

## APPENDIX 5

### COMPARISON OF ASW RESULTS BETWEEN FIRST AND SECOND MEASUREMENT IN HALL C

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#### 5.1. First measurement session

##### 5.1.1. ASW vs. SEATS

ANOVA Table  
for ASW

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
Seat	8	27.822	3.478	0.521	0.8376	4.166	0.224
Residual	81	540.9	6.678				

##### 5.1.2. ASW vs. IACC<sub>E</sub> (MF)

ANOVA Table  
for ASW

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
IACC <sub>E</sub> MF	8	27.822	3.478	0.521	0.8376	4.166	0.224
Residual	81	540.9	6.678				

#### 5.2. Second measurement session

The purpose of the second measurements was to complete the seats on the gallery as the first measurement session only done on the stalls. The second purpose is to use a similar loudspeaker to that was used in Hall A measurement for future comparison with Hall A's.

The ANOVA tables below show effect of seats and IACC<sub>E</sub> on ASW, showing results from the auditory only subjective test and the auditory only analysis.

##### 5.2.1. ASW vs. SEATS

ANOVA Table  
for AASW

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
Seat	11	137.031	12.457	4.727	<.0001	51.996	1
Residual	84	221.375	2.635				

### 5.2.2. ASW vs. IACC<sub>E</sub> (MF)

ANOVA Table  
for AASW

	DF	Sum of Squares	Mean Square	F-Value	P-Value	Lambda	Power
IACCeMF	11	137.031	12.457	5.262	<.0001	51.996	1
Residual	84	221.375	2.634				

### 5.3. Discussion

The different results, non-significance for ASW of the first measurement session and significance for ASW of the second, may be partly due to the different sound sources used, however it is less likely so. The first session used the Soundsphere 2212-1 loudspeaker on a custom built subwoofer and the second session used the Myersound VPA loudspeaker. The Soundsphere is closer to omnidirectional, more powerful, and covers a broader frequency range. The Myersound, however, it is not as omnidirectional as the Soundsphere. Chapter 4 stipulates that the non-significance of results for ASW of the first session may be partly due to the use of non-individualised binaural reproduction – which, to some extent, causes the auditory image to be localised at arbitrary angles around the median saggital plane. Thus, the same result should occur for the second session experiment since it was also used non-individualised binaural reproduction. One other plausible cause for the significant ASW results for the second session is due to the additional measurement locations on the gallery, thus IACC<sub>e</sub> (MF) is shown to have significant effects on ASW in the second session experiment compared to those of the first session. This may be the more likely plausible reason for the different results between the two sessions.