

3-dimensional Atom Probe

Purpose: To characterize the microstructural changes in nano-meter scale induced in materials due to irradiation or thermal ageing, and then to develop a predictive model of damage in materials that enables us to evaluate the structural integrity of nuclear power plant components with high reliability.

Main Specifications:

- 1) The 3-dimensional position and the kind of each atom of a material are determined.
- 2) High spacial resolution is achieved with a new delay-line detector.
- 3) The machine is located in a hot area so that the microstructure of irradiated materials can be characterized.

Location and Date of Installation:

Materials Science Research Laboratory, May 2004.

