| source / bin | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PDF eigenvector 15 | 0.0 | 0.0 | -0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
|  | 0.0 | 0.0 | +0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PDF eigenvector 16 | 0.0 | 0.0 | +0.1 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
|  | 0.0 | 0.0 | -0.1 | +0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PDF eigenvector 17 | 0.0 | 0.0 | -0.1 | +0.1 | -0.1 | 0.0 | 0.0 | +0.1 | 0.0 |
|  | +0.1 | -0.1 | +0.3 | -0.2 | +0.1 | 0.0 | -0.1 | -0.2 | 0.0 |
| PDF eigenvector 18 | 0.0 | +0.1 | +0.3 | 0.0 | -0.1 | 0.0 | 0.0 | +0.2 | +0.1 |
|  | 0.0 | -0.1 | -0.2 | 0.0 | $+0.1$ | 0.0 | 0.0 | $-0.2$ | -0.1 |
| PDF eigenvector 19 | 0.0 | 0.0 | +0.3 | -0.1 | 0.0 | +0.1 | -0.1 | 0.0 | $+0.1$ |
|  | 0.0 | -0.1 | -0.5 | +0.1 | +0.1 | -0.1 | +0.1 | 0.0 | -0.1 |
| PDF eigenvector 20 | 0.0 | 0.0 | -0.4 | 0.0 | 0.0 | +0.1 | -0.1 | 0.0 | 0.0 |
|  | 0.0 | -0.1 | -0.1 | 0.0 | 0.0 | 0.0 | +0.1 | 0.0 | 0.0 |
| PDF eigenvector 21 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | +0.1 | +0.2 | 0.0 |
|  | 0.0 | 0.0 | +0.1 | 0.0 | 0.0 | 0.0 | -0.1 | -0.2 | 0.0 |
| PDF eigenvector 22 | -0.1 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 | +0.1 | $+0.3$ | +0.1 |
|  | +0.1 | 0.0 | +0.1 | 0.0 | +0.1 | 0.0 | -0.2 | -0.3 | -0.1 |
| PDF eigenvector 23 | 0.0 | 0.0 | -0.5 | $+0.2$ | 0.0 | -0.1 | 0.0 | -0.1 | -0.2 |
|  | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 |
| PDF eigenvector 24 | 0.0 | 0.0 | -0.4 | +0.1 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 |
|  | -0.1 | 0.0 | -0.3 | $+0.2$ | -0.1 | -0.1 | $+0.3$ | $+0.3$ | -0.1 |
| PDF eigenvector 25 | -0.1 | 0.0 | -0.4 | +0.2 | -0.1 | -0.1 | $+0.2$ | +0.3 | -0.1 |
|  | 0.0 | 0.0 | -0.7 | +0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PDF eigenvector 26 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
|  | 0.0 | 0.0 | -0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PDF eigenvector 27 | -0.1 | $+0.3$ | 0.0 | +0.2 | -0.3 | $+0.1$ | -0.2 | $+0.2$ | 0.0 |
|  | 0.0 | -0.1 | +0.1 | -0.1 | +0.1 | 0.0 | +0.1 | -0.1 | 0.0 |
| PDF eigenvector 28 | 0.0 | +0.1 | -0.3 | +0.1 | -0.1 | +0.1 | -0.1 | 0.0 | 0.0 |
|  | 0.0 | -0.1 | +0.3 | -0.2 | +0.1 | 0.0 | +0.1 | -0.1 | 0.0 |
| $\alpha_{S}$ | -0.1 | +0.3 | +0.2 | $+0.3$ | -0.2 | +0.1 | -0.2 | +0.1 | 0.0 |
|  | +0.1 | -0.3 | -0.2 | -0.2 | $+0.2$ | -0.1 | $+0.2$ | -0.1 | 0.0 |
| $m_{\mathrm{t}}^{\mathrm{MC}}$ | -0.5 | -2.7 | -1.7 | +0.5 | +0.9 | -0.2 | +0.4 | +1.4 | +2.1 |
|  | +0.5 | +2.5 | +3.6 | -0.2 | -0.8 | +0.1 | -1.1 | -1.2 | -2.1 |
| $\mu_{r, f}$ | -0.7 | +1.7 | +10.2 | +2.1 | -2.2 | 0.0 | -0.4 | +1.8 | -0.3 |
|  | +0.9 | -1.8 | -14.6 | -2.2 | +2.3 | $+0.2$ | +0.1 | -2.0 | $+0.5$ |
| $h_{\text {damp }}$ | $+0.2$ | -0.4 | -6.7 | -0.1 | 0.0 | $+0.7$ | -0.4 | $+0.7$ | $+0.1$ |
|  | -0.5 | -0.1 | +11.3 | $+0.3$ | +0.4 | -0.8 | -0.6 | +1.1 | -0.3 |
| PS ISR | -0.1 | -0.6 | +1.1 | +0.1 | +0.5 | +0.1 | -0.7 | +0.1 | +0.1 |
|  | 0.0 | -0.6 | +3.8 | $+0.2$ | $+0.3$ | -0.5 | -1.4 | +1.2 | -0.1 |
| PS FSR | -0.4 | +1.3 | +7.4 | +1.4 | -0.4 | -0.8 | 0.0 | 0.0 | -1.4 |
|  | +0.2 | -1.2 | -0.7 | -0.5 | +0.5 | -0.4 | -0.6 | +0.3 | +1.0 |
| UE tune | +0.1 | -0.1 | +4.3 | +0.4 | $+0.2$ | -1.4 | -1.8 | +0.7 | 0.0 |
|  | -0.2 | 0.0 | +2.7 | +0.2 | +0.3 | -0.1 | -0.5 | +0.3 | -0.2 |
| colour reconnection | -0.2 | -0.4 | +1.1 | +0.2 | +0.3 | -0.2 | +0.9 | -0.9 | +0.6 |
|  | +0.1 | -0.3 | -0.3 | -0.3 | $+0.2$ | -0.7 | $+0.2$ | +0.6 | +0.1 |
|  | -0.1 | -0.2 | -1.4 | -0.6 | +0.3 | -0.1 | -0.1 | +1.4 | 0.0 |
| fragmentation $\mathrm{b} \rightarrow B$ | -0.1 | +0.7 | -0.6 | +0.9 | -0.7 | -0.3 | -0.2 | -0.1 | +0.2 |
|  | 0.0 | -0.3 | +0.3 | -0.4 | +0.3 | $+0.2$ | 0.0 | +0.1 | 0.0 |
|  | 0.0 | +0.1 | -0.1 | $+0.2$ | -0.2 | 0.0 | -0.1 | 0.0 | 0.0 |
|  | $+0.2$ | +0.5 | -1.3 | +0.3 | -0.6 | -0.2 | -0.5 | -0.3 | +0.2 |
| branching ratio $B \rightarrow \mu$ | 0.0 | 0.0 | -0.2 | +0.1 | 0.0 | +0.1 | -0.1 | 0.0 | -0.1 |
|  | +0.1 | -0.1 | +0.2 | -0.1 | -0.1 | -0.1 | 0.0 | 0.0 | $+0.1$ |

