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Comparison of Auralisation Results between Measurements and Simulations of Line Arrays with High Resolution Modeling Data

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In a concert hall a direct comparison of several line arrays for a new sound system has been made. At different locations the binaural impulse response has been measured and used for auralisation. In a computer model of the hall the measured line array was implemented. The single array sources have been modeled in different modes like far-field cluster, simple module array or as a high-resolution loudspeaker array. By means of the new developed SpeakerLab Module these source simulators have been created and afterwards used to calculate binaural impulse responses at the corresponding seats equal to the measurements. After that an auralisation routine has been used. The results are compared for the different degrees of source resolution and with the measurements. Beside acoustic measures the subjective sound quality of the different auralisation results is reported.