



BRAHMS Status report

Outline:

- Introduction
- **BRAHMS** Production Release
- Present **BRAHMS** Status
- Further **BRAHMS** Developments



Introduction

- **BRAHMS** is now a full simulation and reconstruction tool based on the TESLA TDR
(http://tesla.desy.de/new_pages/TDR_CD/start.html) .
- It has a well defined interface between the simulation and reconstruction part.
- The reconstruction can also be used for other TDR simulations - e.g. the GEANT4 based simulation tool **MOKKA** .



Present BRAHMS Status

- **Br308** production release taken from the **BRAHMS CVS**
- **CVSWEB access** based on a script `cvsweb.cgi` from Henner Zeller (<http://stud.fh-heilbronn.de/zeller/cgi/cvsweb.cgi>) enables Web based presentation and **download** of a tarball (see the **BRAHMS** web page)
- **installation** provided by a configure script and makefile templates
- **simulation - reconstruction interface**
 - hitout.cio.gz** file created after simulation (if requested)
 - ⇒ **hitin.cio.gz** for a separate reconstruction run
 - (advantage if time consuming calorimeter simulation is needed)
- **calorimeters:** cluster reconstruction improved (Vassily Morgunov)
- **drawback:** for large event topologies the reconstruction may fail (to small arrays - see Brahms log)



Simulation Group Global Repository

Select: root - pro - BRAHMS branch

Netscape: Detector Simulation Home Page

File Edit View Go Communicator Help

Bookmarks Location: http://www-zeuthen.desy.de/linear_collider/

Back Forward Reload Home Search Netscape Print Security Shop Stop

Members WebMail Connections BizJournal SmartUpdate Mktplace user.web.cern.ch/user/e_t

Resource management

Program and data resources for the project are managed by **Harald Vogt** (email: harald.vogt@desy.de) at DESY Zeuthen. For each simulation package, a separate web page exists with access to the program source, sample installation scripts and documentation. When central generation or simulation output files exist, they are also listed together with information on their contents.

The repository for the detector simulation is organized as follows:

```
graph TD; root[root] --> old[old]; root --> pro[pro]; root --> dev[dev]; old --> old_BRAHMS[BRAHMS]; old --> old_SIMDET[SIMDET]; old --> old_SGV[SGV]; pro --> pro_BRAHMS[BRAHMS]; pro --> pro_SIMDET[SIMDET]; pro --> pro_SGV[SGV]; dev --> dev_BRAHMS[BRAHMS]; dev --> dev_SIMDET[SIMDET]; dev --> dev_SGV[SGV];
```

Each of the directories in the bottom line you can access by clicking on it. The directories contain 3 subdirectories `src`, `run`, and `doc` where you will find the sources, examples to run the code, and the documentation of the selected simulation package respectively.

You have also access to the root directory using `afs`. The root directory above is at `/afs/ihf.de/group/lc/detector_simulation`



BRAHMS Production Release Web Page

http://www-zeuthen.desy.de/lc_repository/detector_simulation/pro/BRAHMS/readme.html

The screenshot shows a Netscape browser window with the following content:

File Edit View Go Bookmarks Tools Window Help

Back Forward Reload Stop http:// Search Print

Mail Home Radio Netscape Search Bookmarks Google

BRAHMS - A GEANT 3 based Simul...

BRAHMS - a GEANT 3 based Simulation and a Reconstruction Program for the TESLA Detector

2003/11/11:

**Release of BRAHMS Production Version V308
(corresponds to the TDR detector specifications)**

CVSWEB access to the [Brahms repository](#). Select in the upcoming Web page the file **Br308**.

CVSWEB access enables the download of a zipped tarball:
use the corresponding link at the bottom of that page.

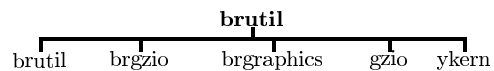
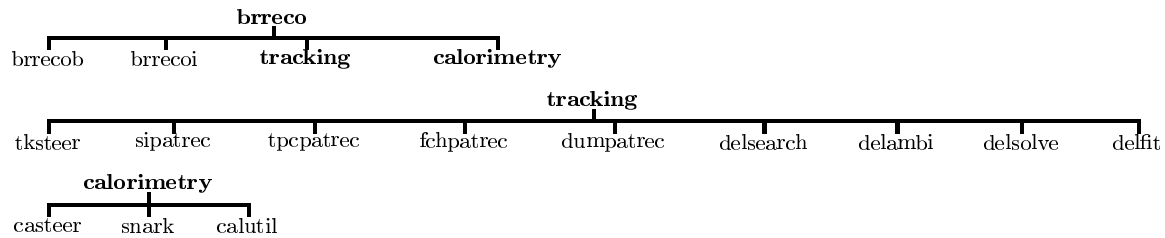
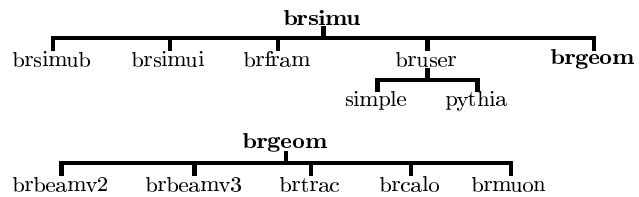
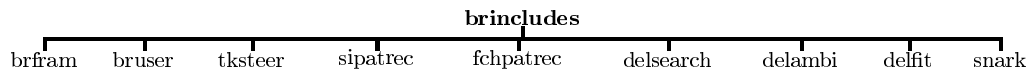
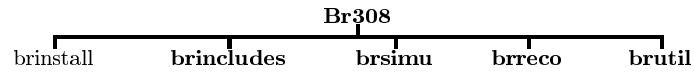
The new directory structure is found [here](#).

Release Notes

Document: Done (0.252 secs)



BRAHMS Directory Tree





CVSWEB access 1

The screenshot shows a Netscape browser window with the address bar set to `http://www-zeuthen.desy.de/lc`. The page title is "CVS Repository" and it features the Apache logo. The main content area contains the following text:

Powered by **APACHE**

CVS Repository

This is a WWW interface for CVS Repositories. You can browse the file hierarchy by picking directories (which have slashes after them, e.g., `src/`). If you pick a file, you will see the revision history for that file. Selecting a revision number will download that revision of the file. There is a link at each revision to display diffs between that revision and the previous one, and a form at the bottom of the page that allows you to display diffs between arbitrary revisions.

This script has been written by Bill Fenner and improved by Henner Zeller, Henrik Nordström, and Ken Coar, then Akinori MUSA brought it back to FreeBSD community and made further improvements; it is covered by [The BSD Licence](#).

If you would like to use this CGI script on your own web server and CVS tree, download the latest version from <URL:<http://www.FreeBSD.org/projects/cvsweb.html>>.

Feel free to send any patches, suggestions and comments to the FreeBSD-CVSweb mailing list at <freebsd-cvsweb@FreeBSD.org>.

CVS Root: **[Br308]** Module path or alias:

File

Br308/

FreeBSD-CVSweb <freebsd-cvsweb@FreeBSD.org>

The browser's status bar at the bottom shows "Document: Done (0.209 secs)".



CVSWEB access 2 - Br308 tarball download

The screenshot shows a Netscape browser window with the following elements:

- Menu bar: File, Edit, View, Go, Bookmarks, Tools, Window, Help
- Navigation buttons: Back, Forward, Reload, Stop
- Address bar: http://www-zeuthen
- Search and Print buttons
- Toolbar: Mail, Home, Radio, Netscape, Search, Bookmarks, Google
- Tab: Br308/
- Page content:
 - Powered by APACHE logo
 - Br308/ title
 - Instructions: "Click on a directory to enter that directory. Click on a file to display its revision history and to get a chance to display diffs between revisions. To download this directory as zipped tarball - click on tarball at the bottom of this page."
 - Current directory: [\[Br308\]](#) / Br308
 - Table listing files and directories:
- Footer: "Download this directory in [tarball](#) or [zip archive](#)"

File	Rev.	Age	Author	Last log entry
Parent Directory				
brincludes/				
brinstall/				
brreco/				
brsimu/				
brutil/				
kumacs/				
CHANGELOG	1.2	3 days	hvoigt	production release



CVSWEB access 3 - file selection

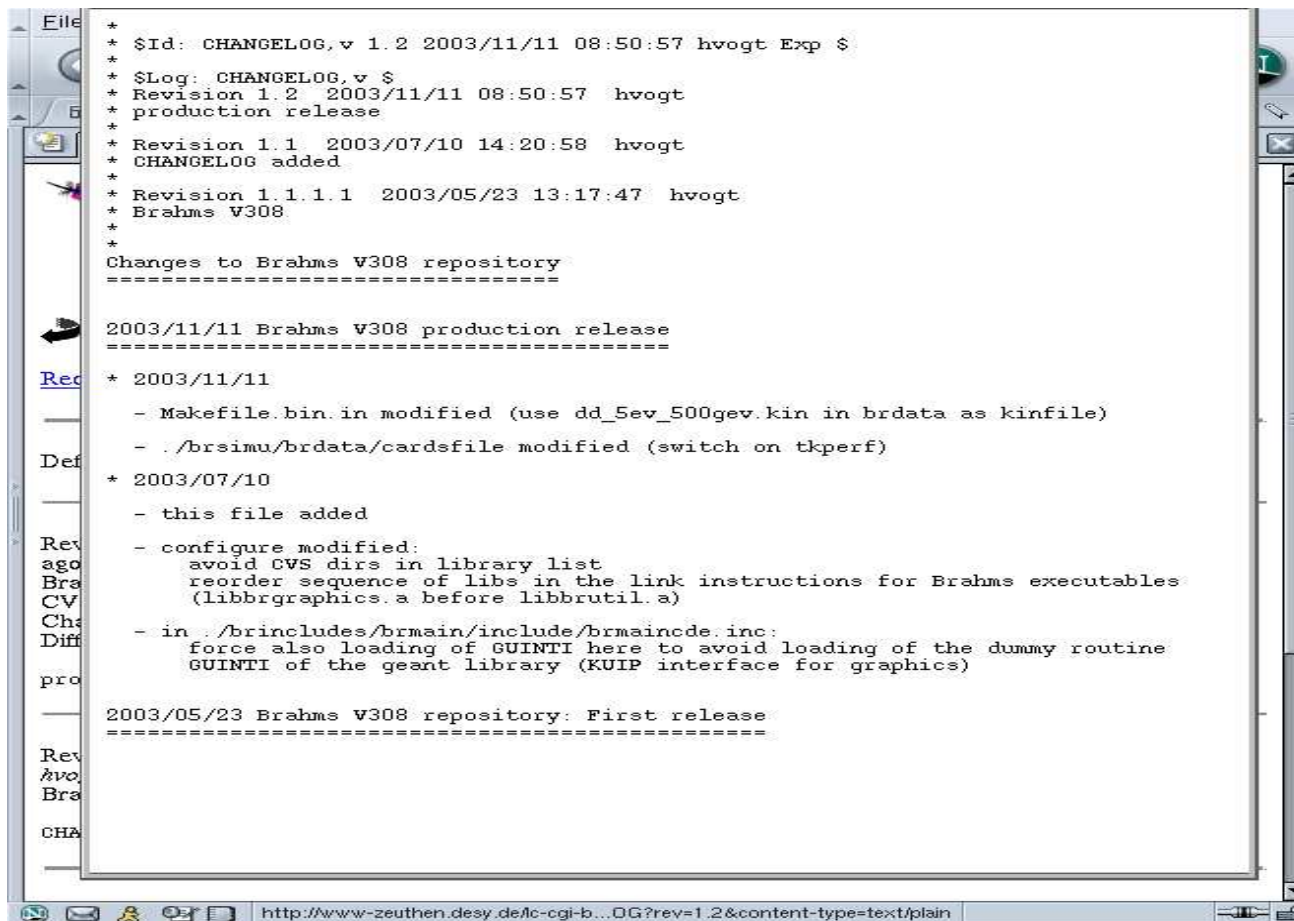
The screenshot shows a Netscape browser window with the address bar set to `http://www-zeuthen.desy.de/lc`. The page title is "CVS log for Br308/CHANGELOG". The page content includes:

- Powered by **APACHE**
- CVS log for Br308/CHANGELOG**
- Up to [\[Br308\]](#) / [Br308](#)
- [Request diff between arbitrary revisions](#)
- Default branch: MAIN
- Revision [1.2](#) / ([download](#)) - [annotate](#) - [[select for diffs](#)], Tue Nov 11 08:50:57 2003 UTC (27 hours, 23 minutes ago) by *hvogt*
Branch: [MAIN](#)
CVS Tags: [HEAD](#)
Changes since [1.1](#): +14 -1 lines
Diff to previous [1.1](#) ([colored](#))
production release
- Revision [1.1](#) / ([download](#)) - [annotate](#) - [[select for diffs](#)], Thu Jul 10 14:20:58 2003 UTC (4 months ago) by *hvogt*
Branch: [MAIN](#)
CHANGELOG added

The status bar at the bottom indicates "Document: Done (0.777 secs)".



CVSWEB access 4 - list file content



```
*
* $Id: CHANGELOG,v 1.2 2003/11/11 08:50:57 hvogt Exp $
*
* $Log: CHANGELOG,v $
* Revision 1.2 2003/11/11 08:50:57 hvogt
* production release
*
* Revision 1.1 2003/07/10 14:20:58 hvogt
* CHANGELOG added
*
* Revision 1.1.1.1 2003/05/23 13:17:47 hvogt
* Brahms V308
*
Changes to Brahms V308 repository
=====

2003/11/11 Brahms V308 production release
=====

* 2003/11/11
- Makefile.bin.in modified (use dd_5ev_500gev.kin in brdata as kinfile)
- ./brsimu/brdata/cardsfile modified (switch on tkperf)
* 2003/07/10
- this file added
- configure modified:
  avoid CVS dirs in library list
  reorder sequence of libs in the link instructions for Brahms executables
  (libbrgraphics.a before libbrutil.a)
- in ./brincludes/brmain/include/brmaincde.inc:
  force also loading of GUINTI here to avoid loading of the dummy routine
  GUINTI of the geant library (KUIP interface for graphics)

2003/05/23 Brahms V308 repository: First release
=====
```



CVSWEB access 5 - show diffs to previous

The screenshot shows a Netscape browser window displaying a CVS diff. The browser's address bar shows the URL `http://www-zeuthen.desy.de/lc-cgi-bin/cvsweb_`. The page title is "Diff for /Br308/brinstall/configure between version 1.1 and 1.2".

The diff is presented in a table-like format with two columns for "version 1.1, 2003/05/23 13:17:47" and "version 1.2, 2003/07/10 14:". The content is as follows:

version 1.1, 2003/05/23 13:17:47	version 1.2, 2003/07/10 14:
Line 106 BRMAINSOBJ="brsimub brsimui brrecob brre	Line 106 BRMAINSOBJ="brsimub brs
UBRAHMS="v308" BRAHMS="brahms_\$(UBRAHMS)"	UBRAHMS="v308" BRAHMS="brahms_\$(UBRAHMS)"
SUBDIRS=" du grep code_ awk '{print \$2}' sed 's/./ /' sed 's/./code_/'"	SUBDIRS=" du grep code_ awk '{print \$2}' sed 's/./ /' s/./CVS/"
SUBDIRS=" echo \$(SUBDIRS)"	SUBDIRS=" echo \$(SUBDIRS)"
includesstring="##,##-I\$(PWD)##" includesstringpre="##\ncludes##"	includesstring="##,##-I\$(PWD)##" includesstringpre="##\ncludes##"
Line 137 cd \${BRROOTDIR}	Line 137 cd \${BRROOTDIR}
LLBRSIMU=" lbrfram - lbruser - lbrbeam - lbrfrac - lbrcalo - lbrmuon" LLBRRECO=" lfksteer - lsipatrec - ltpcpatrec - lfchpatrec - ldelsearch - ldelambi - ldelfit - ldelsolve" LLBRRECO="\$(LLBRRECO) - lcasteer - lcadigi - lsnark - lcalutil" LLBRUTIL=" lbrutil - lbrgzio - lbrgraphics - lgzio - lykern" LINKLIBS=" L\$(BUILD) \$(LLBRSIMU) \$(LLBRRECO) \$(LLBRRECO) \$(LLBRRECO) \$(LLBRUTIL) \$(LLBRRECO)"	LLBRSIMU=" lbrfram - lbruser - lbrbeam - lbrfrac - lbrcalo - LLBRRECO=" lfksteer - lsipatrec - ltpcpatrec - lfchpatrec - ldelambi - ldelfit - ldelsolve" LLBRRECO="\$(LLBRRECO) - lcasteer - lcadigi - lsnark - l LLBRUTIL=" lbrgraphics - lbrutil - lbrgzio - lgzio - lykern" LINKLIBS=" L\$(BUILD) \$(LLBRSIMU) \$(LLBRSIMU) \$(LLBRSIMU) \$(LLBRRECO) \$(LLBRUTIL) \$(LLBRRECO)"
## all the CERN libraries (has to be modified if older CERN Libraries are used)	## all the CERN libraries (has to be modified if older CERN

At the bottom left, there is a legend box:

Legend:
Removed from v. 1.1 (red background)
changed lines (green background)
Added in v. 1.2 (light blue background)

Buttons for "Colored" (checked) and "Show" are visible.



Further Developments

- done in the **Brahms CVS** repository
(in the **dev branch** of the global repository)
- **improvements** in the reconstruction code
(pattern recognition)
- **LCIO** interface (**the way to C++ and Java**)
will be added soon (2 weeks from now!)
- **installation** procedure has still to be improved
(feedback expected!)