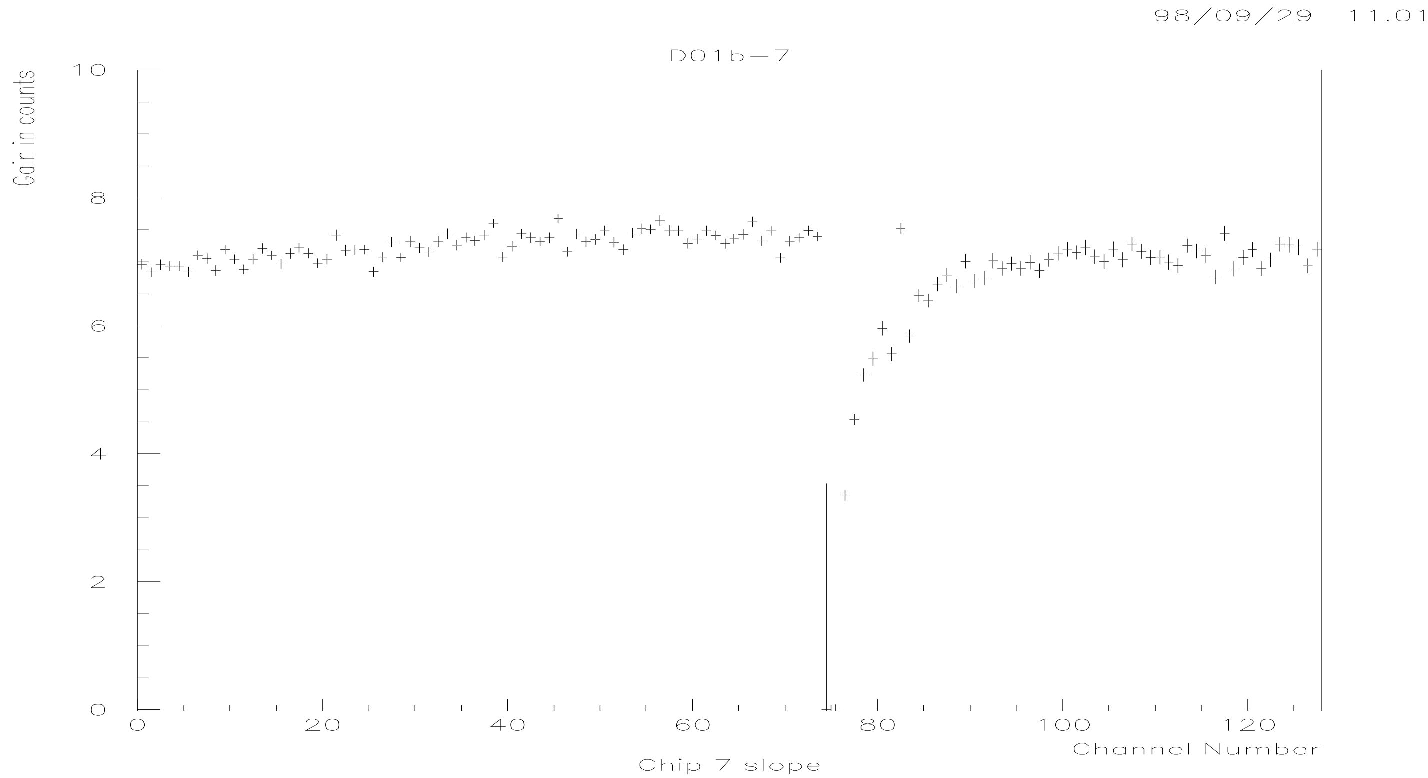
Strange Effect on z (p) side

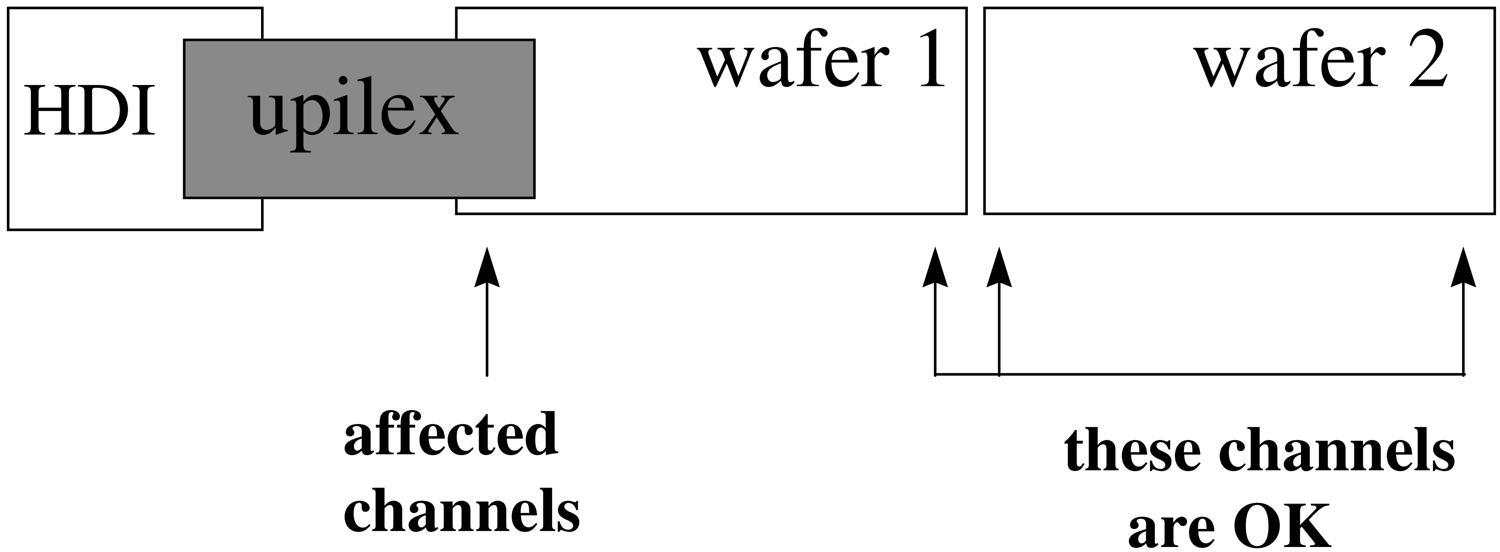
- Seen on all L1 & L2 DFAs connected to HDI
  (no L3 done yet)

- First few channels always have problems
  (*few* ~ 2 - 30)

C Campagnari
SVT-TV Meeting Oct 8 1998



- Gain from charge injection is low.
- First channel typically gain = 0



Not a simple wafer edge effect

More Observations ....

- **Upilex traces for affected channels run near edge / guard traces**

- **Time stamp of charge injection hits is strange:**
  - **hits for "really bad" channels are <u>always</u> ~ 530 nsec (= 16 ticks @ 30 MHZ) early**
  - **hits for "not-so-bad" channels are also early (but only at low threshold)**

Measurement of gain is incorrect

- **Another calibration artifact ??**
- **What happens ~16 clock ticks before Q-inject ??**
- **Why are only these channels affected ??**
- **Could use LED to see if gain really OK.......**
  ..... but busy with production ......
- **Worse after sextant assembly (preliminary ???)**

Giovanni’s Suggestion

- Due to some sort of coupling to guard (??)

- Guard not metallized, so low impedance only in area near where guard is bonded to upilex

- Will test by bonding guard to bias at both
  - upilex / wafer 1 interface
  - wafer 1 / wafer 2 interface