

LArSoft - Bug #23720

internal compiler error when building larcorealg with e19

12/05/2019 05:39 PM - Lynn Garren

Status:	Closed	Start date:	12/05/2019
Priority:	Normal	Due date:	
Assignee:	Kyle Knoepfel	% Done:	100%
Category:	Geometry	Estimated time:	0.00 hour
Target version:		Spent time:	3.00 hours
Occurs In:		Co-Assignees:	
Experiment:	-		

Description

An internal compiler error is reported when building larcorealg with e19.

To reproduce in an empty directory:

```
mrbs newDev -v v09_00_00_rc0 -q e19:prof
source localProducts*/setup
cd $MRB_SOURCE
mrbs g larcorealg
mrbs g larcorealg
dogit "co feature/team_for_e19"
cd $MRB_BUILDDIR
mrbs setenv
mrbs b -jN
```

Output:

```
[ 19%] Building CXX object larcorealg/larcorealg/Geometry/CMakeFiles/larcorealg_Geometry.dir/GeoVectorLocalTransformation.cxx.o
In file included from /home/garren/scratch/larsoft/v09_00_00_rc/srcs/larcorealg/larcorealg/Geometry/GeoVectorLocalTransformation.h:102,
                 from /home/garren/scratch/larsoft/v09_00_00_rc/srcs/larcorealg/larcorealg/Geometry/GeoVectorLocalTransformation.cxx:13:
/home/garren/scratch/larsoft/v09_00_00_rc/srcs/larcorealg/larcorealg/Geometry/GeoVectorLocalTransformation.tcc: In instantiation of 'static geo::LocalTransformation<StoredMatrix>::TransformationMatrix_t geo::LocalTransformation<StoredMatrix>::transformationFromPath(ITER, ITER) [with ITER = __gnu_cxx::__normal_iterator<const TGeoNode* const*, std::vector<const TGeoNode*> >; StoredMatrix = ROOT::Math::Impl::Transform3D<double>; geo::LocalTransformation<StoredMatrix>::TransformationMatrix_t = ROOT::Math::Impl::Transform3D<double>]':
/home/garren/scratch/larsoft/v09_00_00_rc/srcs/larcorealg/larcorealg/Geometry/GeoVectorLocalTransformation.cxx:91:73:   required from here
/home/garren/scratch/larsoft/v09_00_00_rc/srcs/larcorealg/larcorealg/Geometry/GeoVectorLocalTransformation.tcc:116:11: internal compiler error: in type_dependent_expression_p, at cp/pt.c:25178
    ((*iNode)->GetMatrix())
    ~^~~~~~
0x5cd91a type_dependent_expression_p(tree_node*)
  ../../gcc/cp/pt.c:25177
0x6f8d45 uses_template_parms(tree_node*)
  ../../gcc/cp/pt.c:10032
0x6fdc6b tsubst_copy
  ../../gcc/cp/pt.c:15430
0x70e447 tsubst_copy
  ../../gcc/cp/pt.c:18883
0x70e447 tsubst_copy_and_build(tree_node*, tree_node*, int, tree_node*, bool, bool)
  ../../gcc/cp/pt.c:18883
0x70f757 tsubst_copy_and_build(tree_node*, tree_node*, int, tree_node*, bool, bool)
  ../../gcc/cp/pt.c:17819
0x70e4f0 tsubst_copy_and_build(tree_node*, tree_node*, int, tree_node*, bool, bool)
```

```
../.../gcc/cp/pt.c:18143
0x70f830 tsubst_copy_and_build(tree_node*, tree_node*, int, tree_node*, bool, bool)
../.../gcc/cp/pt.c:18670
0x70eae6 tsubst_copy_and_build(tree_node*, tree_node*, int, tree_node*, bool, bool)
../.../gcc/cp/pt.c:18285
0x70f757 tsubst_copy_and_build(tree_node*, tree_node*, int, tree_node*, bool, bool)
../.../gcc/cp/pt.c:17819
0x70eb61 tsubst_copy_and_build(tree_node*, tree_node*, int, tree_node*, bool, bool)
../.../gcc/cp/pt.c:18301
0x702981 tsubst_expr(tree_node*, tree_node*, int, tree_node*, bool)
../.../gcc/cp/pt.c:17434
0x703d11 tsubst_expr(tree_node*, tree_node*, int, tree_node*, bool)
../.../gcc/cp/pt.c:15290
0x703d11 tsubst_init
../.../gcc/cp/pt.c:15296
0x703784 tsubst_expr(tree_node*, tree_node*, int, tree_node*, bool)
../.../gcc/cp/pt.c:16748
0x702008 tsubst_expr(tree_node*, tree_node*, int, tree_node*, bool)
../.../gcc/cp/pt.c:16621
0x701eeb tsubst_expr(tree_node*, tree_node*, int, tree_node*, bool)
../.../gcc/cp/pt.c:16918
0x700b78 tsubst_expr(tree_node*, tree_node*, int, tree_node*, bool)
../.../gcc/cp/pt.c:16606
0x700b78 instantiate_decl(tree_node*, bool, bool)
../.../gcc/cp/pt.c:24053
0x71c063 instantiate_pending_templates(int)
../.../gcc/cp/pt.c:24169
Please submit a full bug report,
with preprocessed source if appropriate.
Please include the complete backtrace with any bug report.
See <https://gcc.gnu.org/bugs/> for instructions.
make[2]: *** [larcorealg/larcorealg/Geometry/CMakeFiles/larcorealg_Geometry.dir/GeoVectorLocalTransformation.cxx.o] Error 1
make[1]: *** [larcorealg/larcorealg/Geometry/CMakeFiles/larcorealg_Geometry.dir/all] Error 2
make: *** [all] Error 2
```

History

#1 - 12/06/2019 03:09 PM - Kyle Knoepfel

- % Done changed from 0 to 100
- Assignee set to Kyle Knoepfel
- Status changed from New to Resolved
- Category set to Geometry

This was resolved with a workaround. Specifically, the genericity of the transformationFromPath function templates were replaced by free function templates.

Implemented with commits:

- [larcorealg:3028299](#)
- [larcorealg:a8d8468](#)

#2 - 12/16/2019 10:27 AM - Kyle Knoepfel

- Status changed from Resolved to Closed