Why Accelerator Mass Spectrometry?

Mass Spectrometry identifies the amount and the type of chemicals present in a sample. A very high sensitivity is achieved by accelerating the beam into a gas-filled channel, where the molecules break up and interferences are eliminated. The most common isotopes under study include $^{14}$C, $^{10}$Be, $^{26}$Al, $^{41}$Ca, $^{129}$I and actinides, with applications in:

- Archeometry
- Environmental sciences
- Geology
- Medicine

The isotopic transmission through the Tandetron is a critical parameter for AMS.

- Ion transport
- Beam stability
- Molecule break up
- Different charge states appear

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**REFERENCES**