



An Online GUI for ROOT/C++ Analyzers

- *Motivation*
- *Overview of Configuration*
- *Demonstration*

Bryan Moffit



The College of _____
WILLIAM & MARY



Motivation

New C++ Analyzer for Hall A

- ★ Kumacs/Macros for Online Replay
- ★ Transition for Shift Workers



Motivation

New C++ Analyzer for Hall A

- ★ Kumacs/Macros for Online Replay
- ★ Transition for Shift Workers

New Online GUI

- ★ Similar to Previous Online Replay
- ★ Easy to Configure
- ★ Analyzer Independent
- ★ Additional Features



The Code and Configuration Files

Run within analyzer/ROOT:

```
analyzer [0] .x online.C+( ``detectorR`` )
```

Configuration Files:

```
detectorR.cfg
```

```
optics.cfg
```

```
physics.cfg
```

```
run1236.cfg
```

```
...
```



Command: rootfile

Command:

```
rootfile <Name of Root File>
```

Examples:

```
rootfile Afile.root
```

```
rootfile /adaql5/work1/rootfiles/e94107_1236.root
```



Command: definecut

Command:

```
definecut <Cut Name> <Cut Description>
```

Examples:

```
definecut beamcut bcm1>10000
```

```
definecut cut1 fEvtHdr.fEvtType==1&&bcm1>10000
```



Command: newpage

Command:

`newpage <Page Dimensions> <Log Y-Axis>`

Examples:

`newpage 4`

`newpage 2 2`

`newpage logy`

`newpage 2 6 logy`



Newpage options

Newpage Options:

`title <Page Title>`

`<Tree Variable> <Cut>`

`<Histogram>`

`macro <Macro FileName>`

Example:

```
newpage 2 6 logy
  title R-arm S1 ADCs
  R.s1.la[0] R.s1.la[0]>0&&R.s1.la[0]<5000&&cut1
  Rs1la0
  macro fit_cerenkov.C
```


Demonstration!

So... Let's See It!!





Conclusion

- ★ Essentially ready for HyperNuclei
- Future Additional Features
 - ★ Online replay for older runs
 - ★ Redefine histogram limits & bin size
 - ★ Your suggestions?!?