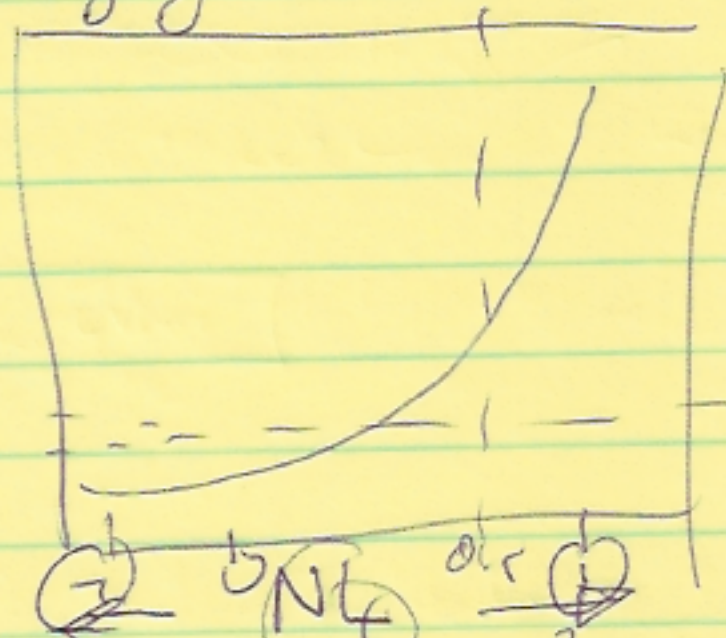


Sketches to Fine CRK

1/24/09

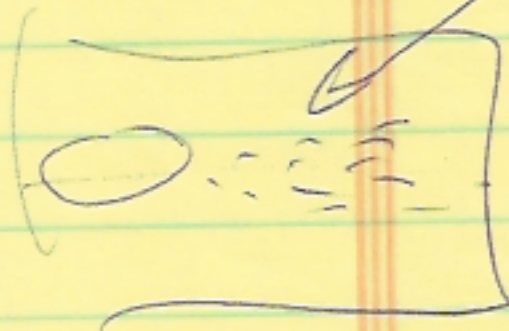
①

Meaning of "Nino 4"

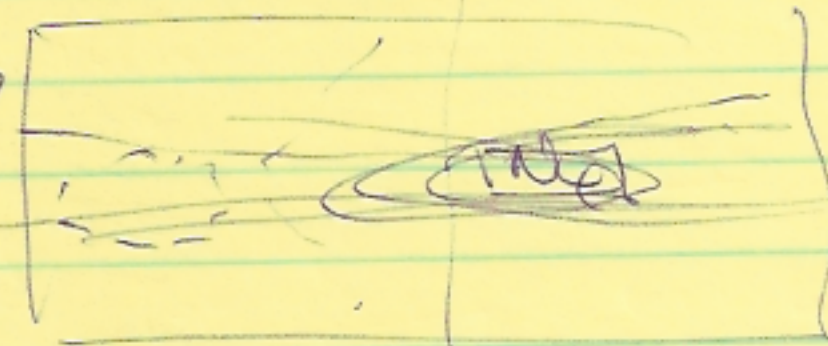


LN

EN



El Niño
La Niña



18/0



"Soulhu
Oserlahn"



WEST-EAST SEESAW

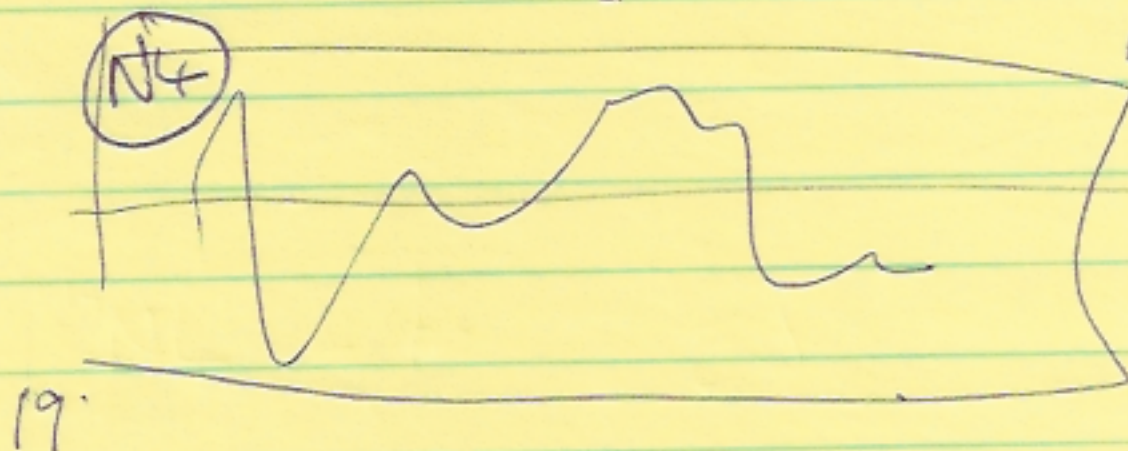
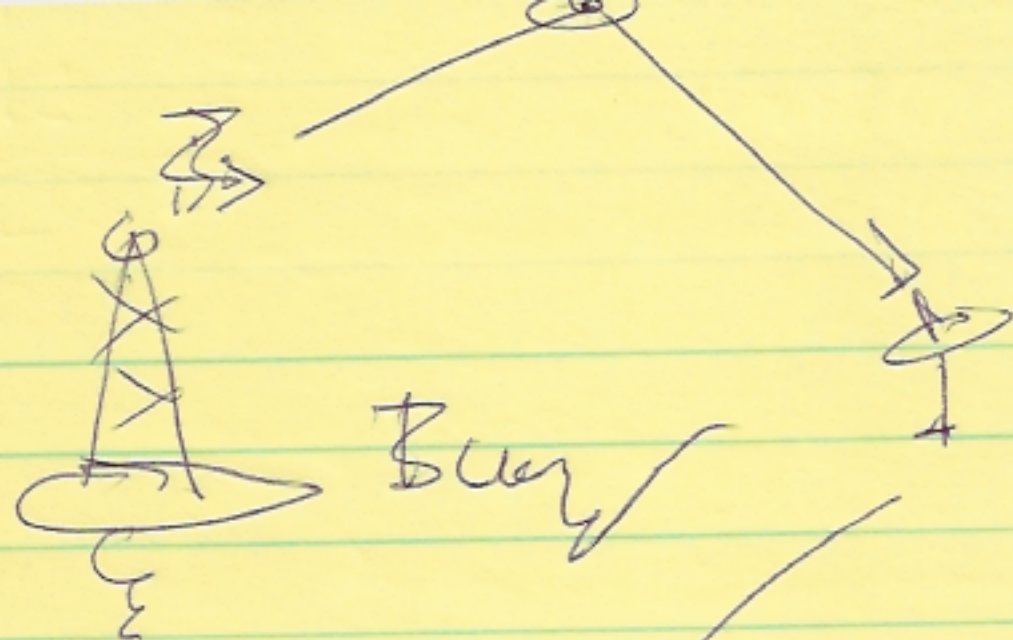
INFLUENCED BY OCEAN TEMPERATURES

"East-West" (seesaw) in at pressure

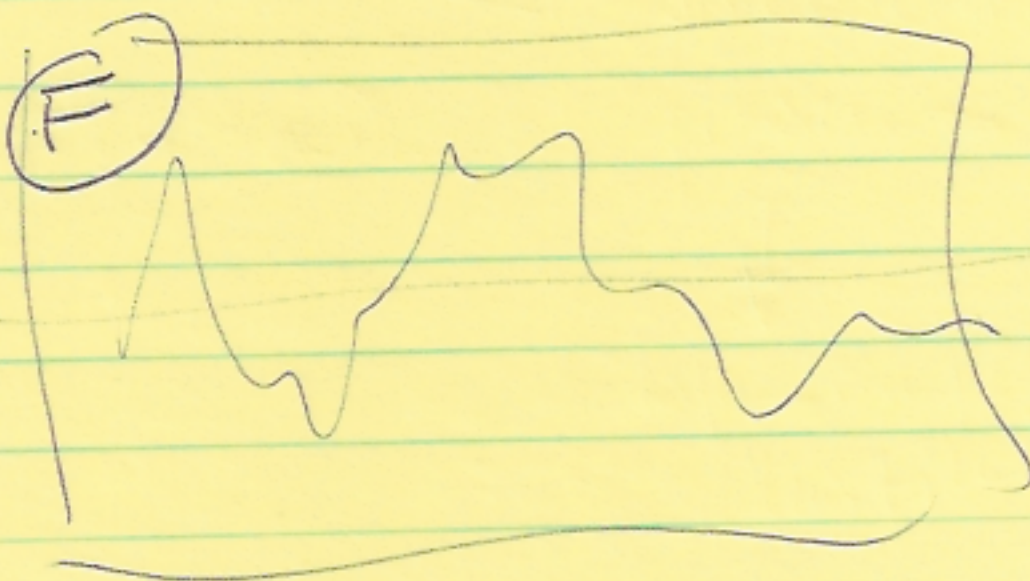
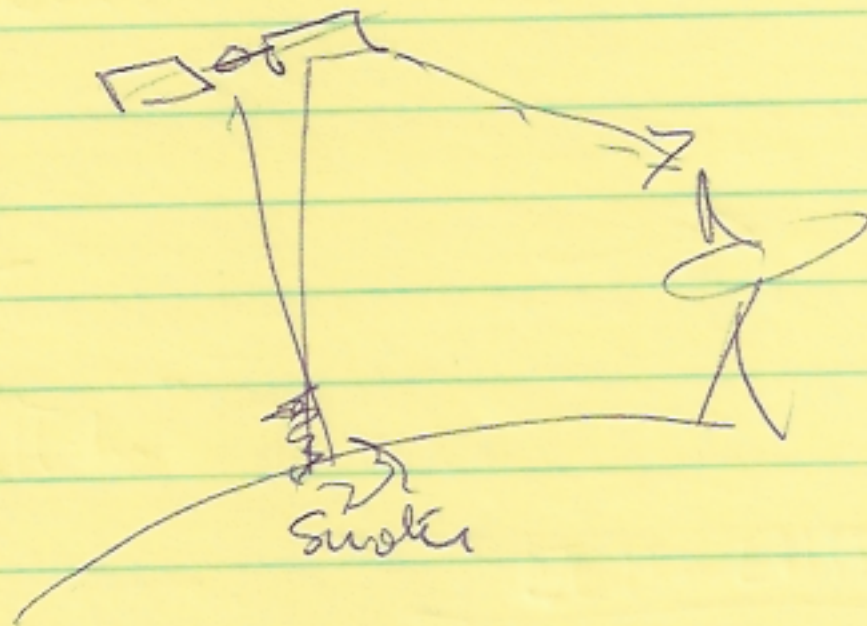
↓
in pressure
in time

both are ESTIMATES

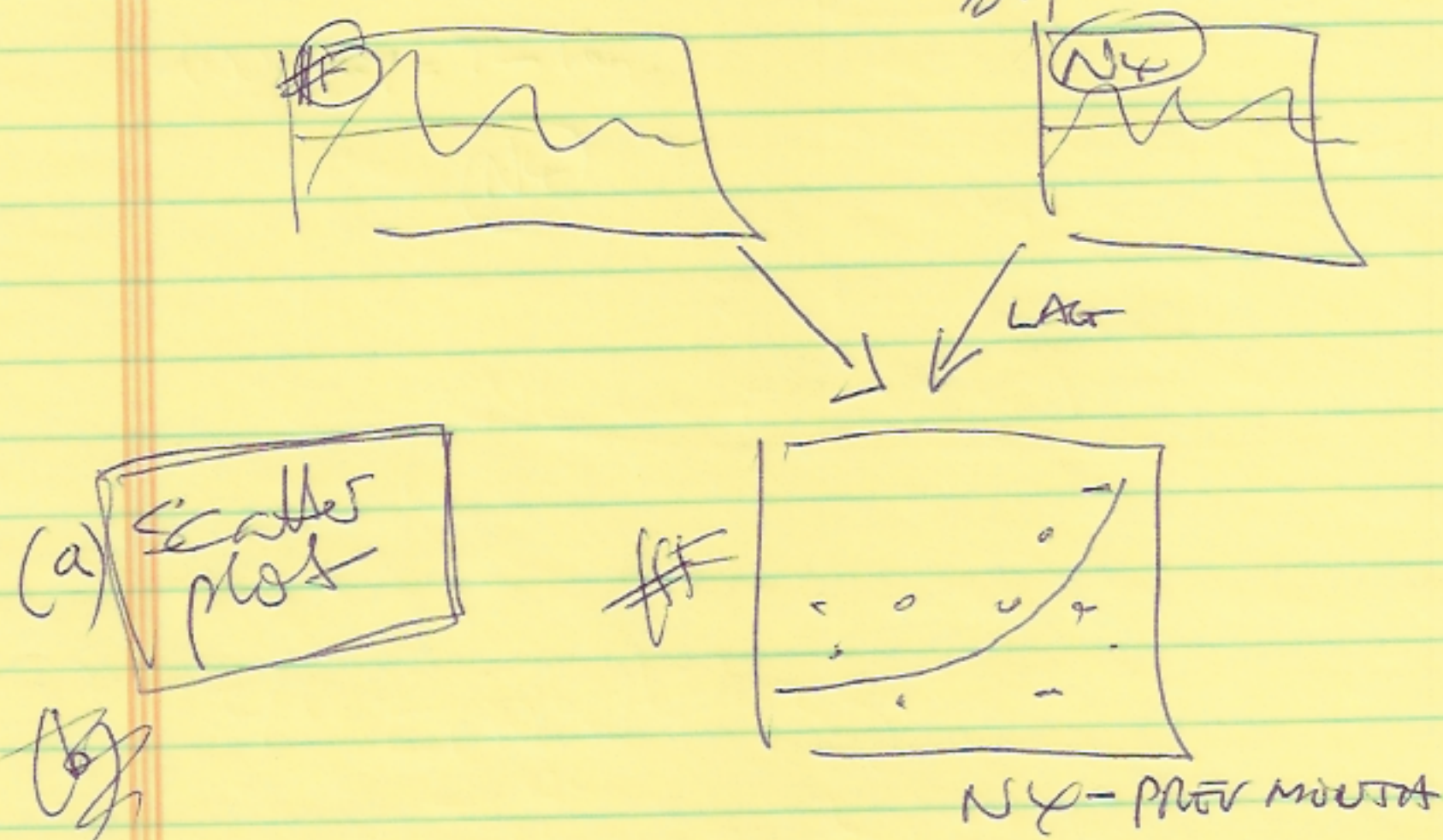
(2) t/s of N4
Monkey
ANOMALY = T-Tay



(3) t/s of Fire Alarm

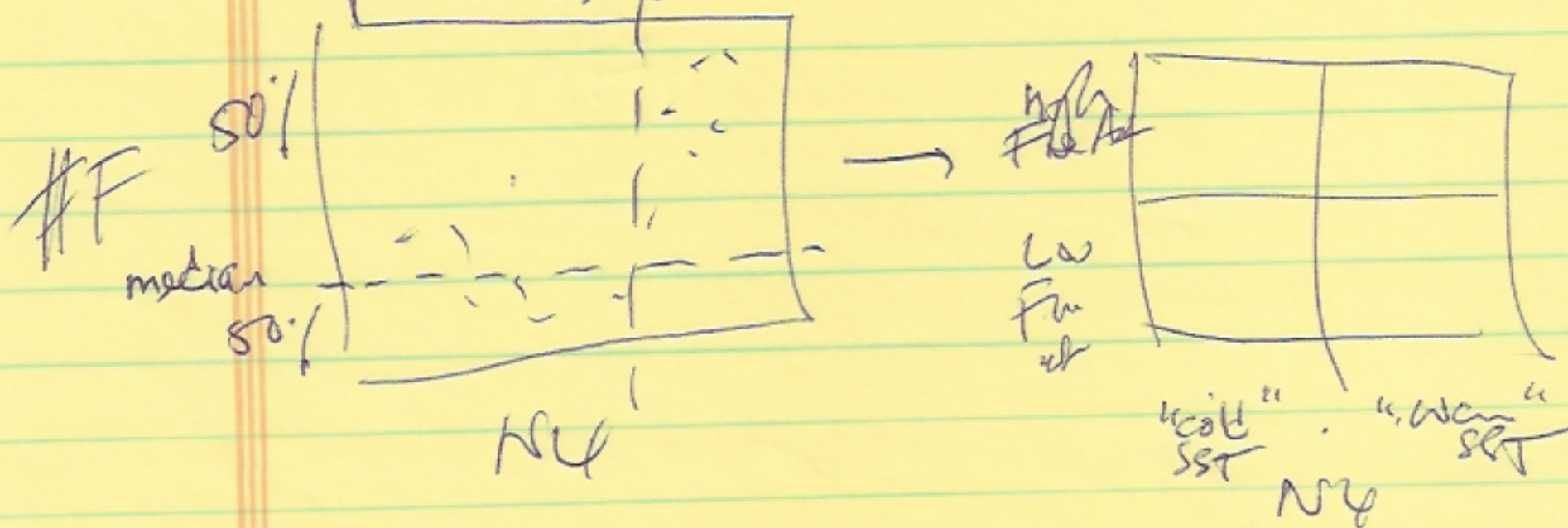


45
 (4) Statistical models relating ~~FF~~ FF to NY



(5) How to read the graphs

(b) make contingency table by choosing thresholds
 Simplest is MEDIAN



⑤ Contingency table can ~~be~~ form the basis
of a probabilistic test

(a) — note scatter implies that ^{clearly} there is NO
1-1 relationship b/w H & NL

(b) — but probability of high vs low file activity
^{clearly} depends on NL in per month;
this probability form defines a probabilistic test

if NL below mean $\Rightarrow \begin{cases} x^1 & \text{High } F \\ x^2 & \text{Low } F \end{cases}$

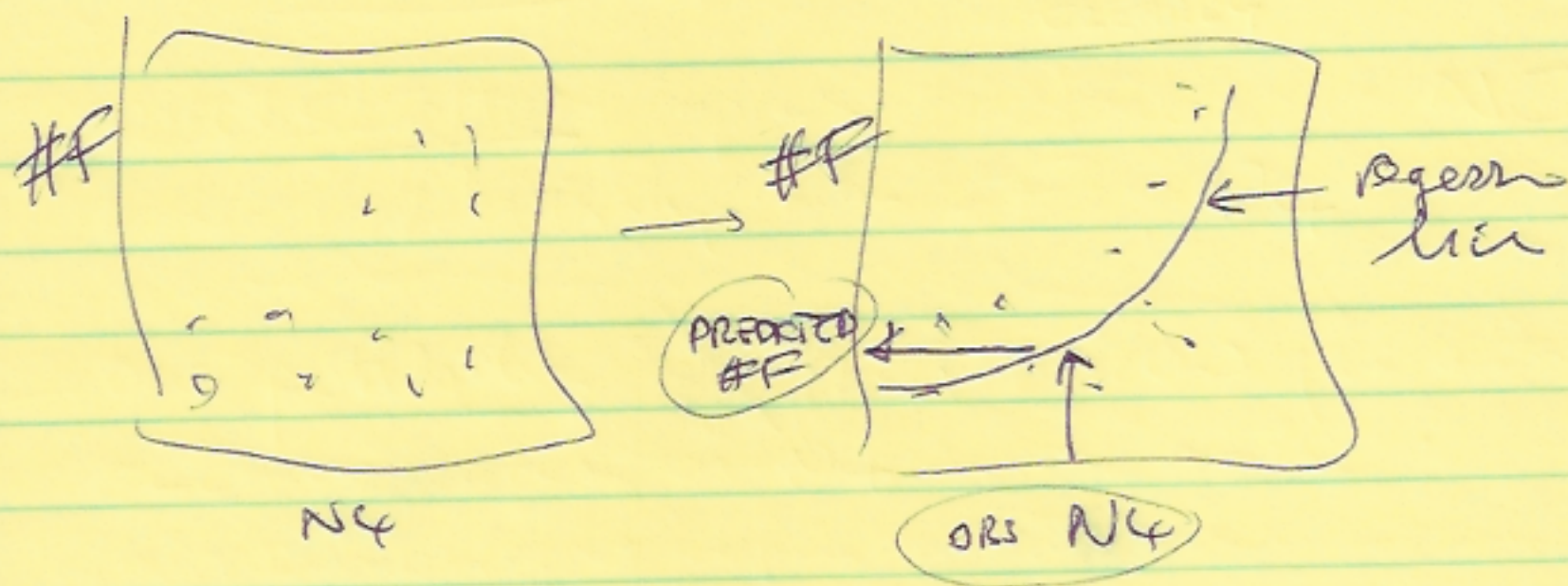
NL above mean $\Rightarrow \begin{cases} H^1 \\ L^1 \end{cases}$

(c) — note that these probabilistic measures
are uncertain; they could be improved
~~by~~ if we had larger datasets (we don't for H)

(we could put error bars on them by measuring
how much they vary when we use subsets of
years to define them)

↑ working?

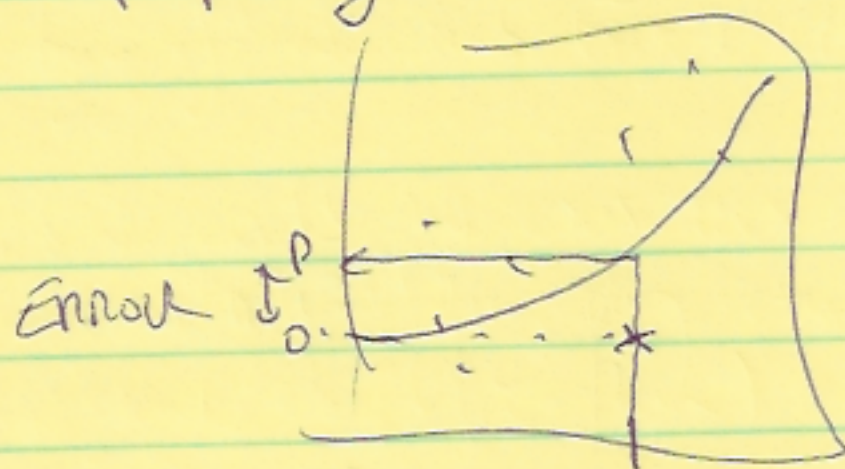
⑥ Building a more sophisticated model: Regression [Poisson model for count data]



- This simple model gives the predicted #F as ONE NUMBER, which does not express the UNCERTAINTY; it's thus not very useful

Why not?

→ you can see the errors this model would have made for part 1



not get part 2 too!

- a simpler way to add error bars is to have them on this error distribution

→ (when we do this, we actually need to use the errors from models that output the variance to avoid "overfitting")

getting this error distribution is a challenge even with simple

(7) What form should tool take?

Guidelines:

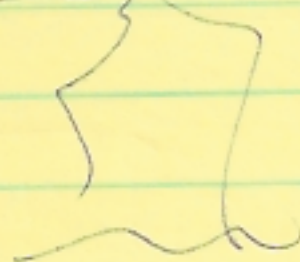
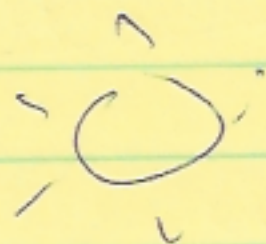
- (1) NLP-F tagged el^i provides a prototype demo of previous clin info, rather than ^{using} state-of-art clin fcts
- (2) severely limited by length of HF training record
- (3) Tool needs to be guided by potential usage as well as available data HF-F info

→ how might it be used?

The Southern
Oscillation
and "El Niño"



CPAC
cold ocean "Niño"



FIRE!

CPAC
warm ocean

W

E

Why "Southern"?

'cos Sir Galton Walker
was also with the North Atlantic!

Why "oscillation"?

name for the see-saw
behaviour