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Simultaneous observations of the postnoon auroral bright spots

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Imaging auroras from high-altitude satellites often shows isolated, quasi-periodic emissions in the afternoon sector of the oval (a.k.a. postnoon auroral bright spots). In the Northern Hemisphere, the postnoon auroral bright spots statistically center ~ 1500 MLT and coincide with the statistical maximum region-1 upward field-aligned currents and particle precipitations. Whether or not postnoon auroral bright spots are conjugate remains an outstanding question, as high temporal and spatial resolution, global auroral Australis imaging has not been available until recent years. In this report we demonstrate, using the Polar ultraviolet imager (UVI) in the Southern Hemisphere and the IMAGE Wideband Imaging Camera (WIC) in the Northern Hemisphere, that the postnoon auroral bright sports can be either conjugate or not conjugate in a number of intervals, which covers the two-month (November and December of 2002) surveyed period. In all events studied the bright spots occurred in the Northern Hemisphere but only 50% in the Southern Hemisphere. The preferred winter hemispheric occurrence may suggest a strong ionospheric control of the production of the auroral bright spots in the afternoon sector. Possible IMF dependence will also be investigated and detailed results will be presented and discussed.