## भारत सरकार अन्तरिक्ष विभाग य वायुमंडलीय अनुसंधान प्रयोगशाला क्षे.मं.नं. 123, क्षक्षय क्षेत्रस डाक घर

तिरुपति - 517 502 प्रयोगप्ताला । यो : गार्दकी - 517 112 पाकाला मंडल, चिल्तूर ज़िला, आंध्र प्रदेश दूरभाष : + 91 8585 272024, 222140 + 91 877 2248146 / + 91 8585 272018/21 NAT

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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.

Director

NARL, Gadanki

मो. प्. पवरामन / Prof. A. Jayarantan निवेशक, एन.ए.आर.एस / Director, NARL अन्तरिक्ष विभाग / Dept. of Space भारत सरकार / Govt. of India पार्वकी / GADANKI-517 112

## INTERNSHIP CERTIFICATES

2018-2019

भारत मरकार अन्तरिक्ष विभाग राष्ट्रीय वायुमंडलीय अनुसंधान प्रयोगशाला भोस्ट ब्रॉक्स न 123. एमबीयू केपस डाक घर तिरुपति-517 502 साइट . पोस्ट व ग्राम, गार्दकी-517 112 विनूर जिला, आंध्र प्रदेश दूरभाग + 91-8585 272024, 272020 विन्य: + 91-8585-272018/21



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## CERTIFICATE

This is to certify that the following students

A SHREYA

4AL15EC001

**CHARAN RAJS** 

4AL15EC017

**DEVIKAHS** 

4AL15EC019

HARSHITHA N P

4AL15EC030

of B.TECH -Electronics and Communication Engineering studying at ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY have successfully completed their internship from 23<sup>rd</sup> January 2019 to 22<sup>nd</sup> February 2019 at NARL, Gadanki. During their internship they have worked on "Implementation of GNSS-SDR and its application for PPP at AIET campus" under the guidance of Mr. Himanshu S. Sethi, Sci. /Engr. SC and Dr. Nirvikar Dashora, Sci. /Engr. SF with full support of Dr. Dattathreya Gujar, Dean (Planning) & Sr. Professor, AIET.

As the

(Himanshu S. Sethi)

Sci. /Engr. -SC

NARL, Gadanki

(Dr. Nirvikar Dashora)

Sci. /Engr. -SF

NARL, Gadanki

र्डे. निर्मितार वशीस / Dr. Nirvikar Cachara वैद्या/इंजीनियर 'एतर्ड्'/Scientist Engineer 'St' राष्ट्रीय वायुमंडलीय अनुसंधान प्रयोगशाना llutional Atmospheric Research Labor errory अन्तरिक्ष विभाग/ DEPARTMENT OF भारत सरकार/ GOVERNMEN! गार्वर्यः/ GADANELEST ११८ १८ १८०