

# 電子オーロラとプロトンオーロラの南北共役性

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## Conjugacy of electron and proton auroras

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The 8-color meridian scanning photometers (SPMs) have been installed both at Syowa Station, Antarctica, and Husafell observatory in Iceland, in order to investigate the conjugacy of the energy characteristics both of electron and proton auroras quantitatively at geomagnetic conjugate points. Specifications and photos of the SPM are shown in Table 1 and Figure 1 below, respectively. The SPM had been installed at Syowa Station in February, 2009 and at Husafell in September, 2010. Main features of the SPM to be noted are: 1) it has 5 different wave lengths for the proton auroral emission; 2) it can be operated automatically through the year with a pre-installed schedule file; 3) its observed data are transferred to Japan automatically after each observation night. The SPM had been first installed at Husafell in September, 2008, but several serious accidents had occurred due to bad weather condition. It had been once picked up in September, 2009, and then re-installed in next September in 2010. So far, we could obtain the SPM data in the dark nights for 2 seasons (during September to April) at Husafell, and for 4 seasons (during March to October) at Syowa Station. From the season starting in September, 2012, the filter configuration of the SPM at Husafell had been changed so that 6 narrow band filters were used for measuring the proton auroral spectrum. In our presentation, a comparison of the energy characteristics of the proton and electron auroral emissions at the conjugate stations will be discussed.

Table 1. Specifications of meridian scanning photometer (SPM).

Wave length (FWHM) (nm)	1. 485.5(3.0)	2. 484.5(0.6)	3. 485.5(0.6)	4. 486.5(0.6)	5. 487.5(0.6)	6. 630.0(0.6)	7. 670.5(5.0)	8. 844.6(0.6)
FOV	3.0 deg							
Scan speed	180deg/10sec							
Sampling	20Hz, 16bit A/D							



Fig. 1. Photos of the 8 color meridian scanning photometer at Syowa Station.