



Contribution ID: 168

Type: Poster

Decayless oscillations in coronal bright points

Thursday, 9 September 2021 09:39 (13 minutes)

Decayless transverse oscillations of solar coronal loops (or decayless oscillations for short) have attracted great attention since their discovery. Coronal bright points (CBPs) are found to be constituted by small-scale loops. However, the decayless oscillations in CBPs have not been widely reported. In this study, we identified this kind of oscillations in some CBPs using 171 Å images taken by Atmospheric Imaging Assembly (AIA) onboard Solar Dynamics Observatory (SDO). Motion magnification algorithm was used to increase the amplitude, and time-distance diagrams were made to show the oscillatory patterns. We also estimated the loop lengths. Our statistical results show that the average period, displacement amplitude and loop length are about 5 minutes, 0.06 Mm and 22Mm respectively. Moreover, we made a toy model to illustrate how these sub-resolution oscillation amplitudes (less than 0.1 Mm) could be detected. Our study shows that the decayless oscillations also widely exist in small-scale loops of CBPs. And these oscillations might allow for the seismological diagnosing of the quiet-Sun regions.

Primary author: GAO, Yuhang (Peking University)

Co-authors: TIAN, Hui (Peking University); CHEN, Yajie

Presenter: GAO, Yuhang (Peking University)

Session Classification: Poster Session 9.4

Track Classification: Session 3 - Fundamental Plasma Processes in the Solar Atmosphere: Magnetic Reconnection, Waves, Emission, Particle Acceleration