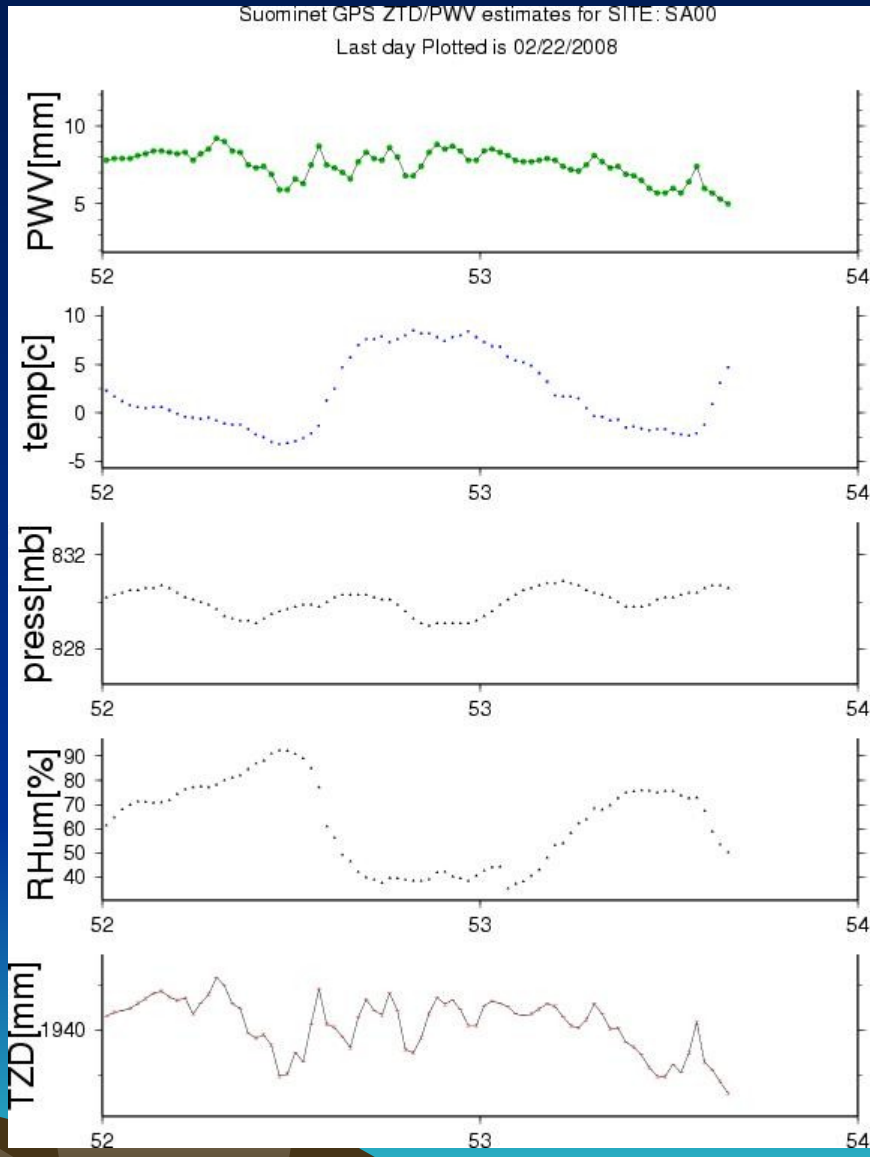
Instruments:

2. NOAA ozone/WV sonde
3. Surface hydrometeorology sensors
4. Ground-based GPS receivers
5. Towers, wind-profilers, S-Pol radar and others






Trend over Boulder, CO
Water Vapor
1980–2004
Update to
Oltmans et al., GRL 2001
from Holger Voemel
Altitude [km]
Trend [%/year]


Suominet GPS ZTD/PWV estimates for SITE: SA00
Last day Plotted is 02/22/2008
PWV[mm]
temp[c]
press[mb]
RHum[%]
TZD[mm]