# TG3 future activities

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# Test of PZ0 with naked detector 15-30 june 2008

After choice of PZ0 as FE circuits for Phase I

- Test of PZ0 (the same device adopted in Milano measurements) with naked detector (prototype detector borehole side fully passivated) in GDL test stand 2
- Test with and without inner HV filter
- Spectroscopy measurements & Th & Co pulse shape DAQ with Mars$^2$ system.
- Cabling: The same as in Milano

# Next step

Design and production of low mass low radioactivity PCBs for 3-chs chips (to serve 1 detector string). Envisaged schedule:

End June/beginning July: Design of PCB (Important need confirmation of Cu pieces where the PCBs are fixed onto)

End July: production of PCBs Cuflon made, golded contacts.

Before summer break: Chips (dyes) are wire-bonded onto the Cuflon PCB and other SMD (input FET+ (feedback +biasing)) components (0204 dimensions) mounted on PCBs

September 2008: Test of circuits at bench test

October 2008: Test with detector string

# Chosen FE and HV components

- FE circuit: PZ0 (ASIC CMOS external input FET and feedback components).
- PCBs material: Cuflon
- Component series: TBD
- Signal (3/string), LV (3/string) and Test Input (1/string?) cables: Habia miniaturized coaxial teflon cable (need to receive a sample of workable (10 m) length).
- HV cable (3/string): SAMI- RG178 modified (holds 6 kV) MFA insulated ($\gamma$-ray spectrometry pending on large mass sample).
- HV feedthrough: INFN-Pd patented to work up to 4 kV in Ar gas proposed, under investigation for mechanical integration @ MPP. Decision to be taken

# Open points need further tests

- Does wire bonding wire survive cooling down by LAr immersion without any protection against turbolences? I think yes but A. Pullia very skeptical.
- Do we need HV filter at top of string (need to be tested) to provide ultraclean bias HV to the detectors? Maybe not but we need tests in similar environment.