

Optical observation at Brazilian Geomagnetic Anomaly(2)

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From photometer observation at Brazilian Geomagnetic Anomaly, the intensity of 630.0nm line frequently increased in the post mid-night sector and decreased again before sunrise. The duration time is about 2 hours and its peak intensity reaches to about 300-500R. This intensity is about 5-10 times stronger than the usual back ground level. This phenomenon seems to occur in all sky regions and recognized by nude eye.

These phenomena called as midnight corpus and it is not typical phenomena in this region. However, the variation of luminosity seems to be larger than any other results. Thus this large variations may relate to the high-energy particle precipitation in this anomaly region.

It is well known that many high energy particles (100keV-1MeV) precipitating into Brazilian Geomagnetic Anomaly region.

However, it is not well understood whether these precipitating particles induce typical optical phenomena or not. Our observation objective is to discover new optical phenomena in this region.

Two panchromatic CCD Camera(wide and fish-eye lens) and two wave length photometer (630.0nm and 557.7nm) were installed at INPE Southern Space Observatory(29S,53W). Our observation were carried out in August 1999, March, August, December 2000 and February 2001. We present these observation results and also typical interesting phenomena.

Multiple band structure related to atmospheric gravity wave was observed by panchromatic CCD camera. However, typical phenomena related to Geomagnetic Anomaly Region were not observed yet. The lack of typical phenomena may be the reason why our observation time was low solar activity period.

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