

技术及应用

温度引起的放射性气溶胶连续监测仪峰位漂移修正技术

张志龙, 傅翠明, 陈宝维, 李建龙

中国辐射防护研究院, 山西 太原 030006

收稿日期 2005-4-20 修回日期 2005-10-25 网络版发布日期: 2006-10-21

摘要 本文介绍了放射性气溶胶连续监测仪中半导体探测器的温度特性引起的 α 谱的峰位漂移对测量结果的影响, 并通过温度跟踪方法和计算机软件处理技术解决这一问题。其中采取了两种方法: 第一种是对峰位进行温度修正, 得到修正过的各道计数; 第二种是采用跟踪天然放射性核素Po-214峰位的漂移, 再根据被测人工放射性核素能量与Po-214能量的相对值来进行修正。

关键词 [放射性气溶胶监测仪](#) [峰位漂移](#) [温度效应](#) [补偿](#)

分类号 [TL364.5](#)

Compensation Technology on Peak Shift Caused by Temperature Effect in the Continuous Radioactive Aerosols Monitor

Zhang Zhi-long, Fu Cui-ming, Chen Bao-wei, Li Jian-long

China Institute for Radiation Protection, P. O. Box 120, Taiyuan 030006, China

Abstract The research concerns in the influence of peak shift related to temperature effect in the continuous radioactive aerosols monitor on the measured data. The tracking measurement of temperature and the data processing computer software technology were adopted in order to eliminate this influence. The method includes two approaches. The first part is calculating the channel's offset by temperature, and the counts of every channel are corrected by software. The second part is tracing the peak shift of Po-214 which is daughter of Rn-220, and the peaks of other artificial nuclides can be corrected according to the relative value of energy.

Key words [radioactive aerosols monitor](#) [peak shift](#) [temperature effect](#) [compensation](#)

DOI

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [\[PDF全文\]\(751KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [参考文献](#)

服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

相关信息

- ▶ [本刊中 包含“ ” 的相关文章](#)
- ▶ [本文作者相关文章](#)

- [张志龙](#)
- [傅翠明](#)
- [陈宝维](#)
- [李建龙](#)

通讯作者