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Electron temperature wave of the solar wind

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The propagation of electron temperature fluctuations is numerically studied using a two-fluid solar wind model. It is found that the wave propagation is dependent on the electron temperature and its spatial gradient. These temperature waves can propagate much faster than ordinary MHD waves. The Fourier analysis of the wave power suggests that at low frequencies these waves can be strongly reflected by the solar wind spatial inhomogeneity. The possibility that such waves can be used to predict energetic coronal events will be discussed.