

ctools - Bug #625

Access of invalid matrix element in ctlike

12/06/2012 01:07 PM - Knödlseider Jürgen

<b>Status:</b>	Closed	<b>Start date:</b>	12/06/2012
<b>Priority:</b>	High	<b>Due date:</b>	
<b>Assigned To:</b>	Knödlseider Jürgen	<b>% Done:</b>	100%
<b>Category:</b>		<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>	1.0.0		
<b>Description</b>			
A ctlike run on 2 COMPTTEL observations gave the following exception:			
 2012-12-06T11:36:52: Iteration 25: func=-134518, Lambda=1e-14, delta=6.62477, max(grad)=80.8315 [0] 2012-12-06T11:36:56: Iteration 26: func=-134523, Lambda=1e-15, delta=4.93667, max(grad)=63.8959 [0] 2012-12-06T11:37:00: Iteration 27: func=-134526, Lambda=1e-16, delta=3.07109, max(grad)=55.6258 [1] 2012-12-06T11:37:00: GOptimizerLM::iteration: Curvature matrix not positive definite. 2012-12-06T11:37:00: Iteration 28: func=-134526, Lambda=1e-16, delta=0, max(grad)=55.6258 [1] 2012-12-06T11:37:00: Free parameter "Index" after convergence was reached with frozen parameter. 2012-12-06T11:37:00: Free parameter "Scale factor 0" after convergence was reached with frozen parameter. 2012-12-06T11:37:00: *** ERROR encountered in the execution of ctlike. Run aborted ... 2012-12-06T11:37:00: *** ERROR in GSparseMatrix::operator(int&,int&): Matrix element (52,52) out of range ([0,51], [0,51]) 2012-12-06T11:37:00: 2012-12-06T11:37:00: Application "ctlike" terminated after 125 wall clock seconds, consuming 227.068 seconds of CPU time.			
 Maybe the problem comes from a non positive definite curvature matrix, but in any case, there should not be an invalid access to matrix elements. Something went wrong here.			
 Relevant files to reproduce the problem are attached.			

History

#1 - 12/06/2012 03:13 PM - Knödlseider Jürgen

- % Done changed from 0 to 10

The problem was due to the fact that two identical models were fit simultaneously to both observations. The id's were in fact not read. The problem can thus be reproduced by removing the id attribute from the model.

We still should investigate the reason for the matrix access error.

#2 - 10/30/2014 12:30 PM - Knödlseider Jürgen

- Priority changed from Normal to High
- Target version set to 1.0.0

This definitely needs to be settled before the release version 1.0.0 goes out.

#3 - 06/29/2015 11:08 PM - Knödlseider Jürgen

- File ctlike\_current.log added
- Status changed from New to In Progress
- Assigned To set to Knödlseider Jürgen
- % Done changed from 10 to 20

Unfortunately (or fortunately?) the current code does not reproduce the problem (attachment:ctlike\_current.log)

**#4 - 06/29/2015 11:15 PM - Knödseder Jürgen**

- Status changed from In Progress to Feedback
- % Done changed from 20 to 100

Put this now on feedback, to be closed before release 1.0.0 if issue does not appear again.

**#5 - 06/30/2015 11:30 PM - Knödseder Jürgen**

- Status changed from Feedback to Closed

Files			
crab_1_10.xml	11.5 KB	12/06/2012	Knödseder Jürgen
obs_1_10.xml	1.03 KB	12/06/2012	Knödseder Jürgen
ctlike.log	23.5 KB	12/06/2012	Knödseder Jürgen
ctlike_current.log	20.6 KB	06/29/2015	Knödseder Jürgen