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Intermittent mass flows inside corotating interaction regions observed by the STEREO spacecraft.

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The Heliospheric Imagers (HI) onboard the STEREO (Solar TErrestrial Relation Observatory) spacecraft can be used to study mass flows inside Corotating Interaction Regions (CIRs) continuously and over several days. The images taken by HI have recently revealed that the plasma compressed inside these CIRs is not distributed in the expected uniform (spiral) pattern. Rather large variations are observed in the mass flow ejected by the streamers and compressed in the CIR. This leads to large variations of the CIR density front with longitude. We track specific density variations in these images and compare them to in-situ measurements. These new observations provide new insights in the nature of CIR density waves and their effect on the background structure of the solar wind.