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3- and 5- Minute Oscillatory Behavior in the Solar Corona BRANDON CALABRO, JAMES MCATEER, ALEXANDER PEVTSOV, New Mexico State University — We study the spatially- and temporally-localized oscillatory behavior of the solar corona using a 6-hour sequence of narrowband 171A (extreme ultraviolet) image from the SWAP instrument onboard Proba2. We use a Morlet wavelet transform to extract oscillation parameters from the temporal evolution of emission in each pixel and study the variation in space and time of oscillatory power in the 3- and 5-minute band. We extract and compare these parameters between active Sun, quiet Sun and coronal hole regions. In each region of the corona studied the 5-minute periodicity is more prevalent than the 3-minute periodicity by a factor of 2–3. All areas of the corona exhibit a similar temporal behavior in the 5-minute band, suggesting a global driving mechanism. However, the dominance of the 5-minute periodicity is stronger in active regions than in other areas of the Sun. The 3-minute periodicity in active regions tends to be localized in the sunspot umbra, whereas the 5-minute is more prevalent in the penumbra.

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