

Title (en)

A WALL-LESS ELECTRON MULTIPLIER ASSEMBLY

Title (de)

WANDLOSE ELEKTRONENVERVIELFACHERANORDNUNG

Title (fr)

ENSEMBLE MULTIPLICATEUR D'ÉLECTRONS SANS PAROI

Publication

EP 2976778 B1 20190918 (EN)

Application

EP 13711836 A 20130322

Priority

EP 2013000887 W 20130322

Abstract (en)

[origin: WO2014146673A1] An electron multiplier assembly comprises a first electrode plate supported on a second electrode plate by a means of plurality of spacers. Through-holes are formed in the first electrode plate and in the second electrode plate and are carefully aligned so to form amplification channels in the gap between the first electrode plate and the second electrode plate. The amplification channels allow to convert primary electrons into an avalanche of electrons that may be detected with suitable readout means. The detector structure is wall-less in the sense that neighboring amplification channels are not separated by walls, which allows to reduce leakage currents and to provide a detector that can be used with a plurality of detector gases or even in humid ambient air.

IPC 8 full level

H01J 43/24 (2006.01)

CPC (source: EP)

H01J 43/243 (2013.01)

Citation (examination)

- US 4649314 A 19870310 - ESCHARD GILBERT [FR]
- US 2010225221 A1 20100909 - SUZUKI AKIO [JP], et al
- WO 2007061235 A1 20070531 - NAT UNIV CHANGWON IND ACADEMY [KR], et al
- KAWARABAYASHI J ET AL: "New array type electron multiplier as a two dimensional position sensitive detector", NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH. SECTION A: ACCELERATORS, SPECTROMETERS, DETECTORS, AND ASSOCIATED EQUIPMENT, ELSEVIER BV * NORTH-HOLLAND, NL, vol. A353, no. 1, 30 December 1994 (1994-12-30), pages 172 - 175, XP004005850, ISSN: 0168-9002, DOI: 10.1016/0168-9002(94)91631-4

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