GammaLib - Bug #433

GammaLib check fails on Solaris using the Sun Studio compiler

08/23/2012 01:45 AM - Knödlseder Jürgen

Status:	New	**Start date:**	08/23/2012
Priority:	Normal	**Due date:**	
Assigned To:		**% Done:**	0%
Category:		**Estimated time:**	0.00 hour
Target version:			

Description

Below the make check output of GammaLib on Solaris, compiled using the Sun Studio compiler. Note that the library has been compiled using OpenMP support:

```
**********************************
* GammaLib support module testing *
**********************************
Test GTools: ..... ok.
PASS: test_GSupport

************************
* GVector class testing *
************************
Test 1: Allocate zero vector:
  Size = 0
Test 3: Assign values:
  test3(1) = pi: (0, 3.14159, 0)
  Size = 3
  GVector out of range access: Test 4: Define vector using copy constructor:
  GVector: (1.1, 2.2, 3.3, 4.4, 5.5)
  GVector test = GVector: (1.1, 2.2, 3.3, 4.4, 5.5)
Test 5: Vector assignment:
  GVector: (1.1, 2.2, 3.3, 4.4, 5.5)
  GVector = GVector: (1.1, 2.2, 3.3, 4.4, 5.5)
  GVector = GVector (bigger vector): (1.1, 2.2, 3.3, 4.4, 5.5, 6.6)
Test 6: Assignment and arithmetics:
  GVector: (1.1, 2.2, 3.3, 4.4, 5.5)
  GVector += GVector: (2.2, 4.4, 6.6, 8.8, 11)
  GVector += 2.0: (3.1, 4.2, 5.3, 6.4, 7.5)
  GVector -= GVector: (0, 0, 0, 0, 0)
  GVector -= 2.0: (-0.9, 0.2, 1.3, 2.4, 3.5)
  GVector *= 2.0: (2.2, 4.4, 6.6, 8.8, 11)
  GVector /= 2.0: (0.55, 1.1, 1.65, 2.2, 2.75)
  GVector = -GVector: (-1.1, -2.2, -3.3, -4.4, -5.5)
  Devide by zero: (Inf, Inf, Inf, Inf, Inf)
  GVector + GVector: (2.2, 4.4, 6.6, 8.8, 11)
  GVector + 2.0: (3.1, 4.2, 5.3, 6.4, 7.5)
  GVector + 2: (3.1, 4.2, 5.3, 6.4, 7.5)
  2.0 + GVector: (3.1, 4.2, 5.3, 6.4, 7.5)
  2 + GVector: (3.1, 4.2, 5.3, 6.4, 7.5)
  GVector - GVector: (0, 0, 0, 0, 0)
  GVector - 2.0: (-0.9, 0.2, 1.3, 2.4, 3.5)
  2.0 - GVector: (0.9, -0.2, -1.3, -2.4, -3.5)
  Scalar (or dot) product GVector * GVector: 66.55
  GVector * 2.0: (2.2, 4.4, 6.6, 8.8, 11)
  2.0 * GVector: (2.2, 4.4, 6.6, 8.8, 11)
  |GVector| (vector norm): 8.15782
  min(GVector): 1.1
  max(GVector): 5.5
  sum(GVector): 16.5
  GVector: (1.1, 2.2, 3.3, 4.4, 5.5)
  acos(GVector/10.0): (1.46057, 1.34898, 1.23449, 1.1152, 0.988432)
```

```
  acosh(GVector): (0.443568, 1.42542, 1.86328, 2.16158, 2.38953)
  asin(GVector/10.0): (0.110223, 0.221814, 0.336304, 0.455599, 0.582364)
  asinh(GVector/10.0): (0.109779, 0.218263, 0.324286, 0.426913, 0.52548)
  atan(GVector/10.0): (0.10956, 0.21655, 0.318748, 0.414507, 0.502843)
  atanh(GVector/10.0): (0.110447, 0.223656, 0.342828, 0.472231, 0.618381)
  cos(GVector): (0.453596, -0.588501, -0.98748, -0.307333, 0.70867)
  cosh(GVector): (1.66852, 4.56791, 13.5748, 40.7316, 122.348)
  exp(GVector): (3.00417, 9.02501, 27.1126, 81.4509, 244.692)
  abs(cos(GVector)): (0.453596, 0.588501, 0.98748, 0.307333, 0.70867)
  log(GVector): (0.0953102, 0.788457, 1.19392, 1.4816, 1.70475)
  log10(GVector): (0.0413927, 0.342423, 0.518514, 0.643453, 0.740363)
  sin(GVector): (0.891207, 0.808496, -0.157746, -0.951602, -0.70554)
  sinh(GVector): (1.33565, 4.45711, 13.5379, 40.7193, 122.344)
  sqrt(GVector): (1.04881, 1.48324, 1.81659, 2.09762, 2.34521)
  tan(GVector): (1.96476, -1.37382, 0.159746, 3.09632, -0.995584)
  tanh(GVector): (0.800499, 0.975743, 0.997283, 0.999699, 0.999967)
  Incompatible size GVector + GVector: *** ERROR in GVector::operator+=(GVector): Vector dimensions differ (5 <-> 6)
  cross(a,b) (using 5-dim vectors): *** ERROR in cross(GVector,GVector): Vector cross product only defined for 3 dimensions but
 vector size is 5
  cross(a,b) (using vectors with different dimension): *** ERROR in cross(GVector,GVector): Vector dimensions differ (5 <-> 6)
  cross(a,b) (using 3-dim vectors):
   a:     (1, 0, 0)
   b:     (0, 1, 0)
   cross: (0, 0, 1)
Test 7: Comparison:
  GVector == GVector: 1
  GVector == GVector(0): 0
  GVector == GVector (bigger): 0
  GVector != GVector: 0
  GVector != GVector(0): 1
  GVector != GVector (bigger): 1
PASS: test_GVector

*************************
* GMatrix class testing *
*************************
Test GMatrix: Output test matrix:
=== GMatrix ===
 Number of rows .............: 3
 Number of columns .........: 4
 Number of elements ........: 12
 Number of allocated cells .: 12
 1, 2, 3, 4
 5, 6, 7, 8
 9, 10, 11, 12
Test GMatrix: Matrix conversions: ..... ok.
Test GMatrix: Vector extraction, insertion and addition: .... ok.
GMatrix - Test 1: Allocate zero matrix: GMatrix - Test 3: Assign matrix values: ok.
GMatrix - Test 4: Define matrix using copy constructor: ok.
GMatrix - Test 5: Matrix assignment: ok.
GMatrix - Test 6: Transposition: ok.
GMatrix - Test 7: Matrix*Vector multiplication: ok.
GMatrix - Test 8: Matrix*Matrix multiplication: ok.
GMatrix - Test 9: Assignment and arithmetics: ok.
GMatrix - Test 10: Matrix functions: ok.
GMatrix - Test 11: Comparison: ok.
PASS: test_GMatrix

****************************
* GSymMatrix class testing *
****************************
Test GSymMatrix: Output test matrix:
=== GSymMatrix ===
 Number of rows .............: 3
 Number of columns .........: 3
 Number of elements ........: 6
 Number of allocated cells .: 6
```

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 4, 1, 2
 1, 5, 3
 2, 3, 6
GSymMatrix - Test 1: Allocate zero matrix: ok.
GSymMatrix - Test 3: Assign matrix values: ok.
GSymMatrix - Test 4: Define matrix using copy constructor: ok.
GSymMatrix - Test 5: Matrix assignment: ok.
GSymMatrix - Test 6: Matrix*Vector multiplication: ok.
GSymMatrix - Test 7: Matrix*Matrix multiplication: ok.
GSymMatrix - Test 8: Assignment and arithmetics: ok.
GSymMatrix - Test 9: Matrix functions: ok.
GSymMatrix - Test 10: Comparison: ok.
GSymMatrix - Test 11: Transformations: ok.
GSymMatrix - Test 12: Cholesky decomposition, solver and inverter: Res(CD)=8.88178e-16 Res(CDZ)=8.88178e-16 Res(S0)=0
 Res(S1)=2.22045e-16 Res(S2)=0 Res(S0Z)=0 Res(S1Z)=2.22045e-16 Res(S2Z)=0 Res(CI)=4.44089e-16 Res(CIZ)=4.44089e-16
 ok.
PASS: test_GSymMatrix

*******************************
* GSparseMatrix class testing *
*******************************
Test GSparseMatrix: Output test matrix:
=== GSparseMatrix ===
 Number of rows .............: 4
 Number of columns ..........: 5
 Number of non-zero elements: 9 (9)
 Pending element ............: (3,4)=9
 Number of allocated cells .: 512
 Memory block size ..........: 512
 Sparse matrix fill .........: 0.45

Test GSparseMatrix: Allocate zero matrix: . ok.
Test GSparseMatrix: Assign matrix values: ..... ok.
Test GSparseMatrix: Define matrix using copy constructor: . ok.
Test GSparseMatrix: Matrix assignment: .. ok.
Test GSparseMatrix: Matrix transpose: .. ok.
Test GSparseMatrix: Matrix*Vector multiplication: .. ok.
Test GSparseMatrix: Matrix*Matrix multiplication: ... ok.
Test GSparseMatrix: Arithmetics: ..... ok.
Test GSparseMatrix: Matrix functions: ... ok.
Test GSparseMatrix: Comparison: ..... ok.
Test GSparseMatrix: Matrix conversions: ........ ok.
Test GSparseMatrix: Cholesky decomposition, solver and inverter: .....ok.
Test GSparseMatrix: Heavy calculus:
 - Fill of 10000 values needed 0.05 sec (reference ~ 0.2 sec)
 - Modification of 10000 values needed 0 sec (reference ~ 0 sec)
 - 10000 columns adding needed 2.15 sec (reference ~ 4.6 sec)
 - 10000 columns stack-adding needed 0.82 sec (reference ~ 1 sec)
 - Matrix adding and subtraction 300 times 1.34 sec (reference ~ 1.4 sec)
 - Matrix multiplication 1 times 0.98 sec (reference ~ 3.1 sec)
ok.
PASS: test_GSparseMatrix

********************
* Numerics testing *
********************
Test GIntegral: .. ok.
PASS: test_GNumerics

************************
* GFits class testing *
************************
Test GFits: ..
TEST ERROR: Unable to create FITS file.
*** ERROR in GFitsHeader::card(std::string&): Keyword "EXTNAME" not found in header
/bin/sh: line 9: 19803: Abort(coredump)
FAIL: test_GFits
```

```
************************
* GXml classes testing *
************************
Test XML attributes: ..... ok.
Test XML elements: .... ok.
Test XML constructors: .... ok.
Test XML loading and saving: ... ok.
Test XML element access: ........ ok.
PASS: test_GXml

********************************
* GApplication classes testing *
********************************
Test GLog: ... ok.
PASS: test_GApplication

************************
* GModel class testing *
************************
Test GModelPar: . ok.
Test GModelPointSource: ...... ok.
Test GModels: .
TEST ERROR: Unable to construct model container from XML document.
*** ERROR in GModels::read(GXml&): Invalid model type "PointSource" encountered. No models are registered.
/bin/sh: line 9: 19832: Abort(coredump)
FAIL: test_GModel

************************
* GSky classes testing *
************************
Test Healpix GSkymap constructors: ........ ok.
Test Healpix GSkymap I/O:
TEST ERROR: Unable to save Healpix map.
*** ERROR in GFitsHeader::card(std::string&): Keyword "EXTNAME" not found in header
/bin/sh: line 9: 19841: Abort(coredump)
FAIL: test_GSky

*******************************
* GObservations class testing *
*******************************
Test openMP results:
**** Unbinned Test ****

* Unbinned : Test with 1 thread
/bin/sh: line 9: 19850: Abort(coredump)
FAIL: test_GObservations

*********************************
* Multi-wavelength class testing *
*********************************
Test observation handling:
TEST ERROR: Unable to construct GMWLObservation.
*** ERROR in GFitsHeader::card(std::string&): Keyword "EXTNAME" not found in header
/bin/sh: line 9: 19859: Abort(coredump)
FAIL: test_MWL

*****************************************
* CTA instrument specific class testing *
*****************************************
Test CTA response: ...../bin/sh: line 9: 19868: Abort(coredump)
FAIL: test_CTA

*****************************************
* LAT instrument specific class testing *
*****************************************
Test response: .
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TEST ERROR: Unable to load LAT response P6_v3_diff.
*** ERROR in GFitsHeader::card(std::string&): Keyword "EXTNAME" not found in header
/bin/sh: line 9: 19877: Abort(coredump)
FAIL: test_LAT
Traceback (most recent call last):
  File "./test_python.py", line 3, in <module>
    from gammalib import *
  File "/home/jenkins/workspace/slave/workspace/gammalib-mandriva/pyext/gammalib/__init__.py", line 1, in <module>
    from gammalib.app import *
  File "/home/jenkins/workspace/slave/workspace/gammalib-mandriva/pyext/gammalib/app.py", line 7, in <module>
    import _app
ImportError: ld.so.1: isapython2.6: fatal: relocation error: file
 /home/jenkins/workspace/slave/workspace/gammalib-mandriva/pyext/gammalib/_app.so: symbol __1cDstdJexceptionG__vtbl_:
 referenced symbol not found
FAIL: test_python.py
============================================
8 of 16 tests failed
Please report to jurgen.knodlseder@irap.omp.eu
============================================
gmake[2]: *** [check-TESTS] Error 1
gmake[2]: Leaving directory `/home/jenkins/workspace/slave/workspace/gammalib-mandriva/test'
gmake[1]: *** [check-am] Error 2
gmake[1]: Leaving directory `/home/jenkins/workspace/slave/workspace/gammalib-mandriva/test'
gmake: *** [check-recursive] Error 1
Build step 'Execute shell' marked build as failure
Finished: FAILURE
```

History

#1 - 08/23/2012 01:47 AM - Knödlseder Jürgen

The problems are related to

- exception handling
- registries
- core dumps of unknown nature