

Title (en)  
ELEMENTARY PARTICLE DETECTOR

Title (de)  
ELEMENTARTEILCHENDETEKTOR

Title (fr)  
DETECTEUR DE PARTICULES ELEMENTAIRES

Publication  
**EP 3912183 B1 20230301 (FR)**

Application  
**EP 20707305 A 20200116**

Priority  
• FR 1900458 A 20190118  
• FR 2020050058 W 20200116

Abstract (en)  
[origin: WO2020148508A1] This elementary particle detector comprises: - first sensors (70) able to measure an amount of electric charge on electrodes of a readout plate (16); - a processing unit (80) able to determine the location of an avalanche of secondary electrons from the amount of electric charge measured by the first sensors and from the known location of the electrodes. The detector also comprises at least one second sensor (92), each second sensor being able to measure an electrical signal produced by the secondary electrons when they pass through a conductive gate (8). The processing unit (80) is additionally able to establish an arrival time of the elementary particle from a time at which the electrical signal is measured by the second sensor.

IPC 8 full level  
**H01J 43/30** (2006.01); **H01J 43/24** (2006.01)

CPC (source: EP US)  
**H01J 43/246** (2013.01 - EP US); **H01J 43/30** (2013.01 - EP)

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**WO 2020148508 A1 20200723**; EP 3912183 A1 20211124; EP 3912183 B1 20230301; FR 3091953 A1 20200724; FR 3091953 B1 20210129; JP 2022517431 A 20220308; JP 7350863 B2 20230926; US 11823881 B2 20231121; US 2022082709 A1 20220317

DOCDB simple family (application)  
**FR 2020050058 W 20200116**; EP 20707305 A 20200116; FR 1900458 A 20190118; JP 2021541566 A 20200116; US 202017423723 A 20200116