



# **Bursa gas detector laboratory, status**

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# Proposal

- ❖ Research and Development Studies of New Generation Gas Detectors
- ❖ The proposal has given to Uludağ University, June 2012
- ❖ Budget: 80 kCHF
- ❖ Start: from October 2013 for 3 years
- ❖ Equipment list: prepared with RD51 collaboration
  - ❖ Leszek Ropelewski & Eraldo Oliveri

## Team

- ❖ Özkan Şahin, İlhan Tapan and Yalçın Kalkan (PhD student)

# Science Faculty

## Present Science Faculty:

- ❖ Physics, Chemistry, Biology and Mathematics
- ❖ Offices, research laboratories and classrooms (NO sufficient places)

## New Science Faculty:

- ❖ Only offices and research laboratories at first stage
- ❖ Later, another building for classrooms will be established



Current building (since 1983)



New building (4 months ago)



# Usage Plan of New Building



Chemistry

Biology

Mathematics

Physics

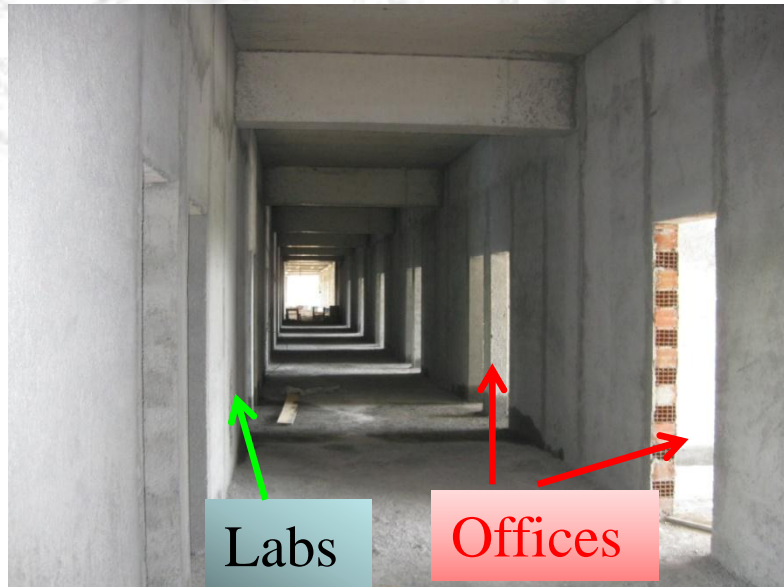
New building (3 months ago)

# Working Areas in New Building

- ❖ Offices: 25 m<sup>2</sup>
- ❖ Research Labs: 25 m<sup>2</sup> and 50 m<sup>2</sup>

**The building is expected to be completed on May 2013 !**

Only 2 weeks ago



# Status of the Gas Detector Laboratory Project

- ❖ Proposal is under reviewing by scientific projects council of university
- ❖ Adding some researchers from the engineering faculty before final decision of the council
  - ❖ Mechanical & Electronic
- ❖ Reviewing process seems to finish in a month from now
- ❖ **November 2012:** proposal to **TAEK** (Turkish Atomic Energy Authority) for financial support in order to continue our scientific visits to CERN
  - ❖ 40 kCHF, for 3 years
  - ❖ The first visit for the next year, 11th RD51 collaboration meeting
  - ❖ Other ones for both calculations and increase our experimental knowledge
  - ❖ Can not be used to buy equipments



# Goals

## TURKEY

- ❖ Establish the first gas detector laboratory in Turkey at Uludağ University
- ❖ Increase our knowledge about MPGD technologies
- ❖ Enlarge the number of people working on gas detectors
- ❖ Get a sufficient background for the next bigger budget projects

## RD51 & CERN

- ❖ Contribute to RD51 activities not only in theoretical part but also in experimental area, too
- ❖ Get in touch more effectively with RD51 institutes to share the jobs needed on development of MPGDs
- ❖ Involve and take some duties in the upgrade programs ongoing at CERN such as ATLAS and ALICE TPC, in a short time

# Working Plan

- ❖ GEM & Micromegas
- ❖ Ar – CO<sub>2</sub> premixed mixtures at 1 atm
  - ❖ GEM: Ar/CO<sub>2</sub> 70/30
  - ❖ Micromegas: Ar/CO<sub>2</sub> 97/3
- ❖ Continue with other gas mixtures at different pressures and concentrations
  
- ❖ First half of 2013:
  - ❖ buy equipments
  - ❖ CERN visit to learn building the detectors we want to buy and take some test measurements with Eraldo to get experience
- ❖ Second half of 2013:
  - ❖ Installation of the equipments into the new building (most probably after May)
    - ❖ Invitation of the experts in RD51 for checking
  - ❖ Starting to the first measurements at Uludağ Lab



# Secondary Stages

- ❖ Depends on the success of the first proposal
- ❖ Could have 180 kCHF from TÜBİTAK (The Scientific and Technological Council of Turkey)
- ❖ 3 years
  - ❖ Salary for the MSc & PhD students: they will have a job for 3 years at least even if they are not a research assistant
  - ❖ Easily scientific visits to research centers
- ❖ More expensive equipments & more serious works
- ❖ But it can be given after the acceptance of the Uludağ project since TÜBİTAK does not support if you do not already have a working laboratory with equipments !!!
- ❖ Better to give TUBİTAK proposal at least 6 months later having a lab



**Thanks & ???**