

**Project Description**

- Development of a desktop procedure to measure acoustical properties of automotive door seals
- Important as method is simple and economical



**Approach**

- Desktop procedure consists of a 4-mic standing wave tube with a removable clamp to hold the sample instead of a reverberation room

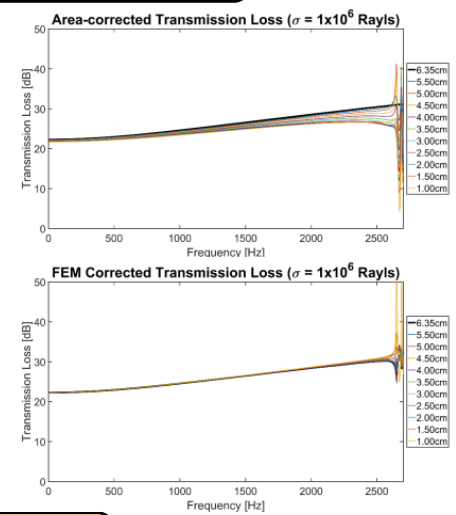
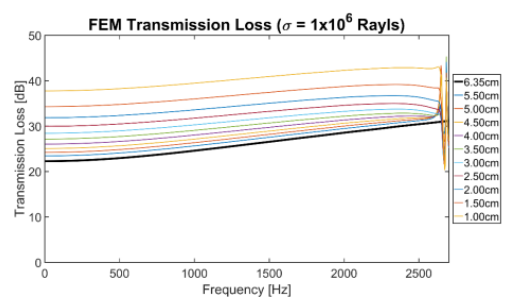


- Improvement of previously developed desktop procedure
  - Developed a finite element model with well-defined porous properties (JCAPL Model) to obtain a sample material of different transmission loss
  - Correction factor was obtained by manipulating equations
  - Correction factor was then applied to original transmission coefficients

**Discussion**

- The removable clamp contributes an area-correction as well as an inertial-nearfield effect
- Both effects must be corrected to obtain the actual transmission loss of the sample tested
- Procedure was successful as it manage to correct the transmission loss of the sample material

**Results**



**Summary:** Desktop procedure could potentially replace traditional methods that require large scale facilities