Automatic detection of CMEs in STEREO-HI data for the FP7 HELCATs project

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In the framework of the FP7 project HELCATS (http://www.helcats-fp7.eu/), an automated catalog of Coronal Mass Ejections (CMEs) detected by the Heliospheric Imagers (HI) onboard the STEREO spacecraft has been created. This is the first time automated CME detection has been successfully applied to heliospheric imager data in a systematic manner. The catalog was built over the full duration of the STEREO mission (since 2007) by applying an automatic detection technique in order to identify and characterize the CMEs. A real time output is also produced. The results are validated by comparison with a manually compiled catalog. Furthermore, this comparison provides insights into the approaches used for CME detection and helps to refine the algorithms. The method will be explained, results will be shown and their implications discussed.