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Study of an auroral breakup during quiet solar wind conditions

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On November 10, 2010 a substorm was observed by a combination of ground instruments including the IMAGE magnetometer chain, all-sky-imagers and the EISCAT radars at Longyearbyen. In addition to these observations we present data from the METOP-2 satellite passing directly over Longyearbyen during the substorm expansion. Solar wind data was available from both THEMIS, WIND and ACE . Looking at the IMAGE magnetometers chain, this substorm is isolated, both in space and time. The substorm occurred during quiet solar wind condition with low speeds (less than 300km/s) and a small southward component of the IMF. These conditions lasting for several hours prior our event are found to give a small and steady energy input to the magnetosphere from evaluating the epsilon parameter. Both satellite and EISCAT data indicates hard electron and proton precipitation with energies over 100 keV for the electrons. The data of the event are presented and different analysis methods are compared.