

BDSOutputBase

```
# eventNumber  
# numberEventPerFile  
# outputFileNumber  
# filename
```

```
+ BDSOutputBase()  
+ ~BDSOutputBase()  
+ WriteHits()  
+ WriteEnergyLoss()  
+ WritePrimaryLoss()  
+ WritePrimaryHit()  
+ WriteTrajectory()  
+ WritePrimary()  
+ WriteHistogram()  
+ Commit()  
+ Write()
```



BDSOutputROOT

```
- theRootOutputFile  
- PrecisionRegionEnergyLossTree  
- EnergyLossTree  
- PrimaryLossTree  
- PrimaryHitsTree  
- x0  
- xp0  
- y0  
- yp0  
- z0  
- zp0  
- E0  
- t0  
- x_prod  
- xp_prod  
- y_prod  
- yp_prod  
- z_prod  
- zp_prod  
- E_prod  
- t_prod  
- x_lastScat  
- xp_lastScat  
- y_lastScat  
- yp_lastScat  
- z_lastScat  
- zp_lastScat  
- E_lastScat  
- t_lastScat  
- x  
- xp  
- y  
- yp  
- z  
- zp  
- E  
- t  
- X  
- Xp  
- Y  
- Yp  
- Z  
- Zp  
- s  
- weight  
- part  
- nev  
- pID  
- track_id  
- turnnumber  
- S_el  
- E_el  
- X_pl  
- Y_pl  
- Z_pl  
- S_pl  
- x_pl  
- y_pl  
- z_pl  
- E_pl  
- weight_pl  
- part_pl  
- turnnumber_pl  
- eventno_pl  
- X_ph  
- Y_ph  
- Z_ph  
- S_ph  
- x_ph  
- y_ph  
- z_ph  
- E_ph  
- weight_ph  
- part_ph  
- turnnumber_ph  
- eventno_ph  
- X_el_p  
- Y_el_p  
- Z_el_p  
- S_el_p  
- x_el_p  
- y_el_p  
- z_el_p  
- E_el_p  
- part_el_p  
- weight_el_p  
- turnnumber_el_p  
- eventno_el_p  
- volumeName_el_p
```

```
+ BDSOutputROOT()  
+ ~BDSOutputROOT()  
+ WriteHits()  
+ WriteEnergyLoss()  
+ WritePrimaryLoss()  
+ WritePrimaryHit()  
+ WriteTrajectory()  
+ WritePrimary()  
+ WriteHistogram()  
+ Commit()  
+ Write()  
- Init()  
- BuildSamplerTree()  
- WriteRootHit()
```