

PREBID CLARIFICATION

I-HUB QUANTUM TECHNOLOGY FOUNDATION, IISER, PUNE

First Floor, Main Academic Building, IISER Campus, Dr Homi Bhabha Rd, 411008

Tel: 020-25908647 Email: qtf_purchase@quantech.org.in Website: www.quantech.org.in

Tender Ref. No: **I-HUBQTF/PUR/22-23/028**

Tender Published Date: **05/12/2023**

Tender ID: **2023_IISRP_783981_1**

Pre-bid Conference Date: **22/12/2023, 14:30**

Item of Procurement: **Laser Cluster for Ion Trap**

Clarification Date: **22/12/2023**

At the outset, the Technical Committee welcomed all the Members and the Representatives of Prospective Bidders and briefed in general the scope of the tender and thereafter requested the Chair to brief the bidders on the salient features of the tender.

Pre-Bid meeting was scheduled on 11/12/2023 at 3.00 PM and minutes of meeting is as under:

1. No queries were received from any bidder.
2. No bidder participated in the pre-bid meeting.

It is noted that as per the request from one of the bidder(s), the Pre-Bid meeting was rescheduled and held on 22/12/2023 at 14.30 PM and the minutes of meeting is as under:

The representatives present were satisfied with the replies given and it was informed that the corrections / additions / clarifications given, as discussed during the Pre-Bid Conference would be hosted on the website of I-HUB QTF, IISER Pune and all the Prospective Bidders are required to take cognizance of the proceedings of the Pre-Bid Conference before submitting their bids as stipulated in the Bidding Documents. Attached is the detailed technical and commercial queries with their clarifications (Annexure I).

The other terms & conditions of the notice issued on our IISER website www.iiserpune.ac.in and GeM portal will remain unchanged. No more correspondence in this regard will be entertained. The other terms & conditions of the notice issued on e-Procurement portal and on I-HUB QTF's website (quantech.org.in) will remain unchanged. No more correspondence in this regard will be entertained. The meeting ended with vote of thanks to the Chair.

Sd/-

Project Director

Technical Clarifications/Amendment

(Annexure I)

SN	Query / Clarification Sought	Clarification / Amendment
PART – I: TECHNICAL SPECIFICATIONS FOR COMPLETE DIODE LASER CLUSTER FOR Ca ION		
(Chapter 04, Page No.: 23, Sr. No.: 1) 396.959 nm laser		
1	<p><u>Original specifications</u></p> <p>Built in piezo electric element for frequency tuning, with Piezo operating voltage range : 0 - 150 V</p>	<p><u>Amended specifications:</u></p> <p>Built in piezo electric element for frequency tuning, with Piezo operating voltage range : 0 - 140 V</p>
(Chapter 04, Page No.: 23, Sr. No.: 2) 422.792 nm laser		
2	<p><u>Original specifications</u></p> <p>Built in piezo electric element for frequency tuning, with Piezo operating voltage range : 0 - 150 V</p>	<p><u>Amended specifications:</u></p> <p>a. Built in piezo electric element for frequency tuning, with Piezo operating voltage range : 0 - 140 V</p>
(Chapter 04, Page No.: 24, Sr. No.: 3) 854.444 nm laser		
3	<p><u>Original specifications</u></p> <p>Built in piezo electric element for frequency tuning, with Piezo operating voltage range : 0 - 150 V</p>	<p><u>Amended specifications:</u></p> <p>a. a. Built in piezo electric element for frequency tuning, with Piezo operating voltage range : 0 - 140 V</p>
(Chapter 04, Page No.: 25, Sr. No.: 07) 515 nm LASER System		
4	<p><u>Original specifications</u></p> <ul style="list-style-type: none"> The laser should be suitable for photo-desorption of calcium for loading calcium into the ion trap Laser central wavelength: 515 (+/- 3 nms), suitable for photo-desorption Output power: > 100 mW at the output of the laser with linewidth narrowing, before the optical isolator Pulse mode operation with variable pulse duration of 100's of ns, and repetition rate > 10 KHz , the pulse output should be achievable by current switching and should be programmable 	<p><u>Amended specifications:</u></p> <ul style="list-style-type: none"> The laser should be suitable for photo- desorption of calcium for loading calcium into the ion trap Laser central wavelength: 515 (+/- 3 nms), suitable for photo-desorption Output power: > 100 mW at the output of the laser. Pulse mode operation with variable pulse duration of 100's of ns, and repetition rate > 10 KHz , the pulse output should be achievable by current switching and should be programmable

(Chapter 04, Page No.: 26) Reference Laser Specifications	
5	<p><u>Original specifications</u></p> <ul style="list-style-type: none"> • The laser should be any suitable reference laser with stabilization to some atomic or molecular absorption line. (10) • Nominal wavelength depends upon the chosen atomic/molecular absorption line that provides absolute reference. (5) • Method of stabilization: Any suitable frequency discrimination method (to lock to the peaks of the chose atomic/molecular lines) (5) • Repeatability $2.5 \times 1e-11$ (5) • Method of stabilization: Third harmonic method (2) • Polarization: Linear, vertical (2) • Incl. double stage isolator, > 55 dB, typ. 57 dB, transmission > 60% (2) • Fiber coupled, Rack mountable (2) • Continuous frequency lock over 24 hours (5) • Tuning: Automatic (5) <p><u>Amended specifications:</u></p> <ul style="list-style-type: none"> • The laser should be any suitable reference laser with stabilization to some atomic or molecular absorption line. (5) • Nominal wavelength depends upon the chosen atomic/molecular absorption line that provides absolute reference. (5) • Method of stabilization: Any suitable frequency discrimination method (to lock to the peaks of the chose atomic/molecular lines) (2) • The stability and accuracy should be ± 500 kHz . (5)

Sd/-

Prof. Ajay Wasan

Chair, Technical Committee

Sd/-

Dr. Kanhaiya Pandey

Member

Sd/-

Dr. Saptarishi Chaudhuri

Member

Sd/-

Prof. Umakant D. Rapol

Member