I S W I Newsletter
Circulated in
Volume 2, Number 63

Participation of the Bac Lieu Observatory to the ISWI (International Space Weather Initiative)

The Vietnam has 4 magnetic observatories because the territory of Vietnam is spread in a narrow and long meridian band, from 8ºN to 23ºN latitude, the magnetic variations cover a large range. One has installed 4 magnetic observatories: Chapa, Phu Thuy in the North, Bac Lieu, Da Lat in the South. The oldest, Chapa, near to the Chinese frontier, was installed in 1957, in the First International Geophysical Year (in 1957); The Phu Thuy, near to Hanoi, installed in 1967, Da Lat in the center region, created in 1981, and finally, Bac Lieu, near to the magnetic equator, in 1988 (See *Fig. 1)*.

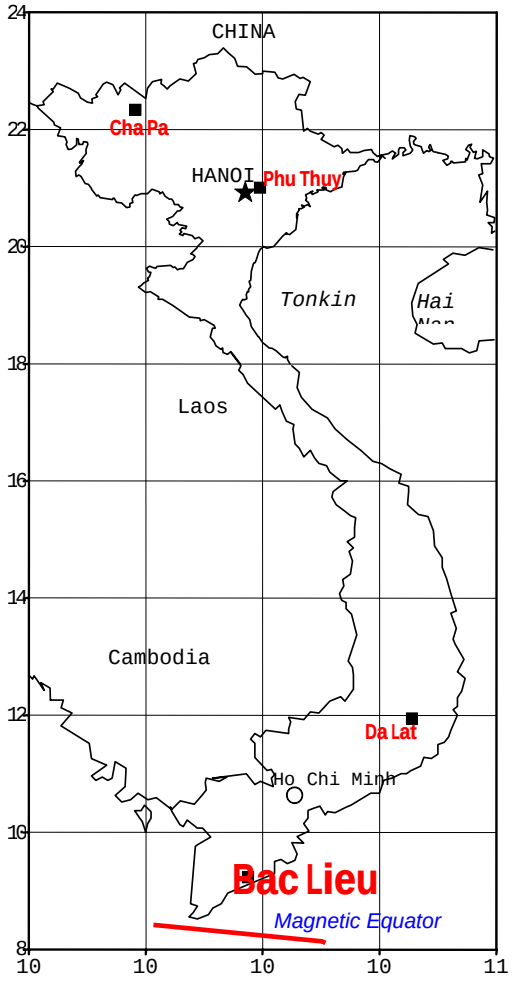

Fig. 1. *Distribution of the magnetic observatories of Vietnam*

Bac Lieu observatory ($\varphi = 9^{o}17'N$; $\Lambda = 105^{o}44'E$; h = 5m) stays in the suburb of the Bac Lieu city, with the distance of 300 km in the South of the Ho Chi Minh city. In Bac Lieu observatory, from 1988 to 1997 one has used a Bobrov MBC Russian

recording system using the photographic paper. From 1998, thanks to the cooperation between the Department of the Earth and Planetary Sciences, Kyushu University 33 Japan and Hanoi Institute of Geophysics for 1998-2003 in the frame of the PEER (Penetration of polar Electric fields into Equatorial Region) project, conducted by the Professor Kiyohumi YUMOTO, one has replaced it by fluxgate magnetometer FRG-601, having a resolution of 0.01 nT and the digital recorder DCR-3 MO. For the absolute measurements, from 1998 one has used a fluxgate magnetometer MAG-01H Bartinghton having a resolution of 1" and a Canadian proton magnetometer GSM-9 with the resolution of 1nT. In Fig. 2, one can see Prof. Kiyohumi YUMOTO in the Hanoi Institute of Geophysics in 1998 for discussing with the Vietnamese cadres about the installation of the new digital magnetometer in Bac Lieu observatory.

Fig. 2. Prof. Kiyohumi YUMOTO in Hanoi Institute of Geophysics in 1998 for discussing about installation of the new magnetometter in Bac Lieu observatory

Fig. 2. *Main building of the Bac Lieu Observatory*

From 1998 to 2009, the magnetometer FRG-601 was installed in the magnetometer house *(Fig. 3).*

Fig3. Magnetometer house (From 1998 – 2009)

The sensor hut was constructed as is shown on the *Fig. 4.*

Fig. 4. Sensor hut

From 2009, the new magnetometer of MAGDAS II (MAGnetic Data Acquisition System II) Project, with the data ADSL transmission has been installed in the main building *(Fig. 5*), with the certificate of MAGDAS *(Fig. 6)*

Fig. 5. Equipment of MAGDAS-II

Fig. 6. MAGDAS certificate for Bac Lieu observatory

Fig. 7 shows the photo of Dr. Le Huy Minh, the Deputy Director and Responsible of the Hanoi Institute of Geophysics.

Fig. 7. Dr. Le Huy Minh, the Deputy Director and Responsible of the Hanoi Institute of Geophysics.

Fig. 8. shows the Person in Charge for MAGDAS of Vietnam.

Fig. 8. Dr. Ha Duyen Chau, Responsible for MAGDAS in Vietnam.