Title (en)

METHOD FOR SWEEPING CHARGED PARTICLES OUT OF AN ISOCHRONOUS CYCLOTRON, AND DEVICE THEREFOR

Title (de)

VERFAHREN ZUM ENTFERNEN DER GELADENEN TEILCHEN AUS EINEM ISOCHRONEN ZYKLOTRON UND DIESES VERFAHREN VERWENDENDE VORRICHTUNG

Title (fr)

METHODE D'EXTRACTION DE PARTICULES CHARGEES HORS D'UN CYCLOTRON ISOCHRONE ET DISPOSITIF APPLIQUANT CETTE METHODE

Publication

EP 0853867 A1 19980722 (FR)

Application

EP 96931694 A 19960925

Priority

- BE 9600101 W 19960925
- BE 9500832 A 19951006

Abstract (en)

[origin: US6057655A] PCT No. PCT/BE96/00101 Sec. 371 Date Apr. 3, 1998 Sec. 102(e) Date Apr. 3, 1998 PCT Filed Sep. 25, 1996 PCT Pub. No. WO97/14279 PCT Pub. Date Apr. 17, 1997A method for extracting a charged particle beam out of an isochronous cyclotron (1) comprising an electromagnet forming a magnetic circuit that includes at least a number of sectors (3, 3') known as "hills" where the air-gap is reduced, and separated by sector-shaped spaces (4) known as "valleys" where the air-gap is larger. According to the extraction method, the particle beam is extracted without using an extraction device as the magnetic field has a special arrangement produced by designing the electromagnet air-gap at the "hills" (3, 3') of the isochronous cyclotron in such a way that the aspect ratio between the electromagnet air-gap at the "hills" in the region of the maximum radius, and the radius gain per turn of the particles accelerated by the cyclotron at said radius is less than 20.

IPC 1-7

H05H 7/10; H05H 13/00

IPC 8 full level

H05H 7/10 (2006.01); **H05H 13/00** (2006.01)

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Cited by

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