

The aim of this project is to develop
Rn detector prototypes based on
new designs of resistive GEMs

Current status

(in black are plans, in red –current status)

Task	Starting date- ending date	Duration in months	Status
Development special designs of resistive GEMs capable to operate in 100 % humid air	January 3-April 30	4	Some designs were already tested, more developments in progress
Developing a full prototype	May1-June 30	2	Done
Tests at CERN	July 1-October 30	4	In progress
Tests in Bari University and UNAM	November1_December 30	2	

Material budged	Amount in kSFr	Notes	Money spend
Development of new R-TGEMs capable t operating in 100% humid air	4	In close collaboration with the TE/MPE workshop	0
Production of these R-TGEM	2	TE/MPE workshop	0
Frontend electronics	2	Modification of existing battery feed compact amplifiers	0
Development of a prototype of a battery feed HV supply	3	Bari-CERN	0
Equipment rent from CERN electronic pool	1		
Development of a full prototype	6	To be constructed in UNAM and CERN	Total: 1500

To correctly evaluate the sensitivity we have
to use a calibrated Rn source

Originally we plan to use the source
from St Etienne, however there are
some safety restrictions at CERN which
not allowing to do this

For this reason we have to spend all remaining money (**16.5kSFr**) to buy a calibrated source

Model RN-150 is a radon gas source that dispenses discrete quantities of radon gas

Calibrated gas sources were developed by Pylon to satisfy the need for a convenient and accurate means of calibrating field instrumentation. These sources feature reliable rates of emanation, high accuracy and ease of use. They are widely used for the calibration of radon measuring instruments.



RN-150

- ANSI N538-1979 safety standard

This will be done this month

Conclusions and plans:

- The work is in progress and for the moment fits the schedule
- The calibrated source will allow us to make the final evaluation of our detector
- This project is also supported by the CERN- KTT division and we are considering to file a patent application