SHIP

DAQ
New DAQ SHIP

NIM ADC
Silena 7423
13 bit (8k)

NIM ADC multiplexer
AMUX (J. Hoffmann, GSI)

- >> 50 parameters
- max. rate ≈ 50 kHz
- random trigger
- real time clock
- dead time 10 µs

SCSI

ethernet

GTB

bit pattern
AMUX designed by Jan Hoffmann, GSI

- read and control 4 for 13 bit (8k) ADC's
- scaler function
- pattern unit function
- TDC function/real time clock
- macropuls/target wheel counter
- onboard histogramming possible

16Mb SDRAM (DSP)
max 10 MHz
16 bits/channels
100 ns resolution
AMUX-ADC connection

- 4 ADC's per AMUX via special adaptor and 50 pin flat cable
**AMUX – GTB Interface**

- **daisy chain connection to SAM3 (up to 2x15 units) via GTB bus**
- **event building and data transfer to DAQ-CPU by the readout processor SAM3**
- **random trigger (first unit with data triggers readout)**
- **max rate 50 kHz (tested in the lab)**
- **high resolution real time clock**
RITU/GREAT DAQ
GREAT – Triggerless Total Data Readout

- 14bit (16k) ADC's
- triggerless
- 100 MHz clock for timestamping
- metronome for synchronisation
- DSP technology for data moving
- histogramming possible