## $B^{+}$ * * * * *

April 3, 2009

The $B^{+}$is the lightest charged meson containing a bottom quark. The mass and lifetime are well measured. It decays weakly and many of the decay modes are known, however these are not sufficient to saturated the total rate. We have therefore chosen to use the data from [?], together with more recent experimental results not included in [?], and some theoretical calculations to constructed the majority of the inclusive modes. Some additional modes are added to saturate some more exclusive measurements. The remainder of the decays are modelled using partonic decays.

The decays to $D^{(*)} D_{s}^{(*)}$ are chosen to saturate the total rate $10.93 \%$ taken from [?] . Due to our choice of modes we have a lower value, $6.9 \%$, for the $D^{(*)} D_{s}$ rate than the result from [?]. However given the error on this result and the total $D^{(*)} D_{s}^{(*)}$ rate this is consistent with the experimental measurement.

The $B^{+}$has mass 5279 MeV and is unstable. The $B^{+}$has spin 0 , charge 1 and is colour neutral. The $B^{+}$is a meson and is from the $1^{1} S_{0}$ multiplet.The properties of the particle and its antiparticle are taken to be independent. The decay length is 0.000501 m . The PDG code is 521 .

| Branching <br> Ratio | Rating | On/ <br> Off | Outgoing <br> Particles | Description | Decayer |
| :---: | :---: | :---: | :--- | :--- | :--- |
| 0.2744378370 | $*^{*}$ | on | $u, d, \bar{c}, u$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. This mode has minore <br> modifications to ensure the total branch- <br> ing ratio is one and results from combin- <br> ing two modes from EvtGen due to the <br> different modelling of partonic decays in <br> Herwig and PYTHIA. | Herwig::WeakPartonic::WeakPa |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching Ratio | Rating | $\begin{aligned} & \hline \text { On/ } \\ & \text { Off } \end{aligned}$ | Outgoing Particles | Description | Decayer |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.0134000000 | ** | on | $\rho^{+}, \bar{D}^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0129000000 | ** | on | $D^{0}, D_{s}^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0124000000 | ** | on | $\bar{D}^{* 0}(2007), D_{s}^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0111000000 | ** | on | $D_{s}^{*+}, \bar{D}^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0100000000 | ** | on | $\overline{D^{* 0}}(2007), D^{*+}(2$ | IIDectis ${ }^{0}$ of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0098000000 | ** | on | $\bar{D}^{* 0}(2007), \rho^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0098000000 | ** | on | $D^{* 0}(2007), D_{s 1}^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0090000000 | ** | on | $\bar{D}^{\prime}{ }_{1}^{0}, \mu^{+}, \nu_{\mu}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::SemiLeptonicScalar:: |
| 0.0090000000 | ** | on | $(\bar{c} \bar{s})_{0},(u u)_{1}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. This mode is different as Herwig cannot hadronize diquarks containing a heavy quark. Therefore we have inserted an extra $d \bar{d}$ or $u \bar{u}$ pair with equal probability to produce a mode Herwig can handle. There are therefore two modes for the one baryon mode from EvtGen. | Herwig::WeakPartonic::WeakF |
| 0.0090000000 | ** | on | $\bar{D}^{\prime}{ }_{1}^{0}, e^{+}, \nu_{e}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::SemiLeptonicScalar:: |
| 0.0088700000 | ** | on | $a_{1}^{+}(1260), \bar{D}^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0070000000 | ** | on | $\overline{D^{0}, \tau^{+}, \nu_{\tau}}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::SemiLeptonicScalar: |
| 0.0070000000 | ** | on | $\overline{D^{* 0}}(2007), D^{* 0}(20$ | $0 \mathrm{D}), \mathrm{ck}^{+}{ }^{+}$of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0056000000 | ** | on | $\overline{D_{1}^{0}}(2420), \mu^{+}, \nu_{\mu}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::SemiLeptonicScalar:: |
| 0.0056000000 | ** | on | $\bar{D}_{1}^{0}(2420), e^{+}, \nu_{e}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::SemiLeptonicScalar:: |
| 0.0050000000 | ** | on | $\overline{D^{* 0}}(2007), D^{*+}(2$ | IID\&c析* $8 \mathrm{f} B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0050000000 | ** | on | $\overline{D^{* 0}}(2007), D^{* 0}(20$ | 0 D ) ecký tof $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0050000000 | ** | on | $\bar{D}^{0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0050000000 | ** | on | $D^{0}, \pi^{-}, \pi^{+}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0050000000 | ** | on | $\bar{s}, g, u$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::WeakPartonic::WeakF |
| 0.0049000000 | ** | on | $D_{0}^{* 0}, \mu^{+}, \nu_{\mu}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::SemiLeptonicScalar: |
| 0.0049000000 | ** | on | $\bar{D}_{0}^{* 0}, e^{+}, \nu_{e}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::SemiLeptonicScalar:: |
| 0.0049000000 | ** | on | $\bar{D}^{0}, D^{*+}(2010), K$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0047000000 | ** | on | $D^{0}, D^{* 0}(2007), K$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0046000000 | ** | on | $\bar{D}^{* 0}(2007), \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching <br> Ratio | Rating | On/ <br> Off | Outgoing <br> Particles | Description |  |
| :---: | :---: | :---: | :--- | :--- | :--- |
| 0.0042000000 | $* *$ | on | $\bar{D}_{2}^{* 0}(2460), D_{s}^{+}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::ScalarMesonFactorized::ISc |
| 0.0041000000 | $* *$ | on | $D_{s 1}^{+}, D^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::ScalarMesonFactorized::ISc |
| 0.0040000000 | $* *$ | on | $D_{2}^{* 0}(2460), D_{s}^{*+}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::ScalarMesonFactorized::ISc |
| 0.0040000000 | $* *$ | on | $c, \overline{,}, \bar{c}, u$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::WeakPartonic::WeakPa |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching <br> Ratio | Rating | On/ <br> Off | Outgoing <br> Particles | Description | Hecayer |
| :---: | :---: | :---: | :--- | :--- | :--- |
| 0.0020000000 | $* *$ | on | $\bar{D}^{\prime}{ }_{1}^{\prime}, \tau^{+}, \nu_{\tau}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::SemiLeptonicScalar:: |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching Ratio | Rating | $\begin{aligned} & \hline \text { On/ } \\ & \text { Off } \end{aligned}$ | Outgoing <br> Particles | Description | Decayer |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.0010200000 | ** | on | $D^{-}, \pi^{+}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0010000000 | ** | on | $D^{*+}(2010), D^{*-}$ | OIDC)caly ${ }^{*}$ of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0010000000 | ** | on | $\bar{D}_{1}^{0}(2420), \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0009100000 | ** | on | $\bar{D}_{0}^{* 0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0009000000 | * | on | $\eta_{c}, K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0009000000 | ** | on | $s, \bar{s}, \bar{d}, u$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::WeakPartonic::WeakI |
| 0.0008000000 | ** | on | $D_{s}^{+}, D^{0}, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0008000000 | ** | on | $D_{s}^{*+}, \bar{D}^{0}, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0008000000 | ** | on | $\bar{D}_{2}^{* 0}(2460), \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0007700000 | ** | on | $\bar{D}^{* 0}(2007), K^{*+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0007500000 | ** | on | $\bar{D}^{\prime}{ }_{1}^{0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0007000000 | ** | on | $\bar{D}_{1}^{0}(2420), \rho^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0007000000 | ** | on | $d, \bar{d}, \bar{d}, u$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::WeakPartonic::WeakI |
| 0.0006300000 | ** | on | $\psi(2 S), K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0006100000 | ** | on | $K^{*+}, D^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0006000000 | ** | on | $\psi(2 S), K^{*+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0006000000 | ** | on | $\overline{D^{\prime}}{ }_{1}^{0}, D_{s}^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0005700000 | * | on | $\chi_{c 1}(1 P), K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0005000000 | ** | on | $J / \psi(1 S), K_{2}^{*+}(14$ | ODecay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0005000000 | * | on | $\psi(3370), K^{*+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0005000000 | ** | on | $D^{+}, D^{-}, K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0005000000 | ** | on | $D^{*+}(2010), D^{-}, K$ | ${ }^{+}$Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0005000000 | ** | on | $D^{+}, D^{-}, K^{*+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0005000000 | ** | on | $D^{*+}(2010), D^{-}, K$ | *Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0005000000 | ** | on | $D^{+}, D^{*-}(2010), K$ | *Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0005000000 | ** | on | $\bar{D}^{0}, \pi^{0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0005000000 | ** | on | $\bar{D}^{* 0}(2007), \pi^{0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0005000000 | ** | on | $D^{* 0}(2007), \rho^{0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching <br> Ratio | Rating | On/ <br> Off | Outgoing <br> Particles | Description | Hecayer |
| :---: | :---: | :---: | :---: | :--- | :--- |
| 0.0005000000 | $* *$ | on | $\bar{D}^{* 0}(2007), \pi^{-}, \pi^{+}$, | , tecay of $B^{+}$with branching ratio taken |  |
| from EvtGen. |  |  |  |  |  |$\quad$ Herwig::Mambo::Mamb

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| Branching Ratio | Rating | $\begin{aligned} & \hline \text { On/ } \\ & \text { Off } \end{aligned}$ | Outgoing Particles | Description | Decayer |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.0002000000 | * | on | $\chi_{c 1}(1 P), K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0002000000 | * | on | $\chi_{c 1}(1 P), K^{+}, \pi^{0}, \pi^{0}$ | ${ }^{0}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0002000000 | * | on | $\chi_{c 1}(1 P), K^{0}, \pi^{+}, \pi^{0}$ | ${ }^{0}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0002000000 | * | on | $\chi_{c 2}(1 P), K^{0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0002000000 | * | on | $\chi_{c 2}(1 P), K^{+}, \pi^{-}, \pi$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0002000000 | * | on | $\psi(3370), K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0002000000 | * | on | $\psi(3370), K^{+}, \pi^{-}, \pi$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Maml |
| 0.0001450000 | ** | on | $\omega, \mu^{+}, \nu_{\mu}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::SemiLeptonicScalar::I |
| 0.0001450000 | ** | on | $\rho^{0}, \mu^{+}, \nu_{\mu}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::SemiLeptonicScalar::I |
| 0.0001450000 | ** | on | $\omega, e^{+}, \nu_{e}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::SemiLeptonicScalar::I |
| 0.0001450000 | * | on | $\rho^{0}, e^{+}, \nu_{e}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::SemiLeptonicScalar::I |
| 0.0001000000 | ** | on | $J / \psi(1 S), K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0001000000 | ** | on | $J / \psi(1 S), K_{1}^{+}(1400)$ | )Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::ScalarMesonFactorized::IS |
| 0.0001000000 | * | on | $\psi(2 S), K^{+}, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0001000000 | * | on | $\psi(2 S), K^{0}, \pi^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Maml |
| 0.0001000000 | * | on | $\eta_{c}, K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0001000000 | * | on | $\eta_{c}, K^{+}, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0001000000 | * | on | $\eta_{c}, K^{0}, \pi^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Maml |
| 0.0001000000 | * | on | $\chi_{c 0}(1 P), K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0001000000 | * | on | $\chi_{c 0}(1 P), K^{+}, \pi^{0}, \pi^{c}$ | ${ }^{0}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0001000000 | * | on | $\chi_{c 0}(1 P), K^{0}, \pi^{+}, \pi^{0}$ | ${ }^{0}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Maml |
| 0.0001000000 | * | on | $\chi_{c 2}(1 P), K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0001000000 | * | on | $\chi_{c 2}(1 P), K^{+}, \pi^{0}, \pi^{c}$ | ${ }^{0}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0001000000 | * | on | $\chi_{c 2}(1 P), K^{0}, \pi^{+}, \pi^{0}$ | ${ }^{0}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0001000000 | * | on | $\psi(3370), K^{+}, \pi^{0}, \pi^{0}$ | ${ }^{0}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0001000000 | * | on | $\psi(3370), K^{0}, \pi^{+}, \pi^{0}$ | ${ }^{0}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000930000 | * | on | $\tau^{+}, \nu_{\tau}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000900000 | * | on | $J / \psi(1 S), \phi, K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching <br> Ratio | Rating | On/ <br> Off | Outgoing <br> Particles | Description |  |
| :---: | :---: | :---: | :--- | :--- | :--- |
| 0.0000840000 | $* *$ | on | $\eta^{\prime}, \mu^{+}, \nu_{\mu}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::SemiLeptonicScalar:: |
| 0.0000840000 | $* *$ | on | $\eta, \mu^{+}, \nu_{\mu}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::SemiLeptonicScalar::1 |
| 0.0000840000 | $* *$ | on | $\eta^{\prime}, e^{+}, \nu_{e}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::SemiLeptonicScalar:: |
| 0.0000840000 | $* *$ | on | $\eta, e^{+}, \nu_{e}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::SemiLeptonicScalar::1 |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching Ratio | Rating | $\begin{aligned} & \text { On/ } \\ & \text { Off } \end{aligned}$ | Outgoing Particles | Description | Decayer |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.0000270000 | ** | on | $b_{1}^{0}, \tau^{+}, \nu_{\tau}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::SemiLeptonicScalar: |
| 0.0000260000 | * | on | $K^{+}, K^{-}, K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000260000 | * | on | $\pi^{+}, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000240000 | * | on | $K^{0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000240000 | * | on | $K^{*+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000230000 | ** | on | $f_{1}(1420), \tau^{+}, \nu_{\tau}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000230000 | ** | on | $f_{1}(1285), \tau^{+}, \nu_{\tau}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::SemiLeptonicScalar: |
| 0.0000200000 | * | on | $a_{1}^{+}(1260), K^{* 0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000200000 | * | on | $a_{1}^{0}(1260), K^{*+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000200000 | * | on | $D_{s}^{*+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000200000 | * | on | $D_{s}^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000200000 | ** | on | $f_{2}^{\prime}(1525), \tau^{+}, \nu_{\tau}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000200000 | ** | on | $f_{2}(1270), \tau^{+}, \nu_{\tau}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::SemiLeptonicScalar: |
| 0.0000200000 | * | on | $\chi_{c 2}(1 P), K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000200000 | * | on | $\chi_{c 2}(1 P), K^{*+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000180000 | ** | on | $\eta^{\prime}, \tau^{+}, \nu_{\tau}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::SemiLeptonicScalar: |
| 0.0000160000 | * | on | $\pi^{+}, \pi^{+}, \pi^{-}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000150000 | * | on | $\rho^{+}, \rho^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000130000 | * | on | $\omega, \rho^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000130000 | ** | on | $h_{1}^{\prime}, \tau^{+}, \nu_{\tau}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000130000 | ** | on | $h_{1}, \tau^{+}, \nu_{\tau}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::SemiLeptonicScalar: |
| 0.0000120000 | * | on | $\rho^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000120000 | * | on | $K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000120000 | ** | on | $\eta, \tau^{+}, \nu_{\tau}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::SemiLeptonicScalar::1 |
| 0.0000110000 | * | on | $\phi, K^{*+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000110000 | * | on | $D^{+}, \bar{K}^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $K^{+}, K_{1}^{0}(1400), \bar{K}^{0}$ | Blecay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{+}, K^{0}, K_{1}(1400)$ | ${ }^{0}$,necay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Maml |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching Ratio | Rating | $\begin{gathered} \hline \text { On/ } \\ \text { Off } \end{gathered}$ | Outgoing Particles | Description | Decayer |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.0000100000 | * | on | $K^{+}, K_{0}^{* 0}(1430), K^{0}$ | ${ }^{0}$ Drecay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{+}, K_{0}^{* 0}(1430), K^{\prime}$ | ${ }^{0}$ Drecay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{0}, K^{0}, \bar{K}_{0}^{* 0}(1430)$ | , Décay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{+}, K^{+}, \bar{K}_{0}^{* 0}(1430$ | Dæ $\overline{\text { cay }}$ of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\overline{K^{-}}, K^{+}, K_{0}^{* 0}(1430$ | D』त्वay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{+}, K^{+}, K_{0}^{*-}(1430$ | 0Deaday of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{-}, K^{+}, K_{0}^{*+}(1430$ | 0Dealay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\phi, K_{0}^{*+}(1430), \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM] |
| 0.0000100000 | * | on | $\phi, K_{0}^{* 0}(1430), \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayMl |
| 0.0000100000 | * | on | $K^{0}, \bar{K}^{0}, K^{0}, \pi^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{0}, \bar{K}^{0}, K^{+}, \pi^{0}, \pi^{0}$ | ${ }^{5}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{+}, K^{-}, K^{0}, \pi^{+}, \pi$ | ${ }^{9}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{+}, K^{-}, K^{+}, \pi^{0},$ | ${ }^{9}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{-}, K^{+}, K^{0}, \rho^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{-}, K^{+}, K^{+}, f_{0}(98$ | 8D)ecay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{-}, K^{+}, K^{+}, \omega$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{-}, K^{+}, K^{+}, \rho^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{0}, K^{*+}, \bar{K}^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{+}, K^{0}, K^{* 0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{+}, K^{* 0}, \bar{K}^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{+}, K^{*-}, K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $K^{-}, K^{+}, K^{*+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\phi, K^{+}, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\phi, K^{+}, \pi^{+}, \pi^{-}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\phi, K^{0}, \pi^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\phi, K^{0}, \rho^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayMl |
| 0.0000100000 | * | on | $\phi, K^{+}, f_{0}(980)$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM1 |
| 0.0000100000 | * | on | $\phi, K^{+}, \omega$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM] |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching Ratio | Rating | $\begin{aligned} & \hline \text { On/ } \\ & \text { Off } \end{aligned}$ | Outgoing Particles | Description | Decayer |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.0000100000 | * | on | $\phi, K^{+}, \rho^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\phi, K^{*+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $a_{1}^{+}(1260), K^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $a_{1}^{+}(1260), K^{+}, \pi^{-}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $a_{1}^{0}(1260), K^{0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $a_{1}^{0}(1260), K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $K^{*+}, f_{0}(980), \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $K^{* 0}, f_{0}(980), \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\pi^{0}, \pi^{0}, K_{0}^{*+}(1430)$, | Wecay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\pi^{+}, \pi^{0}, K_{0}^{* 0}(1430)$ | Wecay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\pi^{+}, \pi^{+}, K_{0}^{* 0}(1430)$ | 円̄ecay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\rho^{-}, K_{0}^{*+}(1430), \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{0}, K_{0}^{*+}(1430), \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{+}, K_{0}^{*+}(1430), \pi-$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{+}, K_{0}^{* 0}(1430), \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{0}, K_{0}^{* 0}(1430), \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\omega, K^{+}, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\omega, K^{0}, \pi^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\rho^{0}, K^{+}, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\rho^{0}, K^{0}, \pi^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\rho^{-}, K^{0}, \pi^{+}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\rho^{-}, K^{+}, \pi^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\rho^{+}, K^{+}, \pi^{-}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\rho^{+}, K^{0}, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\rho^{+}, K^{0}, \pi^{+}, \pi^{-}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\pi^{0}, \pi^{0}, K^{*+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\pi^{-}, \pi^{+}, K^{*+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\pi^{+}, \pi^{0}, K^{* 0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching Ratio | Rating | $\begin{aligned} & \hline \text { On/ } \\ & \text { Off } \end{aligned}$ | Outgoing Particles | Description | Decayer |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.0000100000 | * | on | $\pi^{+}, \pi^{-}, K^{* 0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\omega, K^{*+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\omega, K^{* 0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{0}, K^{*+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{0}, K^{* 0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{+}, K^{* 0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{-}, K^{*+}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{+}, K^{*+}, \pi^{-}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{0}, a_{0}^{+}(980), \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{-}, a_{0}^{+}(980), \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{+}, a_{0}^{0}(980), \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\omega, f_{0}(980), \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{0}, f_{0}(980), \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{+}, f_{0}(980), \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $a_{1}^{+}(1260), \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $a_{1}^{+}(1260), \pi^{+}, \pi^{-}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $a_{1}^{-}(1260), \pi^{+}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $a_{1}^{0}(1260), \pi^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $a_{1}^{+}(1260), f_{0}(980)$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $a_{1}^{+}(1260), \omega$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $a_{1}^{+}(1260), \rho^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\omega, \rho^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\omega, \rho^{0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{+}, \rho^{-}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{+}, \rho^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{0}, \rho^{0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $K^{+}, K_{0}^{* 0}(1430), K$ | ${ }^{0}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $K^{+}, \bar{K}_{0}^{* 0}(1430), K$ | ${ }^{0}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching <br> Ratio | Rating | On/ <br> Off | Outgoing <br> Particles | Description |  |
| :---: | :---: | :---: | :--- | :--- | :--- |
| 0.0000100000 | $*$ | on | $K^{+}, K^{+}, K_{0}^{*-}\left(1430\right.$ Decay of $B^{+}$with branching ratio taken |  |  |
| from EvtGen. |  |  |  |  |  |$\quad$ Herwig::Hw64::DecayM1

Table 1: The decay modes of the $B^{+}$(continues).

| Branching <br> Ratio | Rating | $\begin{gathered} \hline \text { On/ } \\ \text { Off } \end{gathered}$ | Outgoing Particles | Description | Decayer |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.0000100000 | * | on | $\rho^{+}, K^{+}, \pi^{-}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{+}, K^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\pi^{0}, \pi^{0}, K^{*+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\pi^{-}, \pi^{+}, K^{*+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\pi^{+}, \pi^{0}, K^{* 0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{0}, K^{*+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{+}, K^{* 0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $f_{0}(980), \pi^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{+}, a_{0}^{0}(980)$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{+}, f_{0}(980)$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\pi^{+}, \pi^{0}, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\pi^{-}, \pi^{+}, \pi^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000100000 | * | on | $\rho^{+}, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{+}, \pi^{+}, \pi^{-}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\omega, \pi^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000100000 | * | on | $\rho^{0}, \pi^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000091000 | * | on | $\rho^{0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000090000 | * | on | $\phi, K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000086000 | * | on | $\rho^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000085000 | * | on | $f_{0}(980), K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000060000 | * | on | $D^{*+}(2010), K^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000059000 | * | on | $\omega, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000055000 | * | on | $\pi^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000052000 | * | on | $\rho^{0}, K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000051000 | * | on | $\omega, K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000050000 | * | on | $K^{+}, K_{1}^{0}(1400), \bar{K}$ | , Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000050000 | * | on | $K^{+}, K^{0}, K_{1}(1400$ | ${ }^{5}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000050000 | * | on | $K^{+}, K_{0}^{* 0}(1430),$ | ${ }^{0}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching <br> Ratio | Rating | On/ <br> Off | Outgoing <br> Particles | Description |  |
| :---: | :---: | :---: | :--- | :--- | :--- |
| 0.0000050000 | $*$ | on | $K^{+}, \bar{K}_{0}^{* 0}(1430), K^{0}$ Decay of $B^{+}$with branching ratio taken |  |  |
| from EvtGen. |  |  |  |  |  |$\quad$ Hecayer $\quad$ Herwig::Mambo::Mamb

Table 1: The decay modes of the $B^{+}$(continues).

| Branching Ratio | Rating | $\begin{aligned} & \text { On/ } \\ & \text { Off } \end{aligned}$ | Outgoing <br> Particles | Description | Decayer |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.0000050000 | * | on | $\omega, \rho^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000050000 | * | on | $\rho^{+}, \rho^{0}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000050000 | * | on | $K^{0}, \bar{K}^{0}, K^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000050000 | * | on | $K^{+}, K^{-}, K^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000050000 | * | on | $\phi, K^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000050000 | * | on | $K^{* 0}, a_{0}^{+}(980)$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000050000 | * | on | $K^{*+}, a_{0}^{0}(980)$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000050000 | * | on | $\pi^{0}, \pi^{0}, \eta, K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000050000 | * | on | $\pi^{+}, \pi^{-}, \eta, K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000050000 | * | on | $\pi^{+}, \eta, \pi^{0}, K^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000050000 | * | on | $\omega, K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000050000 | * | on | $\omega, K^{0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000050000 | * | on | $\rho^{0}, K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000050000 | * | on | $\rho^{0}, K^{0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000050000 | * | on | $\rho^{+}, K^{0}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000050000 | * | on | $\pi^{0}, \eta, K^{*+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000050000 | * | on | $\pi^{+}, \eta, K^{* 0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000050000 | * | on | $\pi^{+}, \eta, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000050000 | * | on | $\pi^{-}, \pi^{+}, \pi^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000050000 | * | on | $\rho^{+}, \pi^{0}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000050000 | * | on | $\omega, \pi^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000050000 | * | on | $\rho^{0}, \pi^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000049000 | * | on | $K^{+}, \pi^{-}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000048000 | * | on | $\eta, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000042000 | * | on | $\eta^{\prime}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000040000 | ** | on | $a_{0}^{0}(980), \tau^{+}, \nu_{\tau}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000030000 | * | on | $\phi, \phi, K^{*+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000030000 | * | on | $\phi, \phi, K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching <br> Ratio | Rating | $\begin{gathered} \hline \text { On/ } \\ \text { Off } \end{gathered}$ | Outgoing Particles | Description | Decayer |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.0000030000 | * | on | $K^{*+}, K^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000026000 | * | on | $\eta, K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000023000 | * | on | $f_{2}(1270), \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayMl |
| 0.0000022000 | * | on | $\rho^{0}(1450), \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $K^{+}, K_{1}^{0}(1400), K^{0},$ | Øecay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $K^{+}, K^{0}, \bar{K}_{1}(1400)^{0}$ | ${ }^{1}$ Décay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $\bar{K}^{0}, K^{0}, K_{1}^{+}(1400),$ | Blecay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $K^{0}, K^{0}, K_{1}(1400)^{0},$ | , Dècay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $K^{0}, \bar{K}^{0}, K_{1}^{+}(1400),$ | Blecay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $K^{0}, \bar{K}^{0}, K_{1}^{0}(1400)$ | Đecay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $K^{+}, K^{+}, K_{1}(1400)^{c}$ | ${ }^{0}$ Dēcay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $K^{+}, K^{+}, K_{1}^{-}(1400)$ | Drecay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $K^{-}, K^{+}, K_{1}^{+}(1400)$ | Drecay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $K^{-}, K^{+}, K_{1}^{0}(1400),$ | ,मृécay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $\phi, K_{1}^{+}(1400), \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $\phi, K_{1}^{0}(1400), \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $K^{+}, K_{0}^{* 0}(1430), K^{0}$ | ${ }^{0}$ Déćcay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $K^{+}, K_{0}^{* 0}(1430), K^{0}$ | ${ }^{D}$ Décay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $K^{+}, K^{+}, K_{0}^{*-}(1430$ | Déay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $K^{-}, K^{+}, K_{0}^{*+}(1430$ | Dex́ay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $\phi, K_{0}^{*+}(1430), \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $K^{0}, K^{0}, K^{+}, \eta^{\prime}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $K^{+}, K^{-}, K^{+}, \eta^{\prime}, \pi^{0}$ | ${ }^{0}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $\phi, K^{+}, \eta^{\prime}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $K^{*+}, f_{0}(980), \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $\pi^{0}, \pi^{0}, K_{0}^{*+}(1430)$ | ゆecay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $\pi^{+}, \pi^{0}, K_{0}^{* 0}(1430)$ | 叩ecay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $\rho^{0}, K_{0}^{*+}(1430), \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching <br> Ratio | Rating | On/ <br> Off | Outgoing <br> Particles | Description | Decayer |
| :---: | :---: | :---: | :--- | :--- | :--- |
| 0.0000020000 | $*$ | on | $\rho^{+}, K_{0}^{* 0}(1430), \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Hw64::DecayMl |
| 0.0000020000 | $*$ | on | $\pi^{0}, \pi^{0}, \pi^{0}, K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | $*$ | on | $\pi^{+}, \pi^{-}, \pi^{0}, K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | $*$ | on | $\pi^{+}, \pi^{-}, \pi^{+}, K^{+}, \pi$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching Ratio | Rating | $\begin{aligned} & \hline \text { On/ } \\ & \text { Off } \end{aligned}$ | Outgoing Particles | Description | Decayer |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.0000020000 | * | on | $\rho^{0}, \pi^{+}, \pi^{-}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Maml |
| 0.0000020000 | * | on | $\omega, \rho^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $\rho^{+}, \rho^{0}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $K^{-}, K^{+}, K_{1}^{+}(14$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $\phi, K_{1}^{+}(1400)$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $K^{0}, K^{0}, K^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $K^{+}, K^{-}, K^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $\phi, K^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $\pi^{0}, \pi^{0}, \eta^{\prime}, K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $\pi^{0}, \eta, \eta, K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $\pi^{+}, \eta, \eta, K^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $\omega, K^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $\rho^{0}, K^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $\rho^{+}, K^{0}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $\pi^{0}, \eta^{\prime}, K^{*+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $\eta, \eta, K^{*+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $\rho^{0}, a_{0}^{+}(980)$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $\pi^{+}, \eta^{\prime}, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $\pi^{+}, \eta, \eta, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Maml |
| 0.0000020000 | * | on | $\pi^{-}, \pi^{+}, \pi^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000020000 | * | on | $\rho^{+}, \pi^{0}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $\rho^{+}, \eta, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $\omega, \pi^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $\rho^{0}, \pi^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $K_{0}^{*+}(1430), \bar{K}^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $K_{0}^{*+}(1430), \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $K^{*+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000020000 | * | on | $K_{0}^{* 0}(1430), K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching <br> Ratio | Rating | On/ <br> Off | Outgoing <br> Particles | Description |  |
| :---: | :---: | :---: | :--- | :--- | :--- |
| 0.0000020000 | $* *$ | on | $f_{0}(1370), \tau^{+}, \nu_{\tau}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::SemiLeptonicScalar:: |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching <br> Ratio | Rating | On/ <br> Off | Outgoing <br> Particles | Description | Decayer |
| :---: | :---: | :---: | :---: | :--- | :--- |
| 0.0000010000 | $*$ | on | $\phi, K_{1}^{+}(1400), \eta$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Hw64::DecayMl |
| 0.0000010000 | $*$ | on | $K^{*+}, K^{0}, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000010000 | $*$ | on | $K^{+}, K^{* 0}, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000010000 | $*$ | on | $K^{0}, K^{* 0}, \pi^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching <br> Ratio | Rating | On/ <br> Off | Outgoing <br> Particles | Description |  |
| :---: | :---: | :---: | :--- | :--- | :--- |
| 0.0000010000 | $*$ | on | $K^{*}, K^{*+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Hecayer |
| 0.0000010000 | $*$ | on | $K^{* 0}, K^{* 0}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Hw64::DecayMl |
| 0.0000010000 | $*$ | on | $\pi^{0}, \eta, \eta^{\prime}, K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000010000 | $*$ | on | $\pi^{0}, \pi^{0}, \eta^{\prime}, K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000010000 | $*$ | on | $\pi^{0}, \eta, \eta, K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000010000 | $*$ | on | $\pi^{0}, \pi^{0}, \eta, K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000010000 | $*$ | on | $\pi^{+}, \pi^{-}, \eta^{\prime}, K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000010000 | $*$ | on | $\pi^{+}, \pi^{-}, \eta, K^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000010000 | $*$ | on | $\pi^{+}, \eta, \eta, K^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching <br> Ratio | Rating | On/ <br> Off | Outgoing <br> Particles | Description | Decayer |
| :---: | :---: | :---: | :--- | :--- | :--- |
| 0.0000010000 | $*$ | on | $\rho^{+}, \pi^{+}, \pi^{-}, \eta$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000010000 | $*$ | on | $\rho^{-}, \pi^{+}, \pi^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000010000 | $*$ | on | $\rho^{-}, \pi^{+}, \pi^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000010000 | $*$ | on | $\omega, \pi^{+}, \eta^{\prime}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching Ratio | Rating | $\begin{gathered} \text { On/ } \\ \text { Off } \end{gathered}$ | Outgoing Particles | Description | Decayer |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.0000010000 | * | on | $\pi^{0}, \eta, \eta^{\prime}, K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000010000 | * | on | $\omega, K^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $\rho^{0}, K^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $\eta, \eta^{\prime}, K^{*+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $a_{0}^{-}(980), \pi^{+}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $a_{0}^{+}(980), \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $a_{0}^{0}(980), \pi^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $\pi^{+}, \eta^{\prime}, \eta, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000010000 | * | on | $\pi^{+}, K^{0}, \bar{K}^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $K^{+}, \eta^{\prime}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $K^{+}, \eta, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $K^{+}, \eta, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $K^{+}, \pi^{0}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $K^{+}, \pi^{0}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $K^{+}, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $\pi^{+}, \eta, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $\pi^{+}, \eta, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $\pi^{+}, \pi^{0}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $\pi^{+}, \pi^{0}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $\pi^{+}, K^{0}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $\pi^{+}, K^{0}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $\pi^{+}, K^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM] |
| 0.0000010000 | * | on | $K^{+}, K^{0}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM] |
| 0.0000010000 | * | on | $K^{+}, \bar{K}^{0}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayMl |
| 0.0000010000 | * | on | $K^{+}, \bar{K}^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM] |
| 0.0000010000 | * | on | $K^{+}, K^{-}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM1 |
| 0.0000010000 | * | on | $a_{0}^{+}(980), \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayMl |
| 0.0000010000 | * | on | $a_{0}^{0}(980), \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM] |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching Ratio | Rating | $\begin{aligned} & \text { On/ } \\ & \text { Off } \end{aligned}$ | Outgoing Particles | Description | Decayer |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.0000010000 | * | on | $a_{0}^{0}(980), K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayMl |
| 0.0000010000 | * | on | $a_{0}^{+}(980), K^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $f_{0}(980), \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $\rho^{0}(1450), K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $\rho^{+}, K^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $\bar{K}^{0}, K^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $\phi, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $\omega, K^{*+}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $\rho^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000010000 | * | on | $K^{*+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000005740 | * | on | $K^{+}, \mu^{+}, \mu^{-}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000005740 | * | on | $K^{+}, e^{+}, e^{-}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000005400 | * | on | $D^{+}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000005400 | * | on | $D^{*+}(2010), \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000005000 | * | on | $K^{*+}, K^{0}, \eta, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000005000 | * | on | $K^{+}, \bar{K}^{* 0}, \eta, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000005000 | * | on | $\bar{K}^{0}, K^{+}, \rho^{0}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000005000 | * | on | $K^{0}, K^{0}, \rho^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000005000 | * | on | $K^{+}, K^{-}, \rho^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000005000 | * | on | $\phi, \pi^{+}, \eta, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000005000 | * | on | $\phi, \rho^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000005000 | * | on | $\bar{K}^{* 0}, K^{*+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000005000 | * | on | $K^{*+}, K^{0}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM1 |
| 0.0000005000 | * | on | $K^{+}, \bar{K}^{* 0}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000005000 | * | on | $K^{0}, K^{+}, \pi^{0}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000005000 | * | on | $K^{0}, \bar{K}^{0}, \pi^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000005000 | * | on | $K^{+}, K^{-}, \pi^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000005000 | * | on | $\phi, \pi^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching Ratio | Rating | $\begin{aligned} & \hline \text { On/ } \\ & \text { Off } \end{aligned}$ | Outgoing Particles | Description | Decayer |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0.0000002000 | * | on | $K^{*+}, \bar{K}^{0}, \eta^{\prime}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000002000 | * | on | $K^{+}, K^{* 0}, \eta^{\prime}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Maml |
| 0.0000002000 | * | on | $\bar{K}^{0}, K^{+}, \pi^{0}, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Maml |
| 0.0000002000 | * | on | $\bar{K}^{0}, K^{+}, \pi^{+}, \pi^{-}, \pi$ | ${ }^{0}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Maml |
| 0.0000002000 | * | on | $K^{0}, \bar{K}^{0}, \pi^{+}, \pi^{0}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Maml |
| 0.0000002000 | * | on | $K^{0}, \bar{K}^{0}, \pi^{+}, \pi^{-}, \pi$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Maml |
| 0.0000002000 | * | on | $K^{+}, K^{-}, \pi^{+}, \pi^{0}, \pi$ | ${ }^{0}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Maml |
| 0.0000002000 | * | on | $K^{+}, K^{-}, \pi^{+}, \pi^{-}, \pi$ | ${ }^{+}$Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000002000 | * | on | $K^{0}, K^{-}, \pi^{+}, \pi^{+}, \pi$ | ${ }^{0}$ Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Maml |
| 0.0000002000 | * | on | $\bar{K}^{0}, K^{+}, \rho^{0}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Maml |
| 0.0000002000 | * | on | $K^{0}, \bar{K}^{0}, \rho^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000002000 | * | on | $K^{+}, K^{-}, \rho^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000002000 | * | on | $\phi, \pi^{+}, \eta^{\prime}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000002000 | * | on | $\phi, \rho^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000002000 | * | on | $K^{* 0}, K^{*+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000002000 | * | on | $K^{*+}, K^{0}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000002000 | * | on | $K^{+}, K^{* 0}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000002000 | * | on | $\bar{K}^{0}, K^{+}, \pi^{0}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000002000 | * | on | $K^{0}, \bar{K}^{0}, \pi^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000002000 | * | on | $K^{+}, K^{-}, \pi^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Maml |
| 0.0000002000 | * | on | $\phi, \pi^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000001900 | * | on | $K^{*+}, \tau^{+}, \tau^{-}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000001300 | * | on | $K^{+}, \tau^{+}, \tau^{-}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Hw64::DecayM |
| 0.0000001000 | * | on | $\bar{K}^{0}, K^{+}, \pi^{0}, \eta^{\prime}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000001000 | * | on | $K^{0}, K^{+}, \pi^{0}, \eta, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000001000 | * | on | $\bar{K}^{0}, K^{+}, \pi^{+}, \pi^{-}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000001000 | * | on | $K^{0}, K^{+}, \pi^{+}, \pi^{-}, \eta$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Maml |
| 0.0000001000 | * | on | $K^{0}, \bar{K}^{0}, \pi^{+}, \eta^{\prime}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken from EvtGen. | Herwig::Mambo::Mamb |

Table 1: The decay modes of the $B^{+}$(continues).

| Branching <br> Ratio | Rating | On/ <br> Off | Outgoing <br> Particles | Description | Decayer |
| :---: | :---: | :---: | :--- | :--- | :--- |
| 0.0000001000 | $*$ | on | $K^{0}, K^{0}, \pi^{+}, \eta, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000001000 | $*$ | on | $K^{+}, K^{-}, \pi^{+}, \eta^{\prime}, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000001000 | $*$ | on | $K^{+}, K^{-}, \pi^{+}, \eta, \pi^{0}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000001000 | $*$ | on | $K^{0}, K^{-}, \pi^{+}, \pi^{+}, \eta^{\prime}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000001000 | $*$ | on | $K^{0}, K^{-}, \pi^{+}, \pi^{+}, \eta$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Mambo::Mamb |
| 0.0000001000 | $*$ | on | $K^{-}, \pi^{+}, \pi^{+}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Hw64::DecayM] |
| 0.0000001000 | $*$ | on | $K^{+}, K^{+}, \pi^{-}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Herwig::Hw64::DecayMl |
| 0.0000000000 | $*$ | on | $e^{+}, \nu_{e}$ | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. | Decay of $B^{+}$with branching ratio taken <br> from EvtGen. |
| 0.0000000000 | $*$ | on | $\mu^{+}, \nu_{\mu}$ | Herwig::Hw64::DecayMl | Herwig::Hw64::DecayMl |

Table 1: The decay modes of the $B^{+}$.

The $B^{+}$decay modes are given in Table 1 and the total branching ratio is 0.99999999999999 .
There is no mass generator for the $B^{+}$. There is no width generator for the $B^{+}$.
The particle was checked by Peter Richardson at $8: 46: 58$ on the 16 th of May 2008. The most recently changed decay mode was modified at 8:44:59 on the 16th of May 2008. The particle data was last modified at 14:33:4 on the 15th of May 2008.

