



DU438 Software Release Note 6.0

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reference: GAIA-C4-SP-OPM-FA-057-1
issue: 1
revision: 0
date: 2008-05-25
status: Issued

Abstract

This is the Software Release Note for DU438, a software allowing to generate lists of simulated binary/multiple stars with given properties. This version introduces the switch from ASCII to gbin format and describes how to access and install the software.

Document History

Issue	Revision	Date	Author	Comment
1	0	2008-05-25	F . A .	document name change, new template, V6 GaiaSimu.jar
D	2	2008-05-03	F . A .	availability of a GaiaSimu.jar V5 compatible
D	1	2008-04-09	F . A .	Creation

1 Configuration Item Identification

Configuration Item DU438

Version 6.0

Implementor CU4-DU438

Identifier

http://gaia.esac.esa.int/dpacsvn/DPAC_tags/CU4/software/DU438/6.0

2 Overview

This document refers to the DU438 software which purpose is to generate list of simulated Non-Single Stars (NSS). How to run it is described in Arenou (2008b).

2.1 Reference Documentation

- DU438 SUM: Arenou (2008b)
- DU438 SRS: Arenou (2008a)

2.2 Acronyms used in this document

The following is a complete list of acronyms used in this document:

Acronym	Description
CU	Coordination Unit (in DPAC)
DPAC	Data Processing and Analysis Consortium
DU	Development Unit
ICD	Interface Control Document
NSS	Non Single Stars

3 Installation instructions

The DU438 software consists of one standalone java project with its sources, configuration files, and GaiaSimu.jar jar file as the project is built on GaiaSimu.

3.1 Source distribution

The source code for the this version can be retrieved from the Subversion repository with the following URL (login required):

```
http://gaia.esac.esa.int/dpacsvn/DPAC_tags/CU4/software/DU438/6.0/DU438
```

once it is tagged, and, until that, from the live version here:

```
http://gaia.esac.esa.int/dpacsvn/DPAC/CU4/software/DU438
```

3.2 Installation steps

For each project, the root directory contains a *build.xml* file.

- initiate the environment variables (procedure TBD by CU-T):

```
DPCCCOMMON
SOFCOMMON
ANT_HOME
PATH to access ant
```

- install the local copy of the project at some directory level; it will be called DU438 in what follows.
- Apart from the `GaiaSimu.jar` other data are needed and the exact information on how to get them is given at

```
http://www.rssd.esa.int/wikiSI/index.php?title=CU2:_GaiaSimu
```

These large data (such as PSFs, etc.) cannot be put under `svn`, they are actually provided through another link, see the GaiaSimu Software Release Note provided at the URL above. Getting these data is tedious, but has to be done once for all only...

- Above the DU438 directory, a logical link has to be put in order to access to the simulation data:

```
cd .. ; ln -s somewhere/GaiaSimu Gaiasimu
```

(replace the “*somewhere*” by the actual place where the GaiaSimu data has been put), so that the directory DU438/./GaiaSimu/data links to the data directory.

- check the content of DU438/conf/gaiasimu.properties to verify that they reflect the path to all the directory which may be accessed by GaiaSimu. In principle, no modification of its content should be done if the installation and logical link above have been done.
- build the software and run JUnit tests :

ant dist

Please note that the tests are integration tests which simulate a large number of stars, so this will take a lot of time.

3.3 Dependencies

3.3.1 Jar files

DPCC common jar files

Dependency GaiaMdbDm6.1.0.jar
Version see above
Location

<http://gaia.esac.esa.int/dpacsvn/DPAC/DPCC/distributions/dpcccommon/current/lib/>

comments DPCC version for this library

Dependency junit-4.5.jar
Version see above
Location

<http://gaia.esac.esa.int/dpacsvn/DPAC/DPCC/distributions/dpcccommon/current/lib/>

comments DPCC version for this library

DU specific jar files

As the simulation relies mostly of the CU2 GaiaSimu software code, the `GaiaSimu.jar` is needed and the exact information on how to get it is given at the URL below. In particular, this page contains the link to a `.tgz` file containing the official distribution of the `GaiaSimu.jar` file plus information on how to get binary data which may not be contained inside (e.g. large number of PSFs, etc.).

However the needed `GaiaSimu.jar` is already present, and under subversion configuration, in the directory `DU438/lib/ext`, in case the official distribution for the current cycle has not yet been tagged (still in beta phase while the current software already use it).

In this case, the provided `GaiaSimu.jar` is modified so as to provide sources in the current GOG format and is updated when the GOG version is available.

Dependency	<code>GaiaSimu.jar</code>
Version	synchronised with the CU2 version, when GOG becomes available
Location	
	http://www.rssd.esa.int/wikiSI/index.php?title=CU2:_GaiaSimu
comments	local version in <code>lib/ext</code> .

3.3.2 Non-jar libraries

3.3.3 XML files

Dependency	<code>dpcc_build_project.xml</code>
Location	
	http://gaia.esac.esa.int/dpacsvn/DPAC/DPCC/distributions/dpcccommon/current/lib/
comments	common DPCC build file

Dependency	<code>build_project.xml</code>
Location	
	http://gaia.esac.esa.int/dpacsvn/DPAC/CU1/software/common
comments	common CU1 build file

3.4 Tools

Tool	Ant
Version	1.7.0
Location	

`http://gaia.esac.esa.int/dpacsvn/DPAC/CU1/software/common/apache-ant-1.7.0`

comments	used for code building
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Tool	java
Version	1.6
Location	(sun-java6-jdk)
comments	

4 Changes

This is the third release of this tool.

4.1 Functional changes in this release

This tool has been completely changed at cycle 6 (after a partial change at cycle 5) in order to reflect the new simulation method, based on much more realistic observational data. Most of the code has now been put in the DmsCommon class of GaiaSimu: now, only what has to be changed for a given DU is present in the DU438 software, the default remaining in DmsCommon.

4.2 Issue fixed in this release

N/A.

4.3 Open issues

No open issues.

4.4 Bug reporting

Bug reports and software change/addition requests should be submitted through the Mantis tool from the MyPortal area on the Gaia web page (<http://www.rssd.esa.int/index.php?project=GAIA&page=index>).

Please raise issues against the CU4>> DU438 project.

5 Associated Documentation

The Software User Manual (Arenou, 2008b)

6 References

Arenou, F., 2008a, *DU438 Software Requirements Specification*, Tech. Rep. GAIA-C4-SP-OPM-FA-051, Observatoire de Paris / CNRS,

URL <http://wwwhip.obspm.fr/~arenou/PS-papers/gaia/GAIA-C4-SP-OPM-FA-051.pdf>

Arenou, F., 2008b, *DU438 Software User Manual*, Tech. Rep. GAIA-C4-UG-OPM-FA-055, Observatoire de Paris / CNRS,

URL <http://wwwhip.obspm.fr/~arenou/PS-papers/gaia/GAIA-C4-UG-OPM-FA-055.pdf>