

**Title:** The expansion of active regions into the heliosphere

**Abstract:** Image processing is important to reveal new phenomena in solar and coronal observations. A new method is presented which can greatly increase the amount of visual information available from EUV observations of the lower corona. Another method isolates the signal emitted by dynamic phenomena in white-light coronagraph observations, thus enabling the study of very faint moving structures in the extended corona. Recently, these novel methods have revealed for the first time the expansion of active regions out to very large heights in the corona ( $>15R_s$ ). This is a surprising result, since the current understanding is that closed-field active region plasma can contribute only indirectly to the solar wind through eruptive events such as small-scale reconnection or larger CMEs. This result has implications for current models linking the Sun and heliosphere. It also suggests an alternative (albeit intermittent) source to the highly-variable slow wind and provides a new, simple interpretation of certain characteristics of *in situ* measurements.