
Subject: java.lang.OutOfMemoryError:
Posted by [zhaohw](#) on Tue, 11 Sep 2007 01:53:16 GMT
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Hello,

I newly met a memory problem when I am using jas3 to run a job.
The error message is :

java.lang.OutOfMemoryError: Requested array size exceeds VM limit.

Do you have any idea about this error ?

Thanks,
Haiwen

Subject: Re: java.lang.OutOfMemoryError:
Posted by [jfstrube](#) on Tue, 11 Sep 2007 01:57:51 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hello Haiwen,

this is a frequently asked question. Please refer to the JAS3 FAQ
for instructions.

Cheers,
Jan

Subject: Re: java.lang.OutOfMemoryError:
Posted by [tonyj](#) on Tue, 11 Sep 2007 02:29:41 GMT
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Hi, Jan is write about the FAQ, however in the case of

Requested array size exceeds VM limit.

another possibility is that you, or some code on your behalf, is asking for a crazily large array. Do
you know when the error occurs?

Tony

Subject: Reconstructing Events

Posted by [bjasper](#) on Fri, 14 Sep 2007 03:35:02 GMT

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I am but a lowly grad student trying to reconstruct some events using LCsim in JAS3

I'm producing events that have two tau jets plus some SUSY particles. Eventually, I want to be able to reconstruct the effective mass of the two jets + missing energy (from SUSY particles, neutrinos, etc.).

For the sake of learning how to use LCsim, I thought I'd try to fool around with some of the drivers included. For example, MCFastReconstructedParticleDriver (org.lcsim.mc.fast.reconstructedparticle.MCFastReconstructed ParticleDriver). Can anyone explain to me how I run this? I've tried going through the tutorials ("Creating a Driver using JAS3") and modifying them to use the packages that I want but I've had very little success. It likely has something to do with my lack of java knowledge...

If anybody could point me in the right direction for how to use something like "MCFastReconstructedParticleDriver", "RecoDriver", etc. to get information that I'll need (jet energy, stuff like that), I would be forever grateful.

Cheers,
Blair

Subject: Re: Reconstructing Events

Posted by [jfstrube](#) on Fri, 14 Sep 2007 07:14:28 GMT

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Hi Blair,

have you had a look at the examples?

<http://confluence.slac.stanford.edu/display/ilc/Working+with+a+Sample+Driver>

<http://confluence.slac.stanford.edu/display/ilc/lcsim+Tutorials>

All you need to do is install the org.lcsim plugin load the driver in JAS3, load your events and run the Driver. Most Drivers produce Histograms that you can look at.

I suggest to start with the Analysis101 Driver from the examples. See the first link above for

details.

Please don't hesitate to follow up if you have specific questions or suggestions how to improve the documentation.

Cheers,
Jan

Subject: Re: Reconstructing Events
Posted by [bjasper](#) on Mon, 17 Sep 2007 20:54:56 GMT
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using JAS3, I open the driver that I want to use
(lcsim/src/org/lcsim/mc/fast/reconstructedparticle/MCFastReconstructedParticleDriver.java)

I load my events and then try to compile MCFastReconstructedParticleDriver.java. JAS3 gives me the following compile errors:

```
=====
Quote: /usr/local/lcsim/src/org/lcsim/mc/fast/reconstructedparticle
/MCFastReconstructedParticleDriver.java:126: cannot find symbol
symbol : method getProtonEff()
location: class org.lcsim.mc.fast.reconstructedparticle.IDResolutionTables
    else if((abs(pdgid)== 2212) && (rand.nextDouble() < IDEff.getProtonEff()))

/usr/local/lcsim/src/org/lcsim/mc/fast/reconstructedparticle
/MCFastReconstructedParticleDriver.java:130: cannot find symbol
symbol : method getKaonEff()
location: class org.lcsim.mc.fast.reconstructedparticle.IDResolutionTables
    else if((abs(pdgid)== 321) && (rand.nextDouble() < IDEff.getKaonEff()))

/usr/local/lcsim/src/org/lcsim/mc/fast/reconstructedparticle
/MCFastReconstructedParticleDriver.java:152: cannot find symbol
symbol : method getWtChgTrkCal()
location: class org.lcsim.mc.fast.reconstructedparticle.IDResolutionTables
    MCFastReconstructedParticle rp = new MCFastReconstructedParticle(t, type, p,
m_tc.get(t), IDEff.getWtChgTrkCal());

/usr/local/lcsim/src/org/lcsim/mc/fast/reconstructedparticle
/MCFastReconstructedParticleDriver.java:152: internal error; cannot instantiate
org.lcsim.mc.fast.reconstructedparticle.MCFastReconstructedParticle. <init> at
org.lcsim.mc.fast.reconstructedparticle.MCFastReconstructedParticle to ()
```

```
MCFastReconstructedParticle rp = new MCFastReconstructedParticle(t, type, p,
m_tc.get(t), IDEff.getWtChgTrkCal());
```

=====

It says it can't find the symbol "getProtonEff()", which is from org.lcsim.mc.fast.reconstructedparticle.IDResolutionTables, but that is loaded at the top of the driver. Any suggestions?

Subject: Re: Reconstructing Events
Posted by [lima](#) on Tue, 18 Sep 2007 15:46:16 GMT
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Hi Blair,

I just loaded this MCFastReconstructedParticleDriver.java file in JAS3, and it compiles just fine for me. Are there any other compilation errors before these ones you showed? Do you have any modifications to the org.lcsim source code in your personal area? If not, I would suggest you to reinstall JAS3 and try again.

Guilherme

Subject: Re: Reconstructing Events
Posted by [bjasper](#) on Tue, 18 Sep 2007 17:48:22 GMT
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I just installed JAS3, LCsim, GeomConverter a few days ago so it's all a fresh installation. I haven't made any modifications to anything, just a standard installation. I can compile and run all of the org.lcsim examples. One interesting thing is that if I open MCFastReconstructedParticleDriver.java in NetBeans, it has a problem with the following imports:

```
import hep.physics.particle.Particle;
import hep.physics.particle.properties.ParticlePropertyManager;
import hep.physics.particle.properties.ParticlePropertyProvider;
import hep.physics.particle.properties.ParticleType;
```

Do these come with LCsim or did I overlook installing something?

Subject: Re: Reconstructing Events

Posted by [Dmitry Onoprienko](#) on Tue, 18 Sep 2007 19:28:18 GMT

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Hello Blair,

I believe your compilation problem (when you compile from JAS3) comes from the fact that you are using the version of org.lcsim that you downloaded through JAS3 plugin manager.

Try checking out the latest version of lcsim module from CVS, building it, and installing into Jas3.

Here are the tutorials that show how to do this:

Installing Maven with Netbeans Support

Building org.lcsim software

To resolve import problems in NetBeans, you need to tell the IDE where to find those packages. Maven will do this for you automatically if you use it to build the code.

Subject: Re: Reconstructing Events

Posted by [bjasper](#) on Tue, 18 Sep 2007 19:40:34 GMT

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Those are the instructions that I followed to install it. Perhaps I can give a few more details:

1. I installed JAS3 (v 0.8.3, build 1686, Feb 1 2007)
2. I installed Maven 1.0.2
3. Installed NetBeans 5.0 and the mevenide plugin
4. Checked out lcsim and geomconverter through CVS and built with maven, according to the directions at the website you pointed me to.
5. Finally, I installed the JAS3 plugins (org.lcsim, AIDA, WIRED, etc.)

I can try checking out the lcsim package again.

Subject: Re: Reconstructing Events

Posted by [Dmitry Onoprienko](#) on Tue, 18 Sep 2007 20:02:42 GMT

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If you build org.lcsim again, the newly created library may or may not overwrite the precompiled version, depending on your environment and whether you installed the plugin into "system" or "user" extensions directory. I recommend that you remove the org.lcsim plugin using plugin manager, then build org.lcsim from source and install it into Jas3.

Subject: Re: Reconstructing Events

Posted by [bjasper](#) on Tue, 18 Sep 2007 20:40:51 GMT

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I checked out lcsim and geomconverter again and removed the org.lcsim plugin from JAS3 (using the plugin manager). I used maven on geomconverter, and also for lcsim but then for lcsim I used "maven jas:install".

Now, I can compile MCFastReconstructedParticleDriver.java but when I try to load it I get a popup window with the following error:

```
Quote:java.lang.ClassNotFoundException: MCFastReconstructedParticleDriver
  at java.net.URLClassLoader$1.run(URLClassLoader.java:200)
  at java.security.AccessController.doPrivileged(Native Method)
  at java.net.URLClassLoader.findClass(URLClassLoader.java:188)
  at org.freehep.jas.extension.compiler.JASClassLoader.findClass(JASClassLoader.java:27)
  at java.lang.ClassLoader.loadClass(ClassLoader.java:306)
  at java.lang.ClassLoader.loadClass(ClassLoader.java:251)
  at org.freehep.jas.extension.compiler.JASClassManager.loadClass
(JASClassManager.java:141)
  at org.freehep.jas.extension.compiler.CompilerPlugin.loadReques
ted(CompilerPlugin.java:110)
  at org.freehep.jas.extension.compiler.CompilerPlugin.load(Compi
lerPlugin.java:121)
  at org.freehep.jas.extension.compiler.CompilerPlugin.access$100
(CompilerPlugin.java:45)
  at org.freehep.jas.extension.compiler.CompilerPlugin$2.fireActi
onPerformed(CompilerPlugin.java:224)
  at javax.swing.AbstractButton$Handler.actionPerformed(AbstractB
utton.java:2169)
  at javax.swing.DefaultButtonModel.fireActionPerformed(DefaultBu
ttonModel.java:420)
  at javax.swing.DefaultButtonModel.setPressed(DefaultButtonModel
.java:258)
  at javax.swing.AbstractButton.doClick(AbstractButton.java:302)
  at javax.swing.plaf.basic.BasicMenuItemUI.doClick(BasicMenuItem
UI.java:1000)
  at javax.swing.plaf.basic.BasicMenuItemUI$Handler.mouseReleased
(BasicMenuItemUI.java:1041)
  at java.awt.AWTEventMulticaster.mouseReleased(AWTEventMulticast
er.java:231)
  at java.awt.Component.processMouseEvent(Component.java:5501)
  at javax.swing.JComponent.processMouseEvent(JComponent.java:3135)
  at java.awt.Component.processEvent(Component.java:5266)
  at java.awt.Container.processEvent(Container.java:1966)
  at java.awt.Component.dispatchEventImpl(Component.java:3968)
  at java.awt.Container.dispatchEventImpl(Container.java:2024)
  at java.awt.Component.dispatchEvent(Component.java:3803)
  at java.awt.LightweightDispatcher.retargetMouseEvent(Container.j
ava:4212)
  at java.awt.LightweightDispatcher.processMouseEvent(Container.j
ava:3892)
```

```
at java.awt.LightweightDispatcher.dispatchEvent(Container.java: 3822)
at java.awt.Container.dispatchEventImpl(Container.java:2010)
at java.awt.Window.dispatchEventImpl(Window.java:1778)
at java.awt.Component.dispatchEvent(Component.java:3803)
at java.awt.EventQueue.dispatchEvent(EventQueue.java:463)
at org.freehep.jas.util.waitcursor.WaitCursorEventQueue.dispatch
hEvent(WaitCursorEventQueue.java:47)
at java.awt.EventDispatchThread.pumpOneEventForHierarchy(EventD
ispatchThread.java:242)
at java.awt.EventDispatchThread.pumpEventsForHierarchy(EventDis patchThread.java:163)
at java.awt.EventDispatchThread.pumpEvents(EventDispatchThread. java:157)
at java.awt.EventDispatchThread.pumpEvents(EventDispatchThread. java:149)
at java.awt.EventDispatchThread.run(EventDispatchThread.java:11 0)
```

At least it compiles now

Subject: Re: Reconstructing Events

Posted by [Dmitry Onoprienko](#) on Tue, 18 Sep 2007 21:49:22 GMT

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Are you loading it through File-Load... menu ?

If not, try it, and enter a fully qualified name of the class

(org.lcsim.mc.fast.reconstructedparticle.MCFastReconstructed ParticleDriver)

Subject: Re: Reconstructing Events

Posted by [bjasper](#) on Thu, 20 Sep 2007 17:25:59 GMT

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I am able to load it as you suggested (and it creates an "aida42114aida" folder in the left pane. However, when I try to run it, I get the following error:

Quote:java.lang.IllegalArgumentException: Missing value for Proton
at org.lcsim.conditions.ConditionsSetImplementation.getDouble(C
onditionsSetImplementation.java:49)
at org.lcsim.mc.fast.reconstructedparticle.IDResolutionTables.<init
>(IDResolutionTables.java:31)
at org.lcsim.mc.fast.reconstructedparticle.MCFastReconstructedP
articleDriver.process(MCFastReconstructedParticleDriver.java :85)
at org.lcsim.util.DriverAdapter.recordSupplied(DriverAdapter.ja va:74)

```
at org.freehep.jas.extensions.recordloop.MyChain.recordSupplied (MyChain.java:55)
at org.freehep.jas.extensions.recordloop.InteractiveRecordLoop.
supplyRecord(InteractiveRecordLoop.java:533)
at org.freehep.jas.extensions.recordloop.RecordLoopManager.run(
RecordLoopManager.java:66)
at java.lang.Thread.run(Thread.java:595)
```

Subject: Re: Reconstructing Events

Posted by [Dmitry Onoprienko](#) on Thu, 20 Sep 2007 19:06:43 GMT

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This happens because you are trying to run the driver on a data file corresponding to a detector whose description does not contain "Proton" property as a part of "IDEfficiency" conditions set (look at IDEfficiency.properties file inside the detector zip file), and the code does not provide any default value.

Subject: How to use hep.lcd classes in lcsim ?

Posted by [zhaohw](#) on Thu, 27 Sep 2007 00:25:28 GMT

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Hello,

I want to use some classes of hep.lcd (like I can use the classes of hep.physics) in my lcsim code, some thing like:

```
import hep.lcd.vertexing.zvtop.ZvVertex
```

But the java compiler doesn't find the hep.lcd package.
Can some expert tell me how to fix the problem ?

Thanks,

Haiwen

Subject: Re: How to use hep.lcd classes in lcsim ?

Posted by [NormanGraf](#) on Thu, 27 Sep 2007 03:21:44 GMT

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Hello Haiwen,

The hep.lcd packages have been deprecated for quite some time, and are no longer supported. You should be able to find most, if not all, of the functionality in the org.lcsim packages. Please let me know if you have any specific needs.

Norman

Subject: Re: How to use hep.lcd classes in lcsim ?
Posted by [zhaohw](#) on Thu, 27 Sep 2007 17:53:56 GMT
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Hello Norman,

Thanks a lot for your reply.

Now I find what maybe useful to me:

`lcsim/src/org/lcsim/recon/vertexing/`

I want to use such stuff to find jet/secondary vertices for b-tagging.

Previously I found in an user's analysis code both lcsim classes and hep.lcd classes are used. But I don't know these hep.lcd classes have been transplanted to lcsim already.

cheers,
Haiwen

Subject: Re: How to use hep.lcd classes in lcsim ?
Posted by [tonyj](#) on Thu, 27 Sep 2007 18:16:57 GMT
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Hi Haiwen, you should probably check the status of these classes with Jan Strube before trying to use them.

Tony

Subject: Two naive questions for using Driver

Hello,

I have two naive questions for using org.lcsim Driver class:

1. How to output some printout into a txt file ?

For example, I want to write out the values of a variable, say, the energies of particles, into a ASCII file, myfile.txt, How to do in a Driver ? Can you give me a code template ?

2. How to use a Driver in a Driver ?

As I know, If you want to use driver A and B in Driver C, the usual way is:

```
public class C extends Driver
{
    public C(){
        add(new A()); // just construct A
        add(new B()); // just construct B
    }
}
```

My question is: Supposing Driver A has a method A.setSomethingOnA(), how do I use this method in Driver C ?

Are the following code OK for this purpose ?

```
public class C extends Driver
{
    public C(){
        add(new A()); // just construct A
        A.setSomethingOnA(); //maybe very bad code
        add(new B()); // just construct B
    }
}
```

Or,

```
public class C extends Driver
{
```

```
public C(){
    Driver A = new Driver();
    A.setSomethingOnA();
    add(A());
    add(new B()); // just construct B
}
}
```

Thanks,
Haiwen

Subject: Re: Two naive questions for using Driver
Posted by [tonyj](#) on Thu, 27 Sep 2007 20:50:34 GMT
[View Forum Message](#) <> [Reply to Message](#)

zhaohw wrote on Thu, 27 September 2007 13:14Hello,

I have two naive questions for using org.lcsim Driver class:

1. How to output some printout into a txt file ?

For example, I want to write out the values of a variable, say, the energies of particles, into a ASCII file, myfile.txt, How to do in a Driver ? Can you give me a code template ?

Here is an example:

```
import java.io.FileWriter;
import java.io.IOException;
import java.io.PrintWriter;
import org.lcsim.event.EventHeader;
import org.lcsim.util.Driver;

public class PrintDriver extends Driver
{
    private PrintWriter writer;
    public PrintDriver() throws IOException
    {
        writer = new PrintWriter(new FileWriter("c:\\myFile.txt"));
    }
}
```

```
protected void process(EventHeader event)
{
    writer.println("Got "+event);
    super.process(event);
}
protected void suspend()
{
    // Not really necessary, but just to be safe.
    writer.flush();
    super.suspend();
}
}
```

Quote:

2. How to use a Driver in a Driver ?

As I know, My question is: Supposing Driver A has a method A.setSomethingOnA(), how do I use this method in Driver C ?

Your last example looks about right,

```
public class C extends Driver
{
    public C(){
        Driver a = new A();
        a.setSomethingOnA();
        add(a);
        add(new B()); // just construct B
    }
}
```

Subject: Re: Reconstructing Events

Posted by [bjasper](#) on Thu, 27 Sep 2007 21:59:09 GMT

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I ran a simulation using SLIC and the CDCAUG05 geometry. Inside of the zip file, I modified the IDEfficiency.properties file to include Proton: 1.0 (perhaps it should be 0.0 but nonetheless). I then

ran a simulation using this modified geometry and it still complained that it can't find Proton. Do I need to make the change somewhere else as well?

Subject: Re: Reconstructing Events

Posted by [Dmitry Onoprienko](#) on Mon, 01 Oct 2007 00:44:14 GMT

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The simulation output file does not embed the entire detector description. It only contains the detector tag, so when you run a reconstruction job, the actual zip file with conditions data is looked up by this tag. In your case, it is probably downloaded from <http://www.lcsim.org/detectors/> unless it's already in your local cache. If you would like to use a modified copy of the detector .zip file, try putting in into `~/.lcsim/detectors/` directory.

Subject: How to find jet vertex in lcsim ?

Posted by [zhaohw](#) on Mon, 01 Oct 2007 23:49:28 GMT

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Hello,

Can some expert tell me how to find jet vertex using the classes in `org.lcsim/recon/vertexing/zvtop4` ? Or is there any other tools for jet vertexing ? I am using Fast MC events.

Thanks a lot.

Haiwen

Subject: A simple question on using JetDriver

Posted by [zhaohw](#) on Wed, 03 Oct 2007 22:51:49 GMT

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Hello,

I am trying to use `org.lcsim.event.util.JetDriver` to perform jet finding on fastMC tracks. I want to do two jobs :

1. set YCut value for jet finding
2. force the jet finder to find only two jets in an event.

Supposing I have a piece of code :

```
JetDriver jetMaker = new JetDriver();  
jetMaker.[ how to do job 1 ?]  
jetMaker.[ how to do job 2 ?]  
...
```

Is there some way to fill the brackets (which solves my questions) ,or, please give me a piece of sample code ? Urgent!

Thanks a lot.

Haiwen

Subject: Re: How to find jet vertex in lcsim ?
Posted by [zhaohw](#) on Wed, 03 Oct 2007 23:01:54 GMT
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Dear Jan Strube,

Could you give me an example how to use the classes in org.lcsim.recon.vertexing.zvtop4 to find the vertex of a jet, i.e., a group of tracks ? Thanks a lot.

Haiwen

Subject: Re: A simple question on using JetDriver
Posted by [tonyj](#) on Wed, 03 Oct 2007 23:33:33 GMT
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zhaohw wrote on Wed, 03 October 2007 15:51

1. set YCut value for jet finding

```
double ycut = .001;  
JetDriver jetDriver = new JetDriver();  
jetDriver.setFinder(new JadeEJetFinder(ycut));
```

```
add(jetDriver);
```

Quote:

2. force the jet finder to find only two jets in an event.

```
int nJets = 2;
JetDriver jetDriver = new JetDriver();
jetDriver.setFinder(new FixNumberOfJetsFinder(nJets));
add(jetDriver);
```

You will also need

```
import hep.physics.jet.*;
```

For more info see:

<http://java.freehep.org/lib/freehep/api/hep/physics/jet/package-summary.html>

Subject: A question on wired4

Posted by [hokim](#) on Thu, 11 Oct 2007 23:56:57 GMT

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Hi, all

To study sid01_polyhedra, I convert its compact.xml to heprep using GeomConverter. In wired4 I pick up a VertexEndcap and checke its attribute table displayed in left-bottom window.(see the attached figure)

It gives the radius but not z-position.

Is there any way to see z-position?

File Attachments

1) [001.jpg](#), downloaded 717 times

Subject: Re: A question on wired4

Posted by [NormanGraf](#) on Fri, 12 Oct 2007 16:46:33 GMT

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Hello HyunOk,

The z attribute of this heprep is not accessible from within Wired. However, you can access all of the geometric information about this detector element from the compact.xml file. Specifically:

```
<detector id="12" name="VertexEndcap" type="DiskTracker" reflect="true"
readout="VtxEndcapHits" combineHits="true" vis="VertexVis">
  <layer id="1" inner_r = "1.6*cm" inner_z = "7.6*cm" outer_r = "7.5*cm">
    <slice material = "Silicon" thickness = "0.002*cm" sensitive = "yes"/>
    <slice material = "Silicon" thickness = "0.0093*cm" />
  </layer>
  <layer id="2" inner_r = "1.6*cm" inner_z = "9.5*cm" outer_r = "7.5*cm">
    <slice material = "Silicon" thickness = "0.002*cm" sensitive = "yes"/>
    <slice material = "Silicon" thickness = "0.0093*cm" />
  </layer>
  <layer id="3" inner_r = "2.0*cm" inner_z = "12.5*cm" outer_r = "7.5*cm">
    <slice material = "Silicon" thickness = "0.002*cm" sensitive = "yes"/>
    <slice material = "Silicon" thickness = "0.0093*cm" />
  </layer>
  <layer id="4" inner_r = "2.0*cm" inner_z = "18.0*cm" outer_r = "7.5*cm" >
    <slice material = "Silicon" thickness = "0.002*cm" sensitive = "yes"/>
    <slice material = "Silicon" thickness = "0.0093*cm" />
  </layer>
</detector>
```

Norman

Subject: Re: A question on wired4
Posted by [hokim](#) on Mon, 15 Oct 2007 18:56:54 GMT
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Hello Norman
Thanks for your reply

I'm trying to understand the following contents on tracker of compact.xml with wired4.

Quote:

```
<detector id="15" name="TrackerBarrel" type="SiTrackerBarrel" ...>
<detector id="14" name="TrackerEndcap" type="DiskTracker" ...>
```


I have almost figured out them except attributes of "reflect", "combineHits" and "sensitive".

Could you explain them to me?

I know we can completely understand elements and attributes on tracker by studying SiTrackerBarrelConverter.java and DiskTrackerConverter.java under GeomConverter/src/org/lcsim/detector/converter/compact

For now it is not easy for me to understand it and I need more time.

Hyunok

Subject: Re: A question on wired4

Posted by [NormanGraf](#) on Mon, 15 Oct 2007 19:20:17 GMT

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Hello Hyunok,

The compact detector description is intended to be just that, a compact description. Therefore, some convenience methods are built into the definitions. For instance, in order to simply define a forward tracker, we allow the user to also define a backward tracker as the mirror image by providing the "reflect" keyword. This simply means that the existing detector will be reflected in z. "sensitive" means that SimTrackerHits (or SimCalorimeterHits) will be created for any energy deposition by a track as it steps through this volume.

Geant4 can take several steps through each individual volume, and the default action is to create a SimTrackerHit for each step. Sometimes this is not the desired behavior, so the "combineHits" command allows all hits created by a single MC track traversing a sensitive volume to be combined into one hit with the average position, time and energy deposition.

Please let us know if you have any further questions.

Norman

Subject: Memory problems building org.lcsim

Posted by [tonyj](#) on Wed, 17 Oct 2007 04:17:21 GMT

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I have found that to build recent versions of org.lcsim I need:

```
export MAVEN_OPTS="-Xmx1024m -XX:MaxPermSize=128m"
```

before starting maven.

Subject: Question about nested drivers

Posted by [kutschke](#) on Wed, 31 Oct 2007 14:57:19 GMT

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I am preparing two drivers:

A driver based on Tim's test code that will create his hits and put them in the event.

A driver to call the previous driver and give an example of accessing those hits.

The intended audience is people who want to use the second driver without caring about internals of the first.

Here is the question: The first driver presumes that one of Jeremy's drivers has been called. Where should that call be added? Should I put it in the first driver, where no one ever needs to know that it is there, or do I put it in the second driver so that it is intentionally exposed.

My first inclination is that it belongs in the first driver (the one that does the real work and which actually needs it). On the small scale this works fine but it does not scale well. How does one discover, for some given task, which required drivers have already been called and therefore should not be called a second time.

Obviously either way can be made to work so this is an issue of standards and practices. Has this been discussed before and, if so, have the recommendations been documented?

Or are we too small a community, too early in the project to really care?

Rob

Subject: Re: Question about nested drivers

Posted by [wenzel](#) on Wed, 31 Oct 2007 15:20:44 GMT

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I personally don't like it if drivers are called from within drivers and so would think all the drivers (modules might be a better word) should be exposed at the top level driver. Then looking at that code one can get an overview of

the data flow and which drivers/modules are called.

In my opinion there should be only one master driver which controls which modules are called in which order everything else is too confusing.

Subject: Re: Question about nested drivers

Posted by [Dmitry Onoprienko](#) on Wed, 31 Oct 2007 17:23:22 GMT

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Hello Rob,

I am not aware of any discussions or recommendations on this subject, though I suspect many people had to decide on how to handle situations like this in their own code.

My approach has been the following. If the driver is intended as an example, I agree with Hans - all daughter Drivers should be added to the top level Driver. If the driver is designed as a tool to be used by many people who will never need to know what is inside, have access to intermediate objects, or change parameters of intermediate drivers, then those intermediate drivers can be added to the tool's master driver.

If I code a driver that produces a well defined result (like adding a certain object to the event record), and I suspect it might be added by multiple clients, I usually make its process(EventHeader) method check whether the driver has already been run.

One potential problem that is probably not an issue now but might become important as reconstruction jobs get more complex is preventing conflicts between multiple drivers trying to add identically named objects to the event record. Maybe BaseLCSimEvent should be modified to at least print a warning message if a user tries to put an object into it with a key that already exists.

Subject: Bug in AIDA.SaveAsZip

Posted by [kutschke](#) on Thu, 01 Nov 2007 19:44:11 GMT

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Hi All,

I have created and filled a cloud1d that is not displaying correctly. The problem only occurs when I run in batch, save the output as an aida zip file and view the file using jas3. The problem does not occur if I use the ordinary SaveAs() call. The problem does not occur if I run the driver within Jas3.

The attached files are the main program for batch running, the driver that creates the cloud and a jpg of the plot of the cloud. The cloud is filled with 5 entries: 17, 17, 18, 19, 18. Here is the display that I get when I run in batch and view the resulting aida file with jas3; note that the entry at 19 is missing:

I am using a private build of org.lcsim, checked out this morning and jas3-0.8.4rc2 .

Rob

File Attachments

- 1) [MainLoop.java](#), downloaded 537 times
 - 2) [TestDriver.java](#), downloaded 438 times
 - 3) [Batch.jpg](#), downloaded 991 times
-

Subject: Re: Bug in AIDA.SaveaAsZip
Posted by [serbo](#) on Thu, 01 Nov 2007 22:12:47 GMT
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Hi Rob,

Could you also post the link to the .aida file in zip format that you've used?

-Victor

Subject: Re: Bug in AIDA.SaveaAsZip
Posted by [kutschke](#) on Thu, 01 Nov 2007 22:40:16 GMT
[View Forum Message](#) <> [Reply to Message](#)

The url of the offending file is:

<http://home.fnal.gov/~kutschke/ILC/Aida/zip.aida>

Subject: SpacePoint, SpaceVector etc
Posted by [kutschke](#) on Fri, 02 Nov 2007 17:01:09 GMT
[View Forum Message](#) <> [Reply to Message](#)

I understand that, in new code, we have been asked to use SpacePoint, SpaceVector etc, in preference to Hep3Vector.

However there are two SpacePoint classes in the org.lcsim repository:

org.lcsim.spacegeom
org.lcsim.recon.tracking.spacegeom.SpacePath

Similarly for all of the Space* classes except SpaceVector, which is only found in org.lcsim.spacegeom

From this, I presume that we are to use the version in org.lcsim.spacegeom.

I also understand that for 4 vectors the recommended class is still Hep4Vector.

Do I have this right?

Rob

Subject: Re: Bug in AIDA.SaveAsZip
Posted by [serbo](#) on Fri, 02 Nov 2007 19:30:40 GMT
[View Forum Message](#) <> [Reply to Message](#)

I've created JAIDA bug about this problem: <http://bugs.freehep.org/browse/JAIDA-196>

I think that I understand what the problem is, will fix it later today. We probably will have another release candidate with fixes soon.

-Victor

Subject: Re: SpacePoint, SpaceVector etc
Posted by [jfstrube](#) on Fri, 02 Nov 2007 20:58:22 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi Rob,

I have taken the liberty to add SpaceVector to org.lcsim.spacegeom, because it was missing in my estimation.

Classes in org.lcsim.spacegeom implement Hep3Vector, so you should be able to use them with any class that expects Hep3Vectors.

Note, however, that the method v() in its current implementation returns the vector as an array, with whatever coordinates the SpaceVector comes in, so a polar vector would return r, phi, theta rather than x, y, z. On the other hand, every implementation of Hep3Vector that I am aware of assumes cartesian coordinates.

In other words, if you have classes that take Hep3Vectors and operate on .X(), .Y() and .Z(), then you are safe.

If your classes use v() and indices, you will be in trouble.

To answer your last question, there is no LorentzVector implementation in SpaceGeom AFAIK.

Hope that helps,
Jan

Subject: Re: SpacePoint, SpaceVector etc
Posted by [kutschke](#) on Fri, 02 Nov 2007 21:19:57 GMT
[View Forum Message](#) <> [Reply to Message](#)

Thanks Jan,

Is it intended to deprecate the other copy of Space* that is in org.lcsim?

I am trying to understand why the Space* are preferred to Hep3Vector. Is it because the Space* classes allow one to distinguish between a displacement vector and a direction vector, thereby giving an extra layer of type safety. Or are there other reasons.

I presume that VecOp is usable on org.lcsim.spacegeom objects (with the caveat of the v() method that you mentioned.).

Rob

Subject: Re: SpacePoint, SpaceVector etc

Posted by [Dmitry Onoprienko](#) on Fri, 02 Nov 2007 21:37:30 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi Rob,

One advantage of SpacePoint compared to BasicHep3Vector is that it does "lazy" transformations between cartesian, spherical, and cylindrical representations. I also like having SpacePointVector to represent straight line segments in space (silicon strips, for example).

A serious disadvantage in my view is that any SpacePoint is a heavyweight object compared to BasicHep3Vector - it holds 7 doubles and a reference. So if I used it as a field in any hit class, for example, I would be wasting memory.

No idea why there are two spacegeom packages.

- Dima.

Subject: Re: SpacePoint, SpaceVector etc
Posted by [NormanGraf](#) on Fri, 02 Nov 2007 21:39:37 GMT
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Hello Rob,

One should use the org.lcsim.spacegeom package. As Jan points out, the relevant classes in that package implement the Hep3Vector interface.

Norman

Subject: Re: SpacePoint, SpaceVector etc
Posted by [tonyj](#) on Mon, 05 Nov 2007 18:05:36 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi Rob, I don't think that in general one should use Space* in preference to Hep3Vector etc. In general I would say that one should use:

hep.physics.vec.Hep3Vector (or its implementation BasicHep3Vector)

whenever one is referring to anything other than a point in space (e.g. momentum, fields, etc), and perhaps

org.lcsim.spacegeom.SpacePoint

(which implements Hep3Vector) when one is referring to a point in space. My personal opinion is that all other Space* classes should be restricted to use inside TRF only (although I am willing to listen to counter arguments).

To try to make things clearer (but in fact doing the opposite) I started to move SpacePoint to hep.physics.vec so we could recommend using only hep.physics.vec classes. In doing so I found several problems with the current incarnation of the class, which are documented in the source code here:

[http://java.freehep.org/svn/showfile.svn?path=%2ffreehep%2frunk%2fhep%2ffreehep-physics%2fsrc%2fmain%2fjava%2fhep%2fphysics%2fvec%2fSpacePoint.java&revision=HEAD&name=free hep](http://java.freehep.org/svn/showfile.svn?path=%2ffreehep%2frunk%2fhep%2ffreehep-physics%2fsrc%2fmain%2fjava%2fhep%2fphysics%2fvec%2fSpacePoint.java&revision=HEAD&name=free%20hep)

The problems are not yet fixed. The same issues may exist with other versions of SpacePoint.

Tony

Subject: Units for material properties

Posted by [partridge](#) on Thu, 08 Nov 2007 00:10:27 GMT

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There are several methods defined in the IMaterial interface for retrieving material properties. I was particularly interested in getting the radiation length to calculate multiple scattering errors (more on this below).

Since there are no units listed in the Javadoc, I printed out the properties of some materials in the tracking volume from a simulation using the sid01 detector. My empirical results are below:

getName: Matches material name in the compact.xml file

getDensity: gm/cm³ of simulated material (i.e., correctly accounts for cases where nominal density is over-ridden in the compact.xml file)

getZ: Looks reasonable for both elemental and mixture materials

getA: Looks reasonable for both elemental and mixture materials

getMeltingPoint: Always 0

getBoilingPoint: Always 0

getTemperature: Units are Kelvin, nominal value looks like 0 C

getPressure: Units are atmospheres?

getMolecularWeight: Always 0

getEffectiveNumberOfNucleons: Always 0

getNuclearInteractionLength: Units are gm/cm²

getNuclearInteractionLengthWithDensity: Units are cm

getRadiationLength: gm/cm²

getRadiationLengthWithDensity: NAN is always returned

getMoliereRadius: NAN is always returned

getState: "Unknown" is always returned

Comments:

1. Javadoc comments are essential for people to know what is being returned here.
2. Those items returning NAN should be fixed.
3. The use of "cm" units is dangerous since it requires people to do unit conversion. At a minimum, the "WithDensity" methods for radiation and nuclear interaction lengths should return units of mm. I also worry that people will either assume the "non density" values are in mm, rather than gm/cm², or divide these values by the density and assume the result is in mm whereas the current units will give a result in cm. My suggestion would be to have just one value for radiation length that returns mm, and the same for nuclear interaction lengths. I don't feel strongly about whether the density should be gm/cm³ or gm/mm³, as long as there is some Javadoc documentation of the units.
4. Are boiling point and melting point useful? Will they ever be filled in? If the answer is no to either question, consider removing these properties. Similarly for molecular weight, effective number of nucleons, and state.

Subject: Re: Units for material properties
Posted by [jeremy](#) on Fri, 09 Nov 2007 23:55:26 GMT
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Hi, Rich

I did some refactoring of the org.lcsim.detector.material package today.

- Added javadocs for IMaterial, IMaterialElement, IMaterialMixture
- Removed melting point and boiling point from the API completely
- Removed getMolecularWeigth from the API
- Removed getEffectiveNumberOfNucleons from the API
- Fixed bug where getRadiationLengthWithDensity was not computed for mixture
- Fixed bug where getMoliereRadius was not computed for mixture

The state can be set via the XML format. Along with pressure and temperature, this is important to have for the Bethe-Bloche formula. But since neither pressure and temperature aren't included in the XML file, these two fields are just placeholders for now. I plan on including them in the data files in the future, at least for elements.

The unit conventions for nuclear interaction length and radiation length were copied from Geant4, which uses g/cm2. If you want length, then you can use the "WithDensity" version of the method. Is this confusing?

I agree with you on units. I can add a conversion factor of 10 to the returned values. But it should probably be discussed at the Tuesday meeting first.

Subject: Org.lcsim has stopped working ...
Posted by [kutschke](#) on Fri, 14 Dec 2007 02:24:20 GMT
[View Forum Message](#) <> [Reply to Message](#)

A few mintues ago my org.lcsim jobs were working fine. The project I was working on now gives the error message listed below. Between the copy working and not working, I made a one line change in a .java file, recompile it and reran from the command line. I have not changed the input file or any of the jar files.

I went back to my standard beginning example, that has always run

As nearly as I can tell some schema out in web space has changed.

Any idea what to do?

Thanks,
Rob

```
Exception in thread "main" org.lcsim.conditions.ConditionsManager$ConditionsSetNotFound
Exception: Error reading detector condition item 'compact.xml' for detector 'sid00'
  at org.lcsim.util.loop.DetectorConditionsConverter.getData(DetectorConditionsConverter.java:32)
  at org.lcsim.util.loop.DetectorConditionsConverter.getData(DetectorConditionsConverter.java:17)
  at org.lcsim.conditions.CachedConditionsImplementation.getCacheData(CachedConditionsImplementation.java:19)
  at org.lcsim.util.event.BaseLCSimEvent.getDetector(BaseLCSimEvent.java:65)
  at org.lcsim.util.DriverAdapter.recordSupplied(DriverAdapter.java:70)
  at org.freehep.record.loop.SequentialRecordLoopImpl.supplyRecord(SequentialRecordLoopImpl.java:564)
  at org.freehep.record.loop.SequentialRecordLoopImpl.loop(SequentialRecordLoopImpl.java:469)
  at org.lcsim.util.loop.LCSimLoop.loop(LCSimLoop.java:158)
  at org.lcsim.util.loop.LCSimLoop.loop(LCSimLoop.java:140)
  at MainLoop.main(MainLoop.java:32)
```

Caused by: org.jdom.input.JDOMParseException: Error on line 263 of document <http://www.lcsim.org/schemas/compact/1.0/compact.xsd>: s4s-elt-must-match.1: The content of 'gdmlFile' must match (annotation?, (simpleType | complexType)?, (unique | key | keyref*)). A problem was found starting at: attribute.

```
  at org.jdom.input.SAXBuilder.build(SAXBuilder.java:465)
  at org.jdom.input.SAXBuilder.build(SAXBuilder.java:770)
  at org.lcsim.geometry.compact.CompactReader.read(CompactReader.java:79)
  at org.lcsim.geometry.GeometryReader.read(GeometryReader.java:49)
  at org.lcsim.util.loop.DetectorConditionsConverter.getData(DetectorConditionsConverter.java:26)
  ... 9 more
```

Caused by: org.xml.sax.SAXParseException: s4s-elt-must-match.1: The content of 'gdmlFile' must match (annotation?, (simpleType | complexType)?, (unique | key | keyref*)). A problem was found starting at: attribute.

```
  at org.apache.xerces.util.ErrorHandlerWrapper.createSAXParseException(Unknown Source)
  at org.apache.xerces.util.ErrorHandlerWrapper.error(Unknown Source)
  at org.apache.xerces.impl.XMLErrorReporter.reportError(Unknown Source)
  at org.apache.xerces.impl.xs.traversers.XSDHandler.reportSchemaError(Unknown Source)
  at org.apache.xerces.impl.xs.traversers.XSDAbstractTraverser.reportSchemaError(Unknown Source)
```

at org.apache.xerces.impl.xs.traversers.XSDElementTraverser.traverseNamedElement(Unknown Source)
at org.apache.xerces.impl.xs.traversers.XSDElementTraverser.traverseLocal(Unknown Source)
at org.apache.xerces.impl.xs.traversers.XSDHandler.traverseLocalElements(Unknown Source)
at org.apache.xerces.impl.xs.traversers.XSDHandler.parseSchema(Unknown Source)
at org.apache.xerces.impl.xs.XMLSchemaLoader.loadSchema(Unknown Source)
at org.apache.xerces.impl.xs.XMLSchemaValidator.findSchemaGrammar(Unknown Source)
at org.apache.xerces.impl.xs.XMLSchemaValidator.handleStartElement(Unknown Source)
at org.apache.xerces.impl.xs.XMLSchemaValidator.startElement(Unknown Source)
at org.apache.xerces.impl.XMLNSDocumentScannerImpl.scanStartElement(Unknown Source)
at org.apache.xerces.impl.XMLNSDocumentScannerImpl\$NSContentDispatcher.scanRootElementHook(Unknown Source)
at org.apache.xerces.impl.XMLDocumentFragmentScannerImpl\$FragmentContentDispatcher.dispatch(Unknown Source)
at org.apache.xerces.impl.XMLDocumentFragmentScannerImpl.scanDocument(Unknown Source)
at org.apache.xerces.parsers.XML11Configuration.parse(Unknown Source)
at org.apache.xerces.parsers.XML11Configuration.parse(Unknown Source)
at org.apache.xerces.parsers.XMLParser.parse(Unknown Source)
at org.apache.xerces.parsers.AbstractSAXParser.parse(Unknown Source)
at org.apache.xerces.jaxp.SAXParserImpl\$JAXPSAXParser.parse(Unknown Source)
at org.jdom.input.SAXBuilder.build(SAXBuilder.java:453)
... 13 more

Subject: Re: Org.lcsim has stopped working ...
Posted by [tonyj](#) on Fri, 14 Dec 2007 02:58:54 GMT
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Hi Rob, it looks like someone (probably jeremy) updated the compact.xsd file at

<http://www.lcsim.org/schemas/compact/1.0/compact.xsd>

at 17:57 pacific time.

For now I have put back the old version, and renamed the new one to compact.xsd.jeremy

Tony

Subject: Re: Org.lcsim has stopped working ...
Posted by [kutschke](#) on Fri, 14 Dec 2007 14:21:13 GMT
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Thanks - its working now.

Subject: tuples
Posted by [bjasper](#) on Fri, 18 Jan 2008 17:24:26 GMT
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I'd like to work with tuples rather than clouds and histograms. Within a single driver, say JetDriver or MCFastReconstructedParticleDriver, I have no problem creating a tuple with the information I want. However, I can't seem to figure out how to put information from both drivers into the same tuple. Can anybody tell me how to share a tuple between multiple drivers?

Subject: Re: tuples
Posted by [lima](#) on Thu, 24 Jan 2008 16:17:08 GMT
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Hi Blair,

You should be able to do this by creating another driver to manage the ntuple (say an NtupleManagerDriver), which owns the Ntuple. Then the NtupleManagerDriver would have an initialize() method where the ntuple gets booked, and a finalize() method to write the ntuple to disk.

For filling the tuple, there are two options:

1- any driver gets the reference to the ntuple, and fills some of its variables. In this option, NtupMgrDriver would have a static method returning a reference to the ntuple, allowing any other driver to add stuff to the ntuple. Maybe the ntuple variables need to be declared public?

2- NtupleManagerDriver itself fills the ntuple inside two or more (static) filling methods, which can be called by any other drivers, passing the ntuple data as arguments.

These tips should be enough to get you going. Please let

me know if you have any questions.

I actually have a working example for this (~option 2 above) in
src/org/lcsim/recon/cluster/directedtree/DTreeAnalysis.java

It is maybe not trivial to understand, but you should concentrate on the ntuple-related lines of code.

I hope it is useful.

Guilherme

Subject: SUSY particles, charge NaN
Posted by [bjasper](#) on Fri, 01 Feb 2008 19:31:07 GMT
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I'm working with events containing SUSY particles. When I open up an slcio file (from SLIC) and look at an event in the event browser, all SUSY particles (in my case, staul+, staul-, neut10) have charge NaN. As a result, my analysis aborts when I try to run TopDriver (after having successfully run RecoDriver) in the org.lcsim.contrib.niu package. Is there some way to get around this? When I look at the default particle properties, it seems like the SUSY particles all have their charges defined...

Subject: Detector Element code now bombs on sid01
Posted by [partridge](#) on Sun, 03 Feb 2008 23:10:17 GMT
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Running in jas3 with an sid01 single muon data file, I get the following error below on the first event (even with no user code loaded). This used to work. I did a CVS update/build of geomconverter and lcsim, but that didn't help.

```
java.lang.NoSuchMethodError: org.lcsim.detector.DetectorElementContainer.add(Lorg/lcsim/detector/IDetectorElement;)Z
    at org.lcsim.detector.DetectorElementStore.add(DetectorElementStore.java:25)
    at org.lcsim.detector.DetectorElementStore.add(DetectorElementStore.java:5)
    at org.lcsim.detector.DetectorElement.register(DetectorElement.java:176)
    at org.lcsim.detector.DetectorElement.<init>(DetectorElement.java:88)
```

```
at org.lcsim.detector.converter.compact.DeDetector.<init>(DeDetector.java:24)
at org.lcsim.detector.converter.compact.DetectorConverter.conve
rt(DetectorConverter.java:64)
at org.lcsim.geometry.GeometryReader.read(GeometryReader.java:5 6)
```

Subject: Re: Detector Element code now bombs on sid01
Posted by [tonyj](#) on Mon, 04 Feb 2008 17:15:17 GMT
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Hi, NoSuchMethodError almost always means that you have different code at runtime that at compile time.

I would suggest doing a clean and rebuild of GeomConverter and org.lcsim.

Tony

Subject: Re: Detector Element code now bombs on sid01
Posted by [partridge](#) on Mon, 04 Feb 2008 19:24:40 GMT
[View Forum Message](#) <> [Reply to Message](#)

I did a rebuild previously, but that didn't help.

I did a clean followed by a rebuild. That also didn't help.

I checked out new copies of geomconverter and lcsim - no help.

I updated jas3 from v0.8.2 to v0.8.3. It worked until I started wired (on my desktop) or loaded my driver (on my laptop).

Note that I am getting test errors on TrackerHitEndcapDriverTest and TrackerHitStrip2DDriverTest.

Argh!

Subject: Re: Detector Element code now bombs on sid01 - Resolution
Posted by [partridge](#) on Mon, 04 Feb 2008 22:36:02 GMT

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It turned out the problem was due to tests failing in the rebuild operation, causing the jar file not to be copied.

It seems that the old default value for the heap space is no longer adequate. Increasing the heap space (I set it to 1024M) allowed the rebuild tests to succeed.

Sigh.

Subject: Re: Org.lcsim has stopped working ...
Posted by [bjasper](#) on Tue, 05 Feb 2008 23:24:15 GMT
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I just updated Geomconverted and lcsim, but now lcsim won't compile. I get a whole bunch of errors related to plugins and jas. I've attached the output.

I tried removing the directory and checking lcsim out from scratch but I get the same error.

File Attachments

1) [fail.txt](#), downloaded 587 times

Subject: Re: Org.lcsim has stopped working ...
Posted by [tonyj](#) on Tue, 05 Feb 2008 23:32:23 GMT
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It looks to me like the file

`/home/jasper/.maven/repository/jas/jars/jas3-26092007.jar`

is corrupted. Try deleting it and running maven again.

Tony

Subject: Re: Org.lcsim has stopped working ...
Posted by [bjasper](#) on Tue, 05 Feb 2008 23:38:57 GMT
[View Forum Message](#) <> [Reply to Message](#)

Excellent. Thanks Tony

Subject: Re: Org.lcsim has stopped working ...
Posted by [bjasper](#) on Wed, 06 Feb 2008 20:58:57 GMT
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Hmmm, with the corrupt aida package out of the way, now it seems like I can't run *any* drivers, within JAS3 or outside. I keep getting complaints about "NoSuchMethodError: org.lcsim.detector.DetectorElementContainer.add(Lorg/lcsim/d etector/IDetectorElement;) "

I've checked the CVSweb and there doesn't seem to be any packages like that... I can't even run the examples from JAS3 (e.g. Analysis101). Any suggestions? I've attached the output of the fail. (Note: this is a runtime problem, I can compile without warnings)

File Attachments

1) [fail.txt](#), downloaded 471 times

Subject: Re: Org.lcsim has stopped working ...
Posted by [Dmitry Onoprienko](#) on Sat, 09 Feb 2008 22:42:14 GMT
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It looks like some of your files are still corrupted. Have you tried to clean both GeomConverter and lcsim projects and rebuild them, then verify that the created GeomConverter.jar and lcsim.jar files have been copied to your .JAS3/extensions directory ? You might also try clearing maven repository before doing this.

Subject: Re: Org.lcsim has stopped working ...
Posted by [bjasper](#) on Mon, 11 Feb 2008 20:50:18 GMT
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Yes, this was the case. I cleaned everything up and built them again. Thanks for the help!

Subject: GeomConverter - Installing and Running
Posted by [mmeier15](#) on Fri, 25 Apr 2008 20:33:53 GMT
[View Forum Message](#) <> [Reply to Message](#)

I'm trying to get GeomConverter to work, but I'm running into problems. I'm probably doing something wrong, but I don't know what it is.

I've been following the guide at:

<http://confluence.slac.stanford.edu/display/ilc/Building+org+.lcsim+software>
to install GeomConverter.

Here's the specific steps I've followed:

```
export CVSROOT=:pserver:anonymous@cvs.freehep.org:/cvs/lcd
cvs login (just hit enter when prompted for password)
cvs co GeomConverter
cvs co lcsim
cd GeomConverter
maven
cd ../lcsim
maven
```

I can get GeomConverter to build, but my problem is that I can't run it.

The guide at

<http://confluence.slac.stanford.edu/display/ilc/Converting+to+LCDD+or+HepRep+using+GeomConverter>
says that you can run GeomConverter by typing:
`./bin/GeomConverter -o lcdd compact.xml det.lcdd`

However, I don't have a `/bin/` subdirectory and can't find an executable GeomConverter file.

Any ideas as to what I'm doing wrong? Or where I can get a copy of the GeomConverter.bat file?

Thanks

Subject: Re: GeomConverter - Installing and Running
Posted by [jeremy](#) on Thu, 15 May 2008 02:16:50 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hello,

The run script is not created by the default maven goal. You have to execute the following command (assuming Linux/bash).

```
maven -Drun.install=$(pwd) -Dmaven.test.skip=true run:install
```

The script "build.sh" in the GeomConverter base directory will also do this for you.

Subject: Cluster analysis

Posted by [bjasper](#) on Wed, 21 May 2008 19:58:03 GMT

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I'm running the PFA written by Steve Magill and I'm having some trouble getting information about the clusters. I want to be able to get the cluster's position, theta, phi and energy. My problem is that for ~40% of the events I'm having clusters returning "NaN" for their position and 0.0 for their energy. Has anybody else had this problem? Are these clusters not real, rather just some sort of artifact of the code?

After the PFA runs, I use the following code to get the cluster info:

```
.  
.   
.   
List<List<BasicCluster>> clusterSets = event.get(BasicCluster.class);  
.   
.   
.   
for (List<BasicCluster> clusters : clusterSets){  
    String name = event.getMetaData(clusters).getName();  
    if(name=="TrackCALClusters"||name=="PhotonClusters"||name=="NeutralHadronClusters"){  
        for (BasicCluster cluster : clusters){  
            double[] clPos = cluster.getPosition();\  
            e = cluster.getEnergy();  
            Theta = cluster.getTheta();  
            Phi = cluster.getPhi();  
        }  
    }  
}  
.   
.   
.
```

Subject: Re: Cluster analysis
Posted by [bjasper](#) on Wed, 21 May 2008 22:29:08 GMT
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Nevermind, I've come across the answer. The clusters in question all have size 0 so they are just some kind of artifact, easy to weed out.

Cheers.

Subject: LCRelation
Posted by [bjasper](#) on Tue, 03 Jun 2008 17:19:56 GMT
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When I look at the event browser during reconstruction I can see a list of LCRelation items - TracksToMCP - and this correlates a FastMCTrack to a final state MC particle. When I use the "getTo()" or "getFrom()" I get an Object instead of a Track or a MCParticle. How do I get the actual Track/MCParticle instead of these "Objects"?

Subject: Re: LCRelation
Posted by [tonyj](#) on Tue, 03 Jun 2008 18:15:55 GMT
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Hi, can you post the code snippet you are using?

Tony

Subject: Re: LCRelation
Posted by [bjasper](#) on Tue, 03 Jun 2008 19:08:23 GMT
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```
List<LCRelation> TracksToMC = event.get(LCRelation.class,"TracksToMCP");
```

```
for(LCRelation TtoMC: TracksToMC){  
    Object FastTrack = TtoMC.getFrom();  
    Object MCP = TtoMC.getTo();  
}
```

So the "From" column is a list of references to FastMCTracks and the "To" column is a list of references to MCParticles, but LCRelation returns them as objects

Subject: Re: LCRelation
Posted by [tonyj](#) on Tue, 03 Jun 2008 19:25:15 GMT
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Thanks, I think you can fix this simply by inserting casts. E.g.

```
Track fastTrack = (Track) tToMC.getFrom();  
MCParticle mcp = (MCParticle) tToMC.getTo();
```

there is a new RelationalTable mechanism which handles this better, but there are currently no examples of how to use this.

Tony

Subject: Re: LCRelation
Posted by [bjasper](#) on Tue, 03 Jun 2008 20:03:50 GMT
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Thanks! That did the trick

Subject: Re: java.lang.OutOfMemoryError:
Posted by [rwaliczek](#) on Wed, 04 Jun 2008 12:16:58 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hello,
I have similar problem. When I try to run a job I get error:

```
java.lang.OutOfMemoryError: Java heap space  
  at java.util.ArrayList.<init>(ArrayList.java:112)  
  at org.lcsim.util.lcio.SIOReconstructedParticle.<init>(SIOReconstructedParticle.java:39)  
  at org.lcsim.util.lcio.SIOReconstructedParticleBlockHandler.add
```

```
CollectionElements(SIOReconstructedParticleBlockHandler.java :19)
  at org.lcsim.util.lcio.AbstractBlockHandler.readBlock(AbstractBlockHandler.java:34)
  at org.lcsim.util.lcio.LCIOReader.read(LCIOReader.java:66)
  at org.lcsim.util.loop.LCIOEventSource.next(LCIOEventSource.java:70)
  at org.freehep.jas.extensions.recordloop.InteractiveRecordLoop.
getNextRecord(InteractiveRecordLoop.java:372)
  at org.freehep.jas.extensions.recordloop.RecordLoopManager.run(
RecordLoopManager.java:66)
  at java.lang.Thread.run(Thread.java:619)
```

But in this case the increase memory to 512Mb and more doesn't resolve this problem. Any idea? I have JAS3-0.8.4rc3, I use jdk1.6.0_10, and .slcio file come from Marlin.

many regards,
Radek

Subject: Re: java.lang.OutOfMemoryError:
Posted by [NormanGraf](#) on Wed, 04 Jun 2008 14:06:49 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hello Radek,
It appears that you are looking at the output from a full reconstruction. These files can often be quite large, since many, if not all, of the intermediate collections are kept. Is the .slcio file you are trying to analyze publicly accessible? If so, I could investigate what is causing your problem.
Norman

Subject: Re: java.lang.OutOfMemoryError:
Posted by [rwaliczek](#) on Wed, 04 Jun 2008 18:48:39 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hello Norman,
I use a lot of processors to reconstruction, but If I turn of more processors exactly the same error appear..JAS3 correct read only .slcio from Mokka, where are only Sim collection and some collection from digitalization process (ECAL,HCAL). If Its no problem for you I can send my .lcio (about 3mb) file to your email.

Cheers,
Radek

Subject: Re: java.lang.OutOfMemoryError:
Posted by [tonyj](#) on Thu, 05 Jun 2008 13:43:54 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi, can you attach file lcio file to a reply to this forum posting rather than sending it via e-mail?

Tony

Subject: Re: java.lang.OutOfMemoryError:
Posted by [rwaliczek](#) on Thu, 05 Jun 2008 14:54:14 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi, This file is too big(1 event = 2,5Mb), but I generated newest .slcio from mokka 06-01 and its ok, but if I turn on PandoraPFA processor to Marlin I get the same error from JAS3. I think that this processors cause this error, what do you think?

Subject: Re: java.lang.OutOfMemoryError:
Posted by [tonyj](#) on Thu, 05 Jun 2008 15:15:53 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi, I think it is not really a memory problem, my guess is that there is a problem reading the output from PandoraPFA. We will need an example file to look at the problem. Maybe you could attach a single event lcio file to the forum? Or make it accessible via FTP or http?

Tony

Subject: Re: java.lang.OutOfMemoryError:
Posted by [rwaliczek](#) on Thu, 05 Jun 2008 15:57:55 GMT
[View Forum Message](#) <> [Reply to Message](#)

Ok, its the link to single event e+e-, include PandoraPFA processor:
<http://www.uploading.com/files/2VSTYR02/e+e-500GeV.slcio.htm> l

Subject: errors during JAS install
Posted by [manly](#) on Tue, 24 Jun 2008 14:48:51 GMT
[View Forum Message](#) <> [Reply to Message](#)

I have a summer student named Sven Hauksson trying to get lcsim software/JAS3 up and running on a MacBook. The problems/status/error messages we are encountering are summarized below. Any help is appreciated. -Steve

Have successfully downloaded GeomConverter and lcsim to the MacBook. Both build with maven, though lcsim requires that we build using "maven -Dmaven.test.skip=true" because of some errors that come up during testing. (I had the same problem on a Windows XP machine earlier in the week.)

Anyway, when installing JAS3 with maven, from the directory he has lcsim in, using the command:

```
/users/sven/De*/maven-1.0.2/bin/maven jas:install
```

he get the errors:

```
TEST org.lcsim.StdhepFilterTest FAILED
Running org.lcsim.TestFastMC
Tests run: 1, Failures: 0, Errors: 1, Time elapsed: 73.973 sec
TEST org.lcsim.TestFastMC FAILED
Running org.lcsim.TestFastMCGenerator
Tests run: 1, Failures: 0, Errors: 1, Time elapsed: 67.502 sec
TEST org.lcsim.TestFastMCGenerator FAILED
[junit] Running org.lcsim.util.aida.AIDATest
```

BUILD FAILED

However JAS3 will successfully build (supposedly) if he uses the command:

```
/users/sven/De*/maven-1.0.2/bin/maven jas:install -Dmaven.test.skip=true
```

After all this trivialPFA compiles but will not run. He can run all the java examples, but all of the org.lcsim examples return the same error as TrivialPFA.

He says:

The error when I try to run TrivialPFA or any of the org.lcsim is: "Error running (name of file)".

ex. for Trivial PFA I get:

"Error running TrivialPFA". Then when I click on details I get a long list of problems, which I don't know how to shorten.

For example for Trivial PFA I get:

```
java.lang.NoSuchMethodException: Analysis101.main([Ljava.lang.String;)
  at java.lang.Class.getMethod(Class.java:1581)
  at
org.freehep.jas.extension.compiler.JASClassManager.run(JASClassManager.java:223)
  at
org.freehep.jas.extension.compiler.CompilerPlugin.run(CompilerPlugin.java:136)
  at
org.freehep.jas.extension.compiler.CompilerPlugin.access$200 (CompilerPlugin.java:45)
  at
org.freehep.jas.extension.compiler.CompilerPlugin$Commands.onRun(CompilerPlugin.java:477)
  at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
  at
sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:39)
  at
sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:25)
  at java.lang.reflect.Method.invoke(Method.java:585)
  at
org.freehep.util.commanddispatcher.CommandProcessor.invoke(CommandProcessor.java:125)
  at
org.freehep.util.commanddispatcher.CommandProcessor.invokeCommand(CommandProcessor.java:162)
  at
org.freehep.util.commanddispatcher.CommandProcessor$SimpleTarget.doCommand(CommandProcessor.java:290)
  at
org.freehep.util.commanddispatcher.CommandProcessor.invokeCommand(CommandProcessor.java:136)
  at
org.freehep.util.commanddispatcher.CommandProcessor$SimpleTarget.invoke(CommandProcessor.java:326)
  at
org.freehep.util.commanddispatcher.MultiTarget.invoke(MultiTarget.java:72)
  at
org.freehep.util.commanddispatcher.CommandSourceAdapter.actionPerformed(CommandSourceAdapter.java:89)
```

```
at
javax.swing.AbstractButton.fireActionPerformed(AbstractButton.java:1882)
at
javax.swing.AbstractButton$Handler.actionPerformed(AbstractButton.java:2202)
at
javax.swing.DefaultButtonModel.fireActionPerformed(DefaultButtonModel.java:420)
at javax.swing.DefaultButtonModel.setPressed(DefaultButtonModel.java:258)
at javax.swing.AbstractButton.doClick(AbstractButton.java:334)
at apple.laf.ScreenMenuItem.actionPerformed(ScreenMenuItem.java:104)
at java.awt.MenuItem.processActionEvent(MenuItem.java:597)
at java.awt.MenuItem.processEvent(MenuItem.java:556)
at java.awt.MenuComponent.dispatchEventImpl(MenuComponent.java:298)
at java.awt.MenuComponent.dispatchEvent(MenuComponent.java:286)
at java.awt.EventQueue.dispatchEvent(EventQueue.java:466)
at
org.freehep.jas.util.waitcursor.WaitCursorEventQueue.dispatchEvent(WaitCursorEventQueue.java:47)
at
java.awt.EventQueueDispatchThread.pumpOneEventForHierarchy(EventQueueDispatchThread.java:269)
at
java.awt.EventQueueDispatchThread.pumpEventsForHierarchy(EventQueueDispatchThread.java:190)
at java.awt.EventQueueDispatchThread.pumpEvents(EventQueueDispatchThread.java:184)
at java.awt.EventQueueDispatchThread.pumpEvents(EventQueueDispatchThread.java:176)
at java.awt.EventQueueDispatchThread.run(EventQueueDispatchThread.java:110)
```

I'll follow up later with the error he gets trying to run these routines ... I don't have it with me at the moment. In th

Subject: Re: errors during JAS install
Posted by [tonyj](#) on Tue, 24 Jun 2008 15:46:41 GMT
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Hi Steve, the main problem you are having is trying to "Run" the trivial PFA. The "Run" menu item is used to run routines which have a main method, which trivial PFA does not.

Instead you must open a dataset, then using the "Loop" menu and select "Go" to feed events to the trivial PFA.

If you can also post the errors you are getting from the tests that would be useful.

Tony

Subject: Re: errors during JAS install
Posted by [manly](#) on Tue, 24 Jun 2008 15:50:55 GMT
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Oops ... my bad. When I say "run" TrivialPFA, I mean that we open an sid01 lcio file and go 1 after compiling and loading TrivialPFA. We'll see if we can get the errors for the tests posted. Thanks, Steve

Subject: Re: errors during JAS install
Posted by [tonyj](#) on Tue, 24 Jun 2008 17:49:03 GMT
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Hi Steve, the traceback you posted in the first message in this thread was clearly caused by executing the "Run" menu command, as evidenced by this line:

Quote:

```
org.freehep.jas.extension.compiler.CompilerPlugin.run(CompilerPlugin.java:136)
```

So if you get a different error when you try "Go" you will need to post that too.

Tony

Subject: Re: errors during JAS install
Posted by [manly](#) on Tue, 24 Jun 2008 17:59:50 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hmmm. Okay. We'll do that. I know we got a similar crash just doing the go 1.

Also, how do we get the maven build to give us more verbose logging for the TEST errors?

Thanks,
Steve

Subject: Re: errors during JAS install
Posted by [tonyj](#) on Tue, 24 Jun 2008 18:08:42 GMT
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manly wrote on Tue, 24 June 2008 10:59: Also, how do we get the maven build to give us more verbose logging for the TEST errors?

I think maven creates a file for each test, with the full verbose output, probably somewhere underneath the target subdirectory.

Tony

Subject: Re: errors during JAS install
Posted by [manly](#) on Tue, 24 Jun 2008 18:23:05 GMT
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Here is the error message we get from the "go 1":

"Loop terminated due to error" and it gives the details:

```
java.lang.IllegalArgumentException: Unknown event component EcalBarrHits
  at hep.physics.event.BaseEvent.get(BaseEvent.java:48)
  at org.lcsim.event.base.BaseLCSimEvent.get(BaseLCSimEvent.java: 97)
  at
org.lcsim.util.hitmap.HitListToHitMapDriver.process(HitListToHitMapDriver.java:32)
  at org.lcsim.util.Driver.doProcess(Driver.java:273)
  at org.lcsim.util.Driver.processChildren(Driver.java:284)
  at org.lcsim.util.Driver.process(Driver.java:198)
  at org.lcsim.util.DriverAdapter.recordSupplied(DriverAdapter.java:74)
  at
org.freehep.jas.extensions.recordloop.MyChain.recordSupplied (MyChain.java:55)
  at
org.freehep.jas.extensions.recordloop.InteractiveRecordLoop.
supplyRecord(InteractiveRecordLoop.java:533)
  at
org.freehep.jas.extensions.recordloop.RecordLoopManager.run( RecordLoopManager.java:66)
  at java.lang.Thread.run(Thread.java:613)
```

Subject: Re: errors during JAS install
Posted by [cassell](#) on Tue, 24 Jun 2008 18:43:28 GMT
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The only thing I can think of is maybe the the slcio file was obtained without using binary format?? In any case, you can check the file by doing a go 1 without loading anything, and displaying the lcsim event browser. You should be able to see the collections in the event, and EcalBarrHits should certainly exist.

Subject: Re: errors during JAS install
Posted by [tonyj](#) on Tue, 24 Jun 2008 19:04:45 GMT
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If the file was corrupted (for example transfered without binary) it would be unlikely to be readable at all.

I guess one question, what is the file that you are reading?

Tony

Subject: Re: errors during JAS install
Posted by [Dmitry Onoprienko](#) on Tue, 24 Jun 2008 19:13:08 GMT
[View Forum Message](#) <> [Reply to Message](#)

cassell wrote on Tue, 24 June 2008 11:43 ...and EcalBarrHits should certainly exist. Unless it's a single particle file and the particle in the first event went into the endcap ?

Subject: Re: errors during JAS install
Posted by [manly](#) on Tue, 24 Jun 2008 19:24:16 GMT
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No, I don't think this is the problem. When we run JAS3 without loading anything we can go 1 and see an event in the Wired4 window and in the LCSIM browser.

We are reading events from

pythiaZPoleuds-0-1000_SLIC-v2r4p2_geant4-v9r1p0_LCPhys_sid01 _polyhedra.slcio

Subject: Re: errors during JAS install

Posted by [Dmitry Onoprienko](#) on Tue, 24 Jun 2008 20:02:08 GMT

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In that file, the collection of ECAL barrel hits is called "EMBarrelHits", not "EcalBarrHits" - hence the error.

Changing the collection name will probably make the code run, but I think most existing PFA tools are not usable with polyhedra geometry anyway. Unless you are specifically interested in sid01_polyhedra, I would recommend trying to use sid01 data.

Subject: Re: errors during JAS install

Posted by [cassell](#) on Tue, 24 Jun 2008 20:09:21 GMT

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That explains it. The dataset you are using has different collection names, i.e. EcalBarrHits is actually EMBarrelHits. Most of our software has hardwired collection names, so if you want to run a canned program (TrivialPFA) you will need to use a more standard data set. (sid01 detector, qq100 events for example)

Subject: Re: errors during JAS install

Posted by [manly](#) on Tue, 24 Jun 2008 20:15:26 GMT

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Okay. We'll download an sld01 data set and try that. we just picked the set thinking it was a standard sld01 set ... but sld01_polyhedra is different. sigh. Thanks

Subject: Proxy settings

Posted by [jfstrube](#) on Thu, 03 Jul 2008 10:17:39 GMT

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I am trying to run the GeomConverter tests, but I am running a bit into trouble. The problem is downloading files from the web, because I am behind a proxy. I can tell maven the proxy info by putting a build.properties file containing the relevant info into each build dir, but how do I tell the FileCache that I am behind a proxy? Is there a way to also parse build.properties for this information? Since it's required for maven anyways, and maven is required to be there for the build, that wouldn't introduce any additional dependencies.

Thanks for the help,
Jan

Subject: Re: Proxy settings
Posted by [tonyj](#) on Thu, 03 Jul 2008 22:18:25 GMT
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Hi Jan, I think maven uses the standard Java proxy mechanism, as does FileCache. The problem is probably that the settings are not copied from maven to the forked test program. Which version of maven are you using?

Tony

Subject: Re: Proxy settings
Posted by [jfstrube](#) on Fri, 04 Jul 2008 09:55:09 GMT
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Hi Tony,

thanks for your reply, this sounds exactly like what is happening. Right now we are set up with maven 1.0.2, but maven2 would be just fine, I think. I have successfully built both GeomConverter and lcsim with maven 2 on my laptop at one point. So whichever is easier for you is going to work on our end.

Thanks for looking into it.
Jan

Subject: Re: Proxy settings
Posted by [tonyj](#) on Mon, 07 Jul 2008 19:41:39 GMT
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Hi Jan, to set properties during the tests with maven1 you need the following in your maven "user build properties" (this is build.properties in your home directory)

maven.junit.sysproperties=my.property.a my.property.b

my.property.a=whatever
my.property.b=whatever

Using this to set whatever properties are required by your firewall (the same ones you used for maven itself) should work.

Tony

Subject: Re: Proxy settings
Posted by [jfstrube](#) on Mon, 14 Jul 2008 14:41:02 GMT
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Hi Tony,

sorry, that doesn't seem to work. The file is as follows.
Do I need to quote the list of properties, or use a separator or something?

```
maven.proxy.host=wwwcache3.rl.ac.uk  
maven.proxy.port=8080  
maven.junit.sysproperties=maven.proxy.host maven.proxy.port
```

Thanks,
Jan

Subject: Re: Proxy settings
Posted by [tonyj](#) on Mon, 14 Jul 2008 15:33:01 GMT
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Hi Jan, sorry, i didn't realize you were using maven specific properties. I think you need:

```
http.proxyHost=wwwcache3.rl.ac.uk  
http.proxyPort=8080  
maven.junit.sysproperties=http.proxyHost http.proxyPort
```

See <http://java.sun.com/j2se/1.5.0/docs/guide/net/properties.htm> |

Tony

Subject: Re: Proxy settings

Posted by [jfstrube](#) on Tue, 15 Jul 2008 09:40:22 GMT

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Hi Tony,

excellent! That works.

Jan

for maven2 it's even easier:

```
<?xml version="1.0" encoding="UTF-8"?>
<settings>
  <proxies>
    <proxy>
      <active/>
      <protocol>http</protocol>
      <username>scott</username>
      <password>tiger</password>
      <port>8080</port>
      <host>my.proxy.url</host>
    </proxy>
  </proxies>
</settings>
```

goes into the file ~/.m2/settings.xml

or alternatively, one can edit

`${maven_home}/apache-maven-2.0.9/conf/settings.xml`

if `${maven_home}` points to your maven installation

Unfortunately I don't have a good idea of how to get the tests to work with mvn...

Subject: who has Maven1.0.2 for Linux?

Posted by [zhangqm](#) on Tue, 23 Sep 2008 02:09:58 GMT

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I can Not find it in <http://maven.apache.org>. So who has it? please give me a link or sent it to me

at zhangqm1981@gmail.com

Thanks very much!

Subject: Re: who has Maven1.0.2 for Linux?
Posted by [tonyj](#) on Tue, 23 Sep 2008 05:44:09 GMT
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It is at:

<http://archive.apache.org/dist/maven/binaries/maven-1.0.2.tar.gz>

Tony

Subject: Running PFA in Batch Mode
Posted by [bjasper](#) on Wed, 08 Oct 2008 17:56:41 GMT
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I'm trying to run Steve Magill's PFA code (`/usr/local/sim/lcsim/src/org/lcsim/contrib/SteveMagill`) in batch mode. I've been able to successfully run other drivers in batch mode in the past. When I try to do it with this driver though, I get the following:

```
java -ea Main -1 RunPFA inputfile > outfile
Processing file inputfile...
Detector change: innerZ = 1680.0 innerR = 1270.0
DigiSimDriver.init(): detector=<acme0605>
DigiSimDriver.init(): config file=</usr/local/mcfast/test.steer>
Exception in thread "main"
org.lcsim.conditions.ConditionsManager$ConditionsSetNotFoundExcpion: No converter
registered for type: org.lcsim.recon.emid.hmatrix.HMatrix
.
.
.
```

It runs perfectly fine within JAS3, but with lots of data files to analyze I want to run it on our cluster in batch mode. I'm sure I'll need to give more information but I'm not sure what yet so just ask. Can anyone point me in the right direction?

Subject: Re: Running PFA in Batch Mode
Posted by [tonyj](#) on Thu, 09 Oct 2008 06:38:50 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi, it looks as if some part of the initialization of the conditions system has not been performed, but I don't know why that would happen. Can you attach you "main" java class?

Tony

Subject: Re: Running PFA in Batch Mode
Posted by [bjasper](#) on Thu, 09 Oct 2008 17:40:22 GMT
[View Forum Message](#) <> [Reply to Message](#)

Here it is. I also attached "StauStauTemplate.java" which is the PFA (modified for me by Steve Magill). From what I can tell, HMatrix comes in from the following place:

Line 189 in StauStauTemplate -->

```
add(new RonDTPhotonFinderSid01("EMNMHitMap", "ARPFhitmap", phCl));
```

RonDTPhotonFinderSid01 is found in org.lcsim.contrib.Cassell.recon.DTPhotons.*;

Line 45,46 in RonDTPhotonFinderSid01 -->

```
hmv = new HMatrixVars();  
add(hmv);
```

HMatrixVars() is found in org.lcsim.contrib.uiowa.RonPhotonFinder.*;

File Attachments

- 1) [Main.java](#), downloaded 502 times
 - 2) [StauStauTemplate.java](#), downloaded 569 times
-

Subject: build error for LCSIM
Posted by [manly](#) on Fri, 10 Oct 2008 16:43:11 GMT
[View Forum Message](#) <> [Reply to Message](#)

I did a CVS update of LCSIM and GeomConverter in order to grab the UIOWA muonfinder code. After doing this, I was able to build GeomConverter successfully, but the LCSIM build failed. The error messages were

```
\uiowa\SteveMIPReassignmentAlgorithm.java:24: incompatible types
```

```
found : org.lcsim.contrib.uiowa.LocalHelixExtrapolator
required : org.lcsim.recon.pfa.identifier.HelixExtrapolator
    m_extrap = new LocalHelixExtrapolator(); System.out.println("WARNING: HARD-CODED
USE OF LOCALHELIXEXTRAPOLATOR"0;
```

Any suggestions as to what I should do with this?

Thanks

Subject: Re: build error for LCSIM
Posted by [jfstrube](#) on Fri, 10 Oct 2008 16:57:54 GMT
[View Forum Message](#) <> [Reply to Message](#)

This looks to me like there are still obsolete files in your cache. Does maven clean before maven help?

Subject: Re: build error for LCSIM
Posted by [mcharles](#) on Fri, 10 Oct 2008 17:38:21 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi Jan,

jfstrube wrote on Fri, 10 October 2008 09:57 This looks to me like there are still obsolete files in your cache. Does maven clean before maven help?

I think you have it right. This one has bitten quite a few people now -- I might switch to fully qualified package.class names for this one case as an additional workaround.

Cheers,

Mat.

Subject: MuonFinder
Posted by [manly](#) on Wed, 15 Oct 2008 16:07:23 GMT
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I'm working with Professor Manly at the University of Rochester, and we are trying to compile the MuonFinder file but we run into a few errors.

```
C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\
MuonFinder\MuonFinder.java:11: package org.lcsim.recon.pfa.identifier does not exist
import org.lcsim.recon.pfa.identifier.*;
```

```
^
C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\
MuonFinder\MuonFinder.java:44: cannot find symbol
symbol : class HelixExtrapolator
location: class org.lcsim.contrib.uiowa.MuonFinder.MuonFinder
    protected HelixExtrapolator m_findCluster = new
    org.lcsim.recon.pfa.identifier.LocalHelixExtrapolator();
```

```
^
C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\
MuonFinder\MuonFinder.java:44: package org.lcsim.recon.pfa.identifier does not exist
    protected HelixExtrapolator m_findCluster = new
    org.lcsim.recon.pfa.identifier.LocalHelixExtrapolator();
```

```
^
C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\
MuonFinder\MuonFinder.java:86: reference to Cluster is ambiguous, both class
org.lcsim.recon.cluster.directedtree.Cluster in org.lcsim.recon.cluster.directedtree and class
org.lcsim.event.Cluster in org.lcsim.event match
    List<Cluster> muonClusters = new Vector<Cluster>();
```

```
^
C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\
MuonFinder\MuonFinder.java:86: reference to Cluster is ambiguous, both class
org.lcsim.recon.cluster.directedtree.Cluster in org.lcsim.recon.cluster.directedtree and class
org.lcsim.event.Cluster in org.lcsim.event match
    List<Cluster> muonClusters = new Vector<Cluster>();
```

```
^
C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\
MuonFinder\MuonFinder.java:93: cannot find symbol
symbol : class MipTrackMap
location: class org.lcsim.contrib.uiowa.MuonFinder.MuonFinder
    MipTrackMap finder = new MipTrackMap(m_findCluster);
```

```
^
C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\
MuonFinder\MuonFinder.java:93: cannot find symbol
symbol : class MipTrackMap
location: class org.lcsim.contrib.uiowa.MuonFinder.MuonFinder
    MipTrackMap finder = new MipTrackMap(m_findCluster);
```

C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\MuonFinder\MuonFinder.java:95: reference to Cluster is ambiguous, both class org.lcsim.recon.cluster.directedtree.Cluster in org.lcsim.recon.cluster.directedtree and class org.lcsim.event.Cluster in org.lcsim.event match

```
List<Cluster> muonmips = finder.createMIPMuDet(mudethits);
```

^

C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\MuonFinder\MuonFinder.java:97: reference to Cluster is ambiguous, both class org.lcsim.recon.cluster.directedtree.Cluster in org.lcsim.recon.cluster.directedtree and class org.lcsim.event.Cluster in org.lcsim.event match

```
Map<Track,Set<Cluster>> outputmap = new HashMap<Track,Set<Cluster>>();
```

^

C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\MuonFinder\MuonFinder.java:97: reference to Cluster is ambiguous, both class org.lcsim.recon.cluster.directedtree.Cluster in org.lcsim.recon.cluster.directedtree and class org.lcsim.event.Cluster in org.lcsim.event match

```
Map<Track,Set<Cluster>> outputmap = new HashMap<Track,Set<Cluster>>();
```

^

C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\MuonFinder\MuonFinder.java:102: reference to Cluster is ambiguous, both class org.lcsim.recon.cluster.directedtree.Cluster in org.lcsim.recon.cluster.directedtree and class org.lcsim.event.Cluster in org.lcsim.event match

```
for(Cluster mumip : muonmips){
```

^

C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\MuonFinder\MuonFinder.java:152: reference to Cluster is ambiguous, both class org.lcsim.recon.cluster.directedtree.Cluster in org.lcsim.recon.cluster.directedtree and class org.lcsim.event.Cluster in org.lcsim.event match

```
Cluster bestmipc = null;
```

^

C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\MuonFinder\MuonFinder.java:159: cannot find symbol
symbol : class HelixExtrapolationResult

location: class org.lcsim.contrib.uiowa.MuonFinder.MuonFinder

```
HelixExtrapolationResult result = m_findCluster.performExtrapolation(tr);
```

^

C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\MuonFinder\MuonFinder.java:160: reference to Cluster is ambiguous, both class org.lcsim.recon.cluster.directedtree.Cluster in org.lcsim.recon.cluster.directedtree and class org.lcsim.event.Cluster in org.lcsim.event match

```
Cluster calmip = mipmap.get(tr);
```

^

C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\MuonFinder\MuonFinder.java:208: reference to Cluster is ambiguous, both class org.lcsim.recon.cluster.directedtree.Cluster in org.lcsim.recon.cluster.directedtree and class org.lcsim.event.Cluster in org.lcsim.event match

```
Set<Cluster> c = outputmap.get(bestTrack);  
^
```

C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\MuonFinder\MuonFinder.java:210: reference to Cluster is ambiguous, both class org.lcsim.recon.cluster.directedtree.Cluster in org.lcsim.recon.cluster.directedtree and class org.lcsim.event.Cluster in org.lcsim.event match

```
c = new HashSet<Cluster>();  
^
```

C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\MuonFinder\MuonFinder.java:230: reference to Cluster is ambiguous, both class org.lcsim.recon.cluster.directedtree.Cluster in org.lcsim.recon.cluster.directedtree and class org.lcsim.event.Cluster in org.lcsim.event match

```
for(Cluster clus : outputmap.get(tr)){  
^
```

C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\MuonFinder\MuonFinder.java:239: cannot find symbol
symbol : constructor HitMap(java.util.List<org.lcsim.event.CalorimeterHit>)
location: class org.lcsim.util.hitmap.HitMap

```
HitMap muonMap = new HitMap(muonclustershits);  
^
```

C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\MuonFinder\MuonFinder.java:244: reference to Cluster is ambiguous, both class org.lcsim.recon.cluster.directedtree.Cluster in org.lcsim.recon.cluster.directedtree and class org.lcsim.event.Cluster in org.lcsim.event match

```
event.put(_outName, muonClusters, Cluster.class, flag );
```

Note: C:\Documents and Settings\sven\LC_software\lcsim\src\org\lcsim\contrib\uiowa\MuonFinder\MuonFinder.java uses unchecked or unsafe operations.

Note: Recompile with -Xlint:unchecked for details.

What does this mean, and what should we do to fix this? Any help is appreciated.

-Ben Weinert

Subject: Re: MuonFinder

Posted by [tonyj](#) on Thu, 16 Oct 2008 16:42:45 GMT

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Hi, can you make sure you have a full up to date copy of the org.lcsim code from CVS, but doing a

cvs update -PdA

Also are you using maven to build or mvn (maven 2)?

Tony

Subject: Re: MuonFinder
Posted by [tjkim](#) on Thu, 16 Oct 2008 16:46:04 GMT
[View Forum Message](#) <> [Reply to Message](#)

Did you solve the problem?
I guess you need to update the whole lcsim directories.
cvs update -PdA under lcsim directory.

Subject: Re: MuonFinder
Posted by [manly](#) on Thu, 16 Oct 2008 17:02:20 GMT
[View Forum Message](#) <> [Reply to Message](#)

I'm tryign to update CVS using netbeans in windows. I clearly did something wrong.

I am doing maven, not mvn.

I need to play with the way I did my cvs update I think.

Thanks!

Subject: Re: Running PFA in Batch Mode
Posted by [bjasper](#) on Fri, 17 Oct 2008 20:15:04 GMT
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Any thoughts?

Subject: CVS questions on windows

Posted by [manly](#) on Sun, 19 Oct 2008 19:46:49 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi all,

I am using windows XP and used Netbeans to do a CVS checkout of GeomConverter and lcsim successfully in the past. I need to update my code. So I did another CVS checkout of GeomConverter and lcsim. I did a maven clean and maven in both GeomConverter and the lcsim directories. Things are not working.

i've been told to do

```
> cd GeomConverter
>> cvs update -PAd .
>> maven clean
>> ./scripts/buildNoTests.sh
>> cd ../lcsim
>> cvs update -PAd .
>> maven clean
>> ./scripts/build-no-tests.sh
```

But, there is no cvs update option in Netbeans. So I went back to the CVS documentation at

<http://confluence.slac.stanford.edu/display/ilc/cvs>

and it says I need to download cvs ... which I did. i still cannot do a cvs update from the command window. I tried adding the directory in which the newly downloaded cvs sits to my environmental path ... this did nothing.

It seems as if I am missing some fundamental aspects of how netbeans and cvs are supposed to work. Can anyone tell me how to do a fully successful cvs update on windows/netbeans? Sorry to be so clueless.

Subject: Re: CVS questions on windows
Posted by [tonyj](#) on Tue, 21 Oct 2008 21:58:14 GMT
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Hi Steve, there are two ways to use CVS on windows:

From the command window, in which case you need to get the command line version of CVS.
From netbeans, in which case you don't need any command line tools, you just use the CVS built into netbeans. In this case to do an update select the project, right click, and select CVS update.

(Actually there are more than two ways, you can also use TortoiseCVS which integrates CVS into the windows explorer, but ignore that for now).

Does this help? What is the error you are getting when you try to build?

Tony

Subject: Re: Running PFA in Batch Mode
Posted by [tonyj](#) on Tue, 21 Oct 2008 22:07:05 GMT
[View Forum Message](#) <> [Reply to Message](#)

I have forwarded your error to the PFA experts, I can;t see anything obviously wrong.

Tony

Subject: Re: Running PFA in Batch Mode
Posted by [tonyj](#) on Tue, 21 Oct 2008 22:54:09 GMT
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Hi, I think Jeremy figured out the problem. If you create your own LCSimLoop you must do it `_before_` you create any drivers. So I think just moving the new LCSimLoop to the top of your main method will fix the problem.

This is certainly an obscure requirement, we will see if we can fix it.

Tony

Subject: Re: Running PFA in Batch Mode
Posted by [bjasper](#) on Wed, 22 Oct 2008 04:32:38 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hey, it works! That is certainly a very obscure requirement but that doesn't matter anymore

Thanks for your help!

Subject: Re: CVS questions on windows
Posted by [manly](#) on Wed, 22 Oct 2008 21:15:01 GMT
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Hi Tony,

Thanks for the reply.

I think my problem is I forgot to do a maven jas:install ... sigh

-Steve

Subject: cvs update issues
Posted by [manly](#) on Tue, 02 Dec 2008 00:12:49 GMT
[View Forum Message](#) <> [Reply to Message](#)

hi all,

I am trying to update my software. I have checked out GeomConverter and lcsim and I am able to maven both of them and get successful builds. Then when i try a jas::install in the lcsim directory I get a message that says "goal jas::install does not exist in this project". Any ideas of what I'm doing wrong?

Thanks,
Steve

Subject: Re: cvs update issues
Posted by [jeremy](#) on Tue, 02 Dec 2008 19:36:39 GMT
[View Forum Message](#) <> [Reply to Message](#)

Steve,

The "jas:install" target only exists if...

- 1) You are still using maven 1, not maven 2.
- 2) You are building lcsim.

This target does NOT exist if you are building GeomConverter with either tool or if you are building lcsim with maven 2. It is executed automatically with the lcsim build if you are using maven 2.

I just confirmed that the command "maven jas:install" works fine on my copy of lcsim.

Does this clear anything up?

Subject: Re: cvs update issues
Posted by [manly](#) on Tue, 02 Dec 2008 20:31:26 GMT
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Hi Jeremy,

Thanks for your reply. I'm using Maven 1.0.2. Do you suggest that I try Maven 2 instead?

How can I tell if there is a need to a jas::install? When I try to load new code (for example lcsim/src/org/lcsim/util/step/CamKalmanStepper2.java) i get errors telling me that a number of classes are not found. I assumed this meant I needed a jas::install.

Thanks for your time.

-Steve

Subject: Contrib packages?
Posted by [bjasper](#) on Tue, 30 Dec 2008 20:57:05 GMT
[View Forum Message](#) <> [Reply to Message](#)

I understand that the contrib directory has been removed and there is now a lcsim-contrib package that requires Maven 2... Are there any instructions available on how to make the switch?

Subject: Re: Contrib packages?
Posted by [partridge](#) on Tue, 30 Dec 2008 21:04:48 GMT
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You might take a look at:

Subject: Re: Contrib packages?

Posted by [bjasper](#) on Mon, 05 Jan 2009 20:32:45 GMT

[View Forum Message](#) <> [Reply to Message](#)

Okay, I've followed the instructions but when I try to run maven 2 in the lcsim-contrib directory, I get the following error:

```
Downloading: http://repo1.maven.org/maven2/org/freehep/freehep-jas-plugin/2.0.1/
freehep-jas-plugin-2.0.1.jar
```

```
[INFO] -----
```

```
[ERROR] BUILD FAILURE
```

```
[INFO] -----
```

```
[INFO] A required plugin was not found: Plugin could not be found - check that t
he goal name is correct: Unable to download the artifact from any repository
```

Try downloading the file manually from the project website.

Then, install it using the command:

```
mvn install:install-file -DgroupId=org.freehep -DartifactId=freehep-jas-plug
in -Dversion=2.0.1 -Dpackaging=maven-plugin -Dfile=/path/to/file
```

Alternatively, if you host your own repository you can deploy the file there:

```
mvn deploy:deploy-file -DgroupId=org.freehep -DartifactId=freehep-jas-plugin
-Dversion=2.0.1 -Dpackaging=maven-plugin -Dfile=/path/to/file -Durl=[url] -Drep
ositoryId=[id]
```

```
org.freehep:freehep-jas-plugin:maven-plugin:2.0.1
```

from the specified remote repositories:

```
central (http://repo1.maven.org/maven2)
```

```
org.freehep:freehep-jas-plugin:maven-plugin:2.0.1
```

from the specified remote repositories:

```
central (http://repo1.maven.org/maven2)
```

I checked the repository and it seems as though that directory plugin isn't there...

Subject: Re: Contrib packages?
Posted by [bjasper](#) on Wed, 07 Jan 2009 20:32:19 GMT
[View Forum Message](#) <> [Reply to Message](#)

Okay, I managed to find freehep-jas-plugin-2.0.1.jar and installed it manually. But now it's giving this error:

Downloading:
<http://java.freehep.org/maven2/org/lcsim/lcsim/1.11-SNAPSHOT/lcsim-1.11-SNAPSHOT.jar>
[INFO] -----
[ERROR] BUILD ERROR
[INFO] -----
[INFO] Failed to resolve artifact.

Missing:

1) org.lcsim:lcsim:jar:1.11-SNAPSHOT

Try downloading the file manually from the project website.

Then, install it using the command:

```
mvn install:install-file -DgroupId=org.lcsim -DartifactId=lcsim -Dversion=1.11-SNAPSHOT  
-Dpackaging=jar -Dfile=/path/to/file
```

Alternatively, if you host your own repository you can deploy the file there:

```
mvn deploy:deploy-file -DgroupId=org.lcsim -DartifactId=lcsim -Dversion=1.11-SNAPSHOT  
-Dpackaging=jar -Dfile=/path/to/file -Durl=[url] -DrepositoryId=[id]
```

Path to dependency:

- 1) org.lcsim:lcsim-contrib:jar:1.1-SNAPSHOT
- 2) org.lcsim:lcsim:jar:1.11-SNAPSHOT

1 required artifact is missing.

for artifact:

```
org.lcsim:lcsim-contrib:jar:1.1-SNAPSHOT
```

from the specified remote repositories:

```
central (http://repo1.maven.org/maven2),  
freehep-maven (http://java.freehep.org/maven2),  
lcsim-maven (http://lcsim.org/maven2)
```

But I DO have lcsim version 1.11 installed. Does this have something to do with lcsim 1.11 using maven 1.02 (with it's repository in ~/.maven/repository) and lcsim-contrib uses maven 2 (with repository in ~/.m2/repository)?

Subject: Re: Contrib packages?

Posted by [bjasper](#) on Wed, 07 Jan 2009 20:42:40 GMT

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Nevermind. I went back and recompiled GeomConverter and lcsim with Maven2 and it seemed to compile.

Subject: Problem finding new class after adding it to org.lcsim

Posted by [rcowan](#) on Sat, 31 Jan 2009 04:43:22 GMT

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Hi,

I have created a new class in org.lcsim.recon.cheater. The new class, QuickCalibrationFromDataScint, is similar in function to QCalibrationFromData which already exists. After I re-build lcsim using maven2, I find the new class is not found when I run java from the command line using an xml driver file.

I found a work-around by changing the "type" value on the <driver> tag from

```
<driver name="QuickCalibrationFromDataScint"
type="org.lcsim.recon.cheater.QuickCalibrationFromDataScint ">
```

to

```
<driver name="QuickCalibrationFromDataScint"
type="QuickCalibrationFromDataScint">
```

Why didn't the original specification stating that the class would be found in org.lcsim.recon.cheater work? How do I correctly ensure that the class will be found parallel to its source code location?

I searched confluence but couldn't find any information about this.

Thanks. --Ray

Subject: Re: Problem finding new class after adding it to org.lcsim
Posted by [jfstrube](#) on Sat, 31 Jan 2009 09:48:35 GMT
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Hi Ray,
sorry, stupid question, but do you have the correct package statement in your class?
Jan

Subject: Re: Problem finding new class after adding it to org.lcsim
Posted by [rcowan](#) on Sat, 31 Jan 2009 23:55:29 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi Jan,

Thanks very much, that was the problem. Works fine now!

--Ray

Subject: xml with driver
Posted by [tjkim](#) on Tue, 03 Feb 2009 01:26:57 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hello,

I was trying to run PFA with xml files.
I have two basic questions.

In PFA, it has lots of drive which have sub-driver and parameters.
For examples,

```
public class A extends Driver
{
    public A()
    {
        add(new B());
    }
}
```



```
    add(new C(x,y,z));
  }
}
```

In the B driver,

```
public class B extends Driver
{
  public B()
  {
    add(new D());
    .
    .
  }
}
```

I know that I am supposed to put driver name like following,

```
<drivers>
  <driver name="A" type="...A">
  </driver>
</drivers>
```

But I am wondering if xml file can handle this sub-driver like D() case and driver with parameters like C(x,y,z) driver.

Thank you for your help.

Taejeong

Subject: Re: xml with driver
Posted by [jeremy](#) on Tue, 03 Feb 2009 20:49:09 GMT
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Hi, Taejeong.

Three options.

1) Delay creating the subdriver until startOfData() or detectorChanged().

```
public void startOfData()
```

```
{
  new C(x,y,z);
}
```

2) Flatten out the structure and don't use subdrivers. Then you call each driver individually in your xml file.

3) Set the value in the parent driver's setter method.

```
class A
{
  int x;
  B b;
  public A()
  {
    b = new B();
  }

  public void setX(int x)
  {
    this.x = x;
    b.setX(x);
  }
}
```

Does this answer your question?

--Jeremy

Subject: "Number of SeedSectors: 0" messages
Posted by [rcowan](#) on Sat, 07 Feb 2009 00:36:52 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi,

When running the production PFA with full tracking, there are lots of messages like "Number of SeedSectors: 0" in the output. Is there a way to reduce or suppress these? I'm running the reconstruction via an xml file.

Thanks,

--Ray

Subject: Re: "Number of SeedSectors: 0" messages
Posted by [partridge](#) on Sat, 07 Feb 2009 03:59:38 GMT
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Ray,

I turned off this message - sorry about that.

Also, I found some problems with some fast checks I was doing to speed up the tracking code, and have turned them off for now.

Thanks for pointing out this annoying message.

Rich

Subject: Re: "Number of SeedSectors: 0" messages
Posted by [rcowan](#) on Mon, 09 Feb 2009 01:34:01 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi Rich,

Thanks very much for removing the extra printouts!

--Ray

Subject: maven plugin for netbeans
Posted by [manly](#) on Wed, 11 Feb 2009 16:38:50 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi all,

I am building my LCSIM environment on a Windows XP machine. I have JAVA 1.5.0_16 and Maven 2.0.9 and NetBeans 6.5 all successfully installed. The next step for me is to install the maven plugin in Netbeans as per the instructions at

<http://confluence.slac.stanford.edu/display/ilc/Setting+Up+N+etbeans+6.5+with+Maven+2>

When I go to Tools -> plugins, I see no available plugins and the maven plugin is not listed as installed. When I go to www.netbeans.org and look at the plugins available to download, I do not find the maven plugin.

When I downloaded NetBEans at <http://www.netbeans.org/downloads/index.html> I downloaded the version "All".

Any idea of what I did wrong or a can someone tell me where to get the maven plugin?

Thanks,
Steve

Subject: Re: maven plugin for netbeans
Posted by [Dmitry Onoprienko](#) on Wed, 11 Feb 2009 21:19:01 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hello Steve,

Since no one seems to have run into a similar problem - here are a few ideas to try:

- have you tried to hit "Reload Catalog" button on the "Available Plugins" tab ?
- have you set environment variables per instructions on the confluence page ?
- do you have check mark for NetBeans updater on the "Settings" tab ?

If that does not help, I would try to uninstall NetBeans and re-install it after downloading the "Java SE" bundle, not "All" (you probably don't want all those modules anyway, and I think I remember there was a problem at some point with RoR plugin breaking NetBeans plugin manager). Also, you might try updating to JDK 1.6 before re-installing NetBeans.

Subject: Re: maven plugin for netbeans
Posted by [manly](#) on Tue, 17 Feb 2009 16:02:09 GMT
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Hi Dmitry,

I had to go out of town and put this aside for a few days. When I asked netbeans to reload plugins the mavin plugin appeared. i thought I had done that earlier, but apparently not. Thanks

for your help.

-Steve

Subject: Jet Analysis Driver with LCIO Output Driver
Posted by [twhite](#) on Fri, 17 Jul 2009 08:34:38 GMT
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Hi,

I am able to add both these drivers to the constructor and have them run during each event by calling

```
super.process;
```

However I want to be able to output only selected events, which was possible before I added the Jet Analysis driver but now seems impossible as I want to run the Jet Analysis driver in every event.

I have tried adding and removing the drivers during each event to selectively and individually run the each driver but this has so far just caused the program to freeze when I run it.

i.e.

```
super.add(output);  
super.remove(j);  
super.process;  
super.remove(output);  
super.add(j);
```

where 'output' and 'j' have been defined as the drivers with the correct settings, both of which work fine if added in the constructor and simply called in the event.

I am pretty new to this so was wondering if I'm missing anything?

Is there another way to output to an LCIO file?

Thanks

Tom

Subject: Re: Jet Analysis Driver with LCIO Output Driver
Posted by [twhite](#) on Fri, 17 Jul 2009 09:48:41 GMT
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I have managed to solve the problem by outputting to the LCIO file without using the driver.

In the constructor

```
try{
    File output = new File(System.getProperty("user.home"), "output.slcio");
    writer = new LCIOWriter(output);
}
catch(IOException x)
{
    throw new RuntimeException("Error writing LCIO file", x)
}
```

Then in the event

```
try{
    writer.write(event);
}
catch(IOException x)
{
    throw new RuntimeException("Error writing LCIO file", x)
}
```

Subject: Can't create lcsim driver class via xml in batch; runs ok in JAS3
Posted by [rcowan](#) on Sat, 18 Jul 2009 03:18:44 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi,

I've created a new driver class `org.lcsim.contrib.mit.EventFilter` (using netbeans).
I can load this class and run it successfully in Jas3, but when I try to use it
in an lcsim xml file, the driver class is not created:

Exception in thread "main" java.lang.RuntimeException: The Driver class
`org.lcsim.contrib.mit.EventFilter` could not be created. Check that the name and
package is correct in your xml file.

at org.lcsim.job.JobControlManager.setupDrivers(JobControlManager.java:641)

...

The xml file contains:

```
<lcsim>
  <inputFiles>

<file>/nfs/slac/g/lcd/ilc_data/ILC500/ZZ/sid02/slcioreco/panpyZZnunubaruds-0-1000_SLIC-v2r3p
10_geant4-v9r0p1_LCPhys_sid02_lcsim-recon-1_4.slcioreco</file>
  </inputFiles>

  <execute>
    <driver name="EventFilter"/>
  </execute>

  <control>
    <numberOfEvents>10</numberOfEvents>
    <verbose>true</verbose>
    <printDriverStatistics>true</printDriverStatistics>
    <printSystemProperties>true</printSystemProperties>
    <printUserClassPath>true</printUserClassPath>
    <printDriversDetailed>true</printDriversDetailed>
  </control>

  <drivers>
    <driver name="EventFilter" type="org.lcsim.contrib.mit.EventFilter">
    </driver>
  </drivers>
</lcsim>
```

I'm sure I'm missing something...any suggestions?

Thanks. --Ray

Subject: Re: Can't create lcsim driver class via xml in batch; runs ok in JAS3
Posted by [rcowan](#) on Mon, 20 Jul 2009 23:49:15 GMT

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After some additional investigation, and a talk with Tony, it seems that it is presently not possible to call classes in project lcsim-contrib when running lcsim with an xml driver file as shown here:

```
> java -jar <path to lcsim SNAPSHOT jar file> <myXMLfile.xml>
```

Apparently this only gives access to classes defined in lcsim and not in lcsim-contrib due to the order of dependencies. (Does anyone have a counterexample? I'd be happy to see it!).

So it appears that in order to call drivers using an xml file, the driver must be defined in project lcsim and not in lcsim-contrib, at least at present.

If anyone knows differently, let me know.

Thanks,
--Ray

Subject: Re: Can't create lcsim driver class via xml in batch; runs ok in JAS3
Posted by [rcowan](#) on Thu, 13 Aug 2009 03:03:01 GMT
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I asked Jeremy about this. It turns out that you can access drivers defined in lcsim-contrib in a job using an xml steering file. The technique is to add a classpath specification in the xml file. An example can be found in lcsim/sandbox/steeringTest.xml:

```
<!-- additional jars -->  
<classpath>  
  <!-- jar on the web -->  
  <jarUrl>http://www.lcsim.org/test/jars/lcsim-ipr-1.0-SNAPSHOT.jar</jarUrl>  
  <!-- local jar -->  
  <jar>/u/ey/jeremym/work/cvs/lcsim-ipr/lcsim-ipr/target/lcsim-ipr-1.0-SNAPSHOT.jar</jar>  
</classpath>
```

I haven't tried this, but it should work.

Thanks. --Ray

Subject: lcsim release
Posted by [jeremy](#) on Sat, 15 Aug 2009 00:04:40 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hello, lcsim users.

I have made a release of lcsim today and its dependencies. The following versions were tagged and released today.

lcsim - 1.11
lcsim-contrib - 1.1
GeomConverter - 1.8
lcsim-parent - 1.4

The jar files for these versions can be found on the lcsim site.

<http://www.lcsim.org/maven2/org/lcsim>

The websites for these projects are deployed to the software section.

<http://www.lcsim.org/software/lcsim/1.11>
<http://www.lcsim.org/software/GeomConverter>
<http://www.lcsim.org/software/lcsim-contrib>

New development versions are as follows.

lcsim - 1.12-SNAPSHOT
GeomConverter - 1.9-SNAPSHOT
lcsim-contrib - 1.2-SNAPSHOT

We are depending on lcsim-parent 1.4 for the time being for all lcsim dependencies. It is considered stable.

Please send any questions to jeremym@slac.stanford.edu. I will also post this message to the linear collider forum

---IMPORTANT NOTE---

In order to install this release from JAS3 as a plugin, please remove your existing lcsim plugin first.

Go to View -> Plugin Manager -> Installed -> org.lcsim .

Click on "org.lcsim" under user and then the "Remove selected plugins" button.

Now restart JAS3, and install lcsim under Available -> hep -> linearcollider .

This needs to be done due to an error I made in the release procedures. Apologies for that!

--Jeremy McCormick, SLAC

Subject: Failing to run tutorial: Processing Data in Batch Mode using LCSim XML
Posted by [wenzel](#) on Fri, 21 Aug 2009 16:54:21 GMT
[View Forum Message](#) <> [Reply to Message](#)

When I try to follow the tutorial to run in batch I get the Exception below:

my xml file looks like:

```
<lcsim>
  <inputFiles>
    <file> /media/disk-1/wenzel/qgsp/pi-_1GeV_QGSP_BERT_r130.slcio</file >
  </inputFiles>
  <control>
    <numberOfEvents>100</numberOfEvents>
  </control>
  <execute>
    <driver name="EventMarkerDriver"/>
  </execute>
  <drivers>
    <driver name="EventMarkerDriver"
      type="org.lcsim.job.EventMarkerDriver">
      <eventInterval>1</eventInterval>
    </driver>
  </drivers>
</lcsim>
```

```
wenzel@nara:~/NetBeansProjects/lcsim$ java -jar ./target/lcsim-1.11.jar ./myJob.xml
Exception in thread "main" java.lang.NoClassDefFoundError: org/jdom/input/SAXBuilder
    at org.lcsim.job.JobControlManager.setup(JobControlManager.java :189)
    at org.lcsim.job.JobControlManager.setup(JobControlManager.java :175)
    at org.lcsim.job.JobControlManager.main(JobControlManager.java: 96)
Caused by: java.lang.ClassNotFoundException: org.jdom.input.SAXBuilder
    at java.net.URLClassLoader$1.run(URLClassLoader.java:200)
    at java.security.AccessController.doPrivileged(Native Method)
    at java.net.URLClassLoader.findClass(URLClassLoader.java:188)
    at java.lang.ClassLoader.loadClass(ClassLoader.java:307)
    at sun.misc.Launcher$AppClassLoader.loadClass(Launcher.java:301 )
    at java.lang.ClassLoader.loadClass(ClassLoader.java:252)
    at java.lang.ClassLoader.loadClassInternal(ClassLoader.java:320 )
    ... 3 more
```

Subject: Re: Failing to run tutorial: Processing Data in Batch Mode using LCSim XML
Posted by [jeremy](#) on Fri, 21 Aug 2009 21:08:14 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hans,

The command you're using is (slightly) wrong. It should be...

```
java -jar ./target/lib/lcsim-1.11.jar ./myJob.xml
```

This is somewhat subtle, but you need to run the copy in the lib dir instead of the one in target. This is because the maven build places all of lcsim's dependencies into the ./target/lib dir, and when you run from ./target/lcsim-1.11.jar, it can't find the dependencies because it uses the relative path to find them.

You can also take the deps zip file and run it someplace else, which might be less confusing.

```
cd /myworkdir
cp /my/lcsim/target/lcsim-1.11-deps.zip .
unzip lcsim-1.11-deps.zip
java -jar ./lib/lcsim-1.11.jar myJob.xml
```

The above is how I typically tend to run it.

Here are the general instructions for running from batch.

<http://confluence.slac.stanford.edu/display/ilc/lcsim+xml>

Let me know if either of these suggestions works for you.

Subject: Re: Failing to run tutorial: Processing Data in Batch Mode using LCSim XML

Posted by [wenzel](#) on Fri, 21 Aug 2009 21:26:01 GMT

[View Forum Message](#) <> [Reply to Message](#)

Hi Jeremy

Thanks that did the trick.

Hans

Subject: Re: Now how do I run a driver that I created in the contrib area?

Posted by [wenzel](#) on Fri, 21 Aug 2009 22:05:57 GMT

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It looks like I am very close to what I want to do. Now what I really want to do is to run my own driver in batch mode:

I followed the instructions in

<http://confluence.slac.stanford.edu/display/ilc/Adding+a+Driver+using+Netbeans>

and created my own driver in `org.lcsim.contrib.HansWenzel.DualReadout`

called `AnalyzedualCaloHits`

How would I proceed getting this driver to work in batch mode. I tried something like that:

```
cp ~/NetBeansProjects/lcsim-contrib/target/lcsim-contrib-1.2-SNAPSHOT.jar .
```

created the following xml file:

```
<lcsim>
  <inputFiles>
    <file>/media/disk-1/wenzel/qgsp/pi-_1GeV_QGSP_BERT_r130.slcio </file>
  </inputFiles>
  <control>
    <numberOfEvents>-1</numberOfEvents>
  </control>
  <execute>
    <driver name="AnalyzedualCaloHits"/>
  </execute>
  <drivers>
    <driver name="AnalyzedualCaloHits"
      type="org.lcsim.contrib.HansWenzel.DualReadout">
      <eventInterval>1</eventInterval>
    </driver>
  </drivers>
</lcsim>
```

but that naive approach only produces:

```
wenzel@nara:~/batch$ java -jar ./lib/lcsim-1.11.jar ./myJob.xml
```

```
---- org.lcsim version ----
```

```
application.artifactId: lcsim
```

```
application.name: org.lcsim
```

```
application.version: 1.11
```

```
application.description: A Java-based reconstruction and analysis system for ILC detectors.
```

```
build.user: wenzel
```

```
build.date: Fri Aug 21 11:40:07 CDT 2009
```

```
java.version: 1.6
```

```
os.arch: i386
```

```
os.name: Linux
```

```
os.version: 2.6.24-24-generic
```

```
---- End org.lcsim version ----
```

```
Exception in thread "main" java.lang.RuntimeException: The Driver class
org.lcsim.contrib.HansWenzel.DualReadout could not be created. Check that the name and
package is correct in your xml file.
```

```
    at org.lcsim.job.JobControlManager.setupDrivers(JobControlManager.java:641)
```

```
at org.lcsim.job.JobControlManager.setup(JobControlManager.java :221)
at org.lcsim.job.JobControlManager.setup(JobControlManager.java :199)
at org.lcsim.job.JobControlManager.setup(JobControlManager.java :175)
at org.lcsim.job.JobControlManager.main(JobControlManager.java: 96)
Caused by: java.lang.ClassNotFoundException: org.lcsim.contrib.HansWenzel.DualReadout
at java.net.URLClassLoader$1.run(URLClassLoader.java:200)
at java.security.AccessController.doPrivileged(Native Method)
at java.net.URLClassLoader.findClass(URLClassLoader.java:188)
at java.lang.ClassLoader.loadClass(ClassLoader.java:307)
at java.lang.ClassLoader.loadClass(ClassLoader.java:252)
at org.lcsim.job.JobControlManager.setupDrivers(JobControlManager.java:637)
... 4 more
```

Subject: Re: Now how do I run a driver that I created in the contrib area?
Posted by [jeremy](#) on Fri, 21 Aug 2009 23:25:03 GMT
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Hi, Hans.

By including a classpath section in your XML file, you can reference any external jar that lcsim doesn't know about.

```
<classpath>
  <jar>/path/to/my/lcsim-contrib.jar</jar>
</classpath>
```

Or you can reference one on the web.

```
<classpath>
  <jarUrl>http://www.example.org/lcsim-contrib.jar</jar>
</classpath>
```

Try it and post if it works or not.

Sorry, this format is not well documented.

There is an example you can work off of in lcsim/sandbox/steeringTest.xml

Also, I noticed that if you're depending on a snapshot in the lcsim POM, the assembly plugin does something silly and instead of, for instance, GeomConverter-1.9-SNAPSHOT.jar, it uses some

crazy name for the jar including the date. So you have to copy the wrongly named jar to GeomConverter-[ver]-SNAPSHOT.jar instead or it will complain about not finding GeomConverter classes.

--Jeremy

Subject: Re: Now how do I run a driver that I created in the contrib area?

Posted by [wenzel](#) on Mon, 24 Aug 2009 19:31:02 GMT

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Hi Jeremy

thanks for the reply I will give that a try. What worked for me was to create a new package within the checked out lcsim.org project in netbeans. Then I rebuild lcsim and could run the driver in batch mode where th xml file looks like:

```
<lcsim>
  <inputFiles>
    <file> /media/disk-1/wenzel/slci0_combined/electron_Theta90_1GeV.sl cio </file>
  </inputFiles>
  <control>
    <numberOfEvents>-1</numberOfEvents>
  </control>
  <execute>
    <driver name="myAnalyzedualCaloHits"/>
  </execute>
  <drivers>
    <driver name="myAnalyzedualCaloHits"
      type="org.lcsim.mytest.myAnalyzedualCaloHits">
    </driver>
  </drivers>
</lcsim>
```

Subject: Re: Now how do I run a driver that I created in the contrib area?

Posted by [wenzel](#) on Tue, 25 Aug 2009 22:51:10 GMT

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Hi

Just gave that a try and it works for me and I can now run using the jar file build in the contrib area using the xml file below:

```
wenzel@nara:~/NetBeansProjects/lcsim$ pwd
/home/wenzel/NetBeansProjects/lcsim
wenzel@nara:~/NetBeansProjects/lcsim$ more myJob2.xml
<lcsim>
<classpath>
<jar> /home/wenzel/NetBeansProjects/lcsim-contrib/target/lcsim-contrib-1.2-SNAPSHOT.jar</jar>
</classpath>
  <inputFiles>
    <file>/media/disk-1/wenzel/slci0_combined/LCPhys_e-_1._130.slci0 </file>
  </inputFiles>
  <control>
    <numberOfEvents>-1</numberOfEvents>
  </control>
  <execute>
    <driver name="hansAnalyzedualCaloHits"/>
  </execute>
  <drivers>
    <driver name="hansAnalyzedualCaloHits"
      type="org.lcsim.contrib.HansWenzel.Tracking.DualReadOut.hansAnalyzedualCaloHits">
      <myVariable>LCPhys_e-_1._130.jpg</myVariable>
    </driver>
  </drivers>
</lcsim>
```

Subject: How can I access the current input file from within the lcsim
Posted by [wenzel](#) on Fri, 11 Sep 2009 21:33:38 GMT
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Hi

I would like to automate some processing and would like to access the name of the current input

file (where the name is used for some encoding) when running lcsim.org in batch mode. Is there a way to do that. I know there is a way in jas to do that but haven't figured it out yet for lcsim.org

Thanks

Hans

Subject: Re: How can I access the current input file from within the lcsim
Posted by [tonyj](#) on Mon, 14 Sep 2009 17:05:07 GMT
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Hi Hans, if you have access to the LCSimLoop object you should be able to use:

```
loop.getRecordSource().getSourceName();
```

Tony

Subject: Re: How can I access the current input file from within the lcsim
Posted by [wenzel](#) on Mon, 14 Sep 2009 20:04:32 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi Tony

Thanks for the response. Now of course the question is how do i get access access to the LCSimLoop. I am running in batch which I think uses the JobControlManager.

For jas I found the following code snippet to get the file name.

```
SequentialRecordLoop loop = (SequentialRecordLoop)((Studio)Application.getApplication()).  
getLookup().lookup(SequentialRecordLoop.class);  
SequentialRecordSource source = loop.getRecordSource();  
String s = source.getSourceName();
```

thanks for your help

Hans

Subject: Re: How can I access the current input file from within the lcsim
Posted by [wenzel](#) on Mon, 21 Sep 2009 13:10:49 GMT
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Hi All

I managed to get to the using the getLCSimLoop() provided by Jeremy. To access the instance of the the JobControlManager I made it a Singleton and provided a getInstance() method.

No I can access the RecordSource

```
lclloop = JCM.getLCSimLoop();  
rsource = lclloop.getRecordSource();  
System.out.println(rsource.getSourceName());
```

Unfortunately that doesn't provide me with the information I need which is the current lccio file that is being processed instead I get the filelist. Any idea how I could get the current file?
I have attached the modified java classes.

thanks

Hans

File Attachments

- 1) [DualCorrection.java](#), downloaded 611 times
 - 2) [JobControlManager.java](#), downloaded 762 times
-

Subject: GemConverter build Failed
Posted by [poojasaxena](#) on Tue, 18 Jan 2011 10:52:28 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi all,

I am working on UBUNTU (version 10.04) & have installed the following version of JAVA & maven:

Apache Maven 3.0.2

Java version: 1.6.0_20

I have build several projects(like lcsim, lcsim-cotrib, lcsim parent) using mvn (mvn -DskipTests=true clean install) but while building GeomConverter project, build failed error message is coming. Please find here the full error message:

Error Message:

```
*****
[INFO] Building GeomConverter
[INFO] task-segment: [clean, install]
[INFO] -----
[INFO] [clean:clean {execution: default-clean}]
[INFO] [resources:resources {execution: default-resources}]
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is
platform dependent!
[INFO] Copying 21 resources
[INFO] [compiler:compile {execution: default-compile}]
[INFO] Compiling 359 source files to /home/poojasaxena/CLIC/GeomConverter/target/classes
[INFO] [antrun:run {execution: default}]
[INFO] Executing tasks
[mkdir] Created dir: /home/poojasaxena/CLIC/GeomConverter/target/test-output
[INFO] Executed tasks
[INFO] [resources:testResources {execution: default-testResources}]
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is
platform dependent!
[INFO] Copying 38 resources
[INFO] [compiler:testCompile {execution: default-testCompile}]
[INFO] Compiling 75 source files to /home/poojasaxena/CLIC/GeomConverter/target/test-classes
[INFO] [surefire:test {execution: default-test}]
[INFO] Tests are skipped.
[INFO] [jar:jar {execution: default-jar}]
[INFO] Building jar: /home/poojasaxena/CLIC/GeomConverter/target/GeomConverter-1.
11-SNAPSHOT.jar
[INFO] [assembly:attached {execution: default}]
[INFO] Reading assembly descriptor:
/home/poojasaxena/CLIC/GeomConverter/src/assembly/bin.xml
[INFO] -----
[ERROR] BUILD ERROR
```

[INFO] -----
[ERROR] Failed to execute goal org.apache.maven.plugins:maven-assembly-plugin:2.2-beta-5:attached (default) on project GeomConverter: Failed to create assembly: Error adding file-set for 'hep.testdata.aida:lizard:aida:1.0' to archive: Error adding archived file-set.
PlexusIoResourceCollection not found for:
/home/poojasaxena/.m2/repository/hep/testdata/aida/lizard/1.0/lizard-1.0.aida: No such archiver: 'aida'. -> [Help 1]
[ERROR]
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
[ERROR]
[ERROR] For more information about the errors and possible solutions, please read the following articles:
[ERROR] [Help 1] <http://cwiki.apache.org/confluence/display/MAVEN/MojoExecutionException>

please reply.
Thanks in advance

Subject: JAS3: No information about the Detector Geometry Error
Posted by [poojasaxena](#) on Tue, 18 Jan 2011 11:08:28 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi all,
I am using Tracking file MainTrackingDriver.java of lcsim package
org.lcsim.recon.tracking.seedtracker.trackingdrivers.sidloi2.MainTrackingDriver
& analysis code LOIEffFake.java (attached). The .slcio data file used is following
muon_Theta90_10GeV_SLIC-v2r6p3_geant4-v9r2p0_LCPhys_sidloi2.slcio

In JAS3, I am able to load the respective class files together with the data file but while running, I get following Error message of missing Detector geometry message which I am unable to resolve. Please find the error message below & the attached screen shot.

In plugging, both org.lcsim & LCIO pluggings are installed.

Error Message

***** *

Sorry No information could be found on the following detector:

sidloi2

Please chose one of the following

- Alias this detector to one of the detector

- Give location of HepRep file to this detector
 - Proceed with no detector information (limited functionality)
- ***** **

Please reply.
Thanks in advance

File Attachments

- 1) [Screenshot.png](#), downloaded 496 times
 - 2) [LOIEffFake.java](#), downloaded 523 times
-

Subject: Re: JAS3: No information about the Detector Geometry Error
Posted by [poojasaxena](#) on Tue, 18 Jan 2011 16:28:26 GMT
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The cause details of the error is explicitly given here,

```
org.lcsim.conditions.ConditionsManager$ConditionsNotFoundExc eption: Conditions not found
for detector sidloi2
  at org.lcsim.conditions.ConditionsReader.create(ConditionsReade r.java:158)
  at org.lcsim.conditions.ConditionsManagerImplementation.setDete
ctor(ConditionsManagerImplementation.java:45)
  at org.lcsim.plugin.conditions.InteractiveConditionsManagerImpl
ementation.setDetector(InteractiveConditionsManagerImplement ation.java:35)
  at org.lcsim.event.base.BaseLCSimEvent.<init>(BaseLCSimEvent.java:55)
  at org.lcsim.util.lcio.LCIOEvent.<init>(LCIOEvent.java:62)
  at org.lcsim.util.lcio.LCIOEvent.<init>(LCIOEvent.java:25)
  at org.lcsim.util.lcio.LCIOReader.read(LCIOReader.java:58)
  at org.lcsim.util.loop.LCIOEventSource.next(LCIOEventSource.jav a:91)
  at org.freehep.jas.extensions.recordloop.InteractiveRecordLoop.
getNextRecord(InteractiveRecordLoop.java:372)
  at org.freehep.jas.extensions.recordloop.RecordLoopManager.run(
RecordLoopManager.java:66)
  at java.lang.Thread.run(Thread.java:636)
*****
```

Subject: Re: JAS3: No information about the Detector Geometry Error

Posted by [NormanGraf](#) on Tue, 18 Jan 2011 19:46:46 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hello,

Apologies for the error that you are experiencing. sidloi2 was a development detector design not intended for production analyses.

The current baseline Silicon Detector design is sidloi3.

Single particle data files can be found at:

<ftp://ftp-lcd.slac.stanford.edu/ilc/singleParticle/sidloi3/slciio/slic/>

Please let me know if you experience any difficulties accessing either the data files or the detector properties.

Norman

Subject: Re: JAS3: No information about the Detector Geometry Error
Posted by [poojasaxena](#) on Tue, 25 Jan 2011 09:11:43 GMT
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Dear Norman,

Thanks for replying so early, it worked and I could run using sidloi3 detector design, but while using clic_sid, I again got stuck. Please find the update here.

I load the Tracking code "MainTrackingDriver.java" of sidloi3 detector design
org.lcsim.recon.tracking.seedtracker.trackingdrivers.sidloi3.MainTrackingDriver
along with the data file "d_Theta1-179_100GeV_OpalTune-0-1000_SLIC-v2r8p3_geant4-v9r3p
1_QGSP_BERT_sidloi3.slciio" and the same analysis code. In the Tracking code, I changed the
xml file as sidloi3_ttbar_strategies.xml instead of default autogen_ttbar_sidloi2.xml and I could run
it using JAS3 and could get the pT & Z0 plots.

As a next step, I tried loading Tracking file of clic_sid
org.lcsim.recon.tracking.seedtracker.trackingdrivers.clic_sid.MainTrackingDriver with the same
analysis code and the same data file. For clic_sid, I used the "clic01_sid_tt_3TeV_final.xml" as the
xml file. , but while loading I got the following Error message "Error Instantiating
rg.lcsim.recon.tracking.seedtracker.trackingdrivers.clic_sid.MainTrackingDriver "

The details of the Error message was following,

java.lang.RuntimeException: IO Exception occurred

```
at org.lcsim.recon.tracking.seedtracker.StrategyXMLUtils.getStr
ategyListFromInputStream(StrategyXMLUtils.java:114)
at org.lcsim.recon.tracking.seedtracker.StrategyXMLUtils.getStr
ategyListFromResource(StrategyXMLUtils.java:53)
at org.lcsim.recon.tracking.seedtracker.trackingdrivers.clic_si
d.MainTrackingDriver.<init>(MainTrackingDriver.java:52)
at sun.reflect.NativeConstructorAccessorImpl.newInstance0(Nativ
e Method)
at sun.reflect.NativeConstructorAccessorImpl.newInstance(Native
ConstructorAccessorImpl.java:57)
at sun.reflect.DelegatingConstructorAccessorImpl.newInstance(De
legatingConstructorAccessorImpl.java:45)
at java.lang.reflect.Constructor.newInstance(Constructor.java:532)
at java.lang.Class.newInstance0(Class.java:372)
at java.lang.Class.newInstance(Class.java:325)
at org.lcsim.plugin.LCSimPlugin.handleEvent(LCSimPlugin.java:165)
at org.freehep.application.studio.EventSender.broadcast(EventSe
nder.java:30)
at org.freehep.jas.extension.compiler.JASClassManager.loadClass
(JASClassManager.java:144)
at org.freehep.jas.extension.compiler.LoadDialog.actionPerforme
d(LoadDialog.java:64)
at javax.swing.AbstractButton.fireActionPerformed(AbstractButto
n.java:2012)
at javax.swing.AbstractButton$Handler.actionPerformed(AbstractB
utton.java:2335)
at javax.swing.DefaultButtonModel.fireActionPerformed(DefaultBu
ttonModel.java:404)
at javax.swing.DefaultButtonModel.setPressed(DefaultButtonModel
.java:259)
at javax.swing.plaf.basic.BasicButtonListener.mouseReleased(Bas
icButtonListener.java:253)
at java.awt.Component.processMouseEvent(Component.java:6175)
at javax.swing.JComponent.processMouseEvent(JComponent.java:3267)
at java.awt.Component.processEvent(Component.java:5940)
at java.awt.Container.processEvent(Container.java:2105)
at java.awt.Component.dispatchEventImpl(Component.java:4536)
at java.awt.Container.dispatchEventImpl(Container.java:2163)
at java.awt.Component.dispatchEvent(Component.java:4362)
at java.awt.LightweightDispatcher.retargetMouseEvent(Container.
java:4461)
at java.awt.LightweightDispatcher.processMouseEvent(Container.j
ava:4125)
at java.awt.LightweightDispatcher.dispatchEvent(Container.java:4055)
at java.awt.Container.dispatchEventImpl(Container.java:2149)
at java.awt.Window.dispatchEventImpl(Window.java:2478)
at java.awt.Component.dispatchEvent(Component.java:4362)
at java.awt.EventQueue.dispatchEvent(EventQueue.java:604)
at org.freehep.jas.util.waitcursor.WaitCursorEventQueue.dispatc
hEvent(WaitCursorEventQueue.java:47)
at java.awt.EventDispatchThread.pumpOneEventForFilters(EventDis
patchThread.java:275)
at java.awt.EventDispatchThread.pumpEventsForFilter(EventDispat
chThread.java:200)
```

```

at java.awt.EventQueue.pumpEventsForFilter(EventDispatchThread.java:194)
at java.awt.Dialog$1.run(Dialog.java:1072)
at java.awt.Dialog$3.run(Dialog.java:1126)
at java.security.AccessController.doPrivileged(Native Method)
at java.awt.Dialog.show(Dialog.java:1124)
at java.awt.Component.show(Component.java:1468)
at java.awt.Component.setVisible(Component.java:1420)
at java.awt.Window.setVisible(Window.java:842)
at java.awt.Dialog.setVisible(Dialog.java:1011)
at org.freehep.jas.extension.compiler.LoadDialog.showDialog(LoadDialog.java:104)
at org.freehep.jas.extension.compiler.CompilerPlugin$Commands.o
nLoadClass(CompilerPlugin.java:471)
at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccesso
rImpl.java:57)
at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMetho
dAccessorImpl.java:43)
at java.lang.reflect.Method.invoke(Method.java:616)
at org.freehep.util.commanddispatcher.CommandProcessor.invoke(C
ommandProcessor.java:125)
at org.freehep.util.commanddispatcher.CommandProcessor.invokeCo
mmand(CommandProcessor.java:162)
at org.freehep.util.commanddispatcher.CommandProcessor$SimpleTa
rget.doCommand(CommandProcessor.java:290)
at org.freehep.util.commanddispatcher.CommandProcessor.invokeCo
mmand(CommandProcessor.java:136)
at org.freehep.util.commanddispatcher.CommandProcessor$SimpleTa
rget.invoke(CommandProcessor.java:326)
at org.freehep.util.commanddispatcher.CommandSourceAdapter.acti
onPerformed(CommandSourceAdapter.java:89)
at javax.swing.AbstractButton.fireActionPerformed(AbstractButto
n.java:2012)
at javax.swing.AbstractButton$Handler.actionPerformed(AbstractB
utton.java:2335)
at javax.swing.DefaultButtonModel.fireActionPerformed(DefaultBu
ttonModel.java:404)
at javax.swing.DefaultButtonModel.setPressed(DefaultButtonModel
.java:259)
at javax.swing.AbstractButton.doClick(AbstractButton.java:374)
at javax.swing.plaf.basic.BasicMenuItemUI.doClick(BasicMenuItem
UI.java:829)
at javax.swing.plaf.basic.BasicMenuItemUI$Handler.mouseReleased
(BasicMenuItemUI.java:873)
at java.awt.AWTEventMulticaster.mouseReleased(AWTEventMulticast
er.java:289)
at java.awt.AWTEventMulticaster.mouseReleased(AWTEventMulticast
er.java:289)
at java.awt.Component.processMouseEvent(Component.java:6175)
at javax.swing.JComponent.processMouseEvent(JComponent.java:3267)
at java.awt.Component.processEvent(Component.java:5940)
at java.awt.Container.processEvent(Container.java:2105)

```



```
at java.awt.Component.dispatchEventImpl(Component.java:4536)
at java.awt.Container.dispatchEventImpl(Container.java:2163)
at java.awt.Component.dispatchEvent(Component.java:4362)
at java.awt.LightweightDispatcher.retargetMouseEvent(Container.java:4461)
at java.awt.LightweightDispatcher.processMouseEvent(Container.java:4125)
at java.awt.LightweightDispatcher.dispatchEvent(Container.java:4055)
at java.awt.Container.dispatchEventImpl(Container.java:2149)
at java.awt.Window.dispatchEventImpl(Window.java:2478)
at java.awt.Component.dispatchEvent(Component.java:4362)
at java.awt.EventQueue.dispatchEvent(EventQueue.java:604)
at org.freehep.jas.util.waitcursor.WaitCursorEventQueue.dispatch
hEvent(WaitCursorEventQueue.java:47)
at java.awt.EventDispatchThread.pumpOneEventForFilters(EventDis patchThread.java:275)
at java.awt.EventDispatchThread.pumpEventsForFilter(EventDispat chThread.java:200)
at java.awt.EventDispatchThread.pumpEventsForHierarchy(EventDis patchThread.java:190)
at java.awt.EventDispatchThread.pumpEvents(EventDispatchThread. java:185)
at java.awt.EventDispatchThread.pumpEvents(EventDispatchThread. java:177)
at java.awt.EventDispatchThread.run(EventDispatchThread.java:13 8)
*****
```

It seems, the error is linked with the xml file compatibility with the given detector geometry but I am unable to resolve it.

I will be grateful if you could point me to the corresponding necessary reading documents.

Thanks again

best regards
pooja..

Subject: Re: GemConverter build Failed
Posted by [poojasaxena](#) on Tue, 25 Jan 2011 09:25:23 GMT
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It get resolved.
The issue was the maven installation.

Thanks all

Subject: GeomConverter, 'conditions set not found: SamplingFractions/EcalEndcap'
Posted by [aconway](#) on Tue, 09 Jul 2013 22:44:23 GMT
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Hi,

I'm trying to use GeomConverter to create xml files for PandoraPFA for the mcdrcal01 detector and can't get it to work. The stacktrace looks something like the following.

```
[aconway@tp mcdrcal02]$ java -jar
~/m2/repository/org/lcsim/GeomConverter/2.8-SNAPSHOT/GeomConverter-2.8-SNAPSHOT-bin.
jar -o pandora compact.xml mcdrcal01_pandora.xml
EcalEndcap
HcalEndcap
MuonEndcap
Exception in thread "main" java.lang.RuntimeException:
org.lcsim.conditions.ConditionsManager$ConditionsSetNotFoundException: Conditions set not
found: SamplingFractions/EcalEndcap
  at org.lcsim.geometry.compact.converter.Main.main(Main.java:107)
Caused by: org.lcsim.conditions.ConditionsManager$ConditionsSetNotFoundException:
Conditions set not found: SamplingFractions/EcalEndcap
  at
org.lcsim.conditions.ConditionsManagerImplementation.getConditions(ConditionsManagerImplem
entation.java:141)
  at
org.lcsim.geometry.util.SamplingFractionManager$SamplingFractionConverter.getData(Sampling
FractionManager.java:112)
  at org.lcsim.geometry.util.SamplingFractionManager$Sampling
...
```

It seems clear I don't have the right files in the right places for GeomConverter to get the sampling fractions, but I don't really know what it needs. From what I've been able to dig up on the Internet, this simply isn't documented yet. I'll also mention that this command works when I use the sidloi3 detector.

I attached the detector's .zip file. While not all the files in SamplingFractions have the right filenames, it seems to me EcalEndcap should at least work.

Thanks,
Alex

File Attachments

1) <http://www.lcsim.org/detectors/mcdrcal01.zip>,

downloaded 1694 times
