



Analysis of the STEREO/WAVES antenna system: First results

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The WAVES experiments onboard the two STEREO spacecraft will perform measurements of the non-thermal radio spectrum from a few kHz up to about 16 MHz, observed from the Earth orbit (one spacecraft ahead and one behind Earth). For that purpose 3 six meter long orthogonal monopole antennas and a set of receivers are used, thereby enabling direction finding, i.e. the determination of the direction of arrival and the polarization state of the observed radio waves. Numerical wire-grid simulations of the antenna system are performed to determine the so-called effective length vectors of the antennas, which are the most suitable representation of the antenna properties in this context. The results of the first simulations are presented, with a view to the intended direction finding applications.