

**GOVERNMENT OF INDIA
BHABHA ATOMIC RESEARCH CENTRE
SOLID STATE PHYSICS DIVISION**

Ref: BARC/ SSPD/2018/ 569

April 23, 2018

Sub: Minor fabrication: Invitation for quotations for Fabrication and installation of neutron collimators and detector nose on Powder diffractometer-I at Dhruva reactor, BARC.

Quotations are invited for materials as given in attached specification sheet.

Kindly submit your offers along with detailed terms and conditions to **Head, Solid State Physics Division, BARC, Mumbai-400085** on or before **7th May 2018** in a sealed envelope super scribed with the above reference number and due date given above by Indian post only.

The address on the envelope should read: Head, Solid State Physics Division, BARC, Mumbai-400085. Attn: Dr. A. K. Bera

Terms and conditions:

- 1) The items should be delivered only after pre-despatch inspection carried out to the users' satisfaction for acceptance and for certification of the completion of this order, in all respects.
- 2) **Delivery:** This work order shall be executed within three months from the date of its receipt; the work order may please be acknowledged. **Material is to be delivered to North Gate, BARC, Mumbai - 400085.**
- 3) **Guarantee:** Items supplied/work executed shall be guaranteed against quality material/workmanship for satisfactory intended operation, for a period of 12 months from the date of execution of this order.
- 4) Taxes and excise duties shall be quoted separately.
- 5) **Payment terms:**
Payment in general is made within 30 days of the completion of the order and on production of bill in triplicate along with an advanced stamp receipt for the bill amount and guarantee certificate referred to (3) above.
- 6) Head, SSPD reserves the right to accept /reject any or all quotations without giving any reason.
- 7) **Confidentiality & Publicity Clause**
No party shall disclose any information to any third party concerning the matters under this contract generally. In particular, any information identified as "Proprietary" in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party. This clause shall apply to the sub-contractor, consultants, advisers or employees engaged by a party with equal force.
- 8) **"Restricted information" categories under Section 18 of the Atomic Energy Act, 1962 and "Official Secrets" under Section 5 of the Official Secrets Act, 1923:-**Any contravention of the above-mentioned provisions by any contractor, sub-contractor, consultant, adviser or the employees of a contractor will invite penal consequences under the aforesaid legislation.
- 9) **Prohibition against use of BARC's name without permission for publicity purposes:-**The contractor or sub-contractor, consultant, adviser or the employees engaged by the contractor shall not use BARC's name for any publicity purpose through any public media like Press, Radio, T.V or Internet without the prior written approval of BARC.

Enclosed: Specifications of material and drawing of detector nose and collimator.

Head
Solid State Physics Division

Md. Yusuf 23. 4. 2018

डॉ. एस.एम. यूसुफ/Dr. S. M. Yusuf
अध्यक्ष, एस.एस.पी.डी. /Head, SSPD
भारत सरकार, भा.प.अ.केंद्र/ Govt of India, BARC
ट्रॉम्बे, मुंबई ४०००८५/Trombay, Mumbai 400085

Annexure
Specification for neutron beam collimators and detector
nose for powder diffractometer 1, Dhruva, BARC

Details of the component (specifications and drawings are attached)

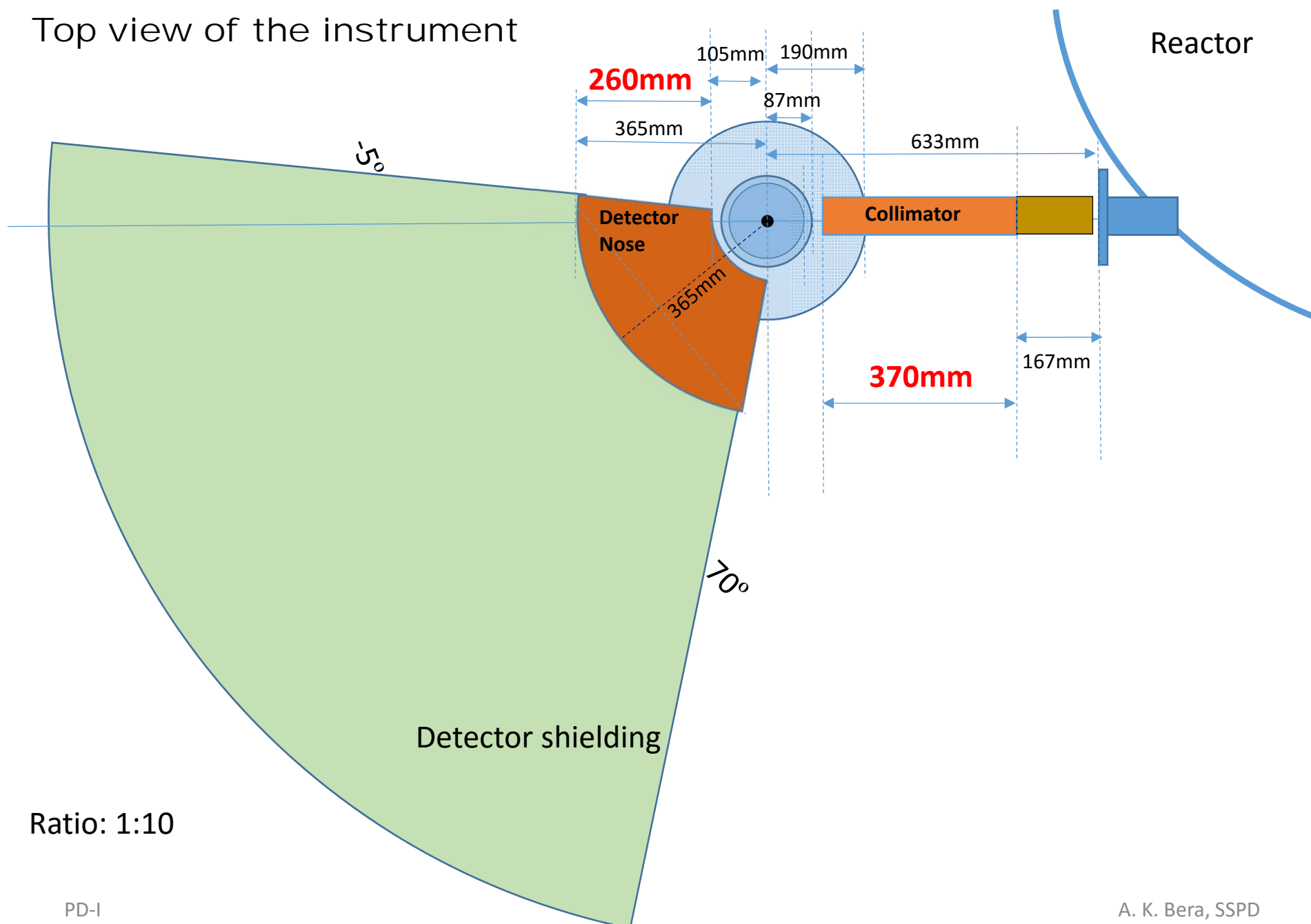
- | | |
|--|-------|
| 1. Detector Nose | No.1 |
| 2. Neutron beam Collimator-1 (SS sheet) | No. 1 |
| 3. Neutron beam collimator-2 (Kapton foil) | No. 1 |

For details and clarification please contact

Dr. A. K. Bera, SSPD, BARC
Phone: 022 25594292
Email: akbera@barc.gov.in

Specification for Neutron beam collimator and detector Nose for PD 1

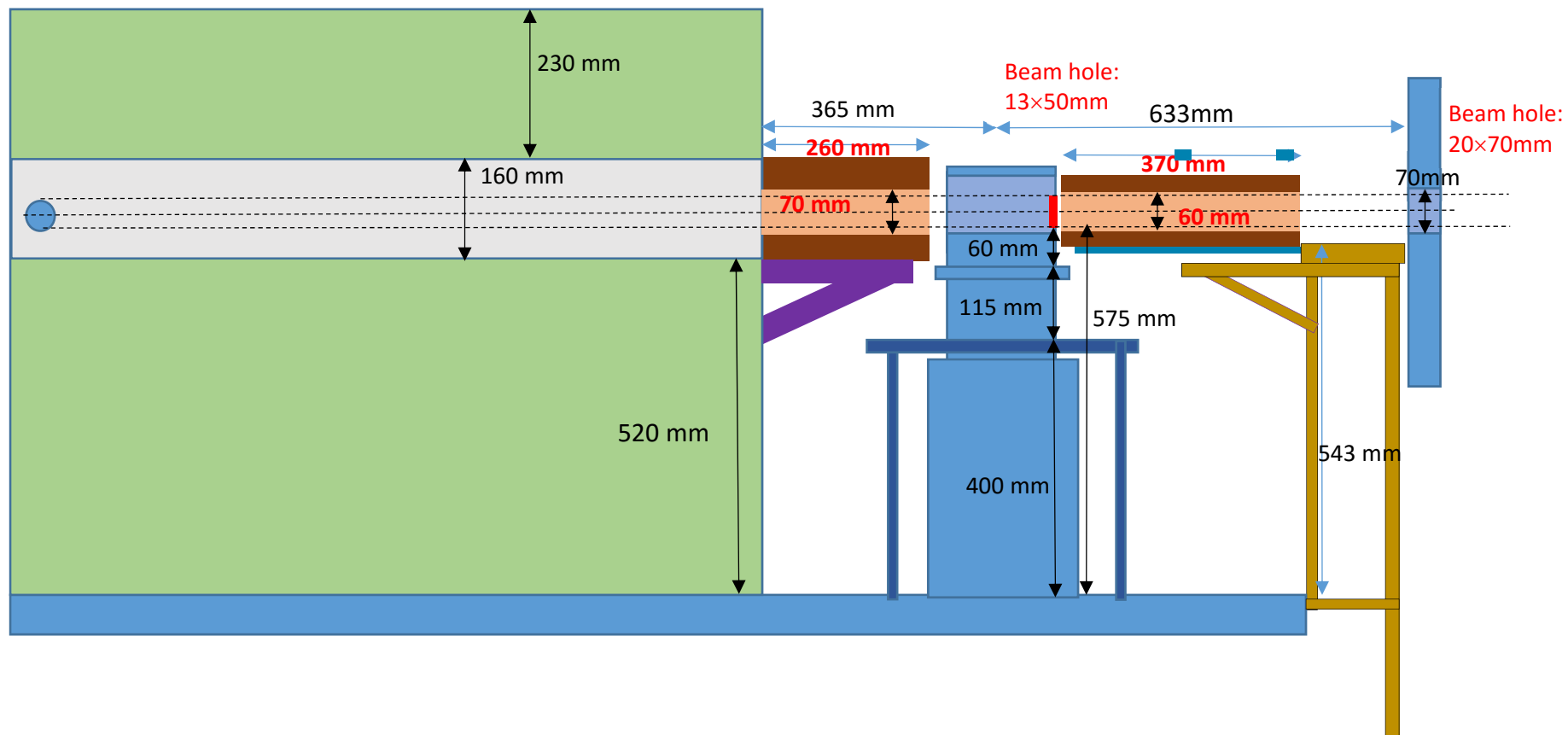
Top view of the instrument



Ratio: 1:10

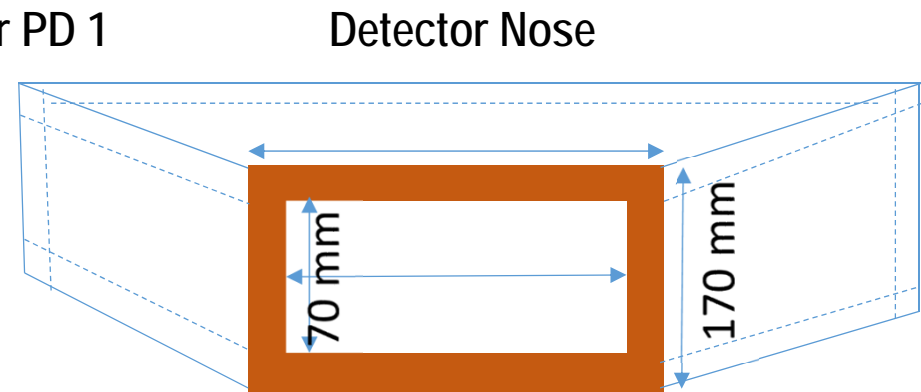
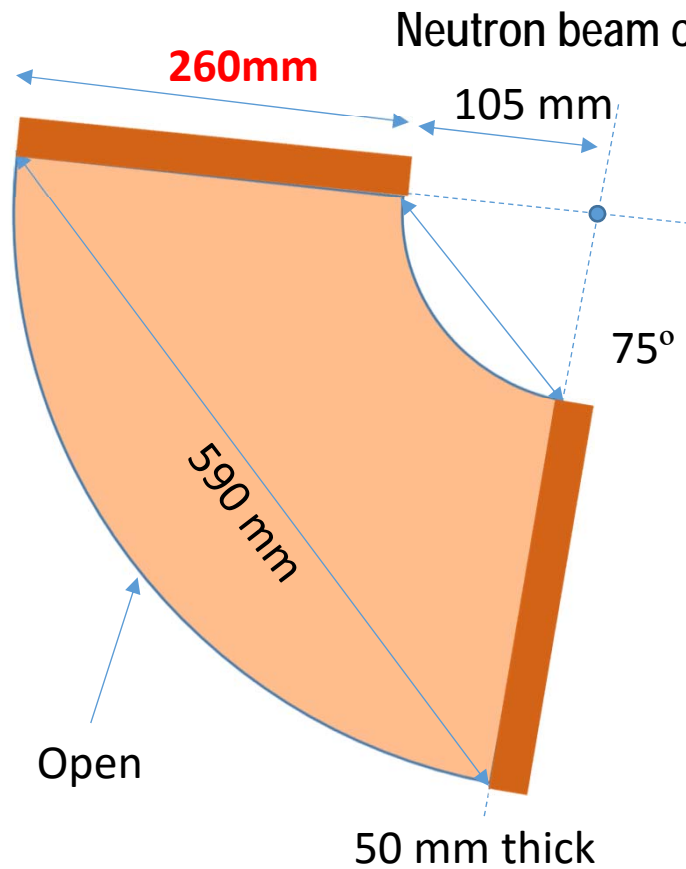
Specification for Neutron beam collimator and detector Nose for PD 1

Neutron beam collimator for PD 1 cross-section view



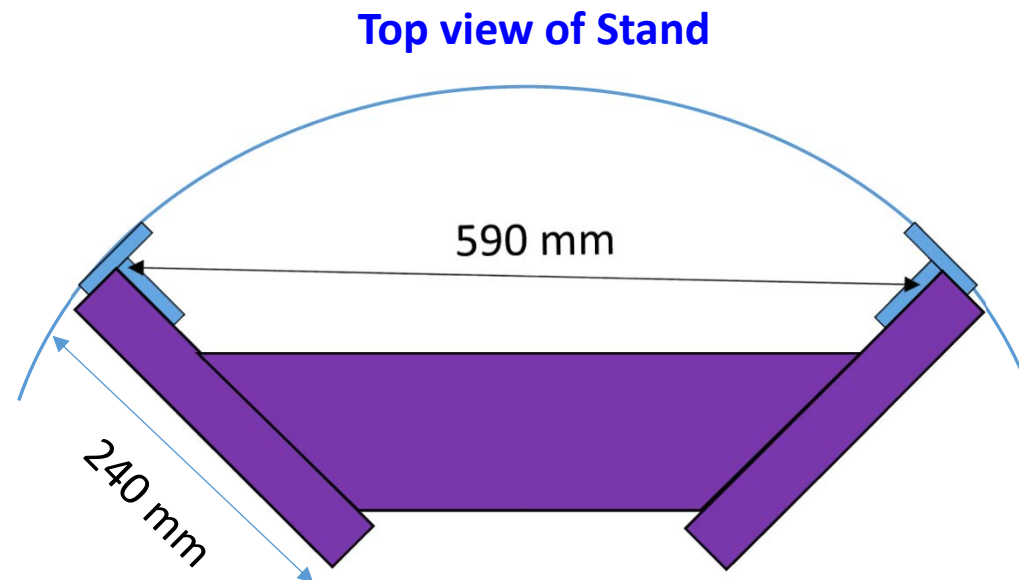
Ratio: 1:10

Specification for Neutron beam collimator and detector Nose for PD 1



Material: Borated Polyethylene (boron 30 % or above)

Detector Nose should be made inside a chrome polished SS304L case

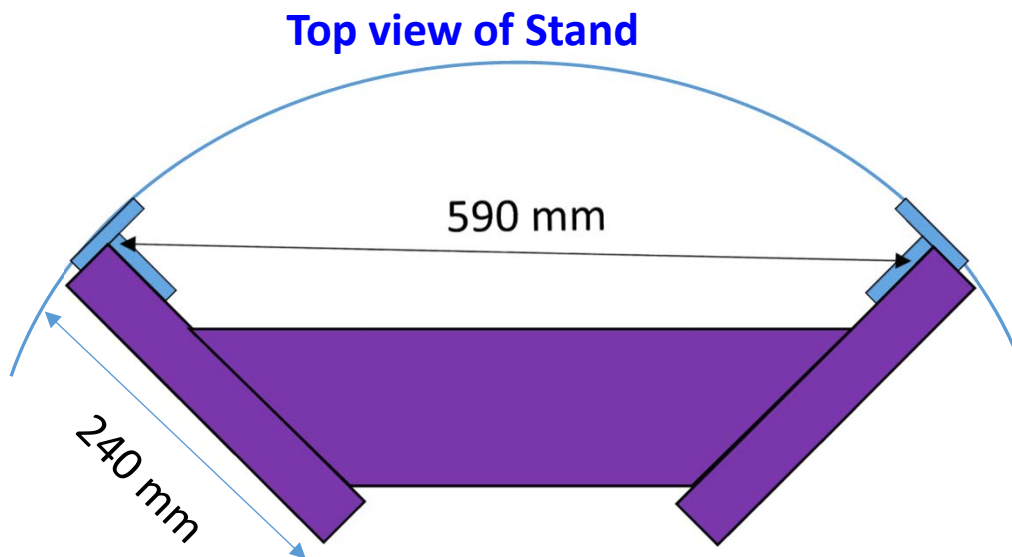


Stand Material: SS304L

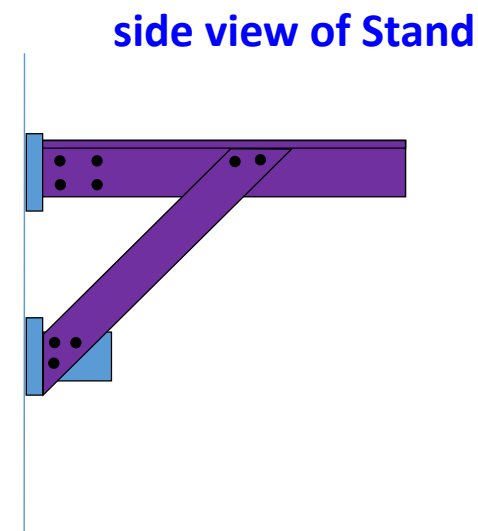
A. K. Bera, SSPD

Specification for Neutron beam collimator and detector Nose for PD 1

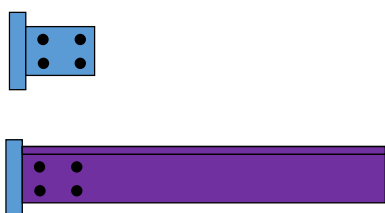
Neutron beam collimator for PD 1



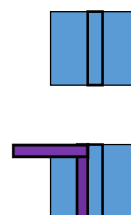
Detector Nose stand



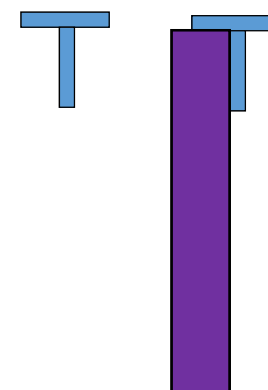
Side view



Front view

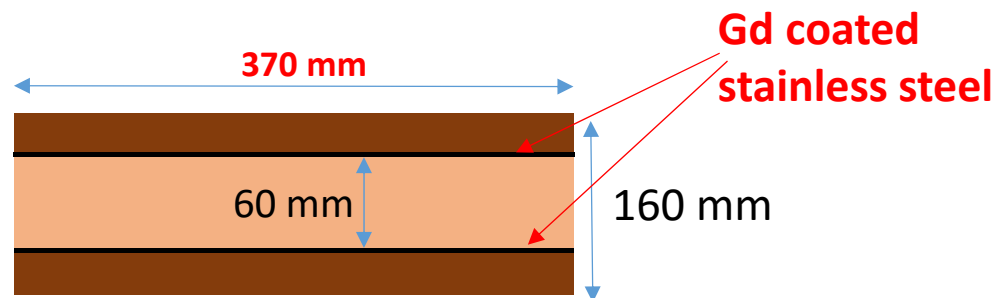


Top view

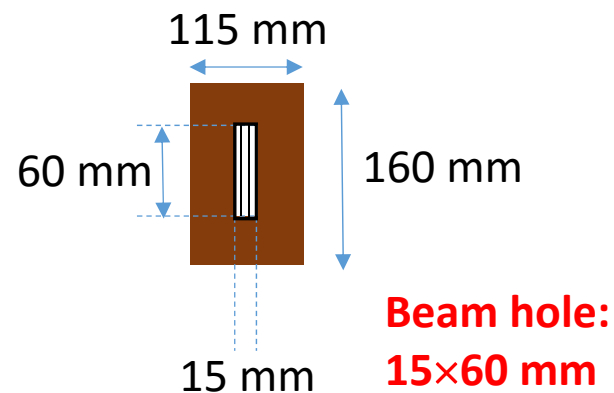


Specification for Neutron beam collimator and detector Nose for PD 1

Neutron beam collimator



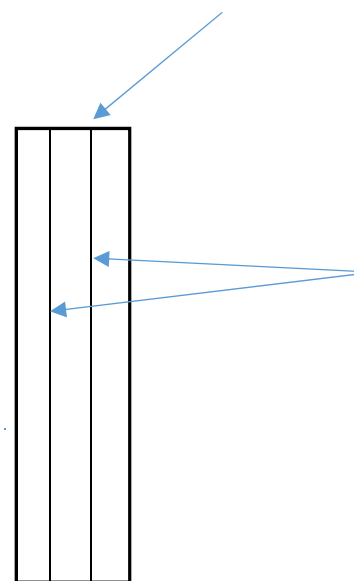
Borated Polyethylene (boron 30 % or above)



Gd coated stainless steel @ 1 mm

Beam collimator should be made inside a chrome polished SS304L case

Beam hole: 15×60 mm



Collimator-1. :

Gd coated stainless steel sheet @ 0.2 mm

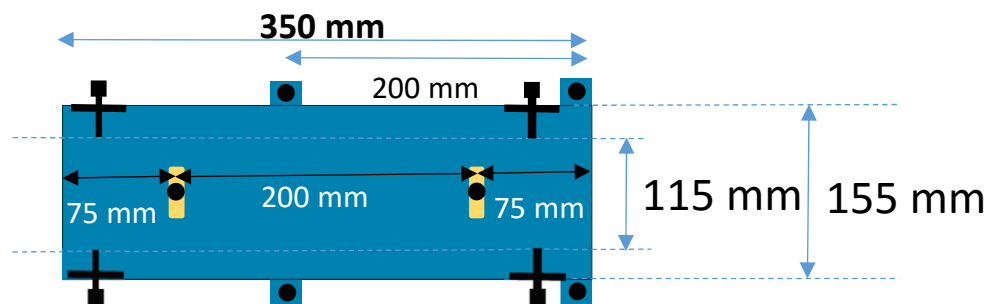
Collimator 2.:

Gd coated Kapton foil @ 0.1 mm

Specification for Neutron beam collimator and detector Nose for PD 1

Neutron beam collimator for PD 1

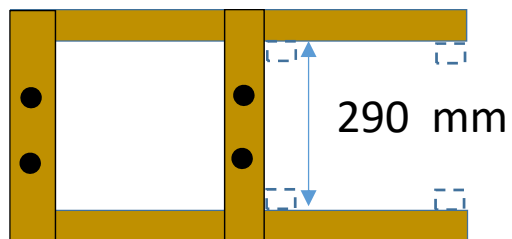
Top view of Stand



side view of Stand



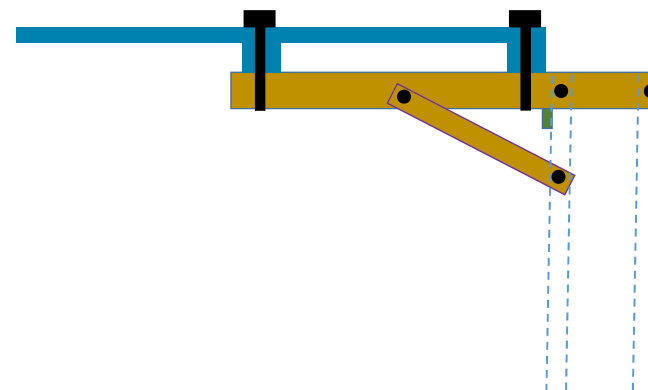
Top view: Attachment with beam stopper stand



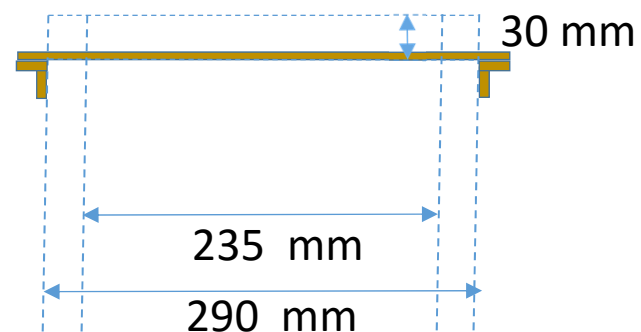
PD-I

Collimator stand

Side view: Attachment with beam stopper stand



Front view: Attachment with beam stopper stand



Stand Material: SS304L

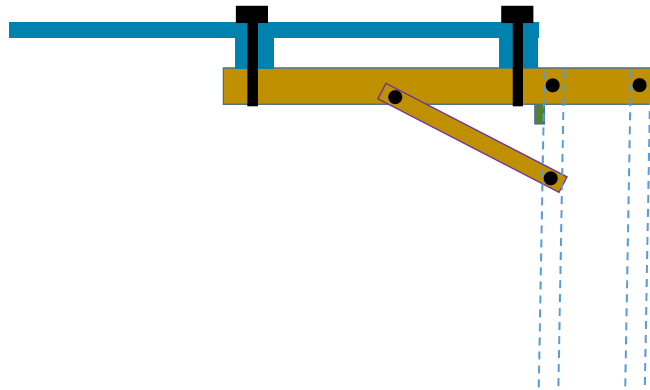
A. K. Bera, SSPD

Specification for Neutron beam collimator and detector Nose for PD 1

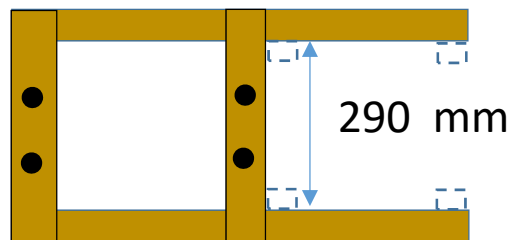
Neutron beam collimator for PD 1

Collimator stand

Side view: Attachment with beam stopper stand



Top view: Attachment with beam stopper stand



Front view: Attachment with beam stopper stand

