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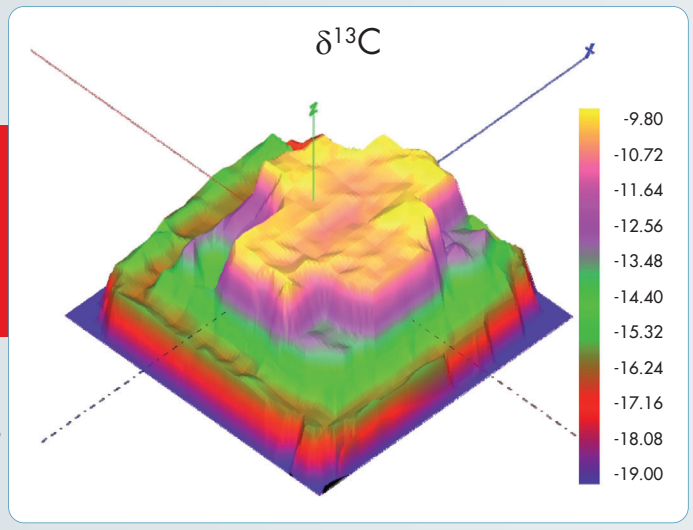
SCIENCE & METROLOGY SOLUTIONS

# Isotopic & Elemental Micro-Analysis in Geosciences with SIMS



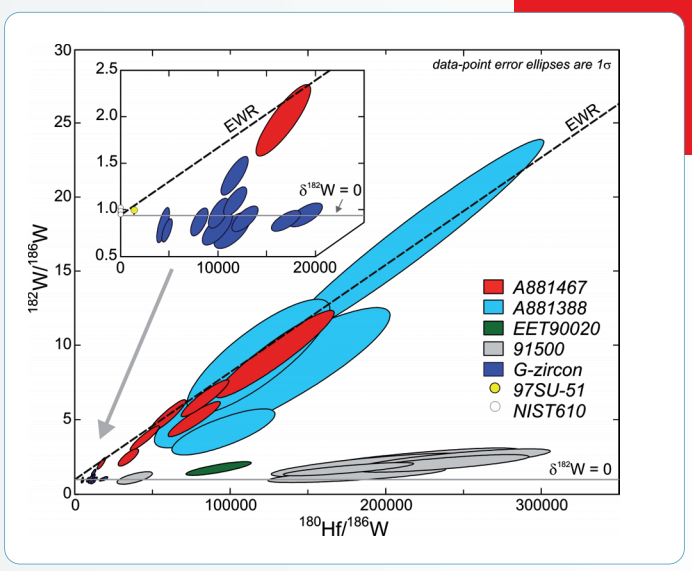

Courtesy of Edinburgh Univ., UK

3D reconstruction of the contoured $\delta^{13}C$ on Picasso diamond (Venezuela).

## Stable Isotopes

### Delivering unrivalled precision & reproducibility

*Carbon isotope map in natural diamond:*
*> 600 analyses performed automatically in multicollection mode.*



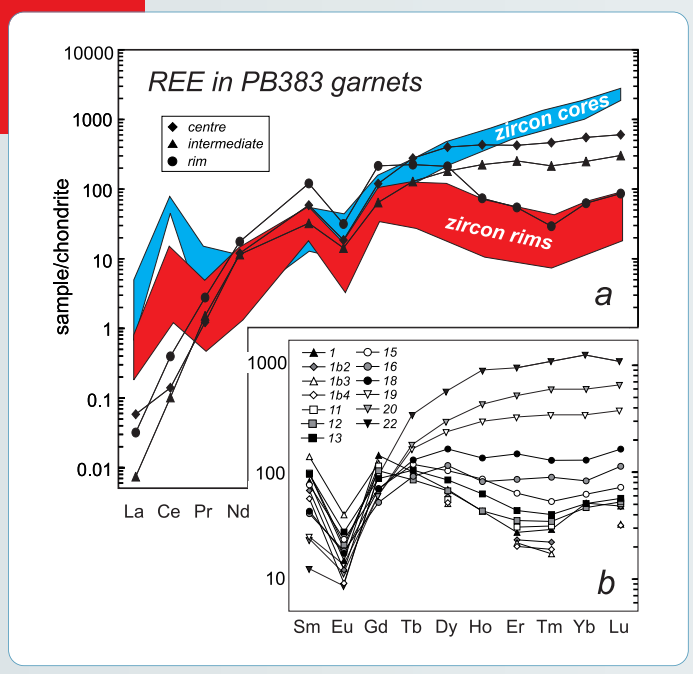

Data from: G. Srinivasan et al., Science 317 (2007)

$^{182}W/^{186}W$ vs. $^{180}Hf/^{186}W$ for meteorite & terrestrial mineral phases.

## Zircon Dating

### Optimized transmission with excellent spatial resolution

*Hf-W composition of eucrite & terrestrial zircon grains*
*High precision measurements at high mass resolution (8,000).*



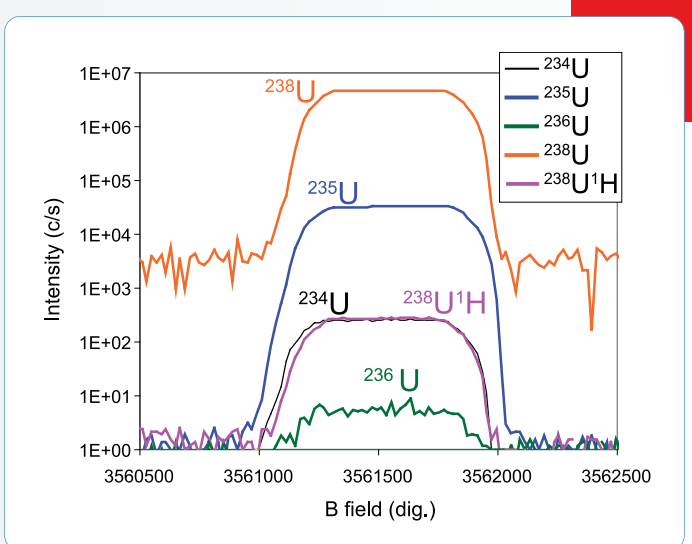

Data from: M.J. Whitehouse et al., Contrib. Mineral. Petrology 145 (2003)

Chondrite normalized REE analysis of metamorphic zircons & garnets from Betic Cordillera, Spain.

## Trace Element Analysis

### Providing µm-scale elemental information for a large mass range

*Study of the trace element composition to accurately relate zircon ages to P-T evolution paths.*




Uranium isotope mass spectrum in multicollection mode, MRP = 2500.

## Nuclear Particles

### Unique sensitivity for small particle analysis

*High transmission at high Mass Resolving Power for optimized particle detection efficiency and improved precision for minor U isotope measurements.*

## IMS 1300-HR³

### Ultra High Sensitivity Magnetic SIMS

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