

## **Analysis of yellow sand using mini step sampler**

S.Matsuyama, K.Ishii, H.Yamazaki, Y.Kikuchi, T.Yamamoto, K.Inomata, Y.Watanabe, A.Ishizaki  
G.Momose, <sup>1</sup>S.Futatsugawa, <sup>2</sup>K.Sera and <sup>3</sup>A.Kimio

Department of Quantum Science and Energy Engineering, Tohoku University  
Sendai 980-8579, Japan

<sup>1</sup>Radioisotope section, Japan Radioisotope Association  
2-28-45 Honkomagome, Bunkyo, Tokyo 113-8941, Japan

<sup>2</sup>Department of Cyclotron Research Center, Iwate Medical University  
Takizawa, Iwate 020-0173, Japan

<sup>3</sup>Faculty of Environmental Studies, Nagasaki University  
Nagasaki, Nagasaki 852-8521, Japan

### **Abstract**

Fine particles sometimes cause turbid conditions in spring without the influence of yellow sand dust particles. Aerosols were continuously collected for 2 or 3 hours during the period of 16 March – 3 June 2005 at Nagasaki to study atmospheric turbidity in western part of Japan. Aerosol samples were analyzed by in-air PIXE system at Tohoku University. An automatic PIXE analysis system was newly developed for this analysis. As a result, time dependence of the density of fine particles are related to that of elemental concentrations of sulfur which transported from the Asian continent. Therefore, fine particles should be take care from the viewpoint of air quality conservation over East Asia, and PIXE is very useful for aerosol monitoring.