# Correlation Matrix (background)



Linear correlation coefficients in %

| | $B_s$ ln(IP $\chi^2$) | $B_s$ ln(1 - DIRA) | $\chi^2_{DTF}$/ndf | $\Delta\chi^2_{add\text{-}track}$ | $B_s$ $A_{p_t}^{cone}$ | max[ghostProb] | $X_s$ daughters min[ln(IP$\chi^2$)] | $X_s$ max[DOCA] | cos(max[$\theta_{Ds\,h}$]) | $D_s$ daughters min[ln(IP$\chi^2$)] | $D_s$ ln($\chi^2_{FD}$) | $D_s$ log(RFD) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $D_s$ log(RFD) | 5 | -57 | 3 | 26 | 19 | 10 | 45 | -23 | 33 | 41 | 19 | 100 |
| $D_s$ ln($\chi^2_{FD}$) | 2 | 15 | 17 | 56 | -7 | -2 | -8 | 17 | -18 | 20 | 100 | 19 |
| $D_s$ min[ln(IP$\chi^2$)] | -1 | -22 | -6 | 27 | 11 | -4 | 23 | -2 | 1 | 100 | 20 | 41 |
| cos(max[$\theta_{Ds\,h}$]) | | -28 | 3 | -9 | 18 | 7 | 18 | -45 | 100 | 1 | -18 | 33 |
| max[DOCA] | -1 | 20 | 13 | 9 | -11 | -3 | -37 | 100 | -45 | -2 | 17 | -23 |
| min[ln(IP$\chi^2$)] | 2 | -35 | -3 | 3 | 9 | 1 | 100 | -37 | 18 | 23 | -8 | 45 |
| max[ghostProb] | 3 | -8 | 5 | -8 | -11 | 100 | 1 | -3 | 7 | -4 | -2 | 10 |
| $B_s$ $A_{p_t}^{cone}$ | -9 | -16 | -14 | 20 | 100 | -11 | 9 | -11 | 18 | 11 | -7 | 19 |
| $\Delta\chi^2_{add\text{-}track}$ | -5 | -1 | 2 | 100 | 20 | -8 | 3 | 9 | -9 | 27 | 56 | 26 |
| $\chi^2_{DTF}$/ndf | 34 | 19 | 100 | 2 | -14 | 5 | -3 | 13 | 3 | -6 | 17 | 3 |
| $B_s$ ln(1 - DIRA) | 53 | 100 | 19 | -1 | -16 | -8 | -35 | 20 | -28 | -22 | 15 | -57 |
| $B_s$ ln(IP $\chi^2$) | 100 | 53 | 34 | -5 | -9 | 3 | 2 | -1 | | -1 | 2 | 5 |