Thunderstorm research teams descend on high plains

Dana Sulsberger

The Goodland Daily News The Severe Thunderstorm Electrification and Precipitation Study (STEPS) is well underway in its second week, with only one storm to speak

STEPS brings together a unique culmination of people, technologies, and organizations. The program offers an opportunity for education as well as

The collection of various students, teachers and scientists involved in the STEPS program are brought together by a need to learn and a passion for the weather that is apparent through their work, and the stories they had to tell.

Kale Franz, a recent high school graduate from Burlington, is coordinating high school students to help with the project.

Franz organized 110 students to record data which they report back to him throughout Kit Carson County in Colorado. Franz is in charge of coordinating events and the volunteers activities, as well as checking data for accuracy. Franz says that he has always had a passion for the atmosphere.

Dave Bronkwell of Colorado State University began in Champagne Ill. where the CHILL radar system originated. (CHILL is the abbreviation for the University of Chicago and the University of Illinois who first developed and operated the radar unit.)

When the system moved to Greeley Colo. Bronkwell came along with it. And now that the system has been moved to Burlington he has once again followed along.

All of these stories and people are coming together with the same goal, better understanding of the makeup of severe thunderstorms. This is the largest research effort to date focused on

"We want to relate the structure to production of lightning - especially positive ground flashes - and their relationship to severe weather," said Dave Rust, lightning and storm electricity researcher from the National Severe Storms Laboratory in Norman,

The various technologies used are; Three radar systems which will be used to determine the internal flow and precipitation structure of a storm, storm chasing vehicles which will be used to collect hail and observe meteorological conditions and precipitation directly beneath storms. The vehicles are manned by volunteers and Graduate



Satellite inside the CSU-CHILL Radar Facility temporarily located in Burlington Colo.

Photos by Dana Sulsbergrer / The Goodland Daily News

students from several colleges. weather balloons into a storm. The balloons transmit wind speeds and other vital data back to one of the ra-

One of the other technologies used clude the National Weather Service,

by STEPS is a 3-D lightning mapping Also used is the T-28 armored air-system which will detect up to 10,000 craft built for flying into storms. It can energy pulses per second to plot the withstand golf-ball sized hailstones. three-dimensional distribution of The plane probes storms at altitudes of lightning. They also utilize the lightup to 20,000 feet. STEPS also uses two ning detection networks which track weather-balloon vans which launch the location and polarity of cloud-toground strikes and the CSU flat plate antenna network to quantify intracloud discharges.

Major participating institutions in-



The "crews" that man the storm chasing vehicles field questions while gathered around their vehicles.

NOAA's (National Oceanic and Atmospheric Association) National Severe Storm Laboratory, Colorado State University, Los Alamos National Laboratory, The New Mexico Institute of Mining and Technology, the South Dakota School of Mines and Technology, Stanford University, and the University of Oklahoma.

While all the STEPS' crew and volunteers wait with baited breath for a storm, there doesn't look to be one in

Weather Service in Goodland May was NWS. one of the driest months on record across the High Plains.

With the rainfall in Goodland recorded at only .50 inches, 2.99 inches below normal, this May is the second driest on record. The driest May on record was in 1927.

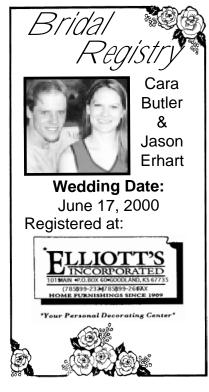
continues, and the region is currently in a mild drought according to the normal temperatures and below norsight. According to the National Drought Severity Index used at the mal precipitation.

It is hard to say whether this dry spell will continue, but climatology on the High Plains for early summer would suggest that we will eventually catch up on rainfall. Precipitation totals for June should range from 3-4 inches. June is typically the most active month Crops, gardens, and lawns are being in terms of severe weather. Only time watered more often as this dry spell will tell, but the outlook through mid June looks to have the area in above

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