

A B S T R A C T

A DETECTOR OF HIGH-ENERGY SECONDARY ELECTRONS

5 The present invention relates to a high-energy secondary electron detector comprising a collector P supporting only three electrodes that are insulated from one another and that are biased relative to the collector:

10 • a first repulsion electrode A1 for repelling charges of a first predetermined sign that are to be repelled, this negatively-biased electrode being provided with at least one opening for passing electrons;

 • a second repulsion electrode A2 for repelling
15 charges of the opposite sign that are to be repelled, this positively-biased electrode also being provided with at least one opening for passing electrons; and

 • a selection electrode A3, this electrode also being provided with at least one opening for passing
20 electrons;

 the openings in said electrodes being in alignment along a conduction cylinder D.

Furthermore, the selection electrode A3 is negatively biased.

25 The invention also provides a method of detecting secondary electrons by means of the detector.

Figure 2a

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