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**On the minimal set of cold background plasma parameters governing
the electron whistler dispersion law
above the ion cut-off frequency in a multi-ion plasma**

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A quantitatively correct electron whistler dispersion law valid in wide continuous frequency domains above the ion cut-off frequency in multi-ion (and/or dusty) plasmas is presented. Under the typical conditions of magnetospheric plasma with an essential difference between the gyrofrequency values of the lightest and the more heavy ions, it corresponds to the upper root of the bi-quadratic equation derived. In this case the resultant contribution of all the ions to the dispersion law is expressed by means of the lower hybrid resonance frequency (LHR), the highest ion cut-off frequency and the relative content of the lightest ion. Thus only one additional background plasma parameter as the relative content of the lightest ion should be provided in addition to those ones (including electron gyro- and plasma frequencies) which can be determined using wide band wave receivers. The features of the electron whistler dispersion equation are also analysed for a cold plasma containing several light ions together with several kinds of heavy particulates of different charge sign. In this case, to fit well the electron whistler dispersion law, the set of external plasma parameters should be expanded into the relative content of all the lightest ions of comparable gyrofrequencies and the electrons' relative content. For the higher frequencies approaching the LHR frequency domain the new dispersion law naturally reduces to the modified whistler dispersion law recently determined by the authors. It is valid in a plasma with a finite ratio of electron gyro- to plasma frequency while the wave frequency is much less than the electron plasma frequency.