

Title (en)

Cathode plate, position sensitive neutral particle sensor using such a cathode plate, sensing system and camera both using such a sensor.

Title (de)

Kathodenplatte; lageempfindlicher Messfühler für neutrale Teilchen mit einer derartigen Kathodenplatte; Fühlersystem und Kamera, beide mit einem derartigen Messfühler.

Title (fr)

Plaque à cathode, détecteur sensible à la position pour particules neutres utilisant une telle plaque à cathode, système détecteur et appareil photographique les deux utilisant un tel détecteur.

Publication

**EP 0000271 A1 19790110 (EN)**

Application

**EP 78300075 A 19780623**

Priority

GB 2659677 A 19770624

Abstract (en)

A position-sensitive neutral particle sensor comprises two spaced parallel cathode arrays (10, 12), each comprising a plurality of metal strips (16, 20) arranged adjacent and edge to edge, the strips in one array being orthogonal to the strips in the other array, the metal of which the cathode arrays are formed being such that an incident neutral particle is converted to a fast electron which escapes from the cathode; and an anode array (14) between and parallel to the cathode arrays and comprising a plurality of spaced wires. When a neutral particle is converted by a cathode strip to a fast electron (34) an avalanche forms and its presence can be detected in one or more strips in each cathode, so that the orthogonal position is determined.

IPC 1-7

**H01J 39/29; G01T 1/29**

IPC 8 full level

**H01J 47/06** (2006.01)

CPC (source: EP)

**H01J 47/06** (2013.01)

Citation (search report)

- FR 2176496 A2 19731102 - COMMISSARIAT ENERGIE ATOMIQUE [FR]
- [D] NUCLEAR INSTRUMENTS AND METHODS, vol. 117, nr. 2, 1974, Amsterdam, NL U. SHIMONI et al. "Investigations on metal converters for gamma-ray detection and mapping", pages 599-603.
- KERNENERGIE, vol. 12, nr. 4, april 1969, Berlin, H. HELFER et al. "Ortsempfindliches Paralleldraht-Zählrohrsystem", pages 132-133.
- REPORT CERN-77-01, 6 january 1977 Geneva, CH A.P. JEAVONS et al. "A new position-sensitive detector for thermal and epithermal neutrons" Page 1, lines 9-14.
- IEEE TRANSACTIONS ON NUCLEAR SCIENCE, vol. NS-19, nr. 3, June 1972, New York, USA G. CHARPAK "Some recent progresses in particle detection", pages 152-157.
- PHYSICS IN MEDECINE AND BIOLOGY, vol. 20, nr. 1, january 1975, London GB R.A. REYNOLDS et al. "A multiwire proportional chamber positron camera: initial results", pages 136-141.
- [P] PHYSICS IN MEDECINE AND BIOLOGY, vol. 23, nr. 3, May 1978, London GB J.E. BATEMAN and J.F. CONNOLLY "A multiwire proportional gamma camera for imaging 99Tcm radionuclide distributions", pages 455-470.
- [A] NUCLEONICS, vol. 24, nr. 7, july '66 New York USA B.R. PULLAN et al. "Measuring radionuclide distribution with crossedwire spark chambers", pages 72-75.

Cited by

US5087821A; FR2638567A1; FR2638536A1; DE4018859A1; EP0368694A1; FR2639436A1; US5038043A; AU620454B2; WO9004851A1

Designated contracting state (EPC)

DE FR NL

DOCDB simple family (publication)

**EP 0000271 A1 19790110; EP 0000271 B1 19811202**; DE 2861396 D1 19820128; GB 1583571 A 19810128

DOCDB simple family (application)

**EP 78300075 A 19780623**; DE 2861396 T 19780623; GB 2659677 A 19770624