



**CERN**

European Organization for Nuclear Research  
Organisation Européenne pour la Recherche Nucléaire

# Status of the MicroMegas License

RD51 Miniweek, CERN

15 June 2012

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# Ultimate goal: enable industry to produce large area high quality $\mu\text{M}$

*Future HEP experiments require the possibility to purchase large quantities of  $\mu\text{M}$  detector elements at reasonable costs and with sufficient quality*

## *Transfer of knowhow and expertise to industrial partners*

- Training on state-of-the-art production technology
- Consultancy on the setup of production infrastructures
- Support for production and quality assurance

## *Exploitation of $\mu\text{M}$ technologies requires a license on the relevant IP:*

- CEA and CERN need to agree on the terms and conditions of the use of this IP
- Such terms and conditions are set out in a co-ownership agreement currently finalised between CERN and CEA

# General IP Situation

## ***Intellectual Property related to MicroMegs in part jointly owned by CEA and CERN:***

|                          |   |  |   |
|--------------------------|---|--|---|
| FR 2739941<br>11/10/1995 | Détecteur de position, à haute résolution, de hauts flux de particules ionisantes   | REBOURGEARD PHILIPPE,<br>GIOMATARIS IOANNIS,<br>CHARPAK GEORGES,<br>ROBERT JEAN-PIERRE | CEA and<br>EOS Imaging<br><br>(ex Biospace) |
| FR2762096<br>15/04/1997  | Détecteur de particules à électrodes parallèles multiples et procédé de fabrication de ce détecteur   | REBOURGEARD PHILIPPE,<br>GIOMATARIS IOANNIS,<br>CHARPAK GEORGES,<br>ROBERT JEAN-PIERRE |   |
| EP09290825<br>28/10/2009 | Method for fabricating an amplification gap of an avalanche particle detector ( <b><i>Microbulk : single process provides the bulk structure + mesh and spacer elements formed by selective etching</i></b> )                 | GIOMATARIS IOANNIS,<br>DE OLIVEIRA RUIZ  | CEA and<br>CERN                             |
| EP11290383<br>26/08/2011 | Detector readout interface for an avalanche particle detector ( <b><i>Piggyback or Peggy Pack ? : Detector-readout interface with a resistive layer and dielectric layer, capacitively coupled to the readout board</i></b> ) | GIOMATARIS IOANNIS,<br>DE OLIVEIRA RUIZ  |   |

# Some generic terms and conditions

***Recent patents owned jointly (50/50) by CERN and CEA***

***Each party has the right to use all patents for their internal R&D purposes:***

- no royalties whatsoever for RD51 and related experiments

***Each party is entitled to grant a non-exclusive license for the use on:***

- CEA owned  $\mu$ M patents
- Jointly owned  $\mu$ M patents

***Each party can grant a non-exclusive and royalty bearing license on the patents for the purpose of manufacturing, using and commercializing products:***

- Manufacture and use of  $\mu$ M's;
- Commercialize  $\mu$ M detectors with an attached sub-license allowing its acquirers to use and manufacture  $\mu$ M's and  $\mu$ M-based Products;
- Manufacture, use, and commercialize  $\mu$ M-based Products incorporating  $\mu$ M's manufactured by the Licensee.

***License conditions will be very close to the standard GEM license***

