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Ref. No.: BA10365947

February 16<sup>th</sup>, 2017

**BIDDER QUESTION 1**

EUROPEAN OPEN TENDER PROCESS

DESY-Reference No.: EO012-16

**Supply of a horizontally focusing, plane-elliptical X-ray mirror for beamline P22 at PETRA III**

**DESY Deutsches  
Elektronen-Synchrotron**  
Notkestraße 85  
22607 Hamburg  
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Fax +49 40 8998-3282

**Postal address**  
22603 Hamburg

**Locations of DESY**  
Hamburg  
Zeuthen/Brandenburg

**Directorate**  
Dr. R. Brinkmann  
Prof. Dr. H. Dosch  
(Chairman)  
C. Haringa  
Prof. Dr. J. Mnich  
Prof. Dr. E. Weckert  
Prof. Dr. Christian Stegmann  
(Representative of Directors  
in Zeuthen)

Dear Sir or Madam,

a tenderer has asked for the clarification of the following question regarding the above named invitation to tender and the specification:

**Question 1a) X-ray mirror**

a. Can you please confirm if we can propose a manual adjustment of the mirror yaw motion instead of a motorized (and encoded) one?

**Answer 1a)**

The mirror yaw orientation must be motorized as specified in the documents.

**Question 1ba) X-ray mirror**

Can you please confirm what will be the nominal grazing incidence angle?

**Answer 1b)**

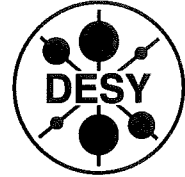
Depending on the different instruments at different focal positions, the respective nominal grazing incidence angle varies from 2.5 mrad to 3.5 mrad.

**Question 2a) Vacuum vessel**

We understand that one all-metal right angle valve is part of the requested supply and that the ion pump, controller and cables are provided free-issue by DESY for the FAT.

**Answer 2a)**

As stated in the documents, the required pumping speed has to be specified by the tenderer. The suitable pumps, controller and cables will be provided by DESY and the model will be selected upon consultation during the design phase.



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**Question 2b) Vacuum vessel**

Can you please confirm if other vacuum systems have to be included in our scope of supply:

- Vacuum gauges
- RGA head
- Viewports
- ...

**Answer 2b)**

All other vacuum related systems necessary for performing the acceptance tests have to be provided by the tenderer until successful completion of the tests.

All vacuum systems necessary for operation of the mirror system under vacuum after completion of the tests have to be included in the scope of supply and will remain on the vacuum vessel.

**Question 3) Commercial**

Can you please confirm if alternative terms of payment (§ 8 of "Invitation to Tender") can be proposed?

**Answer 3)**

Please use the payment conditions stated in the tender documents. Individual changes to the terms of payment may result in the exclusion from the tender proceedings.


All other specifications are as per the information included in the Call for Tender.

**DESY Deutsches Elektronen-Synchrotron**

per procuracionem:



Ross Killough



Gerald Knobloch

Cc.: File; Mr. Wolfgang Drube, FS-PEX