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Influence of the source orientation on the measurement of acoustic parameters in a large reverberant cathedral

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ISO 3382 standard describes both definitions and measurement procedures of different acoustic parameters derived from the room impulse response. Regarding to sound sources, most of the commercial dodecahedron loudspeakers comply with the maximum allowed directional deviations of the source specified in the standard. However, the influence of its specific orientation may affect the results obtained on some parameters more than their subjective just noticeable difference-jnd- at least in rooms with no high reverberation times. An interesting aim is to study such influence in function of the liveliness of the room. A detailed measurement set is been carrying out in a reverberant place (Cathedral of Tudela, Spain) with the objective to analyze the influence of the source's orientation-apart from its acoustic characterization. In addition to dodecahedron loudspeakers, pseudo-impulsive sources are been used in order to compare results from a statistical point of view. Results obtained will be compared with those obtained in several concert and theater rooms.