PID Front End

- Requirements

- Proposed solution

- FE Chip

- Test bench

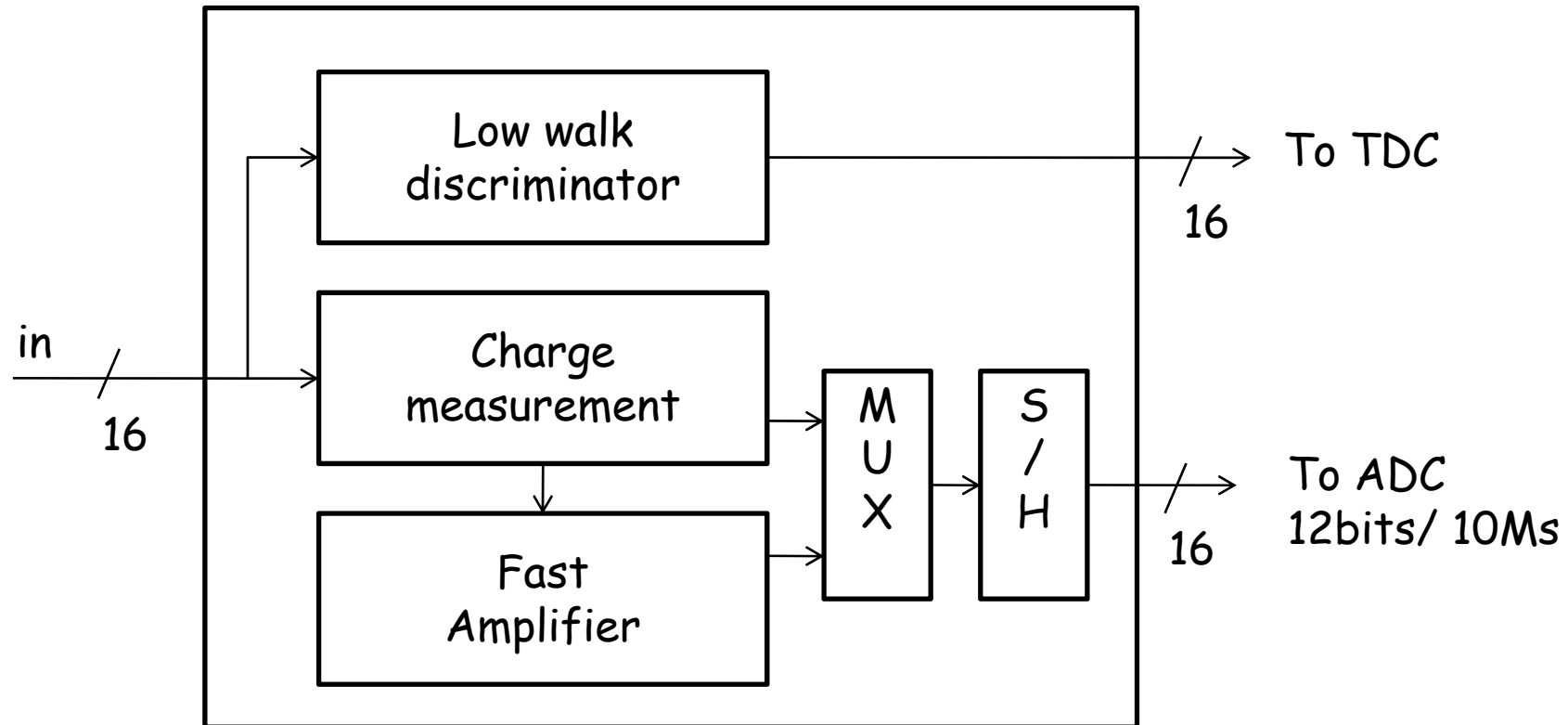# Requirements

- ## Time measurement

  - ### 100ps precision

- ## Max background rate : 1MHz

- ## Min double pulse resolution : 50ns

- ## Charge measurement (max 12 bits)

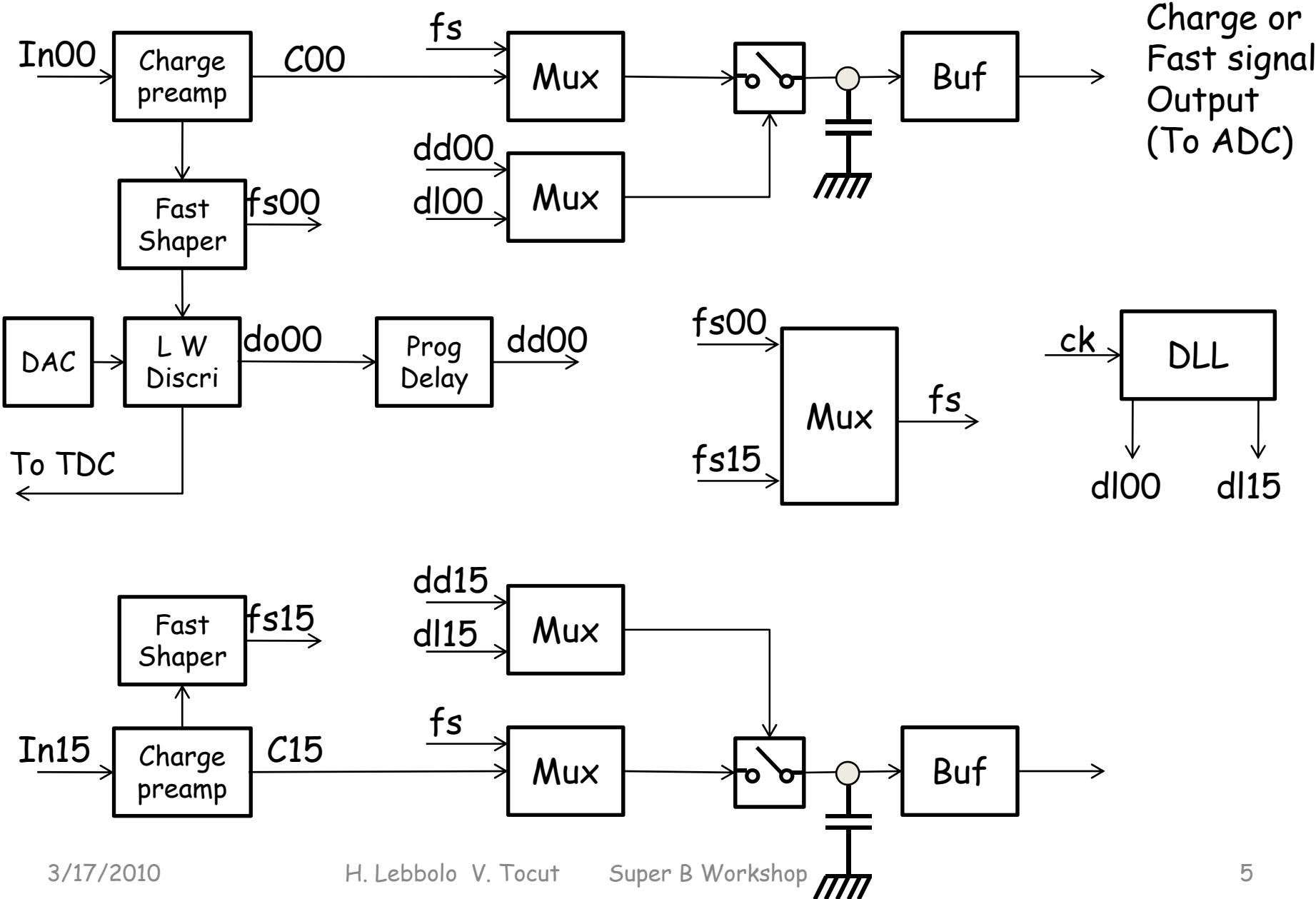 - ### Input dynamics   ?

Proposed Solution

- ## Low walk discriminator
  - < 70ps

- ## Time to Digital Convertor
  - lsb 200ps
  - 100ps resolution

- ## Charge measurement
  - Walk correction (if needed)

- ## Possibility of input waveform memorization
  - PM monitoring

PID Front End Chip

Techno CMOS AMS 0,18μm   5V (available in 2011)

PID Front End ASIC

Proposed Agenda

- 0,18μm Techno only available by the end of 2010 at MPC

- 1st proto submitted by the end of 2011

Test Bench

- 1) SNATS chip on Super Nemo board

- 2) new SNATS available spring 2011

- 3) new SNATS + FE chip (early 2012)