Torino group
(present situation)

Staff (5 + 1 senior)

Angelo Maggiora (staff senior)
Antonio Amoroso (staff)
Daniele Panzieri (staff)
Flavio Tosello (staff)
Michela Chiosso (staff)
Oleg Denisov (staff)

PostDoc (3)

Bakur Parsamyan (postdoc)
Maxim Alekseev (postdoc)
Jorge Berenguer (postdoc)
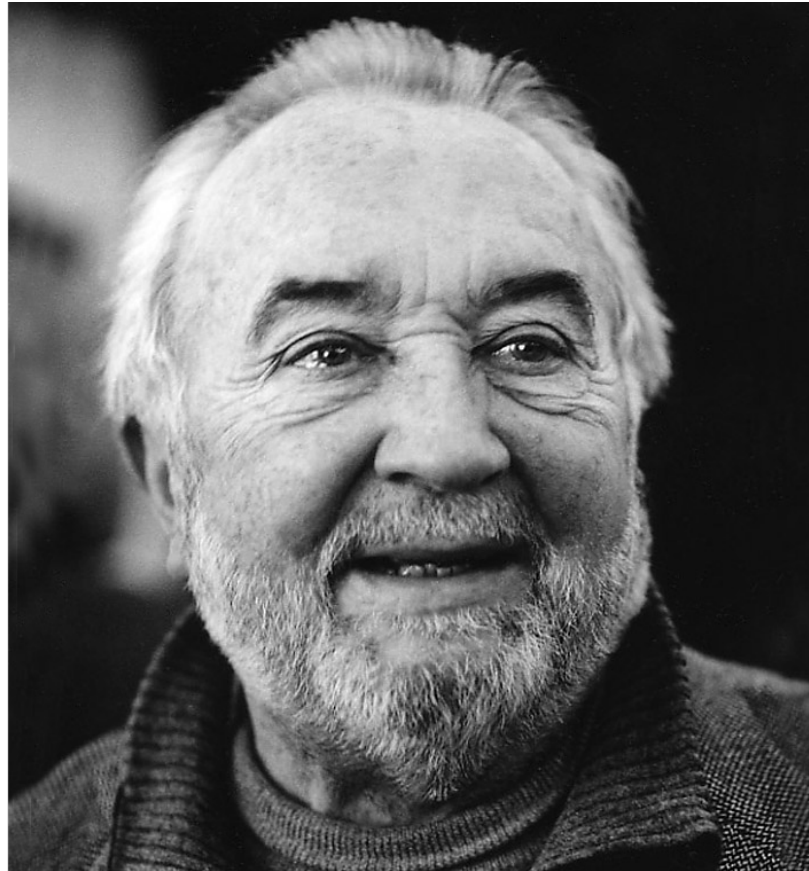
PhD (3 in cotutela)

Michael Pesek Ph.D (PhD)
Alexander Chumakov (PhD)
Bogdan Vasilishin (PhD)

+ Many Master Students

COMPASS Torino group

In memory of **Guido Piragino** (1933 – 2019)
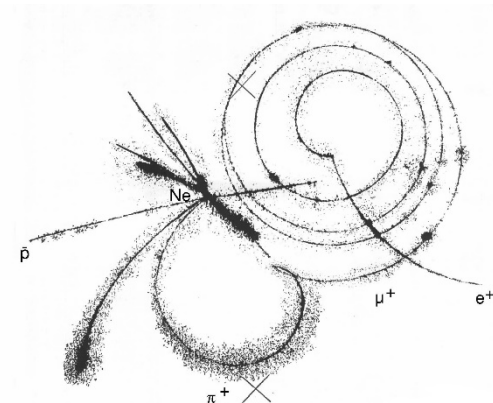

Thanks **Maestro**

COMPASS Torino group
A short story

Our Group was involved in many experiments in the years, since 60's, and very often with a *strong collaboration* with JINR, thanks to Guido Piragino:

Experiments:

- **Dub-To (@ JINR)**

- **ToFras (@ LEALE, Frascati)**

- **ToFraDupp (@ LEAR, CERN)**

- **Disto (@ Saturne, Saclay)**

- **Obelix (@ LEAR, CERN)**

- **PAINUC (@ JINR)**

- **COMPASS (@ SPS, CERN)**

- **COMPASS++/Amber (@ SPS, CERN)**

Torino group in COMPASS
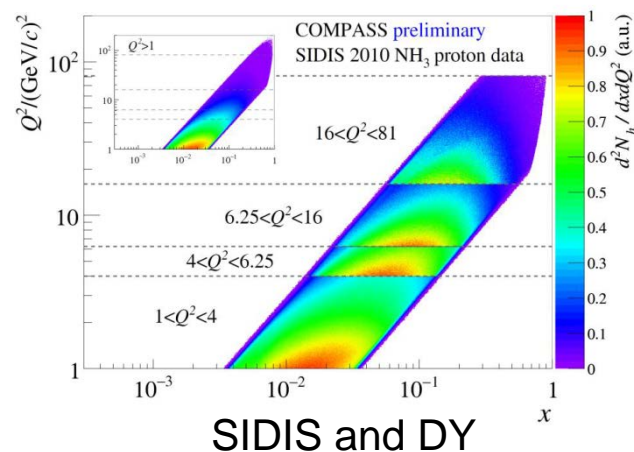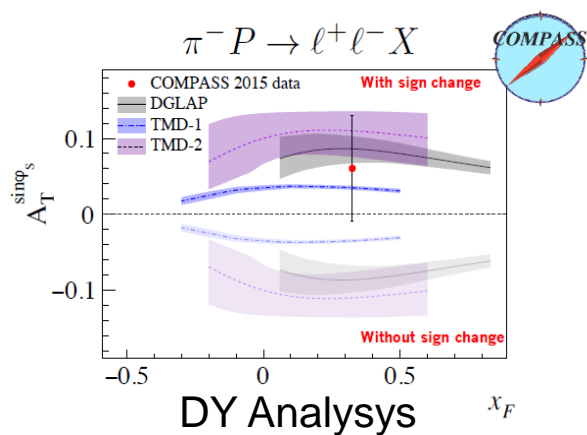

The RichWall
(in collaboration with JINR)
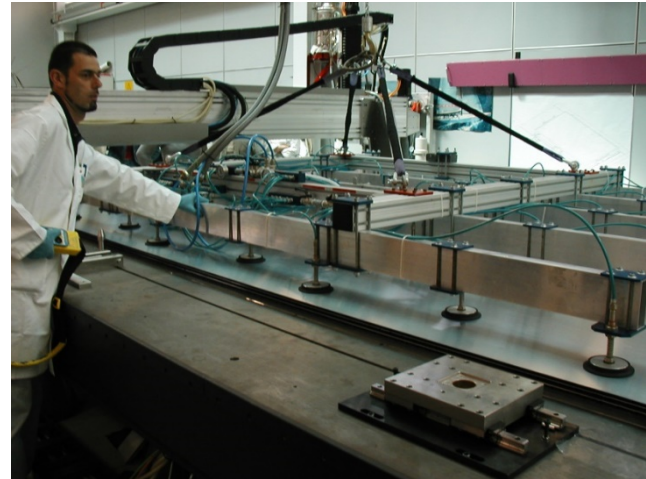

MWPC's
(in collaboration with JINR)

Hadron absorber


Front End Electronics
(CMAD)

DY Analysys

SIDIS and DY

INFN Torino

- Technological Laboratory (mechanics)

- Electronics Laboratory

- Microelectronics Laboratory

- Computer Centre (cloud computing)

Torino group for SPD?

We can mostly be involved in developments of FEE, where our group and INFN Torino have a good expertise.
Obviously this needs a full approvement (and some funding) from INFN

CMAD

CMAD based analog part
(11W/64ch)

14mm

64ch iFTDC FPGA based digital part
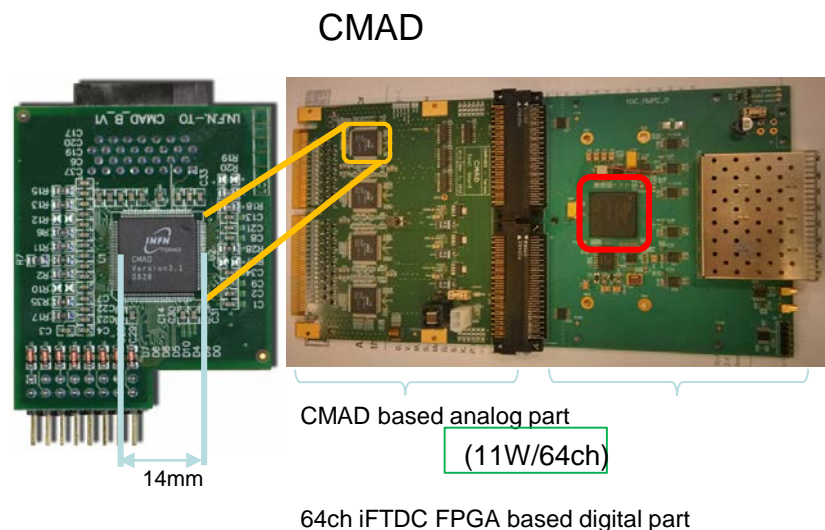
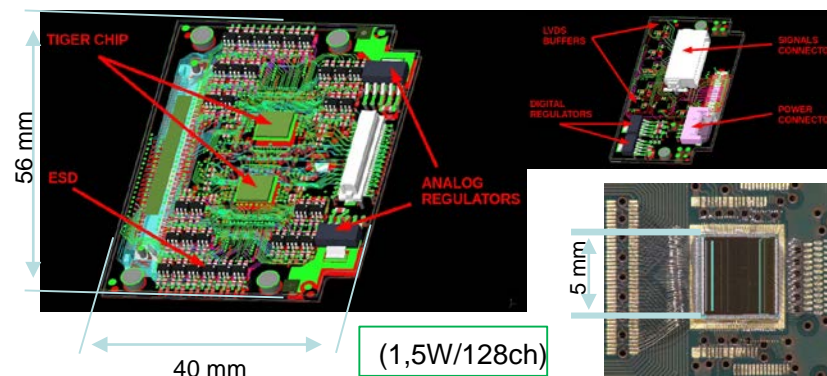Programmable gain : 0,4mV/fC – 4,4 mV/fC

8 channels per chip

Gain programmable channel by channel

Threshold adjustable channel by channel (On board DACs+Logic)

Hit rate > 5 MHz

Power consumption < 30 mW/channel

Torino Integrated GEM Electronics for Readout (TIGER)

56 mm

40 mm

(1,5W/128ch)

5 mm

64 channels: VFE, TDC/ADC, local controller
SEU protected digital backend
On-chip bias and power management
On-chip calibration circuitry
Fully digital output, LVDS IO
4 TX SDR/DDR links, 8B/10B encoding
SPI configuration link
Power consumption < 12 mW/channel
Nominal 160 MHz system clock
Sustained rate per channel: above 100 kHz