EIT Opto-Routing

Spectroscopic Principle Wedge Filter

Overview

Linearly variable filters, also called wedge filters are special optical interference filters with a shift of the spectral characteristics along one axis of the filter. A wedge-filter spectrometer 1 comprises means 10 for spectrally dispersing an incident radiation beam comprising a first plurality of layers of high (H) index of refraction material and a second plurality of layers of low (L) index of refraction material, individual ones of the H and the L layers. LESIA (Laboratoire d'Etudes Spatiales et d'Instrumentation en Astrophysique, Observatoire de Paris-Meudon) has an extensive experience in visible and infrared imaging spectrometry with several instruments onboard planetary space missions (MarsExpress/OMEGA, VenusExpress/VIRTIS, Rosetta/VIRTIS).

The Use of Wedge Filters To Improve Dose Distribution With the

Rotational arcs covering less than 360° are frequently used in order to spare critical structures in radiation therapy; however, this results in a lack of dose uniformity in the target volume. Wedge filters

Beam Steering by Wedge Prisms Tutorial: Optics , Evident

Circular prisms having plane surfaces positioned at slight angles with respect to each other are termed optical wedges, and deflect light by refraction rather than

Wedge Wire Screen Working Principle, Categories and

The wedge wire screen is a metal mesh element widely used in screening, filtration, dehydration, and declining operations for sieving and filtration.

US4957371A

The present invention relates to spectrometers and, in particular, relates to a wedge-filterspectrometerhavingacompactwedge-shapedspectraldisperseropticallycoupled to an

Study of accessible performances of a spectro imager using a wedge

The purpose of this study was, using this code, to evaluate the achievable performances of a spectro imager using a wedge filter, and to quantify the sensitivity of these performances with

US4957371A

The present invention relates to spectrometers and, in particular, relates to a wedge-filter spectrometer having a compact wedge-shaped spectral disperser optically coupled to an electro-optical detector

Spectral Study on the Effects of Angle-Tuned Filter Wedge Angle

The characteristics of the reflecting spectrum are greatly influenced not only by the incident angle, but also by the wedge angle parameter of the non-paralleled wedge thin film filter.

Clinical implementation of wedge filter optimization in three

Background and purpose: To describe a wedge filter optimization technique which automatically chooses the beam weights and wedge filters and to demonstrate the implementation of

The use of wedge filters in X-ray therapy

To assist in obtaining uniform irradiation throughout the treated volume, techniques have been developed using wedge filters, i.e., non-uniform (metal) filters whose thickness varies in one direction

Schematic of filter wedge spectrometer.

These filters are used as monochromators of medium spectral resolution in radiometric and spectroradiometric instrumentation for spectroscopic and remote sensing applications in the

17 November 2017 Wedge filter imaging spectrometer

A LVF is a narrow-band transmission filter with a peak wavelength varying linearly along one dimension of the filter. Coupled to an array detector, it forms a simple and compact imaging spectrometer as

Physical aspects of roentgen therapy using wedge filters

PHYSICAL ASPECTS OF ROENTGEN THERAPY USING WEDGE FILTERS Diagram 1. Measured relationship between the quality of the beam transmitted through filters of carbon, aluminium, copper

Maximizing photon utilization in spectroscopic single-molecule

Article Open access Published: 31 March 2026 Maximizing photon utilization in spectroscopic single-molecule localization microscopy using symmetrically dispersed dual-wedge

Edited by Zoran Sodnik, Bruno Cugny, and Nikos Karafolas

WEDGE FILTER IMAGING SPECTROMETER P. Bernardi1, M. Bonafous1, M. Motisi1, J-M. Reess1, J. Tanrin1, D. Laubier2 1LESIA - Observatoire de Paris - CNRS, 5 place Jules

Mastering Wedge Filters in Radiologic Physics

Explore the fundamentals and advanced applications of wedge filters in radiologic physics, enhancing image quality and diagnostic accuracy.

Clinical implementation of wedge filter optimization in

Background and purpose: To describe a wedge filter optimization technique which automatically chooses the beam weights and wedge filters and to demonstrate

Iodine Wedge Filter for Roentgenographic UseRadiology

5. Wrap them after trimming the edge of the filter opposite the wedge. We have found that each thickness of blotting paper prepared in the above manner compensated for 2 kv. in the diagnostic range.

EXPERIMENTAL VERIFICATION OF A METHOD FOR VARYING

A wide range of wedge angles smaller than the nominal wedge angle can be obtained with a single wedge filter by irradiating partly with, and partly without, the wedge filter inserted in the

Working principle of a linear variable filter (NIR)

This working principle is illustrated in Figure 1. The LVF component can be compared to a scanning Fabry-Perot interferometer that scans with position

Wedge-Wire Screens: Functionality and Benefits

Navigate the operational principles behind wedge-wire screens and uncover the compelling advantages they offer in various applications.

Microsoft Word

Wedge wire filter - type ScrapeFil The selfcleaning wedge wire filter separates solids from liquids, using a filter element with columns extending trapezoidally. The liquid flow runs through the wedge wire

Integrated solid immersion grating microspectrometer with wedge

Here we report a solid immersion grating microspectrometer with wedge prism correction (SIG-W-µSPEC), which realizes both high spectral resolution and a highly compact structure across

Optical filter

A wedge filter is an optical filter so constructed that its thickness varies continuously or in steps in the shape of a wedge. The filter is used to modify the intensity distribution in a radiation beam.

Wedge Imaging Spectrometer concept. , Download

A Wedge-filter Imaging Spectrometer (WIS) can provide the required humidity imagery and has already been studied for application in geostationary orbit by

WO1989005465A1

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to an

COMPENSATING FILTERS

Fig. 2-3 Examples of compensating filters in use today. A, Supertech wedge, collimator-mounted Clear Pb filter used for AP projection of hips, knees,

Wedge Filter

The most common form of compensator is the wedge filter. These wedges are normally constructed of brass, steel, or lead. When placed in the beam, they cause the isodose curves to be angled relative

21 November 2017 Wedge filter imaging spectrometer

The development of the planetary exploration for landers makes it more and more necessary to have at our disposal small and light instruments. This is why we are developing in our laboratory a light

Wedge Filters for Megavoltage Roentgen Ray Beams

In external beam radiation therapy, wedge filters are used to tilt the isodose lines of megavoltage roentgen ray beams over the so called wedge iso- dose angle in order to homogenize the dose

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