Errata

Erratum: Possibility of detection of Higgs boson and precise test of the standard model in e^-e^+ annihilation at $\sqrt{s}=M_Z$: Energy distributions for signal and background [Phys. Rev. D 42, 1418 (1990)]

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The right-hand side of Eq. (19) should be multiplied by a factor 3 for $f=c$ and b quarks.
The seventh line on p. 1420 should read as follows: The parameter α is

$$\alpha=1 \text{ for down and up particles .} \tag{25}$$

Equation (27a) should read

$$n_2^{(d)}(x)=[2(1+\beta)\beta^2/3(1-\beta)^3][3(1-\beta)x^2-8x^3]\theta(x_0-x)\theta(x) - [(1+\beta)/6\beta](1-x)[1+x-2(1+3\beta)x^2]\theta(1-x)\theta(x-x_0) . \tag{27a}$$

Thus the following corrections are necessary in Figs. 3–8:
(i) Figures 3–6 should be replaced by corrected ones.
(ii) In Figs. 7 and 8(a) the scales of the vertical axis should read 1.2×10^{-33} cm^2, and 3.0×10^{-34} cm^2, respectively.
(iii) Figures 8(b) and 8(c) should be replaced by corrected ones.
However, our conclusions do not need modification.

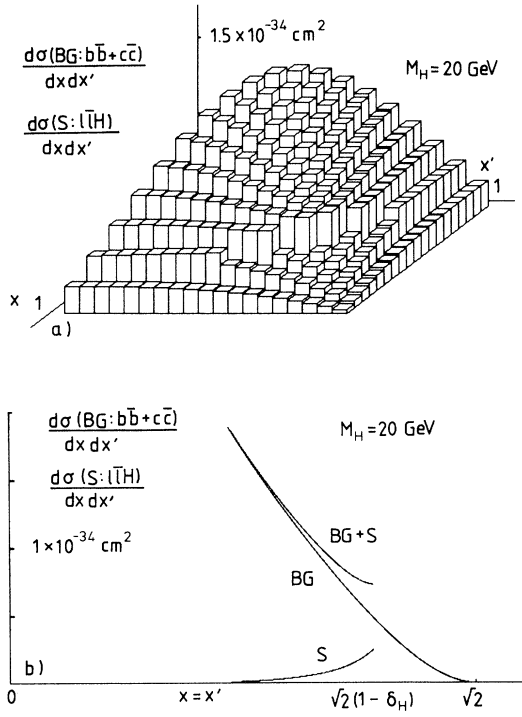

FIG. 3. (a) Double-energy distributions of the background and the signal with $M_H=20$ GeV. We have cut off the region $x_-+x_+\leq 1-\delta_H^2$. (b) Those types of behavior on the diagonal line $x=x'$.

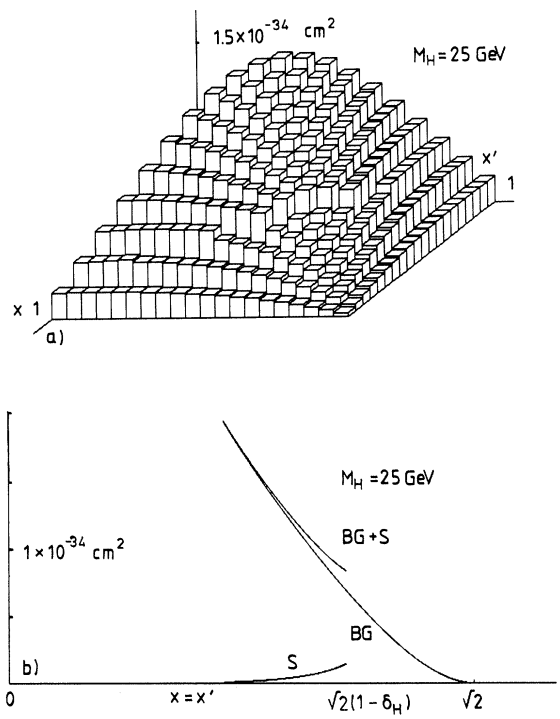

FIG. 4. Same as Fig. 3 for $M_H=25$ GeV.

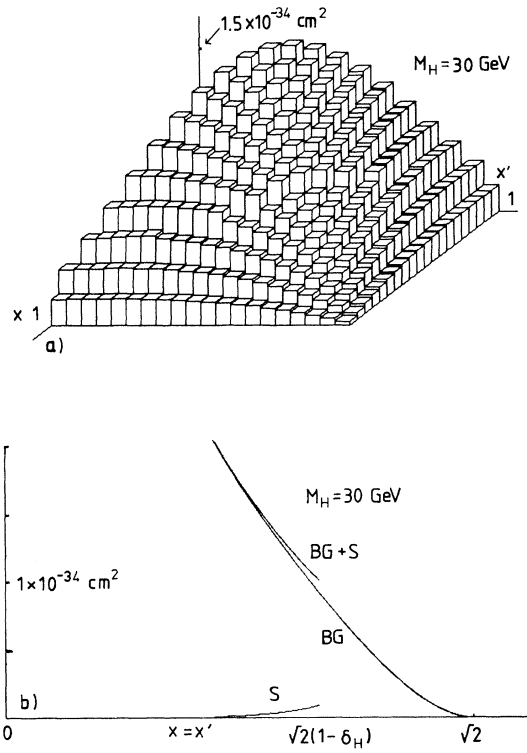

FIG. 5. Same as Fig. 4 for $M_H = 30$ GeV.

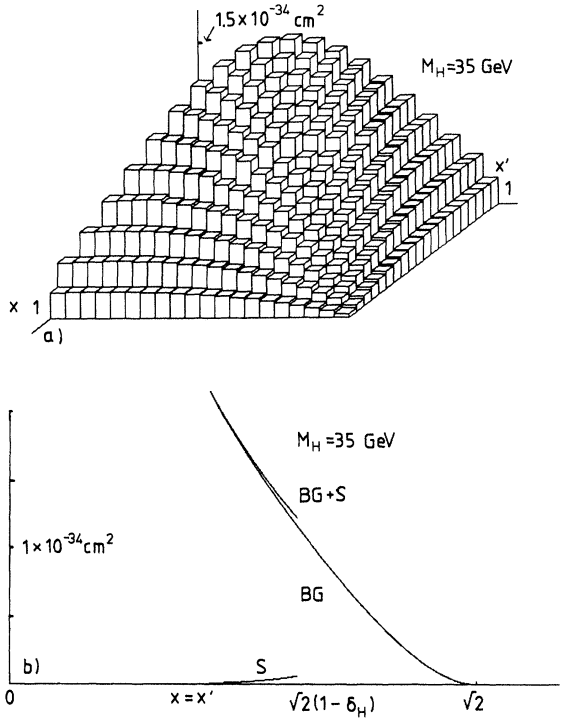

FIG. 6. Same as Fig. 4 for $M_H = 35$ GeV.

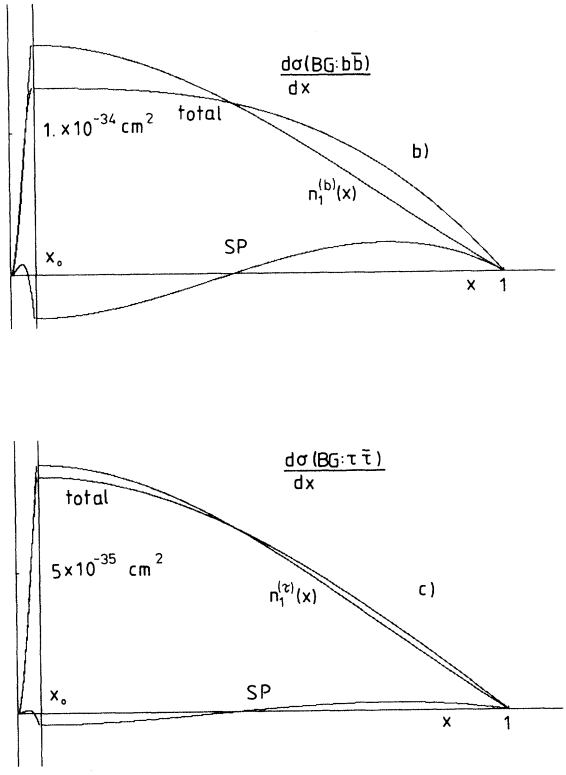

FIG. 8. The single-energy distribution of the background. $x_0 = (1-\beta)/(1+\beta)$. It should be noticed that different scales are used for $x < x_0$ and $x_0 < x$, because x_0 is very small. SP denotes the spin-correlation effect. (b) $f = b$ and (c) $f = \tau$.