

Scripps Hydroclimate Weather Observation Program

Santa Margarita Ecological Reserve



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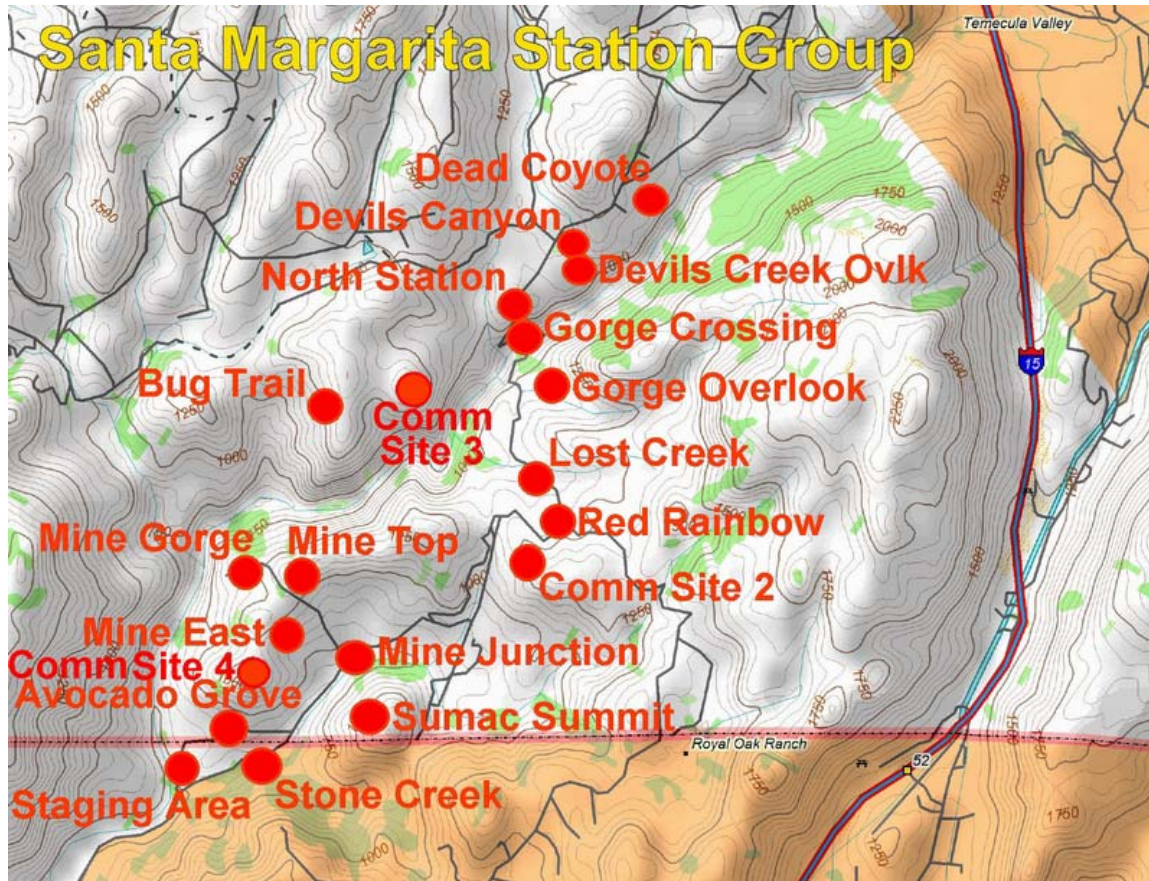
dalden@ucsd.edu



high performance wireless research and education network



Network has 25 sites



22 sites at SMER
including new installations
at TCS8 and TCS10



DL1-Met

Environmental Data Logger



transmits subset of sampled
data every half hour

- * temperature(2)
- * humidity
- * pressure
- * solar radiation
- * winds (2)
- * precipitation

MaxStream
900 MHz
RF Modem

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Digi PortServer TS 2 MEI
**Serial
to Ethernet**

HPWREN

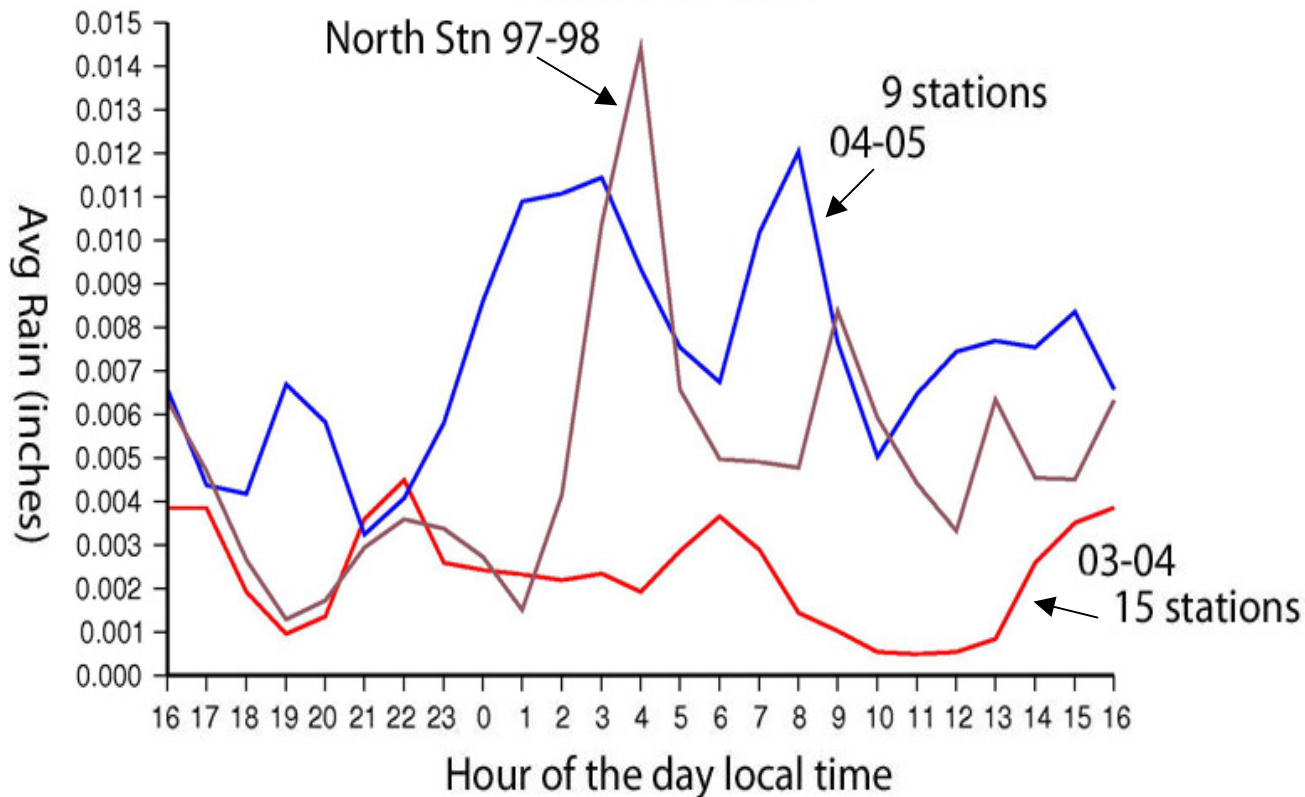


SIO

***Does rainfall
amount vary with
time of day?***

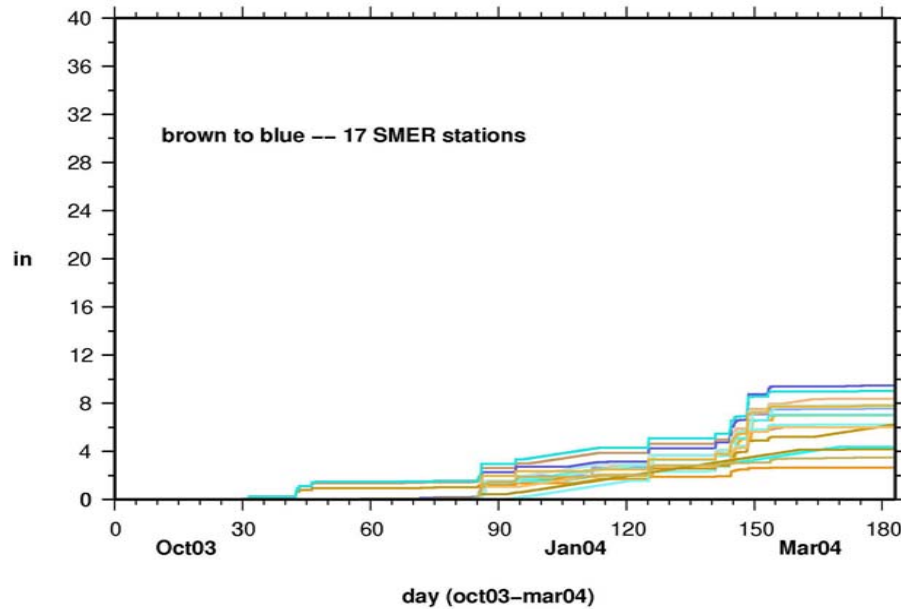
SMER average hourly precipitation

October to March



**At SMER,
observations
from 3 different
years suggest
that most
rainfall
accumulates
between 9PM
and 9AM**

precip accumulations --- oct03 through mar04



***A very dry year followed
by a very wet year:***

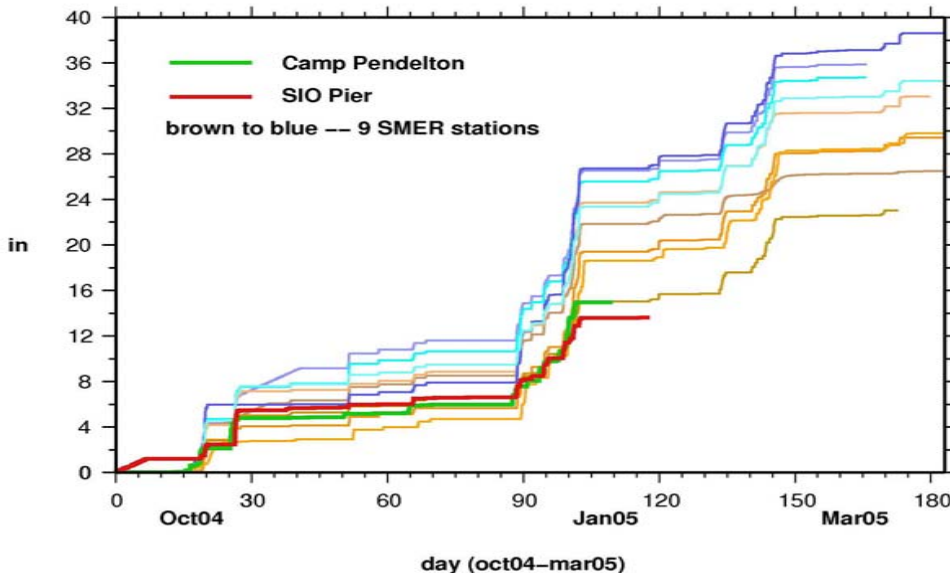
***Striking contrast
between the
accumulation of rainfall
across the SMER
weather station network***

Oct 03 – Mar 04

VS.

Oct 04 – Mar 05

precip accumulations --- oct04 through mar05



**Note more frequent
precipitation events and
larger storms during winter
04-05**

**Coastal stations receive
Less precip than those at
SMER**

2005 – 2006

Development of new logger: DL4

Installations in the Sierra

Upgrades of SMER equipment

