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*           I S W I = International Space Weather Initiative      *
*                      (www.iswi-secretariat.org)                  *
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Attachment(s):

(1) "Report for AWESOME in Vietnam (NEW)", 3 MB pdf, 14 pages.

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:                               Re:
:                               AWESOME Installation in Vietnam
:
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Dear ISWI Participant:

What is the AWESOME Project? ... from the ISWI website:

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Atmospheric Weather Education System for Observation and Modeling of Effects
(AWESOME) and SID (Sudden Ionospheric Disturbance Monitor)
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:   Lead Scientists: Dr. Umran S. Inan, Dr. Morris Cohen
:
:                   and Dr. Deborah Scherrer (Stanford) United States
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Objectives: Lightning, sprites, Elves, relation to terrestrial Gamma Ray  
 flashes , whistler induced electron precipitation, conjugate studies.

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Anyway, I am most pleased to attach for your perusal the attached
Photo Report from Prof. Hoang Thai Lan.
She is with:
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:   Dept. Atmosphere & Space Physics
:   Ho Chi Minh City Institute of Physics
:   01 Mac Dinh Chi Str., 1st Dist.
:   Ho Chi Minh City, Vietnam
:   Phone: +84 8 38 298149
:   Mobile: +84 903 735674
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She has attended one (IHY Korea) or more IHY/ISWI workshops.

If you have an ISWI instrument array, please send to me your report  
 for newsletter circulation.

Forever Faithfully Yours,

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:   George Maeda
:   The Editor
:   ISWI Newsletter
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# A NEW AWESOME VLF RECEIVER SET UP IN VIETNAM

Implementation of ISWI - AWESOME Project in Vietnam, a new VLF Receiver was setting up in Nha Trang.

Instrument Provider: STAR Laboratory of Stanford University.

Hosting Organization: VAST (with the participation of two research institutes: Ho Chi Minh City Institute of Physics and Nha Trang Institute of Technology Research and Application).

This is a Photo Report for the installation of the AWESOME VLF Receiver at Nha Trang station (12.20 N; 109.13 E).

The installation was executed by Vietnamese AWESOME Group led by Dr. Hoang Thai Lan and with instructions remotely from Dr. Morris Cohen (leader of AWESOME Stanford Team).



**Nha Trang is a coastal City**



**The International Airport Cam Ranh, Nha Trang**



**The highway from Airport to Nha Trang City**



**A street going to the Nha Trang station**



**The street going to the station**



**A side of the station seen from the street**

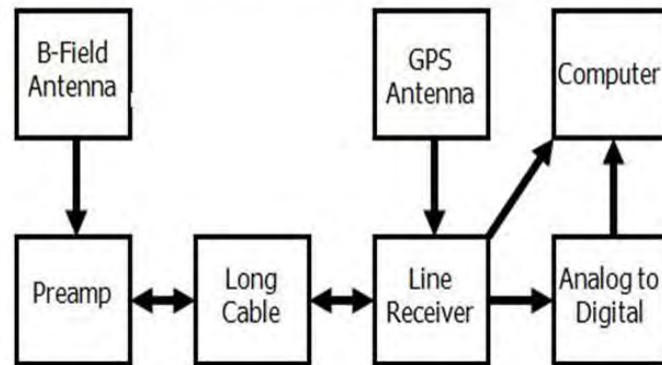


**The Station**



**The building where the AWESOME is setting up**

### VLF data acquisition system:



There are 5 main components to a complete VLF Receiver:

- 1) VLF Antenna
- 2) GPS Antenna
- 3) Preamplifier box
- 4) Line receiver box
- 5) Computer and software.

The Antennas gather the necessary data for the recording. The Preamplifier Box and Line Receiver Box process the signals and pass them to the computer.



GPS antenna



Preamplifier box



Line receiver box



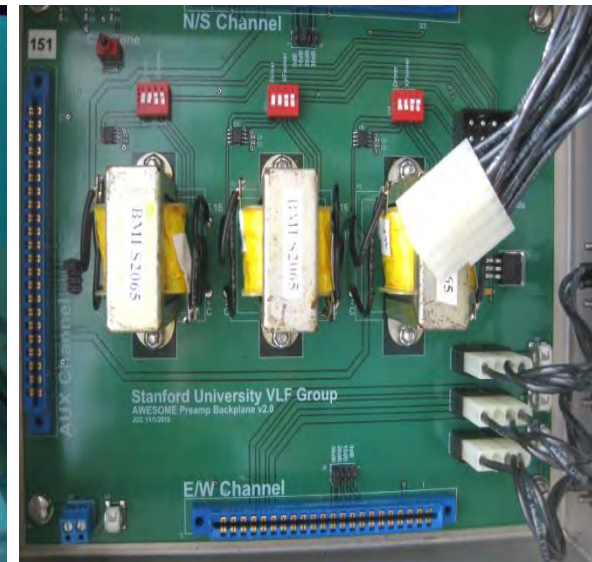
Computer



Checking the components before installation



The opened Preamplifier Box



The Mainboard of Preamplifier



**The E/W and N/S channel cards**



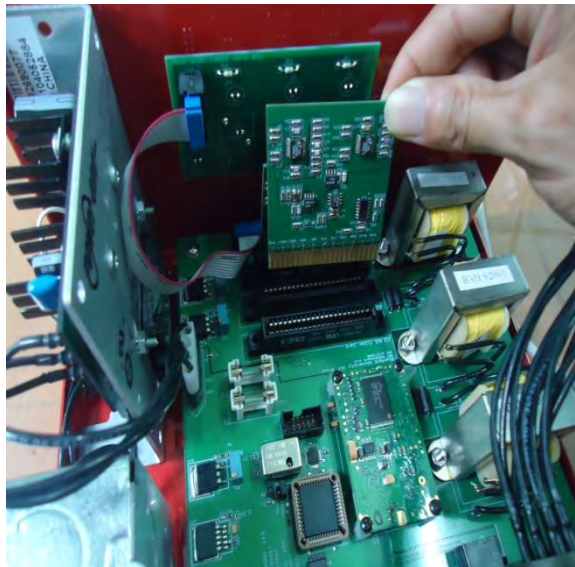
**Testing signals of the Preamplifier**



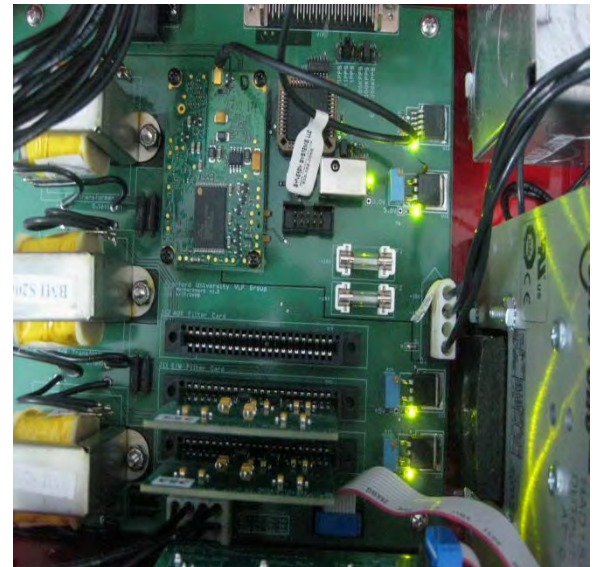
**The Line Receiver**



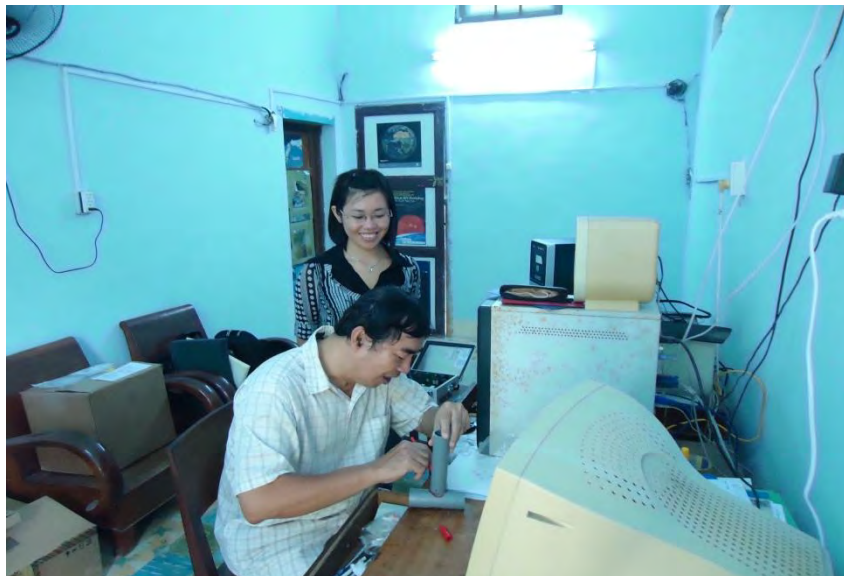
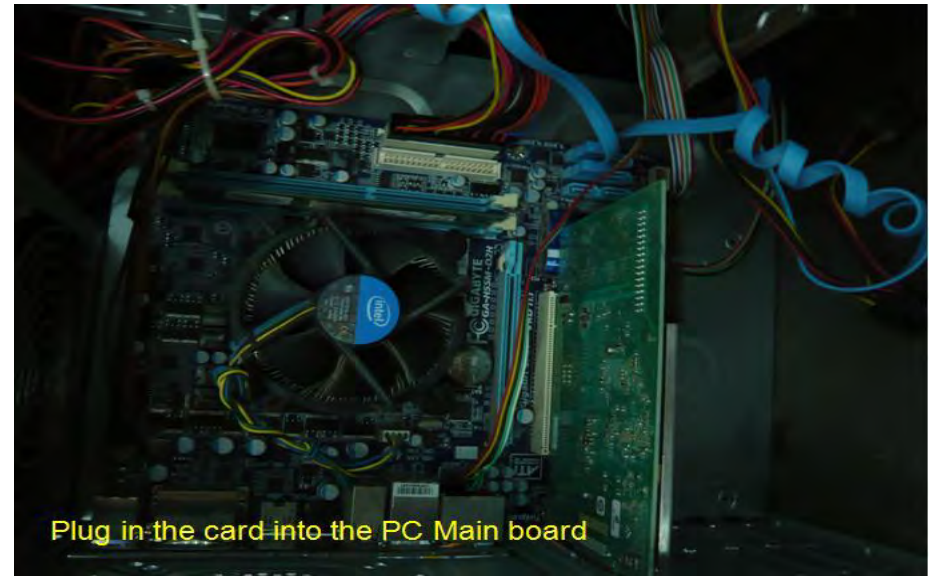
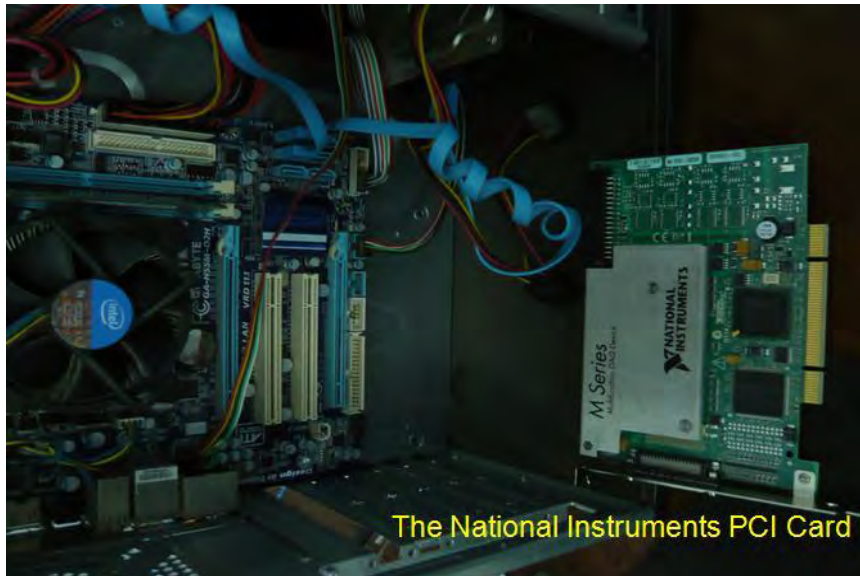
**The Mainboard and Cards of the Line Receiver**



**Plug in the cards into the Mainboard**



**Testing signal of the Line Receiver**





**Setting up the GPS antenna on the roof of the building**



**The GPS antenna is mounted**



**Assembly the VLF Antenna**





**Mounting the Preamplifier Box to the VLF Antenna**



**Determine how to run the cables from outside to the room**



**The GPS and VLF Antennas installed**



**Assembly the antennas cables**



**Assembly the VLF Receiver and Computer**





**Checking the internet connection**



**Trying to find out why it appears flaky**



**Exchange ideas and discussing problems**





The instrument started working from January, 2012



The resort located beside the station



Tea-time



A beach of Nha Trang



**Vietnam AWESOME Team:**

1. Dr. Hoang Thai Lan, leader.
5. MSc. Vinh Hao (Nha Trang Institute), responsible for AWESOME receiver in Nha Trang
2. Ms. Tien (Nha Trang Institute)
3. Ms. Tam (Ho Chi Minh Institute)
4. Mr. Vinh (Ho Chi Minh Institute)
6. Mr. Tue (Nha Trang Institute)
7. Mr. Thang (Nha Trang Institute)
8. Mr. Thao (Nha Trang Institute)
9. Mr. Tuat (Nha Trang Institute)
10. Dr. Vinh (Nha Trang Institute)



A class for Space Weather



Dr. Hoang Thai Lan, ISWI National Coordinator  
of Vietnam - leader of AWESOME Group

Vietnam AWESOME Team wants to thank Stanford AWESOME Team for all they did to make the VLF Receiver setting up in Vietnam successfully. Special thanks to Dr. Morris Cohen for doing so much to solve the problems in sending the instrument and during the time of installation it .

I also would like to express my sincere thanks to Prof. Hans Haubold for his very valuable supports in this cooperation.

Reported by Hoang Thai Lan