We examine the expanded substorm dataset compiled by Frey [J. Geophys. Res., 109, A10304, 2004] to evaluate the question of internal vs external triggering of substorms [see Hsu and McPherron, J. Geophys. Res., 107, 1398, 2002; Morley and Freeman, Geophys. Res. Lett., 34, L08104, 2006] using transfer entropy and conditional redundancy as measures of causality. Conditional Redundancy and Transfer Entropy are particularly useful to identify causal relationships in data sets because they: (a) are highly directional, (b) include higher order, nonlinear correlations, and (c) distinguish between variables that are correlated because of a common driver and variables that are causally correlated. While previous work identified internal triggers based on extended periods of southward IMF, we also consider more direct measures of internal triggering such as the GOES inclination angle, which serves as a proxy for tail stretching (magnetic flux stored in the tail) and/or diffuse auroral precipitation, which can serve as a proxy for the kinetic energy stored in the tail. Our analysis suggests that identification of external triggers related to northward IMF turnings provides little additional information about substorm occurrence.