

**भारत सरकार Govt. of India, Dept. of Space**  
**भारतीय अन्तरिक्ष अनुसंधान संगठन Indian Space Research Organisation**  
**भारतीय सुदूर संवेदन संस्थान Indian Institute of Remote Sensing**  
**4, कालिदास रोड, पोस्ट बॉक्स सं-135, देहरादून 4, Kalidas Road, Dehradun - 248001**  
**Ph NO. 0135&2524317, 4318, 4322 FAX No. 0135 2104939**  
**E-mail pns@iirs.gov.in**

IIRS/ P&S/GIDI 2017000018 01 & GIRS 2017000084 01

दिनांकित/Dated : 03/07/2017

शुद्धि-पत्र / CORRIGENDUM

In continuation to Tender Notification No. GIDI 2017000018 01 & GIRS 2017000084 01 dtd 15/06/2017 for Hiring of Photocopier Machine and Supply of Light weight & Portable trihedral corner reflectors, the last date for submission of bids has been extended upto 11<sup>th</sup> August, 2017. Accordingly, the time schedule for issue of tender documents/ due date for receipt of tender & Date of opening of technical bids are revised. For details, please log on to IIRS website [www.iirs.gov.in](http://www.iirs.gov.in).

Starting date for issue of Tender Forms	:	11/07/2017	
Last date of issue of Tender Forms	:	11/08/2017	: 12. 00 hrs
Due date for receipt of bids	:	11/08/2017	: 14.00 hrs
Date of opening of Technical Bid	:	11/08/2017	: 15.30 hrs

निविदाकारों से आग्रह है कि, वे उपरोक्त संशोधन के अनुसार अपनी बोलियाँ जमा करें। मूल निविदा विज्ञप्ति के उपरोक्त से इतर अन्य सभी विवरण अपरिवर्तित रहेंगे।

Tenderers are requested to note these changes and submit their offers accordingly. All other details as per the original tender notification remain unaltered.

निदेशक, भा.सु.सं.सं.  
Director, IIRS



भारत सरकार, अंतरिक्ष विभाग / Govt. of India, Dept. of Space  
 भारतीय अंतरिक्ष अनुसंधान संगठन / Indian Space Research Organisation  
 भारतीय सुदूर संवेदन संस्थान / Indian Institute of Remote Sensing  
 4, कालीदास रोड़, देहरादून-248001 / 4, Kalidas Road, Dehradun - 248001  
 उत्तराखण्ड / Uttarakhand  
 दूरभाष / PH : 0135-2524318 / 4317, फैक्स / FAX : 0135-2748041  
 ई-मेल / E-mail : pns@iirs.gov.in

**निविदा आमंत्रण सूचना / Notice Inviting Tender**

भारत के राष्ट्रपति की ओर से भारतीय सुदूर संवेदन संस्थान, देहरादून द्वारा निम्नलिखित के लिए दो भागों में मोहरबंद बोलीयां आमंत्रित की जाती हैं।  
 On behalf of President of India, Indian Institute of Remote Sensing, Dehradun invites Two Part sealed tender for the followings.

क्र. सं. / Sl. No.	निविदा सं. / Tender No	विवरण / Description	मात्रा / Qty.
1.	जी.आई.डी.आई. 2017000018-01 / GIDI 2017000018-01	भाडे पर डिजिटल फोटोकॉपियर मशीन / Hiring of Photocopier Machine (Digital) (विस्तृत विवरण/विनिर्देश, निबंधन एवं शर्तें निविदा प्रलेखानुसार / Detailed Specifications, Terms & Conditions as per tender documents)	01 कार्य / 01 Job.
2.	जी.आई.आर.एस. 2017000084-01 / GIRS 2017000084-01	हल्के और पोर्टेबल त्रिकोणीय कोने रिफ्लेक्टर की आपूर्ति / Supply of lightweight & portable trihedral corner reflectors (विस्तृत विवरण/विनिर्देश, निबंधन एवं शर्तें निविदा प्रलेखानुसार / Detailed Specifications, Terms & Conditions as per tender documents)	10 संख्या / 10 Nos.
निविदा शुल्क / Tender Fee		₹ 573/- प्रत्येक निविदा हेतु / For each Tender (निविदा शुल्क ₹ 500 + मूल्य वर्धित कर 14.5 प्रतिशत की से / ₹ 500 Tender Fee + VAT @ 14.5%)	
निविदा प्रारूप जारी करने की तिथि / Starting date for issue of Tender Forms		27.06.2017 से / From 27-06-2017	
निविदा प्रारूप जारी करने की अंतिम तिथि / Last date for issue of Tender Forms		06.08.2017, 12:00 बजे तक / upto 12:00 hrs	
निविदा स्वीकृति की नियत तिथि / Due date for Receipt of Tender		06.08.2017, 14:00 बजे तक / upto 14:00 hrs	
तकनीकी बोलियां खोलने की तिथि / Date of opening of Techno-commercial Bids		06.08.2017 15:00 बजे एवं 15:30 बजे क्रमशः / 06.08.2017 15:00 & 15:30 hrs respectively	

निविदा प्रपत्र किसी भी अनुसूचित बैंक से देहरादून में भुगतान योग्य, वेतन एवं लेखा अधिकारी, आई0 आई0 आर0 एस0 के पक्ष में जारी ₹ 573/- का डी0डी0 जमा करके क्रय एवं भंडार अनुभाग, आई0 आई0 आर0 एस0 से किसी भी कार्यदिवस में प्राप्त कर सकते हैं अथवा [www.iirs.gov.in](http://www.iirs.gov.in) से डाउनलोड कर सकते हैं। यदि निविदा दस्तावेज वेबसाइट से डाउनलोड किया गया है, तो ₹ 573/- का डी0डी0 जो वेतन एवं लेखा अधिकारी, आई0 आई0 आर0 एस0, देहरादून के पक्ष में देय हो, बोली के साथ अवश्य संलग्न करें।  
 Tender forms can be purchased from Purchase & Stores Section, IIRS on all working days on payment of ₹ 573/- in the form of DD drawn in favour of Pay & Accounts officer, IIRS Dehradun payable at Dehradun or can be downloaded from [www.iirs.gov.in](http://www.iirs.gov.in). When tender forms are downloaded, DD for ₹ 573/- drawn in favour of Pay & Accounts officer, IIRS Payable at Dehradun shall be attached with tender document.

निदेशक / Director



**GOVERNMENT OF INDIA  
DEPARTMENT OF SPACE  
INDIAN INSTITUTE OF REMOTE SENSING  
IIRS  
DEHRADUN  
PURCHASE & STORES  
INVITATION TO TENDER**

Ph No: 0135 - 2524317, 4318  
Fax 0135 - 2748041  
Email: pns@iirs.gov.in

Date : 10/07/2017

M/s

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Our Ref No : GIRS 2017-000084-01

Tender Due: 14:00 Hrs ISTon 11/08/2017

Opening : 15:30 Hrs ISTon 11/08/2017

Dear Sirs,

Please submit your sealed quotation , in the Tender Form enclosed here along with the descriptive catalogues / pamphlets / literature ,superscribed with Our Ref.No. and Due Date for the supply of the following items as per the terms & conditions mentioned in Annexure( Form No: ENCLOSED )

S.No.	Description of Items with Specifications	Unit	Quantity
1	Supply of lightweight & portable trihedral corner reflectors: 4 Trihedral corner reflectors (TCR) of 100cm inner leg dimension (size), 3 TCR of 150cm size and 3 TCR of 250cm size (Detailed Specifications, Terms & Conditions as per annexure enclosed)	NOS.	10

DELIVERY AT: IIRS

MODE OF DESPATCH DOOR DLVRY

DUTY EXEMPTIONS

SPECIAL INSTRUCTIONS TWO PART TENDER

SPECIFIC TERMS ENCLOSED



ASHA CHANDRAN L  
PURS. & STORES OFFICER  
For and on behalf of the President of India  
The Purchaser



**Specific terms and conditions to the tender:-**

1. Please submit the Technical Details / Catalogue / Make/ Model/Data Sheets.
2. The offer should be valid for a period of 90 days from the date of opening of Tender.
3. **Please send the quotations ONLY in 'SEALED COVER' indicating our tender enquiry No. and due date by speed post so as to reach us on or before the due date & time. IIRS will not be responsible for any postal delays.**
4. **E- mail/ fax quotations 'WILL NOT BE ACCEPTED'.**
5. Please quote the percentage of GST applicable.
6. Our standard delivery term is FOR, IIRS. In case any vendor offers delivery term of Ex-works, Packing and Forwarding charges if any should be indicated separately either as a percentage of the quoted rate or as a Lumpsum amount.
7. We are exempted from the payment of Customs Duty and necessary exemption certificate shall be issued upon request.
8. **Payment Term:** Payment will be made within 30 days from the date of receipt and acceptance of the item at our site for order value upto 2.00Lakhs. For order value above 2.0 Lakh, 90% payment will be made within 30 days and 10% against submission of Performance Bank Guarantee for the warranty period (wherever warranty is applicable). The Performance Bank Guarantee should be valid for a period of 2 months beyond the completion of the warranty period.
9. For foreign orders our Standard Payment Term is Sight Draft.
10. **Liquidated Damages** – The delivery period quoted should be realistic. The delivery period so quoted and mentioned in the order is the essence of the order/contract. In case of delay in delivery of material as per the delivery schedule, Liquidated Damage @ 0.5% per week or part thereof on the undelivered portion subject to a maximum of 10% of the contract value shall be levied. Wherever, installation and commissioning is also involved, the supply will be deemed to have been completed only when the entire Stores is supplied, installed and accepted.
11. **Security Deposit** : - Wherever the offer value is Rs. 5.00 Lakhs or above, the successful tenderer should submit Security Deposit @ 10% of the order value by way of Bank Guarantee / FD Receipt. The Bank Guarantee shall be obtained from any Scheduled Bank on Rs.200/- Non Judicial Stamp Paper and should be valid beyond 2 months from the completion of all contractual obligations.
12. In order to avail of the benefits extended to by Govt. of India to the Micro and Small Sectors, please submit attested copy of the valid Entrepreneur Memorandum Part-II signed by the General Manager, District Industries Centre / Udyog Adhar / NSIC Registration Certification along with your offer.
13. If any bidder submits forged / false document along with the tender, offer of such vendors will be summarily rejected and such bidders will be blacklisted for all future tenders.
14. Wherever samples are required to be submitted along with the quotation, offer without sample will not be considered.

  
Purchase & Stores Officer



**SPECIAL TERMS AND CONDITIONS FOR SUBMITTING TWO PART BID**

1. This is a two part tender viz., Techno-Commercial Bid (consisting of Technical Specifications, Commercial terms & condition etc.) and Price Bid. Hence, quotation should be submitted in separate sealed covers super-scribing "Tender No. **GIRS-2017-00 0084-01/PT/17-18, Due on 11/08/2017 at 14.00 Hrs** (Techno-Commercial Bid) and Tender No. . **GIRS-2017-00 0084-01/PT/17-18, Due on 11/08/2017 at 14.00 Hrs** (Price Bid).
2. Both the sealed tenders (Techno commercial & Price bid) should be kept in one big cover super scribing Tender for **Supply of Light Weight & Portable Trihedral Corner Reflectors** against Enquiry No. **GIRS-2017-00 0084-01/PT/17-18, Due on 11/08/2017 at 14.00 hrs** and put in the Tender Box available in Purchase Division, IIRS or send by post or Courier within the due date and time prescribed.
3. Only Techno-Commercial bid will be opened on the date of tender opening. The price Bids of those tenderers whose Techno-Commercial Bids are found to be meeting our specifications / requirements will be opened. The bidders are allowed to attend the tender opening on the date and time of opening.
4. The Techno-Commercial Bid should have technical & commercial details only. No price should be quoted in the Techno-Commercial Bid.
5. Tender form can be purchased from Purchase & Sores Section, IIRS, Dehradun on all working days on payment of Rs. 573/- drawn in the form of Demand Draft in favour of Pay & Accounts Officer, IIRS payable at Dehradun through a request or Tenderer can download the tender documents from the website ([www.iirs.gov.in](http://www.iirs.gov.in)). When tender form is downloaded, DD for Rs 573/- drawn in favour of Pay & Accounts Officer, IIRS payable at Dehradun shall be attached along with the technical bid.
6. Late and Delayed Tenders will not be considered. Therefore, please ensure that your tender is posted well in time to reach us before the due date and time.
7. Fax/Email offers shall not be considered
8. All the pages of your offer should be signed/initialed by competent authority and affixed with your company's Seal.
9. **EMD of Rs. 20,000/-** to be submitted along with the quotation in the form of Crossed Demand Draft drawn on any Nationalized / scheduled bank in favour of Pay & Accounts Officer, IIRS, payable at Dehradun. Quotation received without EMD will not be considered. The EMD of unsuccessful bidder will be returned after finalization of order. For exemption from EMD necessary exemption certificate shall be provided along with technical bid.



[Purchase & Stores Officer]



**Technical/Material Specification of Trihedral Corner Reflectors:**

- Lightweight and portable
- Modularity (TCR components can be separated and recombined)
- Corner Reflectors should be quickly assembled with screws and lightweight.
- Material: Aluminium / Alucobond
- Trihedral corner reflectors of 2.5m size should be wind resistive (Figure 6 of Annexure 2)
- Reflector Should have 360-degree Azimuth rotation and 0 to 90-degree vertical movement (elevation/zenith) (Figures 1,2,3 and 4 of Annexure 2)
- All the corner reflectors should have drainage holes to prevent water accumulation due to rain (Figure 5 of Annexure 2)

**Condition:** The supplier have to provide at least one product before completing the entire order. If the product will not meet the qualitative requirement, then the order will be cancelled.



## Design drawings of prototype of TCR with 100cm, 150cm and 250 cm inner leg dimension (size)

Deatiled information may be obtained from (Garthwaite et al., 2015)

Garthwaite, M. C., Nancarrow, S., Hislop, A., Thankappan, M., Dawson, J. H., & Lawrie, S. (2015). *The Design of Radar Corner Reflectors for the Australian Geophysical Observing System: a single design suitable for InSAR deformation monitoring and SAR calibration at multiple microwave frequency bands*. Canberra. <https://doi.org/10.11636/Record.2015.003>

### “ Design drawings of prototype 1.0 m/100cm TCR

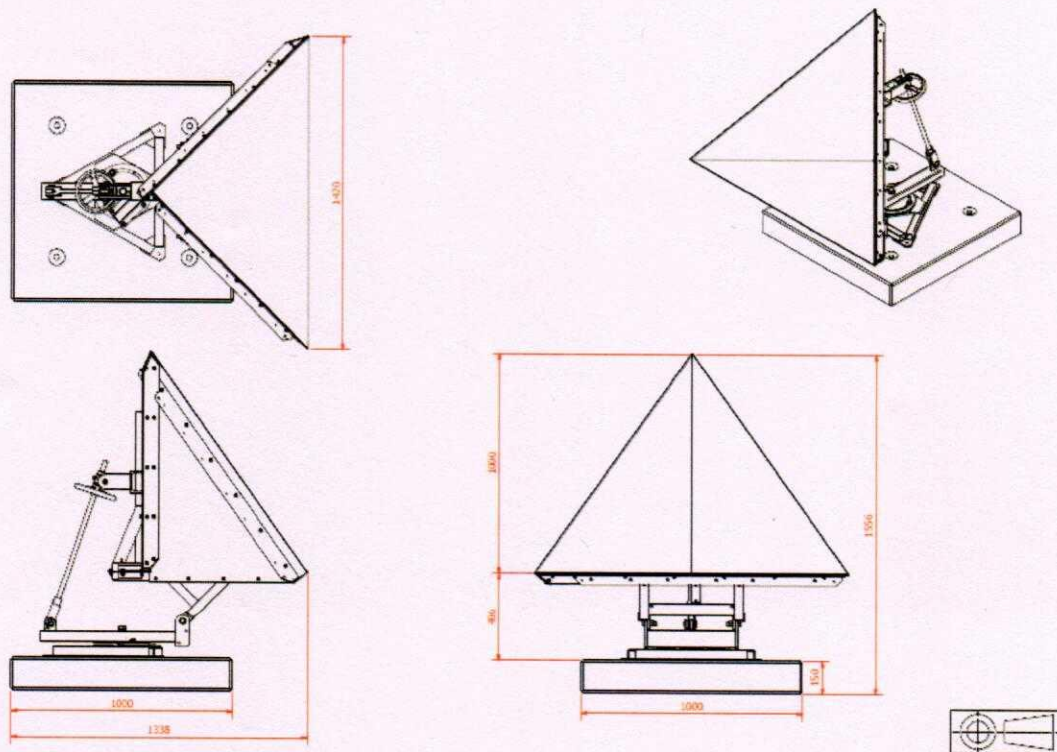


Figure1: Design drawings of prototype 1.0 m CR with ground mounting stand and pre-fabricated concrete slab. The CR is depicted with a baseplate elevation of zero degrees. Dimensions in millimetres.

*[Handwritten signature]*



## Design drawings of prototype 1.5 m/150cm TCR

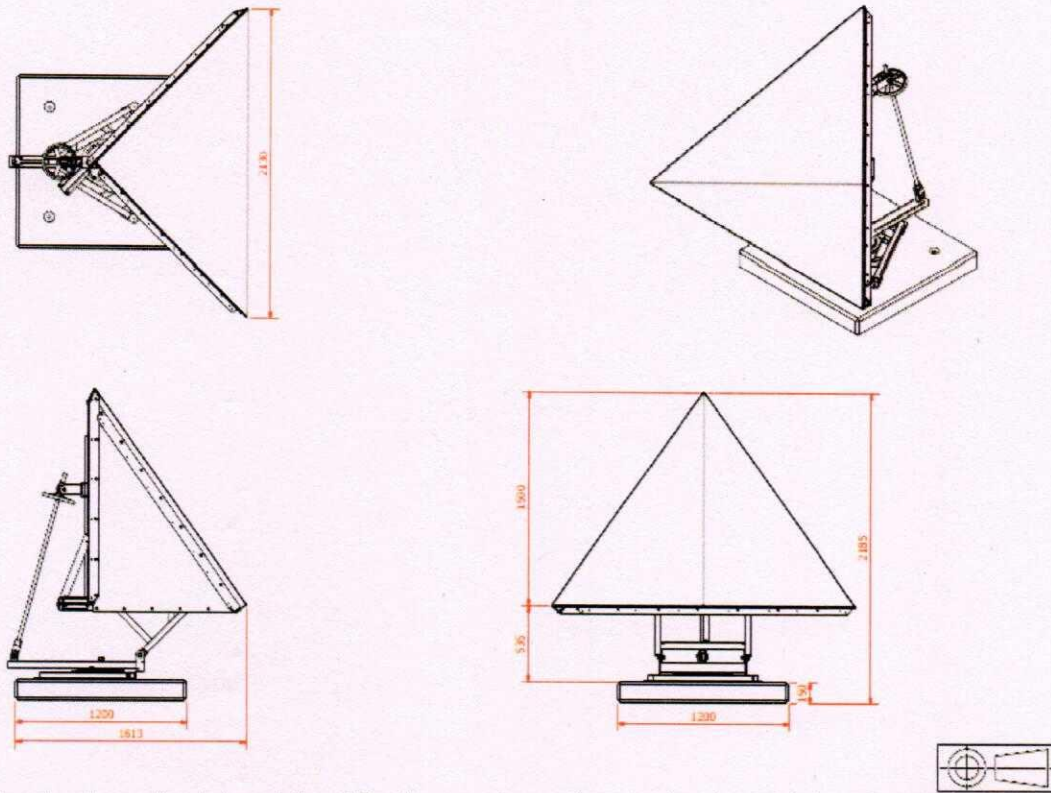


Figure 2: Design drawings of prototype 1.5 m CR with ground mounting stand and pre-fabricated concrete slab. The CR is depicted with a baseplate elevation of zero degrees. Dimensions in millimetres.

## Design drawings of prototype 2.5 m/250cm TCR

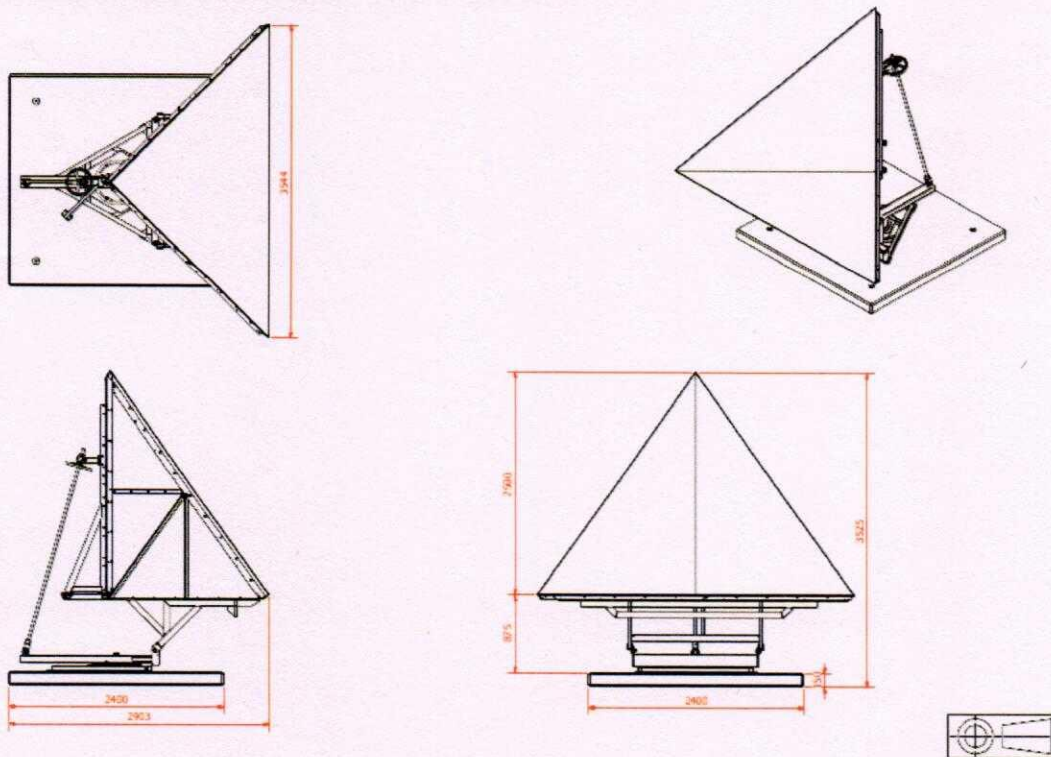
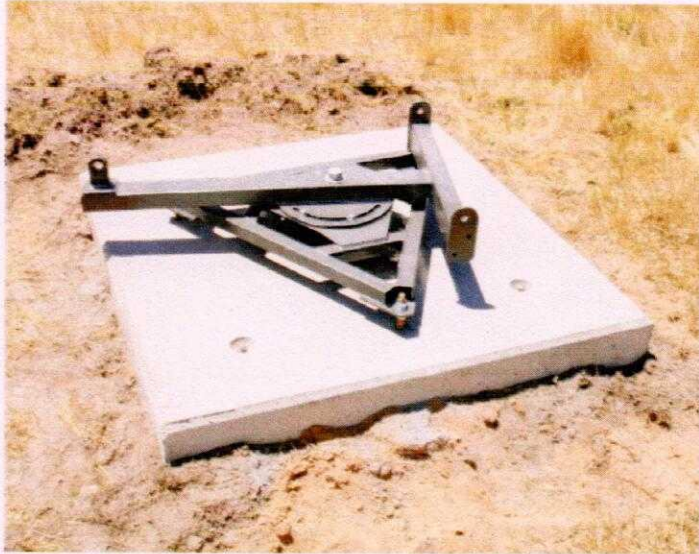
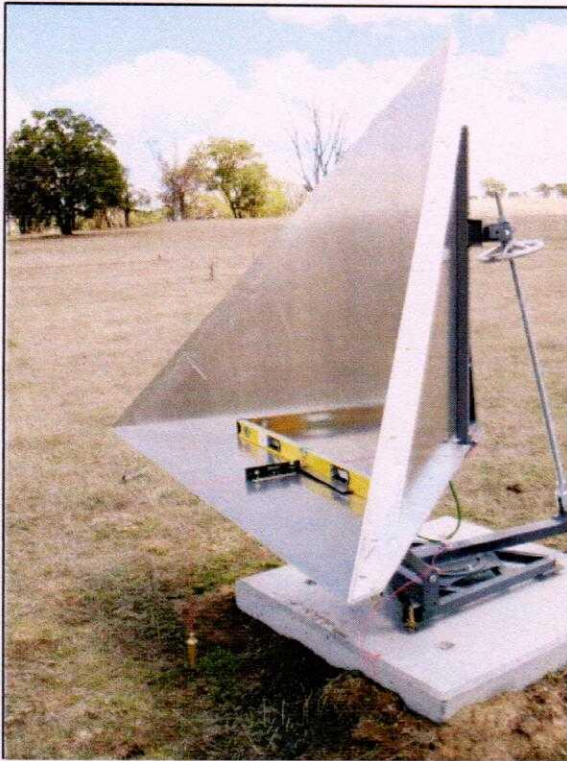


Figure 3: Design drawings of prototype 2.5 m CR with ground mounting stand and pre-fabricated concrete slab. The CR is depicted with a baseplate elevation of zero degrees. Dimensions in millimetres. ” Source : (Garthwaite et al., 2015)

Handwritten signature and checkmark.



## Trihedral Corner Reflector



Source : (Garthwaite et al., 2015)

Figure 4: TCR installed in field

A handwritten signature in blue ink, located in the bottom right corner of the page. The signature is stylized and appears to be a set of initials or a full name.





Figure 5: To avoid water accumulation due to rain.

Source : (Garthwaite et al., 2015)





Larger solid sheet TCR (2.5M/250CM)

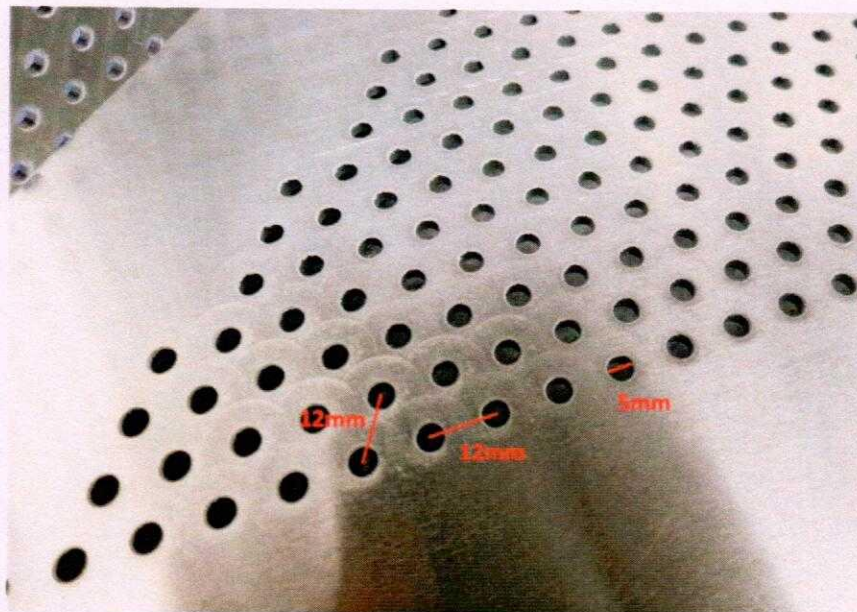


Figure 6: Detail of the equilateral triangular mesh perforation used for prototype mesh CR with annotated dimensions. This mesh has an open area of 15.7%. Source : (Garthwaite et al., 2015)

*[Handwritten signature]*