Mehr Licht!
More Photonics for Intelligence

#D14

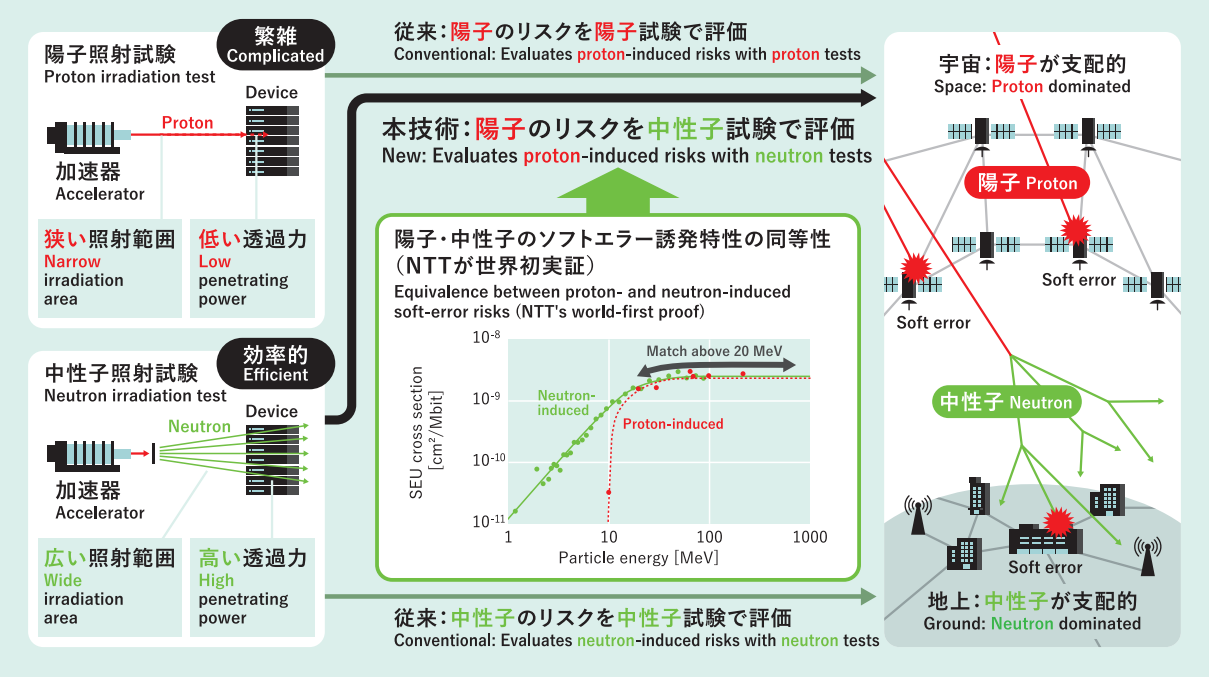
#Resilience#Risk Management#Safety and Security

Evaluating Soft-Error Risks in Space

Efficiently evaluating soft-error risks in space using neutrons

Technical Challenges & Goals

Space equipment may exhibit failures due to proton-induced soft errors (semiconductor device malfunctions). Conventional risk evaluation requires time-consuming proton irradiation. Our technology estimates proton effects from neutron tests, whose high penetration and wide coverage greatly reduce testing effort.



Key Technologies

Core Technologies

- Applying our world-first proof of equivalence between proton- and neutron-induced soft-error risks
- Derives proton-induced failure risk from neutron irradiation test results

Key Differentiators

- Replacing proton tests with neutron tests greatly reduces testing effort and cuts costs by over 90%
- Enables flexible evaluation using compact neutron sources, without high-power proton accelerators

Use Cases

Aerospace & Defense

For equipment used in satellites and on the Moon, this technology quickly and affordably evaluates proton-induced soft-error risks, supports decisions on added protection, cuts development costs, and improves operational reliability.

Exhibitors

NTT Space Environment and Energy Laboratories

Related Links

https://group.ntt/jp/newsrelease/2026/02/27/260227a.html

CONTACT：Resilient Environmental Adaptation Research Project