Corsika Reader

This file is created to read the Corsika binary data and transform it to *.txt* files to do the cluster analysis without using *ROOT 5*.

Prepare your Corsika environment

To transform your binary data file you need to use the **coast** library. To active **coast** library you need to do the following steps:

```
cd 'PATH-TO-CORSIKA-DIR'/corsika-77500
./coconut
```

when you run `./coconut` you install a Corsika executable to do the simulations with your preferred model options. To activate the **coast** library when **coconut** says:

```
options:   'YOUR-MODEL-OPTIONS'

 Which additional CORSIKA program options do you need ?
```

choose the "**d1**" option:

```
d1 - Inclined observation plane
```

and finish your installation. Then, you are able to use the **coast** library.

Prepare your Makefile executable

To transform your binary file you need to have the following files in a the same directory

```
CorsikaReader.cc
CorsikaReader.o
Makefile
Binary_File
```

Note: You need to change a code line inside the *MakeFile* as follows:

```
ifndef COAST_DIR
  COAST_DIR='PATH-TO-CORSIKA-DIR'/corsika-77500
endif
```

Now you are ready to transform your binary file.

Transform your Binary_File

To transform your binary file you only need to run the next command line

```
make reader
```

That creates an executable file `CorsikaReader` to run and transform your *Binary_File*.

Then execute:

```
./CorsikaReader Binary_File
```

This output two *.txt* files with the particle and showers information

```
Binary_File_particle.txt
Binary_File_showers.txt
```