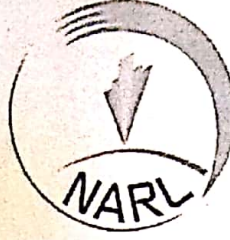


भारत सरकार  
अन्तरिक्ष विभाग  
राष्ट्रीय वायुमंडलीय अनुसंधान प्रयोगशाला  
पो.बॉ.नं. 123, एसवीयू कैंपस डाक घर  
तिरुपति - 517 502  
प्रयोगशाला : पो : गदंकी-517 112  
पाकाला मंडल, चित्तूर जिला, आंध्र प्रदेश  
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फैक्स : + 91 877 2248146 / + 91 8585 272018/21



GOVERNMENT OF INDIA  
DEPARTMENT OF SPACE  
NATIONAL ATMOSPHERIC RESEARCH LABORATORY  
P.B. No.123, P.O SVU Campus  
Tirupati-517 502

Laboratory: P.O. Gadanki - 517 112  
Pakala Mandal, Chittoor Dist., Andhra Pradesh  
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Dr. Dattatreya Gujjar  
Sr. Prof., Department of ECE  
Alva's Institute of Engineering and Technology  
Mijar, Moodabidri -574225

June 29, 2017

Sub: Letter of Joint collaboration under project of GNSS network by NARL

Sir,

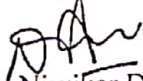
This is to initiate collaboration and joint research work for application of GNSS and ionospheric/atmospheric studies using navigation satellites under an on-going activity of ground based GNSS receiver network at NARL.

A GNSS receiver make "Septentrio PolaRxS PRO" with a "Septentrio GNSS MF-Antenna" and cables was installed at your institute on 17 April 2017 for the aforementioned objective. The plan is to study the delay over the satellite signals due to Earth's Atmosphere and Ionosphere and its effect in precise applications areas. The continuous data from the GNSS receiver installed at your lab would be utilized on collaboration basis.

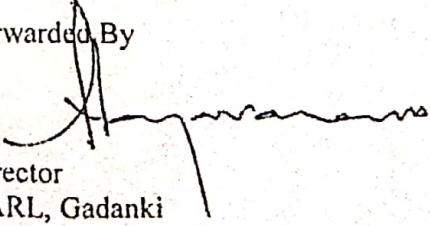
We wish that your institute also takes active part in using the data processing and research using the data recorded from this receiver at your site. Please note that the research publications using data from this receiver would be shared with you. Also, shall you wish to lead in specific scientific objectives under this plan and we assure you the best of our support.

This letter is intended to initiate the joint work and extend the operation of our GNSS receiver at your institute for 3 years. Please do the needful to support the installation of the receiver at your institute and send a response letter with similar intent. Thank you very much for your support to scientific research and development.

Sincerely yours

  
(Dr. Nirvikar Dashora)  
Scientist/Engineer-SE  
NARL, Gadanki

Forwarded By

  
Director  
NARL, Gadanki

प्रो. ए. जयरामन / Prof. A. Jayaraman  
निदेशक, एन.ए.आर.एल / Director, NARL  
अन्तरिक्ष विभाग / Dept. of Space  
भारत सरकार / Govt. of India  
गदंकी / GADANKI-517 112



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## CERTIFICATE

This is to certify that **VISHAL NAYAK** bearing USN 4AL16CS057 and **MARSH VISHAL LOBO** bearing USN 4AL16CS052 of B.TECH – Computer Science and Engineering studying at **ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY** have successfully completed their internship from 21<sup>st</sup> January 2019 to 22<sup>nd</sup> February 2019 at NARL, Gadanki. During their internship they have implemented an **Algorithm for Integer Data Break and Outlier Detection in Geoscience Observations** under the guidance of **Dr. Nirvikar Dashora, Sci. /Engr. SF** with full support from **Dr. Sumith N, Sr. Asst. Prof / Project Coordinator, AIET.**

(Dr. Nirvikar Dashora)

Sci. /Engr. –SF

NARL, Gadanki

H.O.D.  
Dept. Of Computer Science & Engineering  
Alva's Institute of Engg. & Technology  
Mijan, MOOVEDRI - 574 225

डॉ. निर्विकार दशोरा / Dr. Nirvikar Dashora  
वैज्ञानिक/इंजीनियर 'एसई'/Scientist/Engineer 'SE'  
राष्ट्रीय वायुमंडलीय अनुसंधान प्रयोगशाला  
National Atmospheric Research Laboratory  
अन्तरिक्ष विभाग/ DEPARTMENT OF SPACE  
भारत सरकार/ GOVERNMENT OF INDIA  
गदंकी/ GADANKI-517 112, आ.प्र./A.P.



भारत सरकार

अन्तरिक्ष विभाग

राष्ट्रीय वायुमंडलीय अनुसंधान प्रयोगशाला

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## CERTIFICATE

This is to certify that P VIGNESH PEJATHAYA bearing USN 4AL16CS060 and MANISH B SHRIYAN bearing USN 4AL16CS131 of B.TECH – Computer Science and Engineering studying at ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY have successfully completed their internship from 21<sup>st</sup> January 2019 to 22<sup>nd</sup> February 2019 at NARL, Gadanki. During their internship they have worked on "Automated GNSS field receiver using Microcomputer board and its use in mapping" under the guidance of Dr. Nirvikar Dashora, Sci. /Engr. SF with full support from Mr. Sayeesh, Prof / Project Coordinator, AIET.

(Dr. Nirvikar Dashora)

Sci. /Engr. -SF

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Alva's Institute of Engineering & Technology

Mijan, MOULALI - 574 225

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डॉ. निर्विकार दशोरा / Dr. Nirvikar Dashora

वैज्ञानिक/इंजीनियर 'एसई'/Scientist/Engineer 'SE'

राष्ट्रीय वायुमंडलीय अनुसंधान प्रयोगशाला

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अन्तरिक्ष विभाग/ DEPARTMENT OF SPACE

भारत सरकार/ GOVERNMENT OF INDIA

गदंकी/ GADANKI-517 112, आंध्र प्रदेश