

New Features in Atlantis

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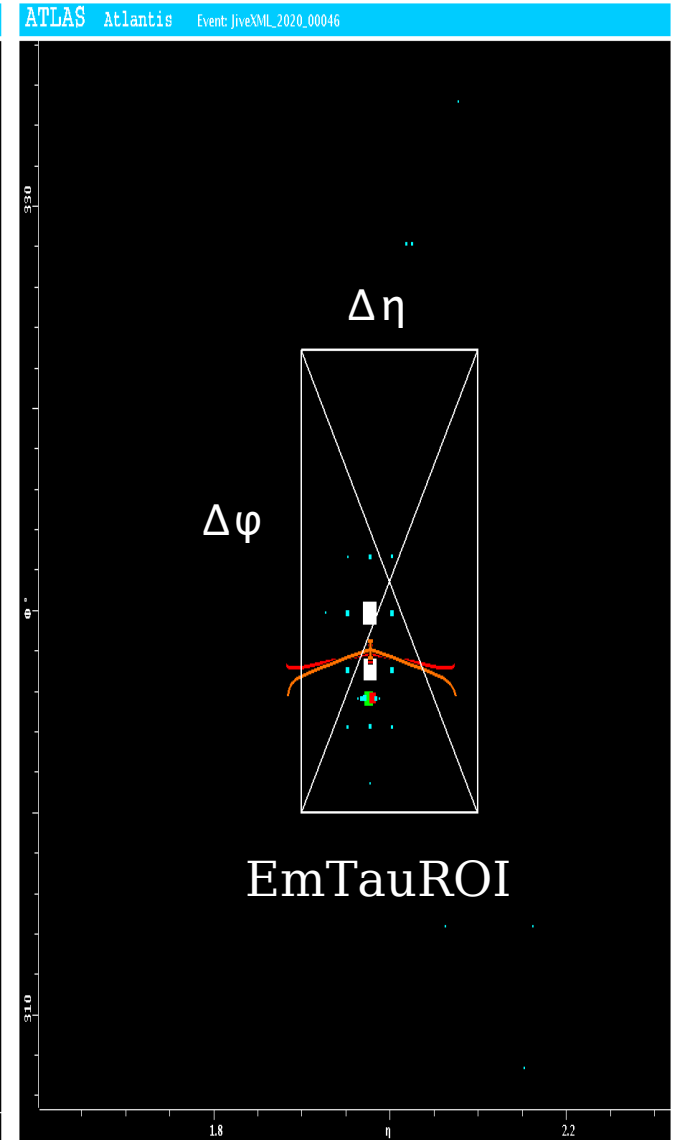
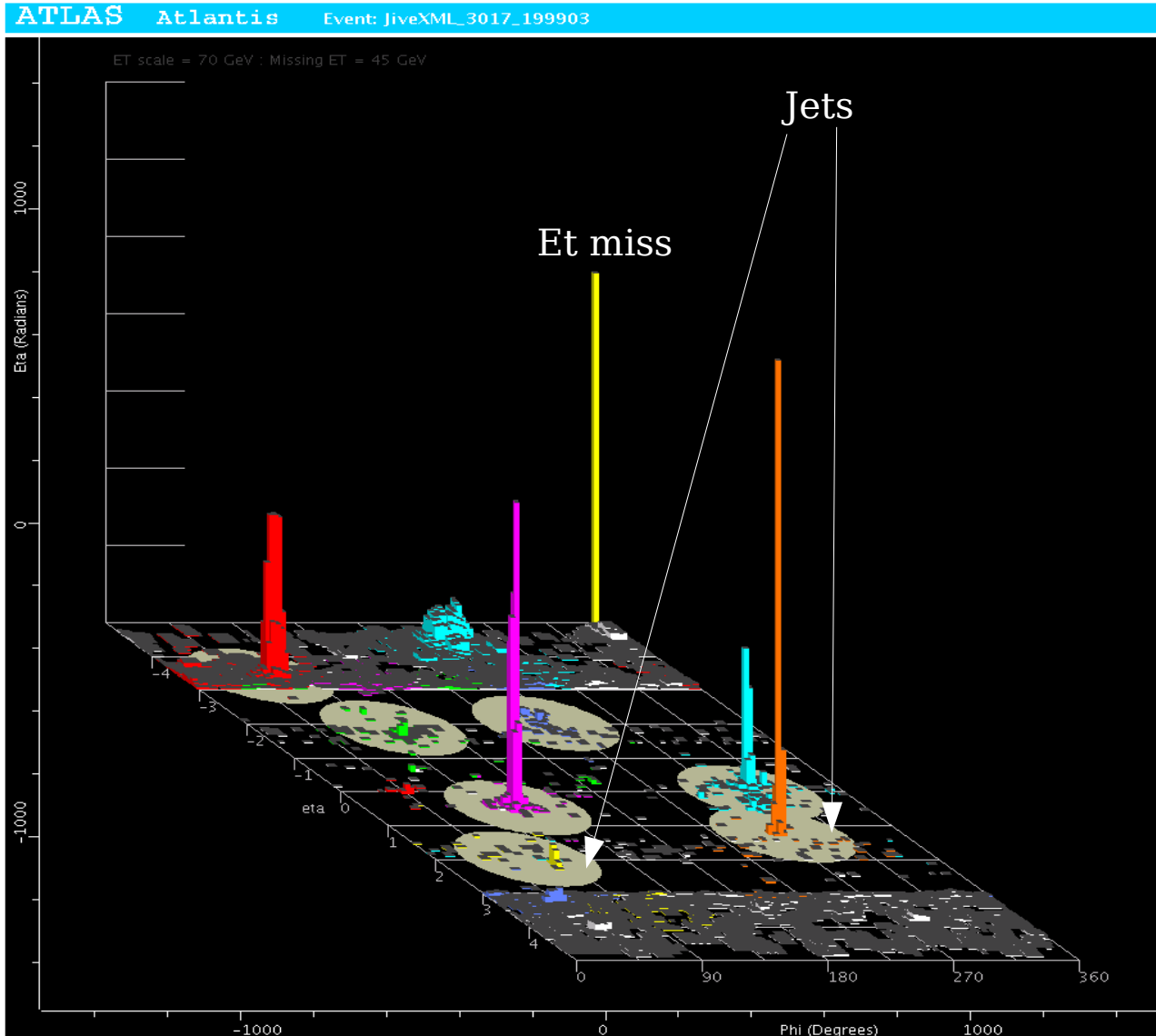
Outline - features since 10/12/2004

- DetDesc and Graphics SW review preparation
 - Documentation (user / developer's)
 - CVS clean-up, migration to AtlantisJava module
 - JiveXML webpage update **www.hep.ucl.ac.uk/atlas/JiveXML/JiveXML.shtml**
- Calo community requests
 - lego plot (now improved)
 - log scale
 - colour coding, grey scale
- Muon community requirements (meeting on 22/04)
 - More detailed info on hits and tracks
 - Simulated tracks from MuonEntryRecord
- new datatypes: ET mis, EmTauROI, JetROI
- Improved GUI
- Commissioning support
- Online data access
 - Online events from JiveXML server (old)
 - Interactive Athena (new)
- Future plans

Calo improvements

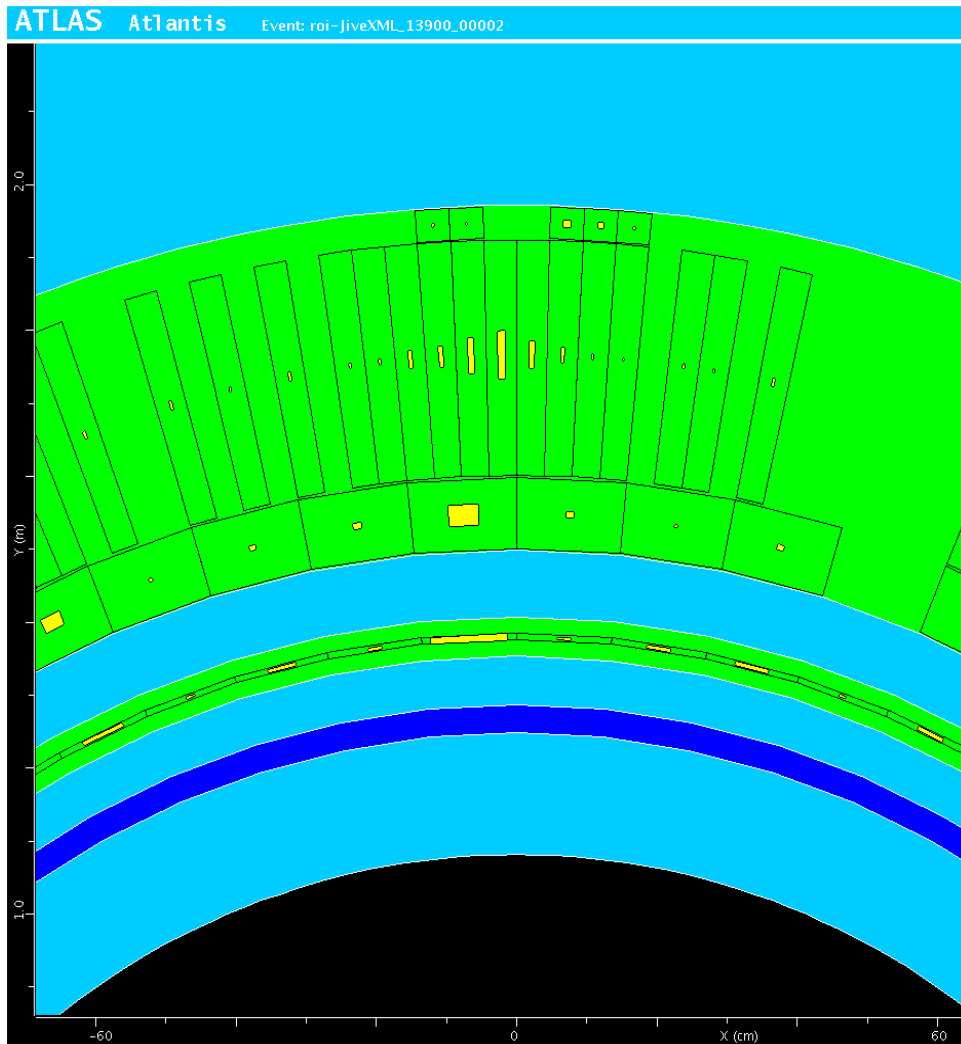
Lego plot view with ET mis, Jets, etc

EmTauROI, JetROI

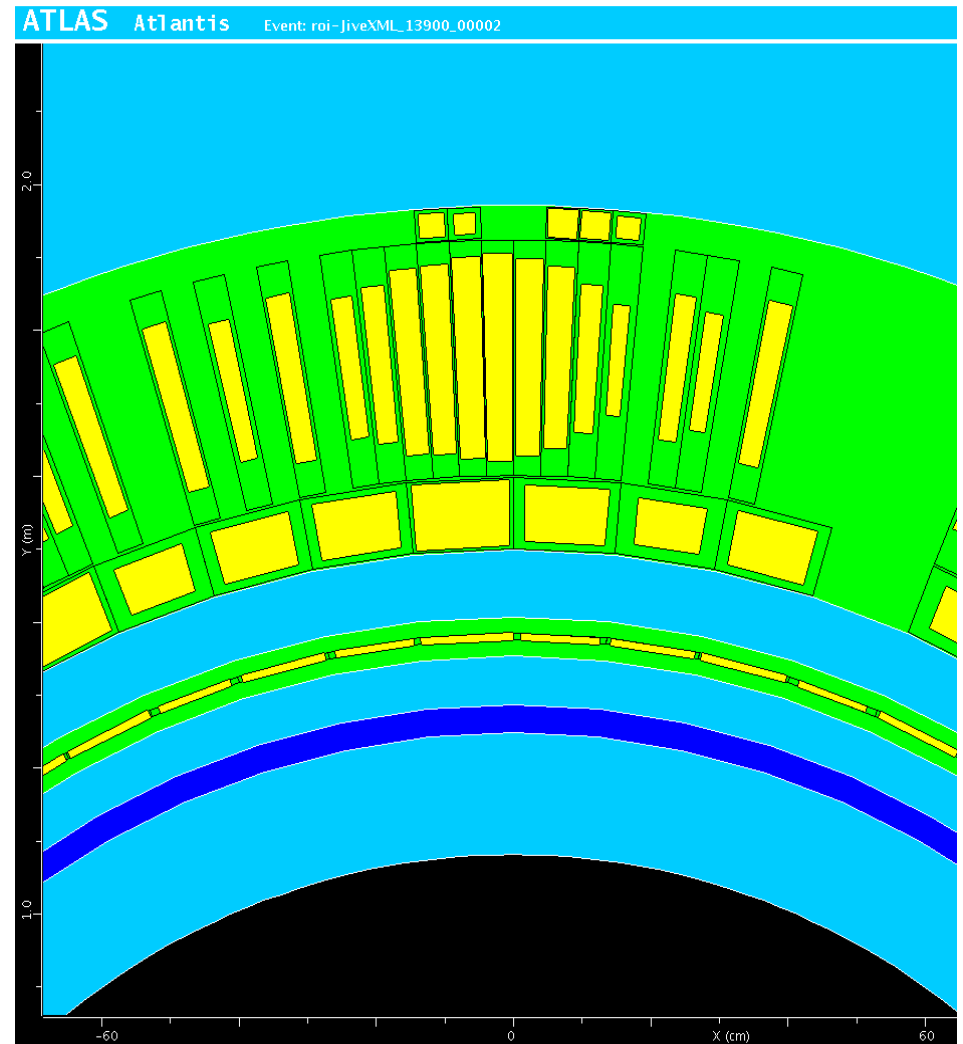


Calo improvements (2)

Linear energy scale

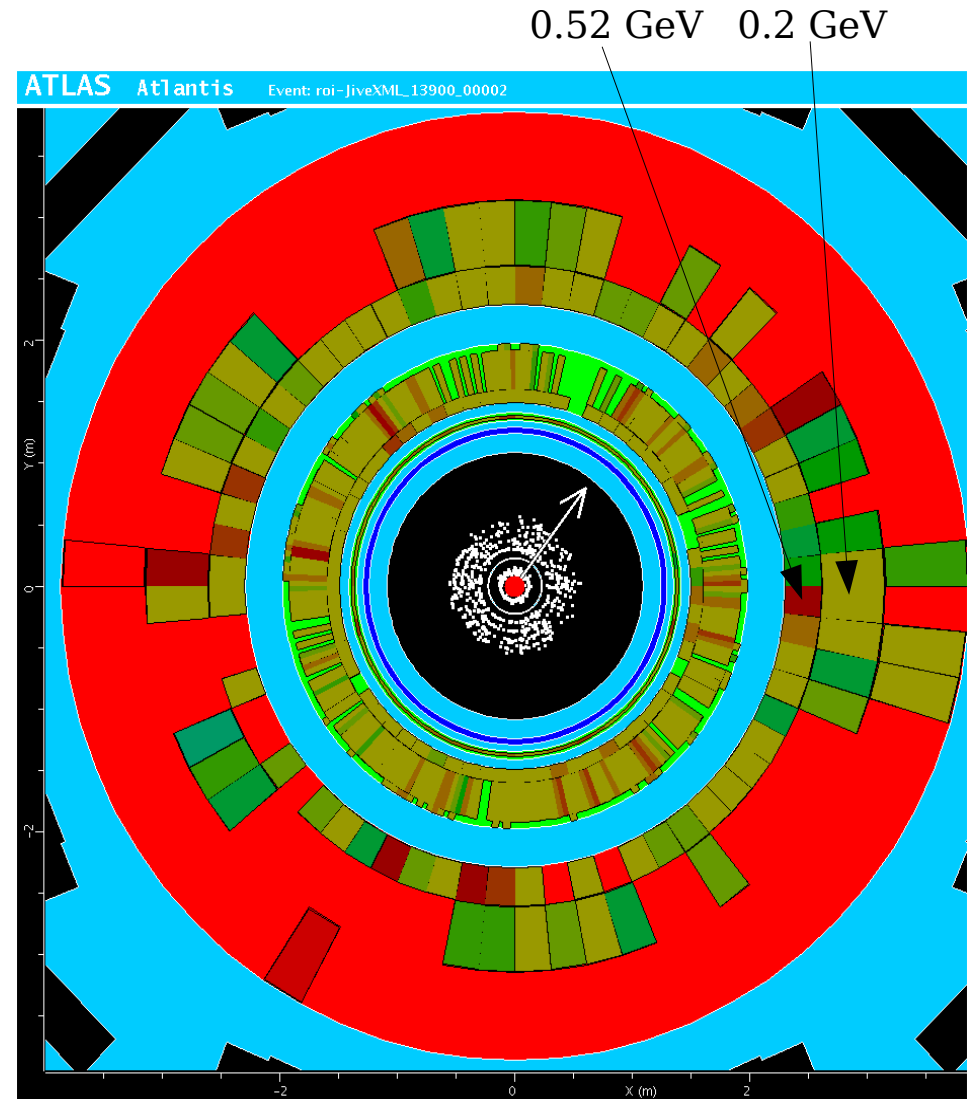
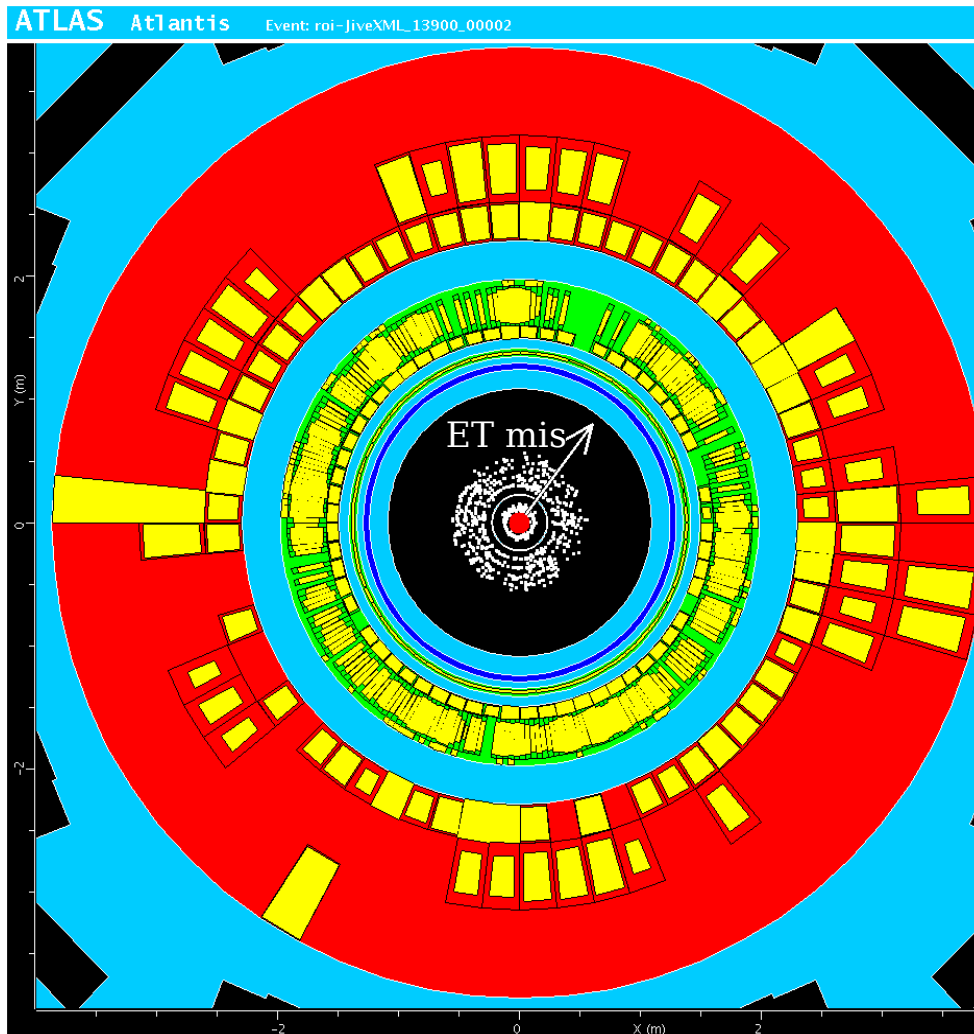


Logarithmic energy scale



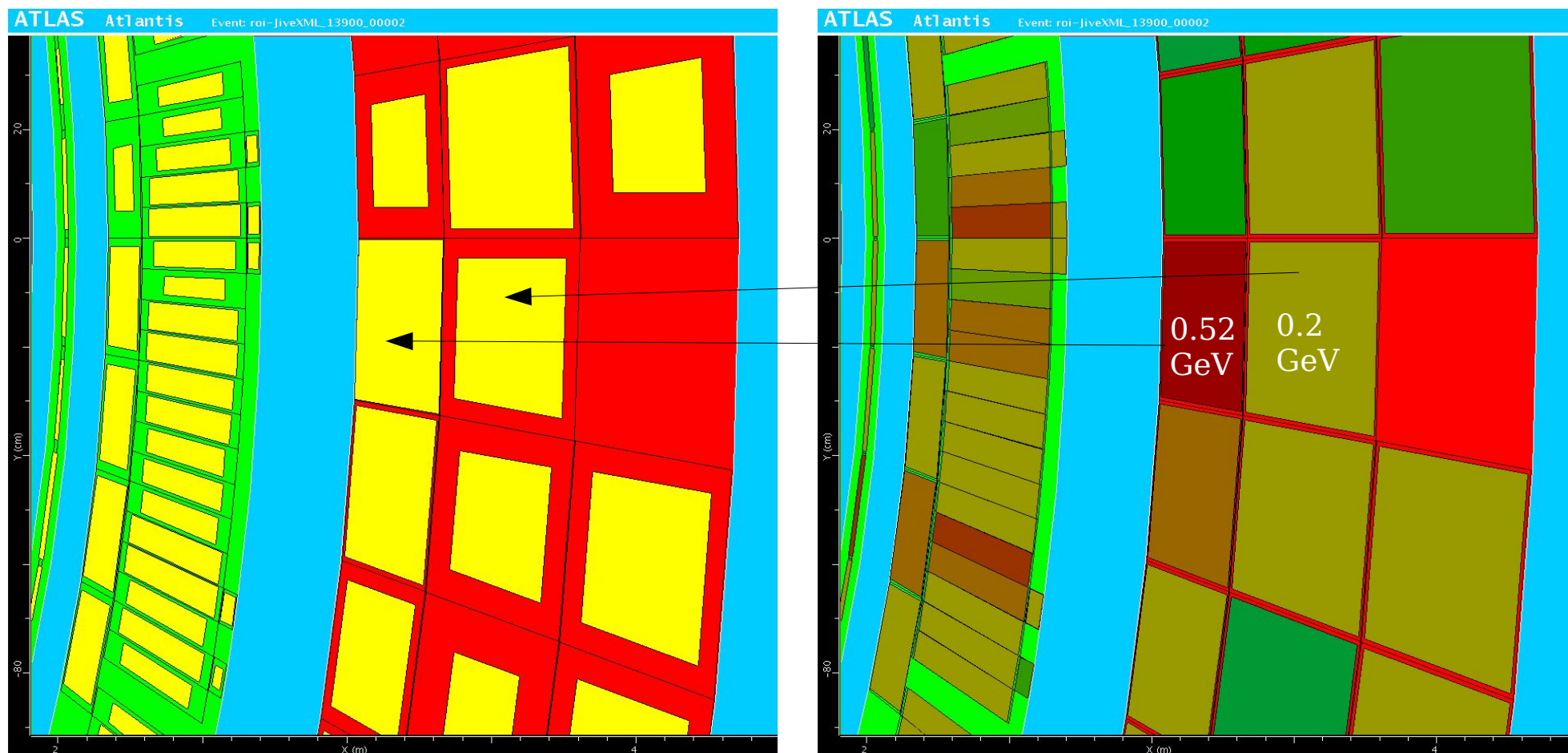
Calo improvements (3)

LAr, TILE – constant / energy colour coding with log scale



Calo improvements (4)

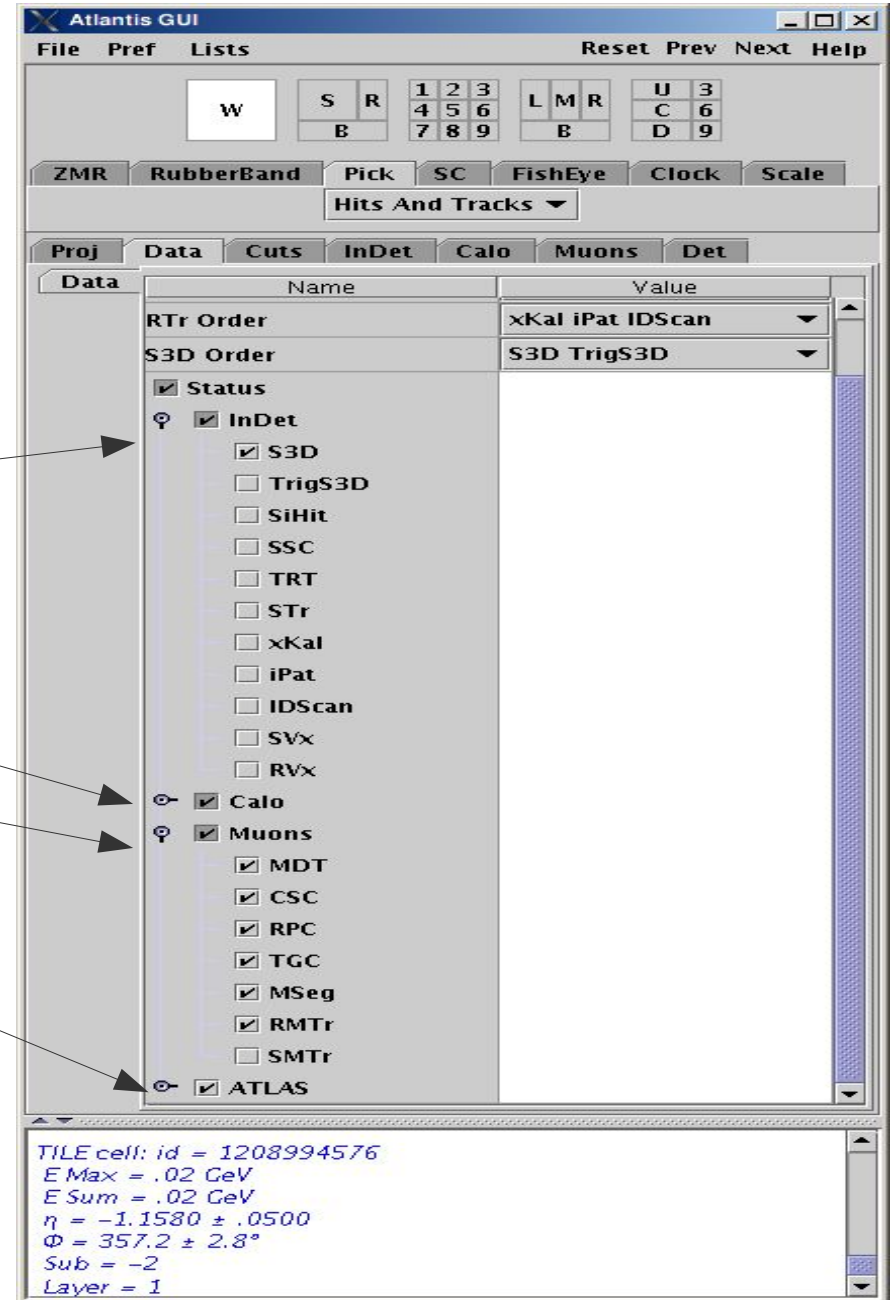
LAr, TILE – constant / energy colour coding with log scale, (grey colour coding also possible)



Improved GUI – grouped datatypes

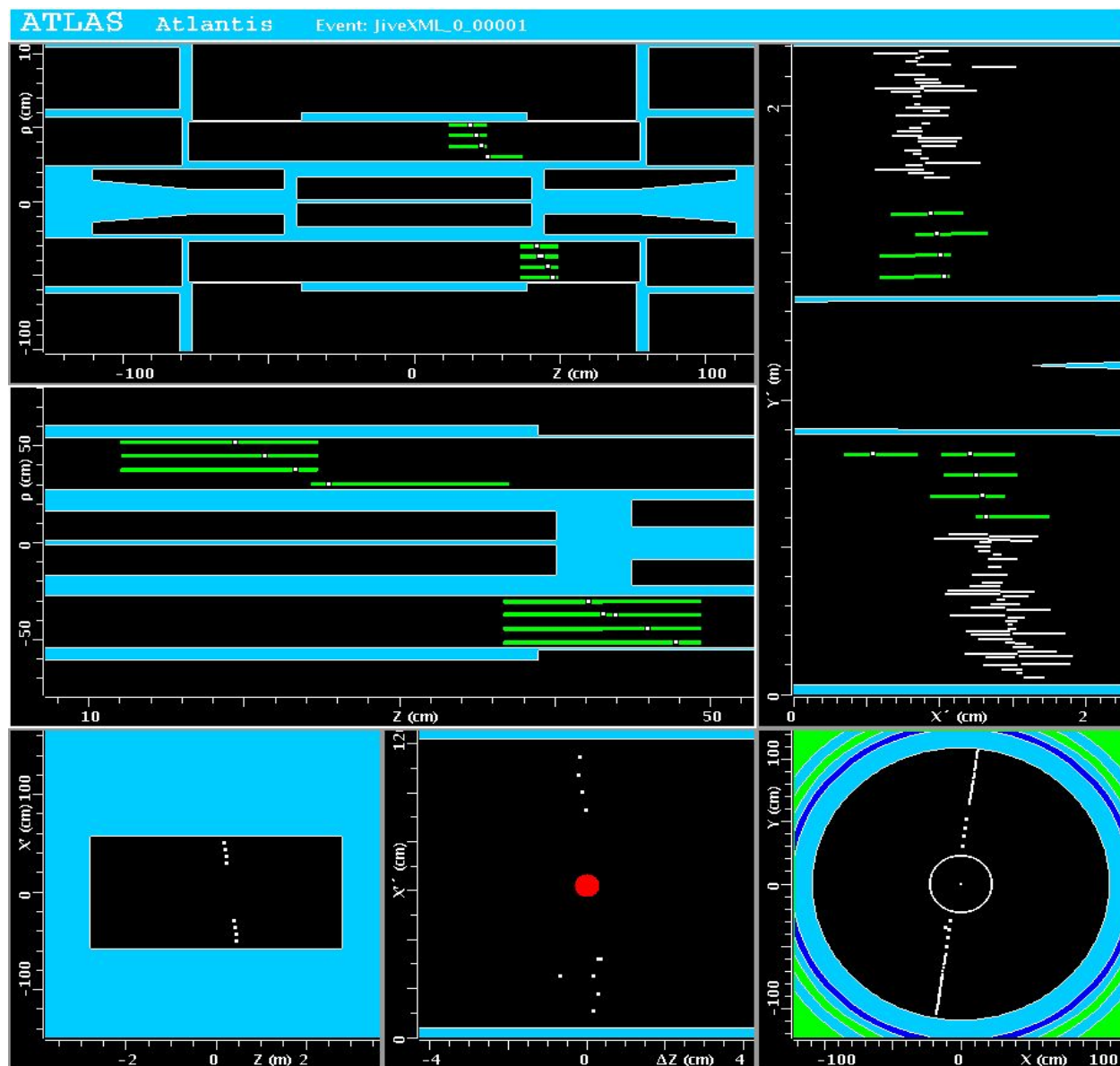
- Group wrap / unwrap
- Group switch on / off

InDet
Calo
Muon
ATLAS



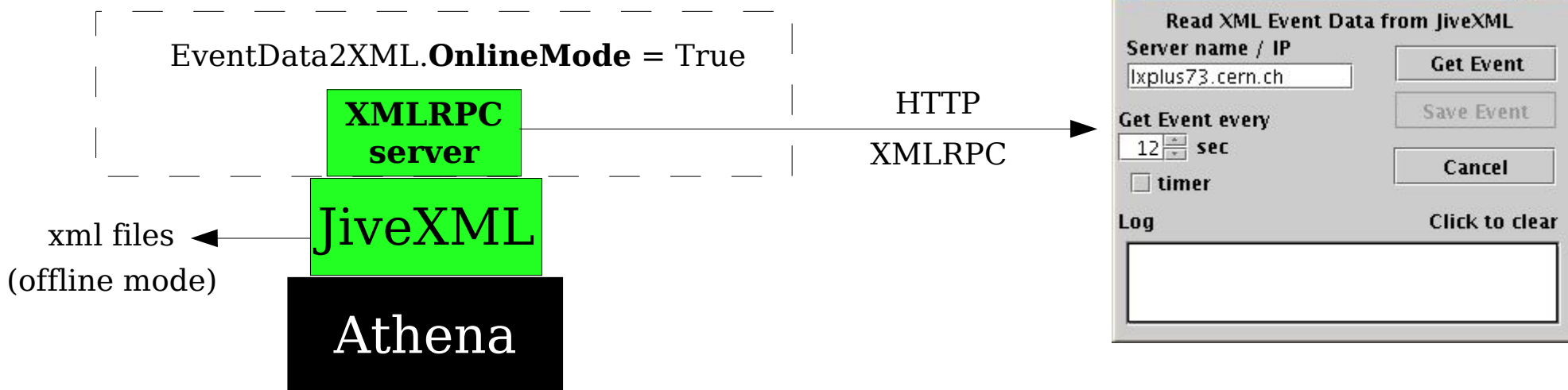
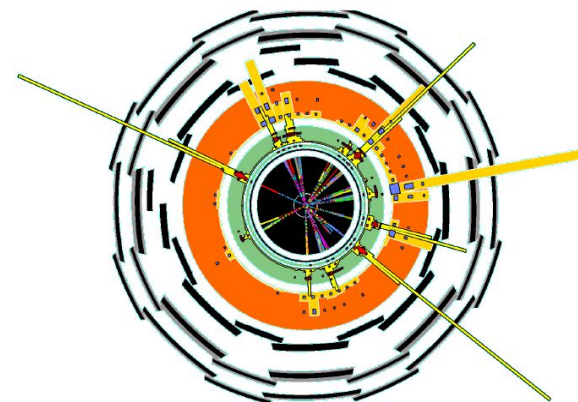
Commissioning support

- online mode
- simulated cosmics
- Nikos's talk



Online access – JiveXML server

- JiveXML (Athena) produces event XML data
- Atlantis reads the data
 - from files (local disk, URL)
 - online (JiveXML server, Interactive Athena)



Atlantis (XMLRPC Java client) calls JiveXML (XMLRPC C++ server)
On click / automatic event data requests
Implemented for data taking CTB 2004

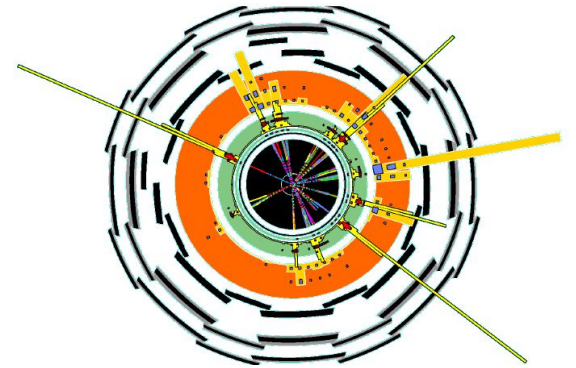
Online access - Interactive Athena

- Atlantis (XMLRPC Java client) calls InteractiveServer.py (XMLRPC Python server) that drives Athena interactive prompt
- What is InteractiveServer.py?

Interactive Athena session

```
bash> athena -i <job_options.py>
athena> execfile ("InteractiveServer.py")
athena> server = InteractiveServer()
athena> server.start()
...
```

HTTP
XMLRPC



What can you do from Atlantis dialog?

- Execute remotely Athena commands
- Query / change job options
- Call .initialize(), .execute(), .finalize()
- Access “declaredProperty” in algorithms
- Require event data
- JiveXML can be now re-initialized, re-executed, but ...



Interactive Athena – example session

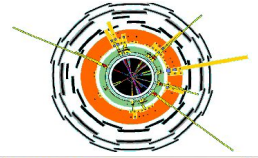
Interactive Athena session

```
...  
athena> server.start()
```

InteractiveServer.py

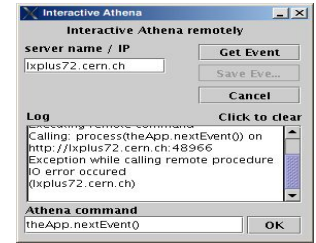
HTTP

XMLRPC



typed in the Atlantis Interactive Athena dialog

```
theApp.initialize()  
theApp.nextEvent()  
    <obtain event data> [with KtJets]  
EventData2XML.finalize()  
EventData2XML.JetRecJets = ConeJets  
EventData2XML.initialize()  
EventData2XML.execute()  
    <obtain event data> [with Cone Jets]
```



Calling `.finalize()` / `.initialize()` may, however, cause the crash of Athena if the algorithm is not properly constructed / initialized, resp. finalized / destructed **with respect to the interactive running** (solved in case of `EventData2XML` (i.e. `JiveXML`)).

Future plans

- Commissioning support
- Athena - Atlantis interactivity improvements
- Muon community wish-list
 - Residual plot (also for InDet)
 - Simulated Geant Muon hits
- Display AOD
- Missing Et in $\varphi\eta$ projection
- User support and training (tutorial today)
- Beginner's / advanced GUI
- Follow up other requests from ID/Calo/Muon
- Investigate 3D visualisation facilities

Future plans (2)

- Interactive Athena in Atlantis
 - pick few tracks and run vertex fitting or re-run jet clustering with different parameters (ranked high priority by the DetDesc and Graphics reviewers but this must be possible from the Athena interactive prompt first)
 - Asynchronous calling
 - Transmitting just fragments of events

Getting ...

- Getting Atlantis
 - Download from cern.ch/atlantis
 - Release
 - [/afs/cern.ch/atlas/offline/external/Atlantis](afs/cern.ch/atlas/offline/external/Atlantis)
 - [atlantis](#) (alias)
 - Development version:
 - [/afs/cern.ch/atlas/project/Atlantis/new](afs/cern.ch/atlas/project/Atlantis/new)
 - [atlantis_new](#) (alias)
 - CVS module (src): [offline/graphics/AtlantisJava](#)
- Getting support: atlantis.support@cern.ch

Questions?