

**Notice inviting Expression of Interest for procurement of high resolution secondary ion mass spectrometer (HR-SIMS)**

**1. Introduction and background of IUAC:**

Inter-University Accelerator Centre (IUAC) was set-up by University Grants Commission (UGC) under Ministry of Human Resources and Development (MHRD), Government of India as the first Inter-University Centre after due approval of the Planning Commission and the Prime Minister of India in October, 1984. The basic objective of IUAC is to provide front ranking accelerator based research facilities to create possibilities for internationally competitive fundamental research within the university system. The Centre has established sophisticated accelerator systems and experimental facilities involving several universities in the areas of Nuclear Physics, Materials Science, Atomic Physics, Radiation Biology, Radiation Physics and Accelerator Mass Spectrometry. The students and researchers from universities and institutes from India and abroad are using the facilities of IUAC for basic research.

**2. Indicative specifications of the HR-SIMS:**

Inter-University Accelerator Center (IUAC) proposes to procure a magnetic sector based High Resolution Secondary Ion Mass Spectrometer (HR-SIMS) for various applications including geochronology, stable isotope ratio and trace element abundance measurements on variety of solid samples.

**Envisaged analytical tasks:** High-resolution *in situ* analyses of solid samples for the following studies:

- a. U-Pb geochronology of zircon and other U bearing minerals, often having multiple growth zones and with complexity.
- b. Isotopic compositions of elements, e.g. C, O, S, Pb, U and Th.
- c. Abundances of trace elements including lanthanides.
- d. High-resolution isotopic imaging.

The performance of the equipment should comply with the following minimum indicative specifications:

S.No	Parameter	Specification
1	Mass Resolution (Pb ; 10% peak height)	≥ 5500
2	Sensitivity of Pb in Zircon matrix	≥ 12 cps/ppm/nA
3	Internal precision for the ratio $^{207}\text{Pb}/^{206}\text{Pb}$ in zircon	< 1%
4	External precision for the ratio $^{207}\text{Pb}/^{206}\text{Pb}$ in zircon	< 1%
5	External precision for the ratio $^{206}\text{Pb}/^{238}\text{U}$ in zircon	< 2%
6	Internal precision in quartz for $^{18}\text{O}/^{16}\text{O}$ ratio	< 0.1%
7	External precision in quartz for $^{18}\text{O}/^{16}\text{O}$ ratio	< 0.1%
8	Internal precision in Zircon for $^{18}\text{O}/^{16}\text{O}$ ratio	< 0.05%
9	External precision in Zircon for $^{18}\text{O}/^{16}\text{O}$ ratio	< 0.05%

**EOI should include the following documents (duly signed and stamped):**

1. List of installations of similar HR systems (Year and model number) and details of the contact persons.
2. List of publications (soft copy) during last five years arising out of these installations.
3. Details of onsite technical and research support provided to the existing users.
4. Details of the availability of technical and support facility in India.
5. Company/Organization Status (Proprietary/Partnership/Private Ltd. Etc.) with name and address of the partners, Board of Directors, etc.
6. Address of the website containing relevant technical specifications of HR-SIMS.

Interested vendors may submit EOI document providing detailed technical specifications and items listed above. The short listed vendors, based on above criteria, will be invited to give detailed technical presentation on specifications and other details of the HR-SIMS offered by them.

EOI should be submitted to **Administrative Officer (S&P), Inter-University Accelerator Centre, Aruna Asaf Ali Marg, P.O. Box -10502, New Delhi -110067 before 15<sup>th</sup> November, 2017, 17:00 hrs.**

Presentation by the short listed vendors will be during last week of November, 2017.