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All-sky imaging of 630nm night glow in the dip-equator

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The location is involved in the dip-equator region at the geomagnetic latitude of +1.61 degree. An all-sky imager with an image intensifier and a frame integrate CCD camera was installed in the Equatorial Atmospheric Observatory at Hoc Mon Village operated by National Center of Science and Technology(NCST) of Vietnam. A fluxgate magnetometer(1000nT in range, 16 bit and 1Hz sampling) was also installed to monitor variation of ionospheric electric currents especially those of the equatorial electrojet. Information provided the newly installed instruments will be coordinatively compared with those of the zenith photometer and the digital ionosonde that have been in operation already for a few years as NCST joint programs with University of Calgary and University of Western Ontario, respectively.

Dynamic features in 630nm images are expected to be observed in evening local time associated with plasma bubble phenomena although past reported examples are described that they appeared very weakly. Predominant intensifications in 630nm luminosity will be observed around local mid-night though they may be most likely of structure less images associated with atmospheric tides.

Impression of first look data monitoring at the observation site are; sky condition of the tropical area in the South-East Asia is that clouds are contiguously generated and that air with humidity efficiently scatters city lights of Ho Chi Minh City 30 km apart while February is generally involved in the dry season. Actually we had no precipitations through the period.