

## Summary offer of Provision of Research Services

1. Title of DRDO's Research Service Qualitative Requirement (RSQR): <b>A STUDY ON THE APPLICABILITY OF IRNSS/ NAVIC TIME FOR TEST RANGE APPLICATIONS THROUGH IRIG-B SIGNAL GENERATION</b>				Offer Number: Date received: Revised on:	
2. RSQR Document ref. No. ITR/CT/CARS/01	Date of Issue		Issuing DRDO Lab/ Estt/ Project: <b>Integrated Test Range, Chandipur</b>	Remarks of RSQR initiator:	
	YY	MM			
	2022	09	05		
3. Name of Research Service Provider (RSP) making this offer: <b>PI: Dr Anindya Bose</b> <b>Co-PI: Dr Tanmoy Sarkar</b> <b>The University of Burdwan, Burdwan</b>			4. RSP's ref. No. AB/2022/34 dt 06 Sept, 2002		Judgment of OEC:
3 (a) RSP's address for correspondence: <b>Department of Physics, The University of Burdwan, Golapbag, Burdwan</b> Pin code: <b>713104</b> Telephone: <b>(0)9434004478</b> Email: <b><a href="mailto:abose@phys.buruniv.ac.in">abose@phys.buruniv.ac.in</a></b>			5. (a) Key personnel of RSP to be deployed: <b>Dr. Anindya Bose, Senior Scientific Officer,</b> <b>Dr Tanmoy Sarkar</b> <b>Department of Physics, The University of Burdwan, Burdwan-713104</b>		
			5. (b) RSP's sub-contractors/ consultant: a) Name: <b>Dr P Banerjee</b> Institute: Former Sc G, NPL, New Delhi b) Name: NIL		
6. Principal technical features of offer as related to RSQR (Detailed in attachment A): <b>Attached</b>					
7. DRDO –owned equipment that RSP requires to be positioned by DRDO (Detailed, with estimated cost, in Attachment B): <b>NOT APPLICABLE</b>					
8. Estimated time to completed provision of research services and submit final report:				Month: <b>18 months from date of release of initial advance</b>	
9.1 estimated expenditure (as elaborated on reverse) on:					
a) Personnel (1 JRF) including training				<b>Rs. 6,02,640/-</b>	
b) Equipment				NIL	
c) Other (Excluding institute overhead): Contingency Rs 1,35,000 (Rs 45,000 @ Rs 2500 x 18 months) + Research Consultant Rs 90,000 (@ Rs 5000 pm x 18 months) + Consumables and fabrication expenses - Rs 1,50,000+Travel Rs 1,10,000]				<b>Rs. 3,95,000/-</b>	
<b>Total</b>				<b>Rs. 9,97,640/-</b>	
9.2 Required schedule of Payments (Rs. in lakh)		Date	Payment		
a) Initial advance			<b>Rs 3,00,000/-</b>		
b) at Performance milestone I of RSQR		6 months	<b>Rs 3,00,000/-</b>		
c) at Performance milestone II of RSQR		14 months	<b>Rs 3,00,000/-</b>		
d) on submission of Final Report		17 months	<b>Rs 97,640/-</b>		
		<b>Total</b>	<b>Rs 9,97,640/-</b>		
10. Reference to R&D work being performed by RSP for Armed Services/ DRDO/ other S&T (including foreign) agencies: <b>Completed:</b> 01 CARS project for RCI-DRDO (2011-2012) 01 project with SAC-ISRO (2017-2020) 01 project with DRDO (2017-2020) 01 project with AICTE (2017-2020) 01 CARS Project for ITR-DRDO (2020-2022)  <b>Ongoing:</b> 01 project with SERB-DST (2021-2024) 01 project with NGP-DST (2023-2025)			11. Offer as above valid till (date): 12. Signature competent authority of RSP:  <b>Sujit Kumar Chowdhury</b> 04/07/23  Name: Dr Sujit Kumar Chowdhury Designation: Registrar, The University of Burdwan		

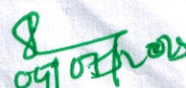
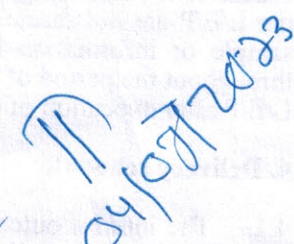
REGISTRAR  
THE UNIVERSITY OF BURDWAN  
BURDWAN - 713104





## Contract for Acquisition of Research Services (CARS)

By signature of authority identified at (11) below, DRDO here by contracts on the Research Service Provider identified at (3), the provision of the Research Services described at (6), within the time stated at (8) for payments at (9.2), and subject to other conditions overleaf, as follows:

1. Short title of Research Service to provided: <b>A study on the applicability of IRNSS/ NavIC time for Test Range applications through IRIG-B signal generation</b>				Contract Number: <b>RD/PI-23/1TR-059</b> <b>dt. 04.07.2023</b>							
2. RSQR Document Ref. No <b>ITR/CT/CARS/01</b>	Date of issue <table border="1" style="width: 100%; text-align: center;"> <tr> <td>YY</td> <td>MM</td> <td>DD</td> </tr> <tr> <td>2022</td> <td>09</td> <td>05</td> </tr> </table>		YY	MM	DD	2022	09	05	Issuing DRDO Lab/ Estt/ Project: <b>Integrated Test Range, Chandipur</b>		Dates of CARS Amendments:
YY	MM	DD									
2022	09	05									
3. Name and address of Research Service Provider (RSP):  <b>PI: Dr Anindya Bose, Senior Scientific Officer, Deptt of Physics, The University of Burdwan, Burdwan 713104, West Bengal</b>  <b>Co PI: Dr Tanmoy Sarkar, Scientific Officer (Selection Grade), Deptt of Physics, The University of Burdwan, Burdwan 713104, West Bengal</b>				4. RSP's Offer Ref.  <b>AB/2022/34 dt 06/09/2022</b>							
5. (a) This contract will require a formal amendment if the following key professionals are not available to RSP: Nil (b) RSP is authorized to engage these professionals as research consultants (names, institutes / companies): <b>Dr. P Banerjee, Former Scientist G, National Physical Laboratory, New Delhi</b>											
6. Principal technical features of Research Service to be provided <b>Detailed in Annexure I</b>											
7. DRDO will make available the following DRDO-owned equipment to RSP <b>Detailed in Annexure I</b>											
8. The technical performance of this contract shall be complete when RSP submits the Final Report before (date):				18 months from the date of release of initial advance							
9.1 Expenditure on items below shall not exceed sums shown against each											
a) Personnel [JRF: pay Rs. 31,000 p.m. + HRA @8%] x 18 months				<b>Rs. 6,02,640/-</b>							
b) Equipment				NIL							
c) Others: Rs 1,35,000 (Contingency: Rs 45,000 @Rs 2,500 pm x 18 months + Research Consultant Rs 90,000 @ Rs 5000 pm x 18 months) + Consumables and fabrication cost-Rs1,50,000+Travel Rs 1,10,000				<b>Rs. 3,95,000/-</b>							
<b>Total</b>				<b>Rs. 9,97,640/-</b>							
9.2 Schedule of payments (Rs. In lakhs)		Date		Payment@							
a) Initial advance (30%)				<b>Rs 3,00,000</b>							
b) at Performance Milestone M1 (30%)		6 months		<b>Rs 3,00,000</b>							
c) at Performance Milestone M3 (30%)		14 months		<b>Rs 3,00,000</b>							
d) On submission of Final Report (10%) (Refer also entry 8 above)		17 months		<b>Rs 97,640</b>							
@ Payment will be made within 45 days of receipt by L/E/P of Contingent Bill				<b>Total: Rs 9,97,640/-</b>							
10. DRDO will deem this contract, including amendments thereto, to have been consummated when signed below by the authority of the academic institution (e.g. Registrar) competent to enter into this contract:  Signature:				11. Signature of L/E/P contract administrator:							
<div style="text-align: center;">   <b>Name: Dr Sujit Kumar Chowdhury</b> </div>				<div style="text-align: center;">   <b>Name: Sh H K Ratha</b> </div>							

**REGISTRAR**  
**THE UNIVERSITY OF BURDWAN**  
**BURDWAN - 713104**

**H K RATHA, SCIENTIST - H (OS)**  
**निदेशक आईटीआर, चान्दीपुर**  
**DIRECTOR ITR, CHANDIPUR**