

QUASI-PERIODIC VELOCITY FLUCTUATIONS IN ERUPTIVE PROMINENCES OBSERVED BY AIA/SDO

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We present an investigation of prominences behavior during eruption. Variations in the distribution of their velocities are detected at altitudes < 0.6 solar radii. Detailed analyses are carried out for 304Å Solar Dynamics Observatory/Atmospheric Imaging Assembly (SDO/AIA) observations. To track prominences behavior during eruptions, 41 events in the period 2010 – 2017 are studied. To follow the rising of a filament on higher altitudes (up to 32 solar radii), Solar and Heliospheric Observatory/ Large Angle and Spectrometric Coronagraph (SOHO/LASCO) data are also inspected. They are used to obtain kinematic profiles of eruptions. Obtained height-time and speed-time plots of the eruptions show velocity fluctuations in 83% of the explored cases, detected only in SDO/AIA field of view, but not in any of the prominences observed at higher altitudes by SOHO/LASCO. Time intervals between fluctuations and heights at which they are detected are estimated. Strong periodicity cannot be determined.