Update!

Attempting to work on a universal Ar-replay on the farm this will then be modified for Tritium.

Shell script to request a run to be retrieved from tape.
- get_raw.sh or get_raw.sh run#
- The raw root file will be stored in /cache

- Forcing the replay script to use the DB provided in the directory.
- I will attempt to keep the DB up to date, from gitup

To use

- In order to force the use of the current DB, there is a kill switch in the replay code.
  - Use "replay.sh" to change to the correct DB. This will also begin the replay script.
    - You can use a run number as an argument.
    - I am having an issue get the "max event" argument also working, but having a small issue with it.
- Small issue: I can not figure out how to make the Gmp libraries work for everybody without compiling them.
  - You can compile them individually or use the script libs.sh to compile all the libraries in the libraries directory.
- Please in your spare time try to test its usability: Read the ReadMe
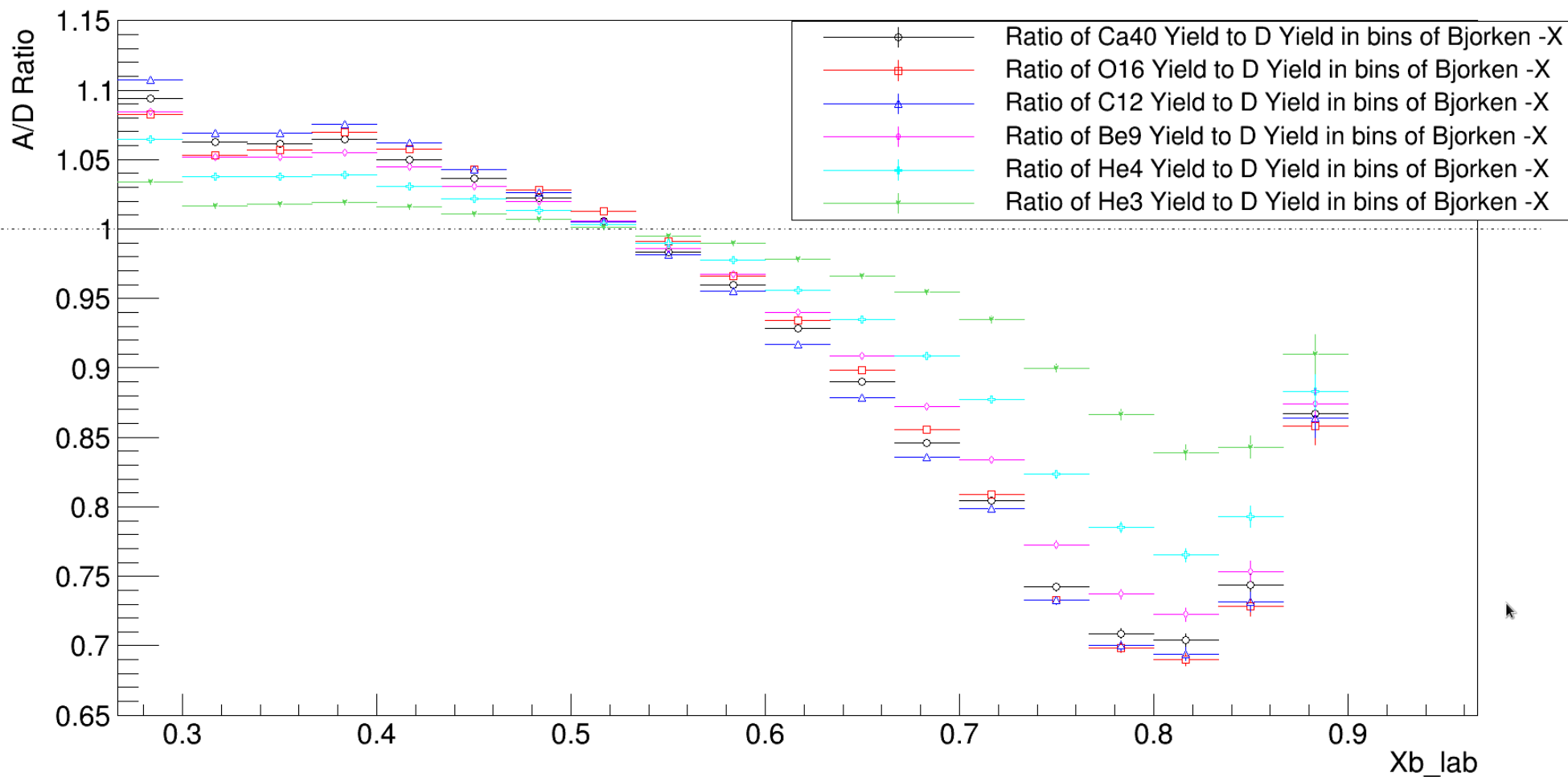 - If it does not work, please let me know. If you fix anything THANK YOU. Let me know what you did!

If you would like to have the script. It should work in any directory once you copy it.
You may also add this alias to your shell log in file

alias get_raw "/lustre/expphy/work/halla/triton/Ar_replay/get_raw.sh '\!:1'"

```
ifarm1101>
ifarm1101> pwd
/lustre/expphy/work/halla/triton/Ar_replay
ifarm1101>
ifarm1101>
ifarm1101>
ifarm1101> ls
coinc.cuts              env.sh                  libs.sh~        replay_coinc.C      replay_online_C.d   rootlogon.C
coinc.odef              get_raw.sh              Makefile~       replay_coinc.C~     replay.sh           ScratchROOTfiles
coinc.odef~             get_raw.sh~             ole             replay_coinc_C.d    replay.sh~          scripts
DB                      keepOldReplayCore64.so  onlineCOINC     ReplayCore64.C      replay_test.C       summaryfiles
deadtime.C              KJelastic.C             onlineGUI64     ReplayCore64.C~     replay_test.C~
def_coinc.h             LHRS.cuts               onlineLHRS      ReplayCore64_C.d    RHRS.cuts
def_coinc.h~            LHRS.odef               onlineRHRS      ReplayCore64_C.so   RHRS.odef
DT_Ar.dat               libraries               ReadMe          replay_norm.C       rootfiles
endcap_dummy_run_295.eps  libs.sh               ReadMe~         replay_online.C     root_hist
ifarm1101>
ifarm1101>
ifarm1101>
ifarm1101>
ifarm1101>
ifarm1101>
ifarm1101>
ifarm1101>
ifarm1101> sh get_r
get_raw.sh~* get_raw.sh*
ifarm1101> sh get_raw.sh 762
get request: 7871768
status: pending
/cache/halla/Ar40/raw/Ar40_762.dat.0 -> pending

An email will be sent to your jlab user name @ jbane@jlab.org once the 762 file has been added to the cache
```
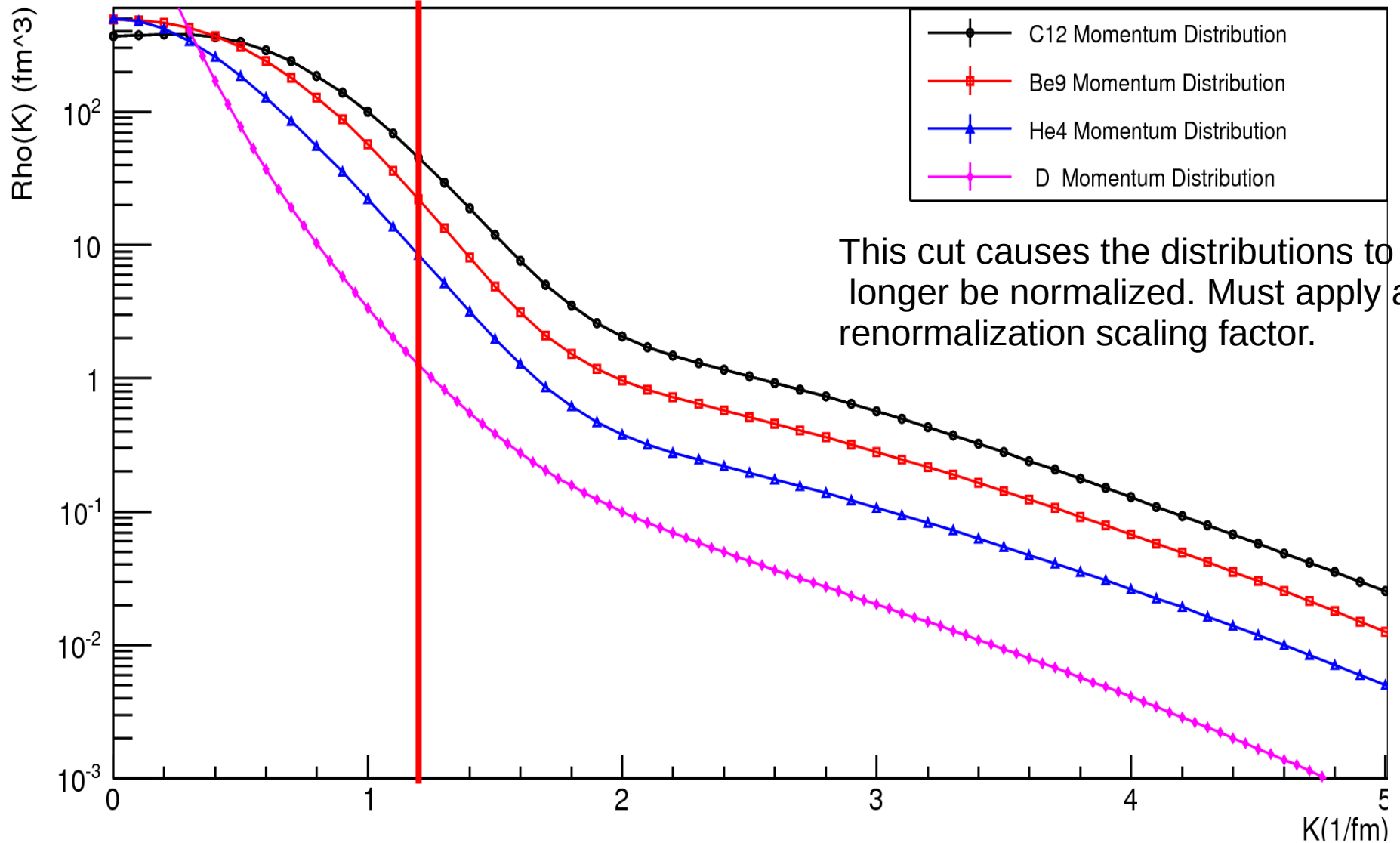
Send email to the user's jlab email:

The file will be added to the cache:
/cache/halla/Ar40/raw/Ar40_run#.dat.0

EMC simulation

Cut on High Momentum

Momentum Distribution

This cut causes the distributions to no longer be normalized. Must apply a renormalization scaling factor.

EMC simulation

Ratios of simulated Yield in bins of Bjorken-X with high momentum Protons(k>0.25(GeV)
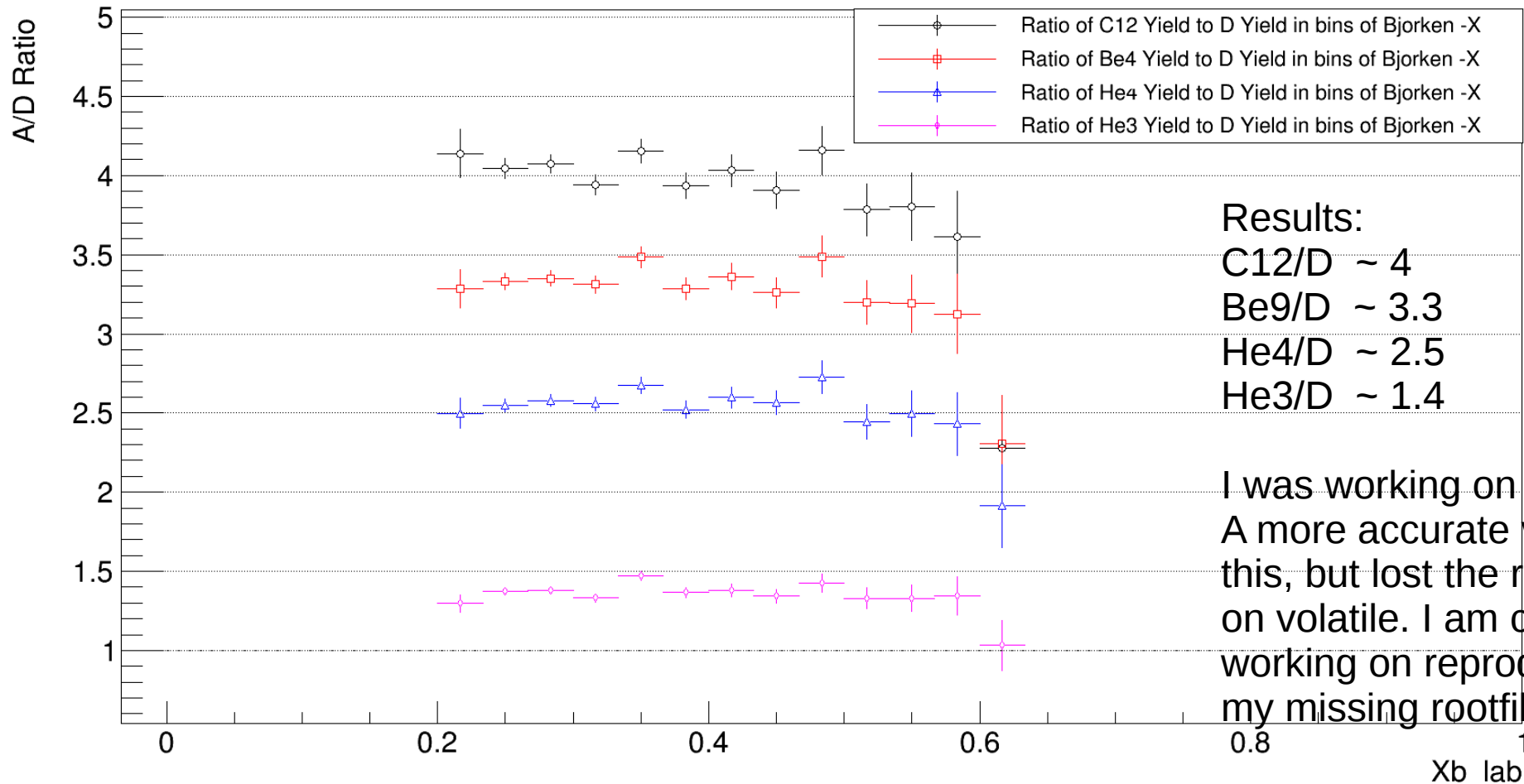
Results: Exp R:
C12/D ~ 4   ~3.6
Be9/D ~ 3.3   ~2.8
He4/D ~ 2.5   ~2.6
He3/D ~ 1.4   ~1

I was working on getting
A more accurate value for
this, but lost the rootfiles
on volatile. I am currently
working on reproducing
my missing rootfiles.

Experimental results from Nadia Fomin: arXiv:1209.1621
Pulled from graph – values for a_2 are approximations
a_2 = ratio of A/D cross sections in the high-momentum region
Data from E12-06-105

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