

MAUS - Support #1254

St9bad_alloc errors plotting in Python

16 April 2013 12:42 - Carlisle, Timothy

| | | | |
|---|---------------------|------------------------|---------------|
| Status: | Closed | Start date: | 16 April 2013 |
| Priority: | Normal | Due date: | |
| Assignee: | Rogers, Chris | % Done: | 100% |
| Category: | bin(aries) | Estimated time: | 0.00 hour |
| Target version: | Future MAUS release | | |
| Workflow: | New Issue | | |
| Description | | | |
| <p>I'm getting the dreaded: <i>"terminate called after throwing an instance of 'std::bad_alloc' what(): St9bad_alloc"</i> (memory related) errors when trying to trying to loop over my virtual planes & make plots, (the same approach given in Xboa Example 2) e.g.:</p> <pre>Bunch.root_graph(bunch_list, 'mean', ['z'], 'mean', ['x'], 'm', 'mm') Bunch.root_graph(bunch_list, 'mean', ['z'], 'mean', ['pz'], 'm', 'mm') Bunch.root_graph(bunch_list, 'mean', ['z'], 'mean', ['energy'], 'm', 'mm') Bunch.root_graph(bunch_list, 'mean', ['z'], 'mean', ['time'], 'm', 'mm') Bunch.root_graph(bunch_list, 'mean', ['z'], 'beta', ['x','y'], 'm', 'mm') Bunch.root_graph(bunch_list, 'mean', ['z'], 'emittance', ['x','y'], 'm', 'mm')</pre> <p>etc</p> <p>I get the same error if I simply fill arrays, e.g.:</p> <pre>for Plane in range(0, len(bunch_list)-1): my_bunch = bunch_list[Plane] _x= round(my_bunch.get('mean', ['x']), 2) _y= round(my_bunch.get('mean', ['y']), 2) etc</pre> <p>my simulations have 10,000 muons, and >100 planes which probably isn't helping the memory side of things...I'm not well versed in Python at all, any advice on how to get round this?</p> <p>Thanks,</p> <p>Tim</p> | | | |

History

#1 - 16 April 2013 12:57 - Rogers, Chris

- Target version set to Future MAUS release

Which version of xboa are you using? Can you attach the full script?

Cheers

#2 - 16 April 2013 12:59 - Rogers, Chris

Note xboa version is

```
import xboa.Common
print xboa.Common.xboa_version
```

#3 - 16 April 2013 13:13 - Carlisle, Timothy

- File Xboa_Example2_TimEdit.txt added

Hey Chris,

I'm using 0.15. Example 2 script attached (matplotlib stuff removed). I've added 2 statements to output beta(z) and emittance(z), which are producing the errors.

Thanks

#4 - 16 April 2013 13:22 - Rogers, Chris

I had a memory leak "blitz" in 0.15.1, available here:

<http://micewww.pp.rl.ac.uk/maus/xboa/>

See if that fixes your problem.

To install, follow instructions [here](#)

#5 - 16 April 2013 13:24 - Rogers, Chris

Also, if you have a record of the output could you send it through to me?

#6 - 16 April 2013 13:38 - Carlisle, Timothy

Ah great thanks, installing new Xboa at the moment.
Do you mean a proper error log output?

#7 - 16 April 2013 13:43 - Carlisle, Timothy

Do I need to re-config Maus first? It can't find python it seems...vaguely remember this happening before. Maus0.5 has Python-2.7.2 bundled I think.

```
~/maus0.5_orig/third_party/build/xboa-0.15.1 python setup.py build
running build
running build_py
running build_ext
building 'xboa.core.Bunchcore' extension
gcc -pthread -fno-strict-aliasing -g -O2 -DNDEBUG -g -fwrapv -O3 -Wall -Wstrict-prototypes -fPIC
-I/home/carlisle/maus0.5_orig/third_party/install/include/python2.7 -c xboa/core/Bunchcore.c -o build/temp.linux-x86_64-2.7/xboa/core/Bunchcore.o
gcc -pthread -shared build/temp.linux-x86_64-2.7/xboa/core/Bunchcore.o -L/home/carlisle/maus0.5/third_party/install/lib -lpython2.7 -o
build/lib.linux-x86_64-2.7/xboa/core/Bunchcore.so
/usr/bin/ld: cannot find -lpython2.7
collect2: ld returned 1 exit status
error: command 'gcc' failed with exit status 1
```

#8 - 16 April 2013 14:50 - Rogers, Chris

Need to source env.sh first

#9 - 16 April 2013 15:03 - Rogers, Chris

I was going to phone but looks like they took the contact details off the John Adams website(!)

I noticed you had the path as:

```
/home/carlisle/maus0.5
```

and in some places:

```
/home/carlisle/maus0.5_orig
```

looks like this is causing problems.

#10 - 16 April 2013 16:08 - Carlisle, Timothy

- File log.out added

log file

#11 - 16 April 2013 16:11 - Carlisle, Timothy

- File log2.out added

take 2

#12 - 16 April 2013 16:32 - Rogers, Chris

- Category set to bin(aries)

- Status changed from Open to Closed

- % Done changed from 0 to 100

Resolved with phone call to Tim. Looks like he encountered memory problems associated with bugs in 0.15.0 which were fixed in 0.15.1 - talked Tim through the installation process, following which things looked okay.

Files

| | | | |
|---------------------------|---------|---------------|-------------------|
| Xboa_Example2_TimEdit.txt | 2.52 KB | 16 April 2013 | Carlisle, Timothy |
| log.out | 9.91 KB | 16 April 2013 | Carlisle, Timothy |
| log2.out | 2.7 KB | 16 April 2013 | Carlisle, Timothy |