



**Supplemental Material S3.** Distributions of pupil measures across three selected SNRs (-13 dB that was used in the model NH SNR; -7 dB from the range of overlapping SNRs; -1 dB with the largest median misclassification percentage) within the NH group. Visibly shifted distribution of pupil measures in -1 dB SNR compared to -13 dB and -7 dB SNR indicates a complex pattern of pupil measures that depend on SNR.