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manTree SFrame GRL instructions

Installation

Start with a clean shell & setup sframe. Then you need to checkout the package:

```
cd $SFRAME_DIR
svn co svn+ssh://svn.cern.ch/repos/atlasoff/DataQuality/GoodRunsLists/trunk GoodRunsLists
```

You will need myusername@svn.cern.ch if your cern username is different to your manchester one. If you want to take a tagged version, e.g. 00-00-91, the command is like:

```
cd $SFRAME_DIR
svn co svn+ssh://svn.cern.ch/repos/atlasoff/DataQuality/GoodRunsLists/tags/GoodRunsLists-00-00-91
```

Now you need to compile (after patching the makefile):

```
cd GoodRunsLists/cmt
patch Makefile.Standalone -i /afs/hep.man.ac.uk/g/atlas/SFramePatches/Nov2010/GRL.Makefile.Standa
make -f Makefile.Standalone
```

This generates the shared library: GoodRunsLists/StandAlone/libGoodRunsLists.so

Now make a soft link of library libGoodRunsLists.so to your SFrame library folder

```
ln -s $SFRAME_DIR/GoodRunsLists/StandAlone/libGoodRunsLists.so $SFRAME_DIR/lib
```

Example: Adding GRL to SFrame analysis code

This example is for Single electron challenge and so assumes you have set up SFrame and manTree according to these instructions as well as topSel.

GRL Location at manchester

To find GRL look in directory :

```
/afs/hep.man.ac.uk/d/atlas-neutrino/ManTrees/data10/GRL/top/
```

This GRL for top channel for periods A-H. If you need a GRL to that is not in /afs/hep.man.ac.uk/d/atlas-neutrino/ManTrees/data10/GRL/top/ then following instructions for generating GRLs.

Generating GRL

For full instructions instructions and

<https://atlas-top-grls.web.cern.ch/atlas-top-grls/xmlGRL/ReadMe.txt> [here].

To use the GRL generator click [here](#). There are four flags to set:

- Configuration file (for semi+dileptonic channels use StandardGRL.top_allchannels_7TeV)
- Project tag (put in period you which to generat GRL for)
- Cool folder (this can be found <https://twiki.cern.ch/twiki/bin/view/AtlasProtected/DataPeriods> [here]] for each period.
- DQ tag (set as LBSUMM)

After setting these flags click submit and the GRL will be downloaded to your personal computer.

To work in SFrame add GRL to config directory (SFrame package)/config/ and follow instructions below.

XML File

Add the library to the config XML file topSel/config/TopSingleEle_config.xml

```
<JobConfiguration JobName="TopSingleEleJob" OutputLevel="INFO">  
  <Library Name="libGoodRunsLists"/>
```

Source Code

To initialize:

```
void TopESel::BeginCycle() throw(SError) {  
  m_grl_reader.AddXMLFile("GRL/grl-100903-noprescaled_A-F2.xml");  
  m_grl_reader.AddXMLFile("GRL/grl-G1-G5.xml");  
  bool check = m_grl_reader.Interpret();  
  if(!check) {  
    m_logger << WARNING << "Problem in GRL reader" << SLogger::endmsg;  
  } else {  
    m_logger << INFO << "GRL Reader Interpret() returned true" << SLogger::endmsg;  
  }  
  m_grl = m_grl_reader.GetMergedGoodRunsList();  
}
```

```
m_logger << INFO << "Initialized GRL " << m_grl.GetSuggestedName().Data() << SLogger::endmsg;
}
```

In:

Call `m_grl` and ask if event is in the GRL by passing Run Number & LumiBlock:

```
i.e bool result = m_grl.HasRunLumiBlock( m_evinfo->RunNumber(), m_evinfo->LumiBlock() );
```

Header

Add following

```
#include "GoodRunsLists/TGoodRunsListReader.h"
#include "GoodRunsLists/TGoodRunsList.h"

/// GRL
Root::TGoodRunsListReader m_grl_reader;
Root::TGoodRunsList m_grl;
```

MAKEFILE

Add:

```
INCLUDES += -I$(SFRAME_DIR)/GoodRunsLists
```

```
-- JohnAlmond - 27-Oct-2010, MarkOwen - 22-Nov-2010
```

This topic: AtlasSandbox > SFrameGRL

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