

Useful Tools



Thanks to Shujie and Zhihong

TRI_Tools.h

- Located in scripts dir. of our repo.
 - Also need TRI_Main.h
- Plenty of useful functions
 - gGet_RunNoChain
 - Send a string a coma separated values
 - Returns, a vector of those values.
 - Great for this 1220,1221,1222,1223,1502,1503....
 - GgetTree
 - Send a vector of run numbers
 - Returns a Tchain of the T Trees from those files
 - Also, can define the name of tree to chain.....
 - Works great in conjunction with gGet_RunNoChain

Rootalias.h

- LoadRun

- Many versions of this, send run number, Tree name, and path.
 - Works great if you have a few locations of root files
 - Just send run number and it will search through locations define in the PATHS variable
- Returns a TChain of that run number
 - You can add to that chain using TChain::Add(LoadRun....)

- GetTarget

- Use the run number to return the target
- It will let you know if the target was moved during the run.

[jbane@utkjlabs ~]\$ analyzer

```

*****
*
*           W E L C O M E to the
*       H A L L A  C++  A N A L Y Z E R
*
* Release      1.7.0-devel      May 01 2018
* Based on ROOT 6.08/00      Nov 4 2016
*
*           For information visit
*       http://hallaweb.jlab.org/podd/
*
*****

```

analyzer [0] .L TRI_Main.h

analyzer [1] .L TRI_Tools.h

analyzer [2] vector<Int_t> RunNumsVec = gGet_RunNoChain("1222,1223,1224,1225")

RunNoChain is 1222 1223 1224 1225

(std::vector<Int_t> &) { 1222, 1223, 1224, 1225 }

analyzer [3] RunNumsVec[1]

(__gnu_cxx::__alloc_traits<std::allocator<int> >::value_type) 1223

analyzer [5] gGet

gGetTree

gGet_InputFile_Var

gGet_RunNoChain

gGet_TargetInfo

analyzer [5] gGetTree(RunNumsVec)

T->Add(/v/lustre2/expphy/volatile/halla/triton/Marathon_Rootfiles/pass1/tritium_1222.root)

Add /v/lustre2/expphy/volatile/halla/triton/Marathon_Rootfiles/pass1/tritium_1222_1.root

Add /v/lustre2/expphy/volatile/halla/triton/Marathon_Rootfiles/pass1/tritium_1222_2.root

Add /v/lustre2/expphy/volatile/halla/triton/Marathon_Rootfiles/pass1/tritium_1222_3.root

T->Add(/v/lustre2/expphy/volatile/halla/triton/Marathon_Rootfiles/pass1/tritium_1223.root)

Add /v/lustre2/expphy/volatile/halla/triton/Marathon_Rootfiles/pass1/tritium_1223_1.root

Add /v/lustre2/expphy/volatile/halla/triton/Marathon_Rootfiles/pass1/tritium_1223_2.root

Add /v/lustre2/expphy/volatile/halla/triton/Marathon_Rootfiles/pass1/tritium_1223_3.root

T->Add(/v/lustre2/expphy/volatile/halla/triton/Marathon_Rootfiles/pass1/tritium_1224.root)

Add /v/lustre2/expphy/volatile/halla/triton/Marathon_Rootfiles/pass1/tritium_1224_1.root

Add /v/lustre2/expphy/volatile/halla/triton/Marathon_Rootfiles/pass1/tritium_1224_2.root

Add /v/lustre2/expphy/volatile/halla/triton/Marathon_Rootfiles/pass1/tritium_1224_3.root

T->Add(/v/lustre2/expphy/volatile/halla/triton/Marathon_Rootfiles/pass1/tritium_1225.root)

Add /v/lustre2/expphy/volatile/halla/triton/Marathon_Rootfiles/pass1/tritium_1225_1.root

Add /v/lustre2/expphy/volatile/halla/triton/Marathon_Rootfiles/pass1/tritium_1225_2.root

Add /v/lustre2/expphy/volatile/halla/triton/Marathon_Rootfiles/pass1/tritium_1225_3.root

(TChain *) 0x53912d0

analyzer [6]

Lets not reinvent the wheel!!!

- TRI_Tools.h & TRI_Main.h
 - <https://github.com/JeffersonLab/tritium>
 - <https://github.com/yezhihong/My-Tritium>
 - <https://github.com/yezhihong?tab=repositories>
- Rootalias.h
 - /home/a-onl/tritium/replay/scripts/rootalias.h
 - Pushed to repo?????
 - Only works with root 6!!!
- To use: just add `#include "file"` to scripts or load in your interactive root session

PLEASE SHARE!!!

- If you have some great tools or algorithms that **might** be helpful to us please share and share early
- Using git would be great for this, maybe add small ReadMe for any non intuitive functions or dependencies