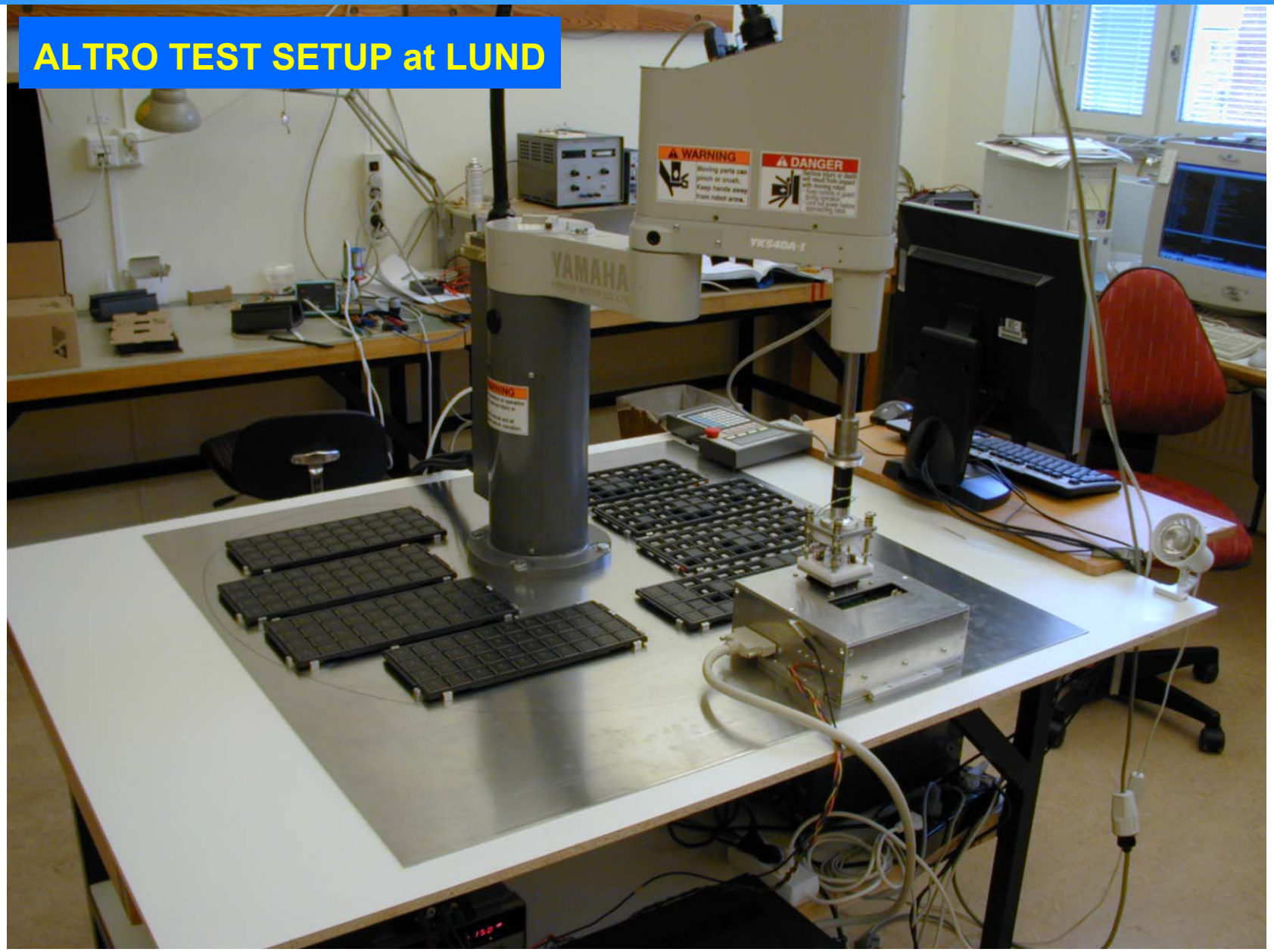
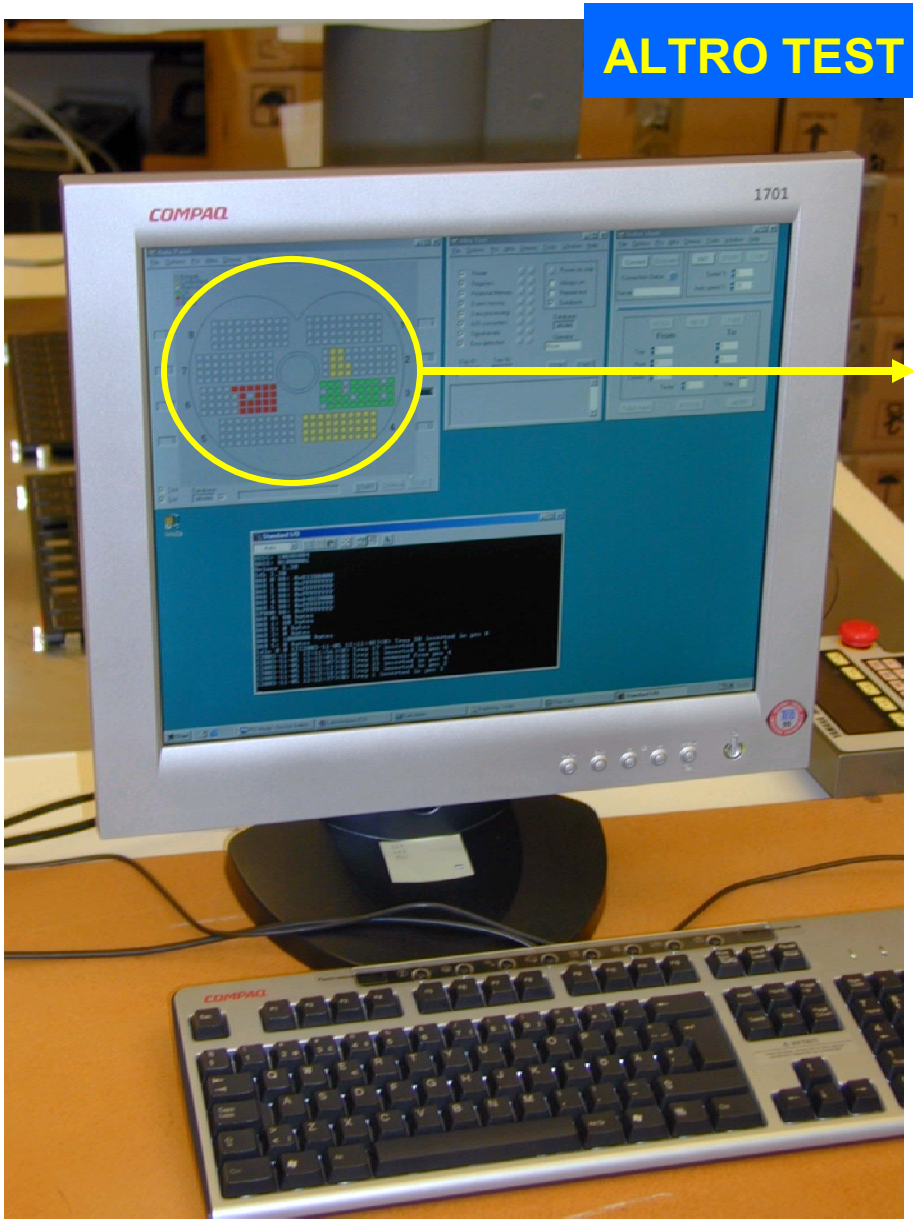
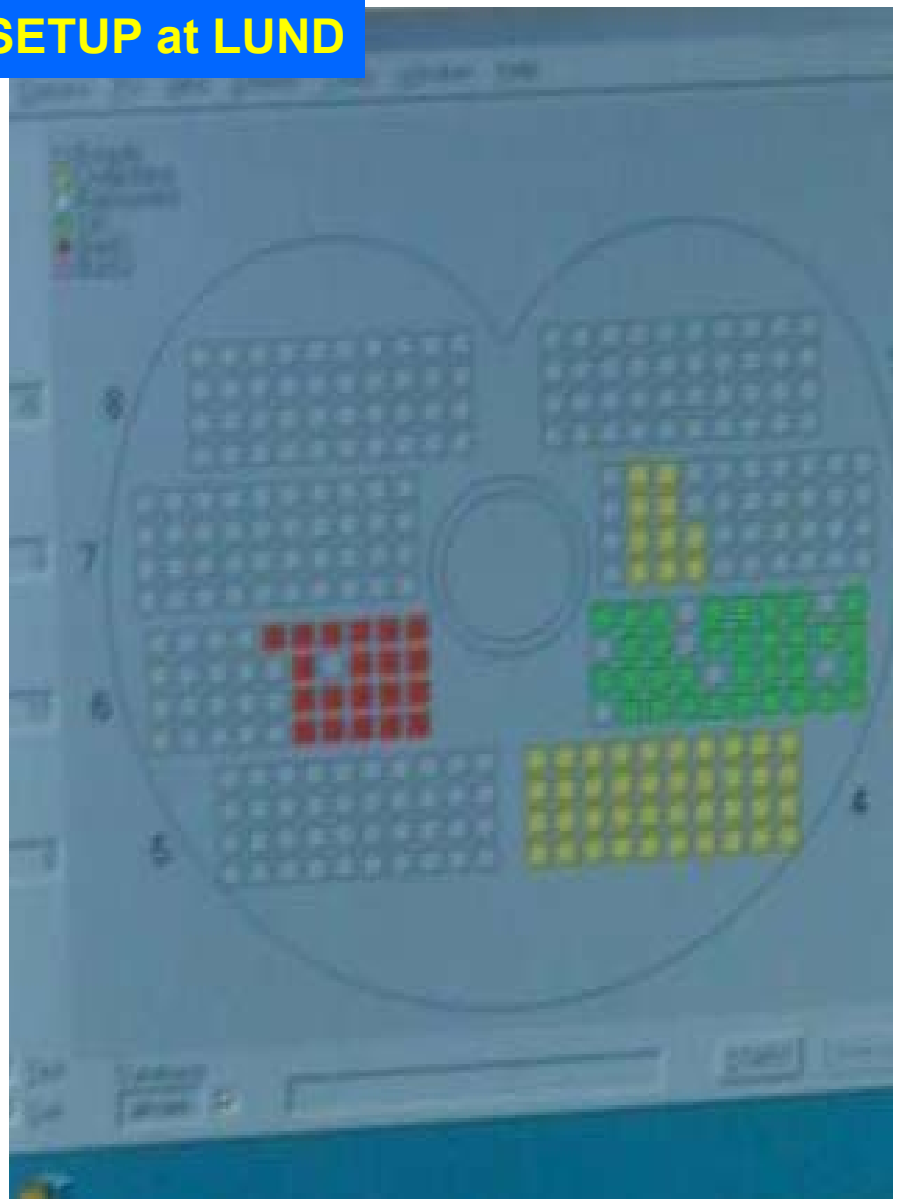
ALTRO Mass-Testing



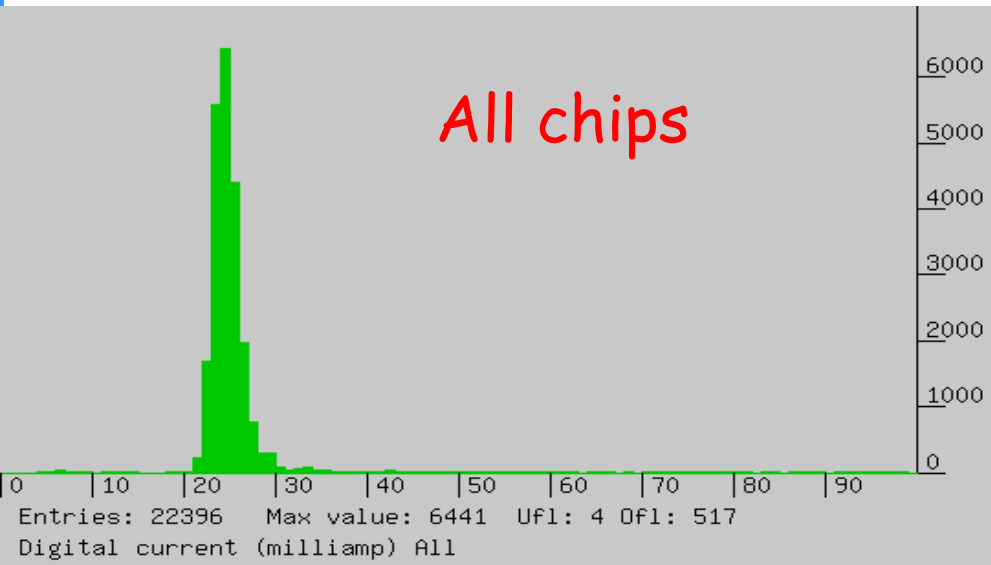
ALTRO Mass-Testing

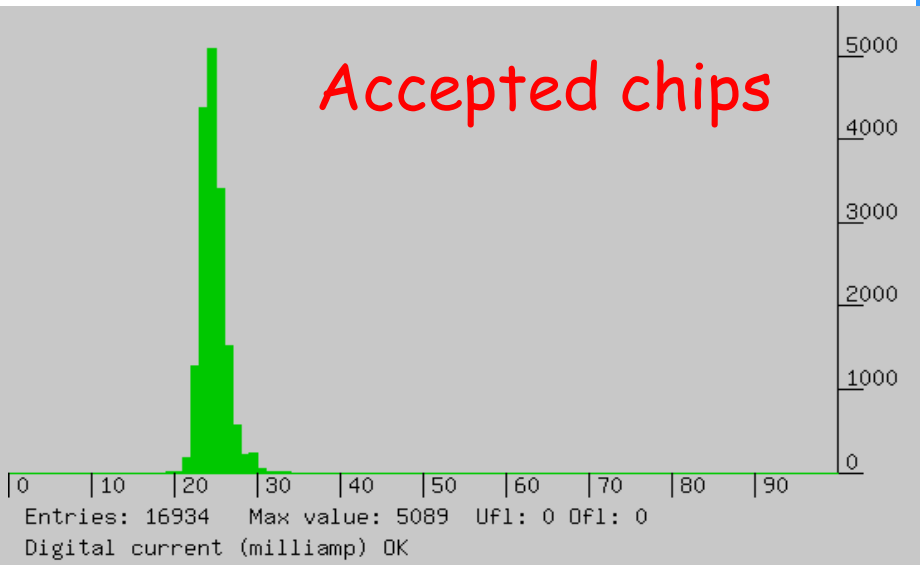
ALTRO TEST SETUP at LUND



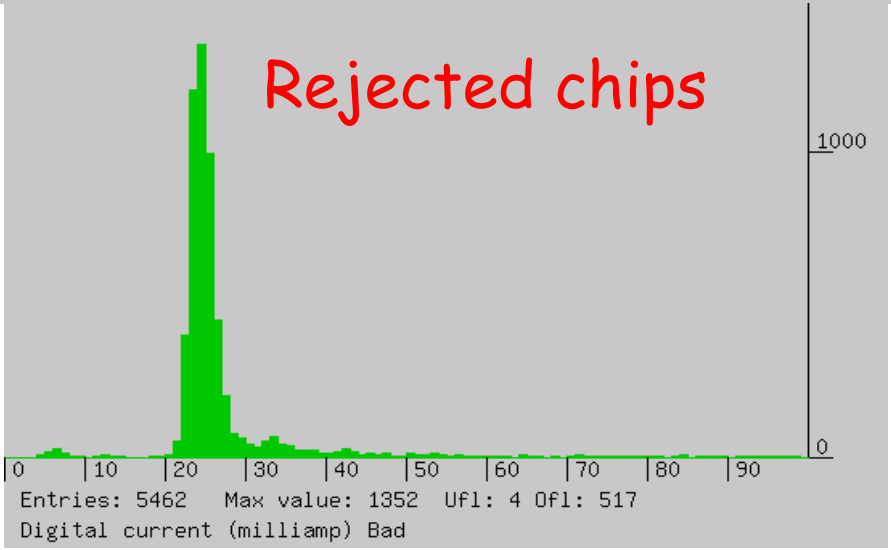


Example - Distribution of digital Current





$9 < I < 200$



The majority of the chips are rejected for bit-stuck in the digital circuit

Summary

- As of Yesterday 39 000 chips tested
- Yield of directly accepted chips is 82.5 %
- Testing of remaining 6000 chips and reverification of rejected chips (~7500) will be completed by March 15
- At present, test rate of about 1000 chips a day

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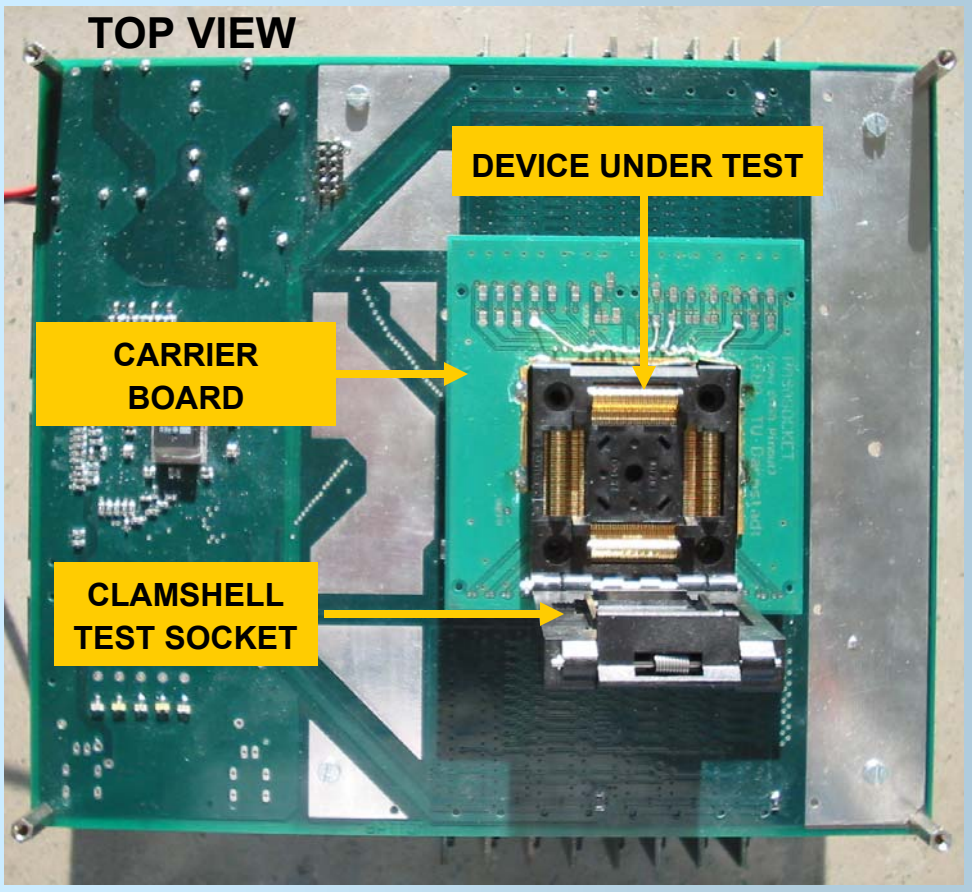
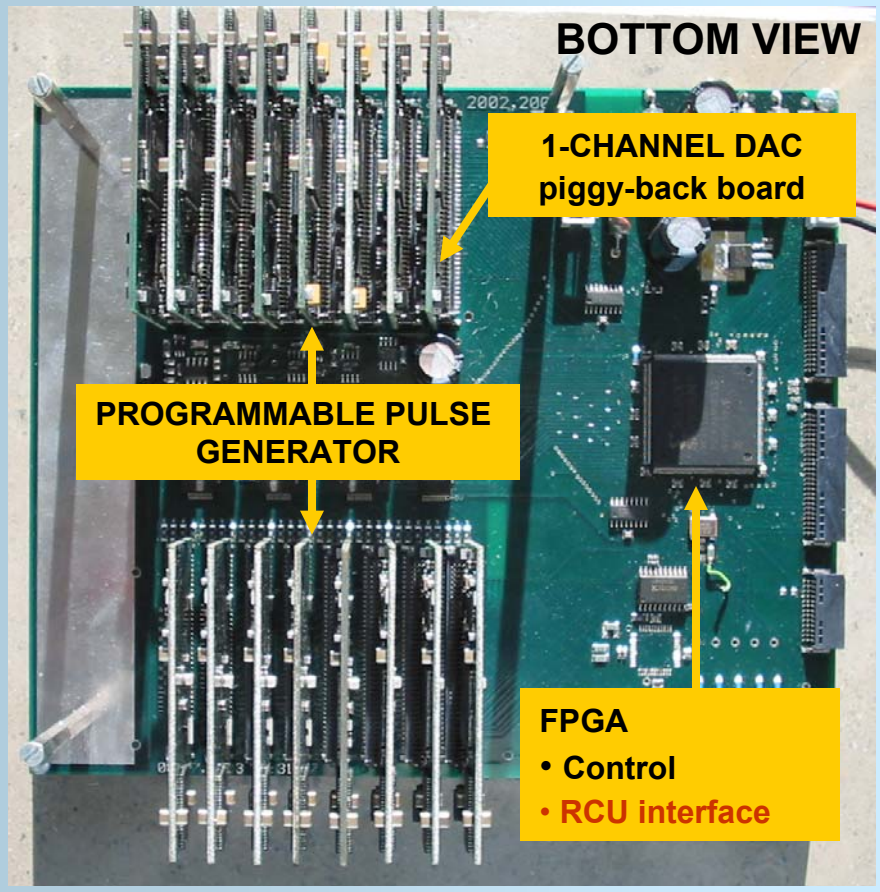
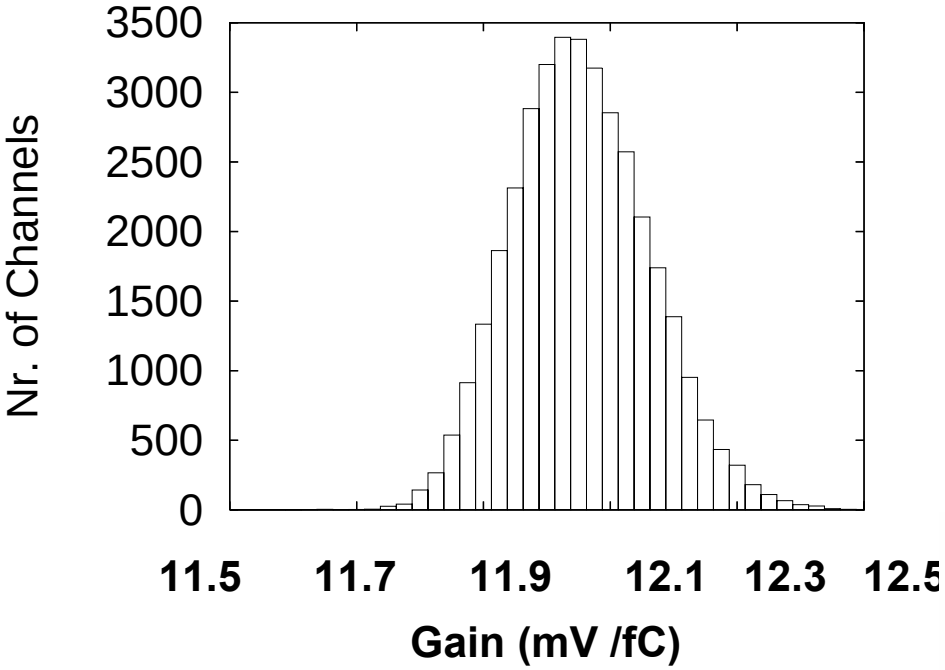
TEST EQUIPMENT



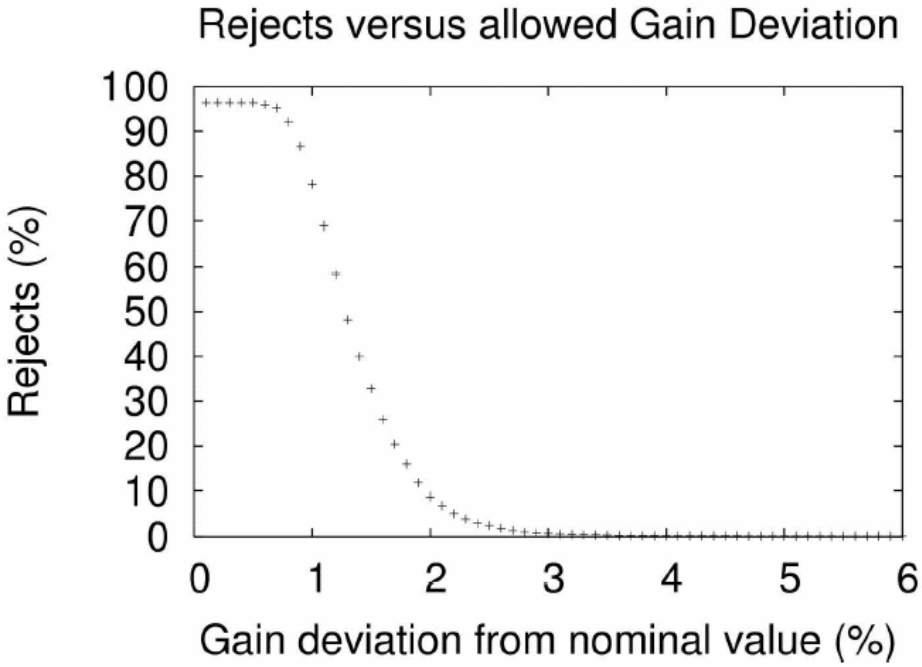


PASA Mass-Testing

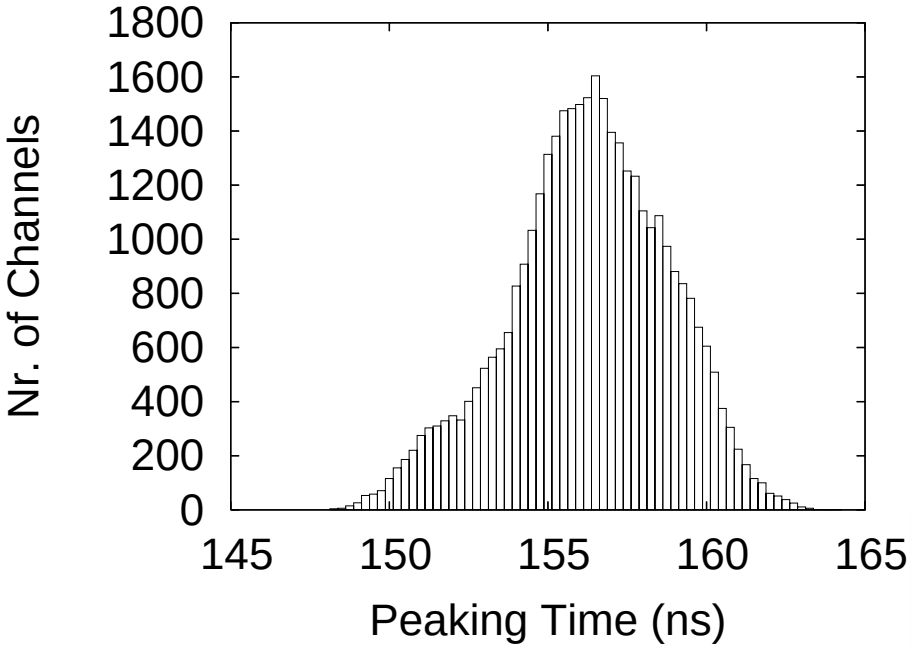


Distribution of the Conversion Gain measured in about 38400 channels

All good chips have a conversion gain within ~3% from the nominal value

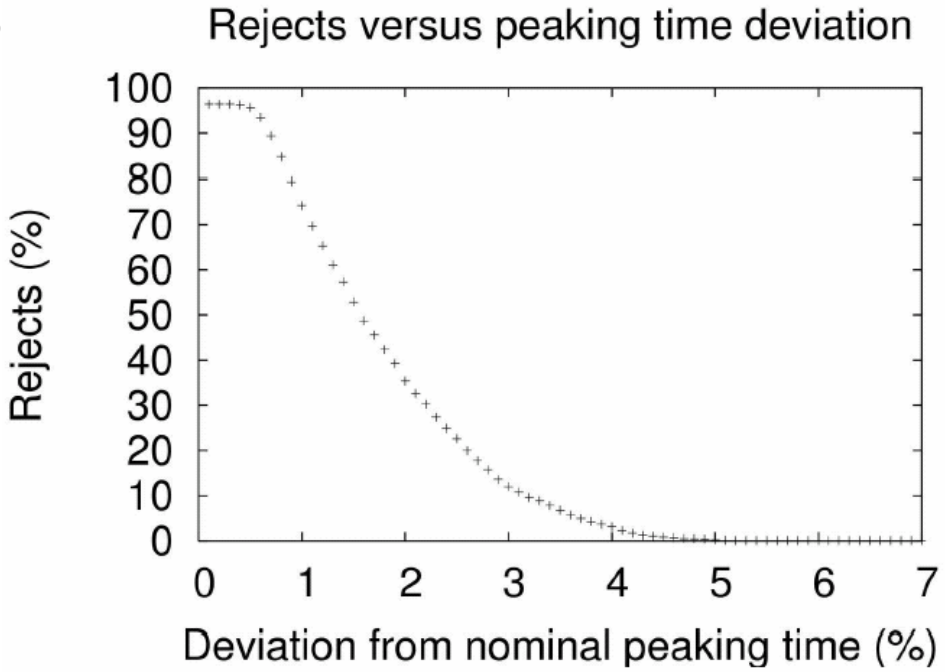


PASA Mass-Testing



Distribution of the peaking time measured in about 38400 channels

All good chips have a peaking time within ~5% from the nominal value



Summary

- 2500 PASAs (production lot) have been tested
- Yield of accepted chips is 96.4 %
- 55000 chips to be tested (Lund): 22 March – 30 June
- Test rate: 2 chips / minute ⇨1000 chips / day (8h)

Faulty chips

- 18 chips with high current (> 2 x nom. Value)
- 4 chips with functional errors in all channels (large dist.)
- 4 chips with all channels main paramters off-limits
- 2 chips with high noise (> 1000 electrons)
- 61 chips with gain off limits (> 50% from nom value)

Majority of the chips with no response