

## 昭和基地 - アイスランド共役点観測 ~ 現状と将来

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## Syowa - Iceland Conjugate Observation : Now and Future

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Syowa Station in the Antarctic and Iceland in the northern hemisphere are in the magnetic conjugate relationship, where both are connected with each other with a same magnetic field line. Conjugate observation at Iceland has been carried out since 1984, hence, during about two solar cycles, as a collaborative project between NIPR and University of Iceland. At present, there are three observatories in Iceland; Husafell (HUS), Tjornes (TJR), and Aedey (AED). Conjugate point of Syowa, which was located between HUS and TJR in 1984, is now located just north-eastward of TJR. Fig. 1 shows the instruments at the conjugate stations as of 2007. Except the auroral optical instruments, all other instruments are operated continuously. The optical instruments are operated only during the auroral season. Especially, ATV (Auroral TV camera) in Iceland has been operated mainly during the campaign period in September or March. CAI (Conjugate Auroral Imager), a monochromatic CCD all-sky imager, was installed in 2005 both at Syowa and HUS. CAI at HUS is operated automatically during the whole auroral season.

The conjugate observation between Syowa and Iceland is well fitted in the framework of the international ICESTAR (Inter-hemispheric Conjugacy Effects in Solar-Terrestrial and Aeronomy Research) program during the IPY2007-2008 period. Now it should be discussed what kind of observation in Iceland should be done to contribute to the ICESTAR. Several possible keywords are as follows: quantitative observation, automatic operation, near-real time data acquisition, quick opening of the archived data, further collaboration with other universities and institutes, new observatories, and public outreach.

	SYO	HUS	TJR	AED
Fluxgate magnetometer	○	○	○	○
Induction magnetometer	○	○	○	○
Riometer	○	○	○	
VLF wave receiver	○			
Imaging Riometer	○	○	○	
Auroral TV camera	○	○	○	
Conjugate Auroral Imager	○	○		
monochro. All-Sky Imager	○			
Meridian Scan. Photometer	○			
Fabry-Perot Imager	○			
SuperDARN HF radar	○		△	
MF radar	○			
1-100HzULF/ELF wave	○			
Ionosonde	○			
VHF radar	○			
FM/CW radar	○			
Solar Radio Spectrometer		○		
Auroral Radio Spectrometer		○		

Figure 1. Current observation items at the conjugate stations in the both hemispheres.