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# Acoustics — Statistical distribution of hearing thresholds related to age and gender

## AMENDMENT 1: Correction of parameter values for estimating the hearing threshold distribution

*Acoustique — Distribution statistique des seuils d'audition en fonction de l'âge et du sexe*

*AMENDEMENT 1: Correction des valeurs des paramètres pour l'estimation de la distribution des seuils d'audition*



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# Acoustics — Statistical distribution of hearing thresholds related to age and gender

## AMENDMENT 1: Correction of parameter values for estimating the hearing threshold distribution

*4.3, Tables 2 to 5*

Replace them with the tables below, respectively:

**Table 2 — Values of $\gamma_{n,su}$ ($n$ = 0, 1, 2, ..., 5) in Formula (2) for males**

| Frequency Hz | $\gamma_{0,su}$ | $\gamma_{1,su}$ | $\gamma_{2,su}$ | $\gamma_{3,su}$ | $\gamma_{4,su}$ | $\gamma_{5,su}$ |
|---|---|---|---|---|---|---|
| 125 | 4,629 | $6{,}447 \times 10^{-1}$ | $-8{,}849 \times 10^{-2}$ | $3{,}691 \times 10^{-3}$ | $-5{,}976 \times 10^{-5}$ | $3{,}394 \times 10^{-7}$ |
| 250 | 5,267 | $7{,}097 \times 10^{-1}$ | $-9{,}128 \times 10^{-2}$ | $3{,}637 \times 10^{-3}$ | $-5{,}741 \times 10^{-5}$ | $3{,}218 \times 10^{-7}$ |
| 500 | 4,981 | $7{,}507 \times 10^{-1}$ | $-9{,}202 \times 10^{-2}$ | $3{,}677 \times 10^{-3}$ | $-5{,}836 \times 10^{-5}$ | $3{,}281 \times 10^{-7}$ |
| 750 | 4,651 | $7{,}329 \times 10^{-1}$ | $-8{,}814 \times 10^{-2}$ | $3{,}590 \times 10^{-3}$ | $-5{,}760 \times 10^{-5}$ | $3{,}241 \times 10^{-7}$ |
| 1 000 | 4,420 | $7{,}140 \times 10^{-1}$ | $-8{,}541 \times 10^{-2}$ | $3{,}569 \times 10^{-3}$ | $-5{,}816 \times 10^{-5}$ | $3{,}286 \times 10^{-7}$ |
| 1 500 | 4,144 | $6{,}787 \times 10^{-1}$ | $-8{,}044 \times 10^{-2}$ | $3{,}518 \times 10^{-3}$ | $-5{,}886 \times 10^{-5}$ | $3{,}347 \times 10^{-7}$ |
| 2 000 | 4,098 | $6{,}318 \times 10^{-1}$ | $-7{,}534 \times 10^{-2}$ | $3{,}457 \times 10^{-3}$ | $-5{,}937 \times 10^{-5}$ | $3{,}401 \times 10^{-7}$ |
| 3 000 | 4,295 | $5{,}302 \times 10^{-1}$ | $-6{,}283 \times 10^{-2}$ | $3{,}090 \times 10^{-3}$ | $-5{,}368 \times 10^{-5}$ | $2{,}946 \times 10^{-7}$ |
| 4 000 | 4,682 | $4{,}554 \times 10^{-1}$ | $-5{,}519 \times 10^{-2}$ | $2{,}946 \times 10^{-3}$ | $-5{,}300 \times 10^{-5}$ | $2{,}919 \times 10^{-7}$ |
| 6 000 | 5,613 | $3{,}626 \times 10^{-1}$ | $-4{,}721 \times 10^{-2}$ | $2{,}920 \times 10^{-3}$ | $-5{,}581 \times 10^{-5}$ | $3{,}121 \times 10^{-7}$ |
| 8 000 | 6,615 | $2{,}912 \times 10^{-1}$ | $-4{,}155 \times 10^{-2}$ | $2{,}921 \times 10^{-3}$ | $-5{,}852 \times 10^{-5}$ | $3{,}330 \times 10^{-7}$ |

**Table 3 — Values of $\gamma_{n,sl}$ ($n$ = 0, 1, 2, ..., 5) in Formula (3) for males**

| Frequency Hz | $\gamma_{0,sl}$ | $\gamma_{1,sl}$ | $\gamma_{2,sl}$ | $\gamma_{3,sl}$ | $\gamma_{4,sl}$ | $\gamma_{5,sl}$ |
|---|---|---|---|---|---|---|
| 125 | 3,336 | $1{,}307 \times 10^{-1}$ | $-2{,}025 \times 10^{-2}$ | $1{,}120 \times 10^{-3}$ | $-2{,}281 \times 10^{-5}$ | $1{,}568 \times 10^{-7}$ |
| 250 | 3,320 | $2{,}304 \times 10^{-1}$ | $-2{,}539 \times 10^{-2}$ | $1{,}205 \times 10^{-3}$ | $-2{,}269 \times 10^{-5}$ | $1{,}458 \times 10^{-7}$ |
| 500 | 3,428 | $3{,}620 \times 10^{-1}$ | $-4{,}110 \times 10^{-2}$ | $1{,}869 \times 10^{-3}$ | $-3{,}445 \times 10^{-5}$ | $2{,}208 \times 10^{-7}$ |
| 750 | 3,596 | $3{,}839 \times 10^{-1}$ | $-4{,}432 \times 10^{-2}$ | $1{,}977 \times 10^{-3}$ | $-3{,}549 \times 10^{-5}$ | $2{,}222 \times 10^{-7}$ |
| 1 000 | 3,771 | $3{,}633 \times 10^{-1}$ | $-4{,}187 \times 10^{-2}$ | $1{,}821 \times 10^{-3}$ | $-3{,}145 \times 10^{-5}$ | $1{,}890 \times 10^{-7}$ |
| 1 500 | 3,930 | $3{,}645 \times 10^{-1}$ | $-4{,}219 \times 10^{-2}$ | $1{,}792 \times 10^{-3}$ | $-2{,}965 \times 10^{-5}$ | $1{,}703 \times 10^{-7}$ |
| 2 000 | 4,012 | $3{,}872 \times 10^{-1}$ | $-4{,}472 \times 10^{-2}$ | $1{,}874 \times 10^{-3}$ | $-3{,}024 \times 10^{-5}$ | $1{,}693 \times 10^{-7}$ |
| 3 000 | 4,105 | $4{,}046 \times 10^{-1}$ | $-4{,}557 \times 10^{-2}$ | $1{,}857 \times 10^{-3}$ | $-2{,}828 \times 10^{-5}$ | $1{,}464 \times 10^{-7}$ |
| 4 000 | 4,095 | $4{,}385 \times 10^{-1}$ | $-4{,}776 \times 10^{-2}$ | $1{,}921 \times 10^{-3}$ | $-2{,}843 \times 10^{-5}$ | $1{,}404 \times 10^{-7}$ |
| 6 000 | 4,007 | $4{,}972 \times 10^{-1}$ | $-4{,}973 \times 10^{-2}$ | $1{,}930 \times 10^{-3}$ | $-2{,}672 \times 10^{-5}$ | $1{,}178 \times 10^{-7}$ |
| 8 000 | 3,900 | $5{,}594 \times 10^{-1}$ | $-5{,}620 \times 10^{-2}$ | $2{,}401 \times 10^{-3}$ | $-3{,}925 \times 10^{-5}$ | $2{,}287 \times 10^{-7}$ |

**Table 4 — Values of $\gamma_{n,su}$ ($n$ = 0, 1, 2, ..., 5) in Formula (2) for females**

| Frequency Hz | $\gamma_{0,su}$ | $\gamma_{1,su}$ | $\gamma_{2,su}$ | $\gamma_{3,su}$ | $\gamma_{4,su}$ | $\gamma_{5,su}$ |
|---|---|---|---|---|---|---|
| 125 | 5,024 | $4{,}074 \times 10^{-1}$ | $-4{,}706 \times 10^{-2}$ | $1{,}794 \times 10^{-3}$ | $-2{,}881 \times 10^{-5}$ | $1{,}803 \times 10^{-7}$ |
| 250 | 4,992 | $4{,}869 \times 10^{-1}$ | $-4{,}930 \times 10^{-2}$ | $1{,}822 \times 10^{-3}$ | $-2{,}856 \times 10^{-5}$ | $1{,}704 \times 10^{-7}$ |
| 500 | 4,693 | $4{,}996 \times 10^{-1}$ | $-5{,}011 \times 10^{-2}$ | $1{,}881 \times 10^{-3}$ | $-2{,}923 \times 10^{-5}$ | $1{,}674 \times 10^{-7}$ |
| 750 | 4,484 | $4{,}957 \times 10^{-1}$ | $-5{,}061 \times 10^{-2}$ | $1{,}936 \times 10^{-3}$ | $-3{,}001 \times 10^{-5}$ | $1{,}680 \times 10^{-7}$ |
| 1 000 | 4,352 | $4{,}825 \times 10^{-1}$ | $-5{,}026 \times 10^{-2}$ | $1{,}965 \times 10^{-3}$ | $-3{,}061 \times 10^{-5}$ | $1{,}698 \times 10^{-7}$ |
| 1 500 | 4,209 | $4{,}767 \times 10^{-1}$ | $-5{,}075 \times 10^{-2}$ | $2{,}047 \times 10^{-3}$ | $-3{,}219 \times 10^{-5}$ | $1{,}770 \times 10^{-7}$ |
| 2 000 | 4,253 | $4{,}550 \times 10^{-1}$ | $-4{,}899 \times 10^{-2}$ | $2{,}015 \times 10^{-3}$ | $-3{,}165 \times 10^{-5}$ | $1{,}710 \times 10^{-7}$ |
| 3 000 | 4,343 | $4{,}743 \times 10^{-1}$ | $-5{,}135 \times 10^{-2}$ | $2{,}194 \times 10^{-3}$ | $-3{,}544 \times 10^{-5}$ | $1{,}955 \times 10^{-7}$ |
| 4 000 | 4,614 | $4{,}736 \times 10^{-1}$ | $-5{,}014 \times 10^{-2}$ | $2{,}163 \times 10^{-3}$ | $-3{,}455 \times 10^{-5}$ | $1{,}840 \times 10^{-7}$ |
| 6 000 | 5,201 | $4{,}952 \times 10^{-1}$ | $-4{,}978 \times 10^{-2}$ | $2{,}181 \times 10^{-3}$ | $-3{,}463 \times 10^{-5}$ | $1{,}775 \times 10^{-7}$ |
| 8 000 | 5,861 | $5{,}067 \times 10^{-1}$ | $-4{,}798 \times 10^{-2}$ | $2{,}138 \times 10^{-3}$ | $-3{,}406 \times 10^{-5}$ | $1{,}712 \times 10^{-7}$ |

**Table 5 — Values of $\gamma_{n,sl}$ ($n$ = 0, 1, 2, ..., 5) in Formula (3) for females**

| Frequency Hz | $\gamma_{0,sl}$ | $\gamma_{1,sl}$ | $\gamma_{2,sl}$ | $\gamma_{3,sl}$ | $\gamma_{4,sl}$ | $\gamma_{5,sl}$ |
|---|---|---|---|---|---|---|
| 125 | 3,630 | $4{,}812 \times 10^{-2}$ | $2{,}039 \times 10^{-3}$ | $-5{,}642 \times 10^{-5}$ | $-1{,}049 \times 10^{-6}$ | $2{,}399 \times 10^{-8}$ |
| 250 | 3,057 | $2{,}425 \times 10^{-1}$ | $-9{,}369 \times 10^{-3}$ | $1{,}635 \times 10^{-4}$ | $-1{,}781 \times 10^{-6}$ | $1{,}516 \times 10^{-8}$ |
| 500 | 2,981 | $3{,}401 \times 10^{-1}$ | $-1{,}773 \times 10^{-2}$ | $3{,}697 \times 10^{-4}$ | $-3{,}040 \times 10^{-6}$ | $1{,}137 \times 10^{-8}$ |
| 750 | 3,035 | $3{,}749 \times 10^{-1}$ | $-2{,}207 \times 10^{-2}$ | $5{,}029 \times 10^{-4}$ | $-4{,}214 \times 10^{-6}$ | $1{,}190 \times 10^{-8}$ |
| 1 000 | 3,123 | $3{,}924 \times 10^{-1}$ | $-2{,}511 \times 10^{-2}$ | $6{,}191 \times 10^{-4}$ | $-5{,}644 \times 10^{-6}$ | $1{,}653 \times 10^{-8}$ |
| 1 500 | 3,318 | $3{,}954 \times 10^{-1}$ | $-2{,}757 \times 10^{-2}$ | $7{,}316 \times 10^{-4}$ | $-6{,}974 \times 10^{-6}$ | $1{,}908 \times 10^{-8}$ |
| 2 000 | 3,457 | $4{,}034 \times 10^{-1}$ | $-2{,}973 \times 10^{-2}$ | $8{,}299 \times 10^{-4}$ | $-8{,}130 \times 10^{-6}$ | $2{,}093 \times 10^{-8}$ |
| 3 000 | 3,690 | $4{,}001 \times 10^{-1}$ | $-3{,}112 \times 10^{-2}$ | $9{,}419 \times 10^{-4}$ | $-1{,}004 \times 10^{-5}$ | $2{,}938 \times 10^{-8}$ |
| 4 000 | 3,860 | $3{,}907 \times 10^{-1}$ | $-3{,}033 \times 10^{-2}$ | $9{,}259 \times 10^{-4}$ | $-9{,}132 \times 10^{-6}$ | $1{,}642 \times 10^{-8}$ |
| 6 000 | 4,028 | $4{,}119 \times 10^{-1}$ | $-3{,}206 \times 10^{-2}$ | $1{,}064 \times 10^{-3}$ | $-1{,}155 \times 10^{-5}$ | $2{,}670 \times 10^{-8}$ |
| 8 000 | 4,103 | $4{,}302 \times 10^{-1}$ | $-3{,}246 \times 10^{-2}$ | $1{,}140 \times 10^{-3}$ | $-1{,}322 \times 10^{-5}$ | $3{,}582 \times 10^{-8}$ |

*4.4, Formula (5)*

Replace "+ $ks_l$" with "– $ks_l$".

*B.2*

In Step 3, replace the values of $\gamma_{0,su}$, $\gamma_{1,su}$, $\gamma_{2,su}$, $\gamma_{3,su}$, $\gamma_{4,su}$ and $\gamma_{5,su}$ (i.e. 4,68, 0,455, $-5{,}52 \times 10^{-2}$, $2{,}95 \times 10^{-3}$, $-5{,}30 \times 10^{-5}$ and $2{,}92 \times 10^{-7}$) with

4,682, $4{,}554 \times 10^{-1}$, $-5{,}519 \times 10^{-2}$, $2{,}946 \times 10^{-3}$, $-5{,}300 \times 10^{-5}$, $2{,}919 \times 10^{-7}$, respectively.

In Step 4, replace the values of $\gamma_{0,su}$, $\gamma_{1,su}$, $\gamma_{2,su}$, $\gamma_{3,su}$, $\gamma_{4,su}$, $\gamma_{5,su}$ and $s_u$ (i.e. 4,68, 0,455, $-5{,}52 \times 10^{-2}$, $2{,}95 \times 10^{-3}$, $-5{,}30 \times 10^{-5}$, $2{,}92 \times 10^{-7}$ and 18,22) with

4,682, $4{,}554 \times 10^{-1}$, $-5{,}519 \times 10^{-2}$, $2{,}946 \times 10^{-3}$, $-5{,}300 \times 10^{-5}$, $2{,}919 \times 10^{-7}$ and 17,95 respectively.

In Step 6, replace the values of $s_u$ and $\Delta H_{25,60}$ (i.e. 18,22 and 32,49) with 17,95 and 32,30, respectively.