

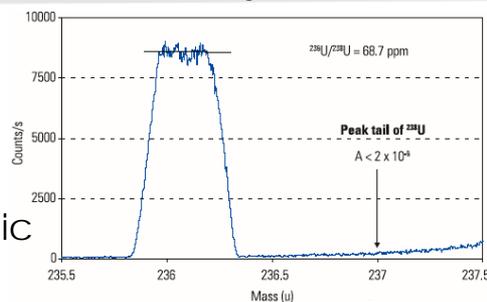
Capability/Need

- **Advances** EMSL's elemental and isotopic analysis and characterization capabilities (currently: conventional inductively coupled plasma mass spectrometry only)
- Improvements include:
 - Multi-Collector Plasma Source MS
 - High- and Ultra-High Resolution Plasma Source MS
- Collective capability will be unique & preeminent, offering ultimate in ratio precision, accuracy, and sensitivity



Science/Users

- Provision of highly precise and unequivocal data on elemental/isotopic abundance & ratios
- Isotope ratios provide unique signatures for contaminant migration, biological tracer studies, atmospheric movements, nuclear forensics
- Enables integration of elemental, isotopic, and molecular compositional information



EMSL Strategy Alignment; Specifics

- Science themes: Biological Interactions/Dynamics; Geochemistry/Biogeochemistry and Subsurface Science
- Cross-cutting challenges: Static-Dynamics; Unprecedented Resolution; Predict Biological Function
- EMSL capability area: Mass Spectrometry
- Anticipated availability: August 2010
- Technical POC's : Lizbeth Alexander, Dave Koppenaal