



# National Electrostatics Corp.

CARBS IBA ACCELERATOR SYSTEM



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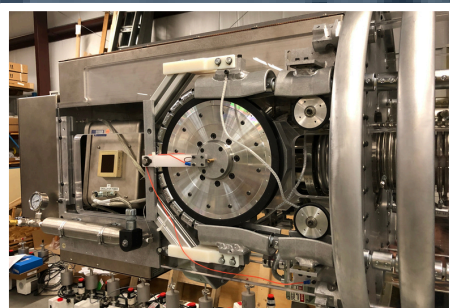
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NEC offers the CARBS System, a completely automated instrument for ion beam analysis (IBA).

- 2.5 MV terminal
- Single-ended
- S-series column
- 2 chains ( $\geq 120 \mu\text{A}$  beam current)
- Capacitive linear ripple  $< 80 \text{ V}_{\text{rms}}$
- $\sim 500 \text{ V}$  Stability
- (+) RF ion source



## IBA Application:

*Particle Induced X-Ray Emission (PIXE) - Space Science*

- Bombards sample with high-energy protons
- Interaction emits characteristic X-rays
- These X-rays can be detected & analyzed to determine the elemental composition of the sample, enhancing protection against debris
- Simulate this environment to test how technology and materials can withstand these conditions\*

\*Provides more details about the elements present within materials and their relative atomic percentages. This allows researchers to better understand how ions deposit energy as they pass through different layers of materials.