

LArSoft - Support #20410

building larsoft with e17

07/23/2018 03:38 PM - Lynn Garren

Status:	Resolved	Start date:	07/23/2018
Priority:	Normal	Due date:	
Assignee:		% Done:	100%
Category:		Estimated time:	0.00 hour
Target version:		Spent time:	0.50 hour
Experiment:	-	Co-Assignees:	

Description

This ticket will list problems identified when attempting to build larsoft with e17 (gcc 7.3.0).

All work is on branch feature/team_for_e17

larreco/RecoAlg/KalmanFilterAlg.cxx

```
[ 10%] Building CXX object larreco/larreco/RecoAlg/CMakeFiles/larreco_RecoAlg.dir/KalmanFilterAlg.cxx.o
/home/garren/scratch/larsoft/v06_90_00_rc/srcs/larreco/larreco/RecoAlg/KalmanFilterAlg.cxx: In member function 'bool trkf::KalmanFilterAlg::fitMomentumMS(const trkf::KGTrack&, const trkf::Propagator*, trkf::KETrack&) const':
/home/garren/scratch/larsoft/v06_90_00_rc/srcs/larreco/larreco/RecoAlg/KalmanFilterAlg.cxx:165:28: error: 'vtemp2.boost::numeric::ublas::bounded_array<double, 2, std::allocator<double> >::data_[1]' may be used uninitialized in this function [-Werror=maybe-uninitialized]
    trkf::KVector<2>::type vtemp2 = prod(temp1, vtemp1);
                                ^~~~~~
```

cclplus: all warnings being treated as errors

```
[ 10%] Building CXX object larreco/RecoAlg/CMakeFiles/larreco_RecoAlg.dir/SeedFinderAlgorithm.cxx.o
/home/garren/scratch/larsoft/v06_90_00_rc/srcs/larreco/larreco/RecoAlg/SeedFinderAlgorithm.cxx: In member function 'void trkf::SeedFinderAlgorithm::ConsolidateSeed(recob::Seed&, const art::PtrVector<recob::Hit>&, std::vector<char>&, std::vector<std::vector<std::vector<int> > >&, bool)':
/home/garren/scratch/larsoft/v06_90_00_rc/srcs/larreco/larreco/RecoAlg/SeedFinderAlgorithm.cxx:566:28: error: 'Occupancy[0]' may be used uninitialized in this function [-Werror=maybe-uninitialized]
]
    if (Occupancy[n] < fOccupancyCut) nBelowCut++;
    ~~~~~^
```

larsim/LArG4/NestAlg.cxx

```
[ 21%] Building CXX object larsim/larsim/LArG4/CMakeFiles/larsim_LArG4.dir/NestAlg.cxx.o
/home/garren/scratch/larsoft/v06_90_00_rc/srcs/larsim/larsim/LArG4/NestAlg.cxx: In member function 'const G4VParticleChange& NestAlg::CalculateIonizationAndScintillation(const G4Track&, const G4Step&)':
/home/garren/scratch/larsoft/v06_90_00_rc/srcs/larsim/larsim/LArG4/NestAlg.cxx:12:14: error: '*' in boolean context, suggest '&&' instead [-Werror=int-in-bool-context]
#define WIN 0*CLHEP::mm //top Cu block (also, quartz window)
    ^
/home/garren/scratch/larsoft/v06_90_00_rc/srcs/larsim/larsim/LArG4/NestAlg.cxx:200:9: note: in expansion of macro 'WIN'
    if ( !WIN && !TOP && !ANE && !SRF && !GAT && !CTH && !BOT && !PMT ) {
        ^~~
```

cclplus: all warnings being treated as errors

larreco/ShowerFinder/ShowerReco3D/ShowerRecoAlgBase.cxx

```
[ 30%] Building CXX object larreco/larreco/ShowerFinder/ShowerReco3D/CMakeFiles/larreco_ShowerFinder_ShowerReco3D.dir/ShowerRecoAlgBase.cxx.o
```

```

In file included from /home/garren/scratch/larsoft/v06_90_00_rc/srcs/larreco/larreco/ShowerFinder/
ShowerReco3D/ShowerRecoAlgBase.cxx:4:0:
/home/garren/scratch/larsoft/v06_90_00_rc/srcs/larreco/larreco/ShowerFinder/ShowerReco3D/ShowerRec
oAlgBase.h: In member function 'virtual void showerreco::ShowerRecoAlgBase::AppendInputClusters(co
nst std::vector<cluster::ClusterParamsAlg>&)':
/home/garren/scratch/larsoft/v06_90_00_rc/srcs/larreco/larreco/ShowerFinder/ShowerReco3D/ShowerRec
oAlgBase.h:26:10: error: '<anonymous>.showerreco::ShowerCluster_t::angle_2d' may be used uninitial
ized in this function [-Werror=maybe-uninitialized]
    struct ShowerCluster_t {
        ^~~~~~
/home/garren/scratch/larsoft/v06_90_00_rc/srcs/larreco/larreco/ShowerFinder/ShowerReco3D/ShowerRec
oAlgBase.h:26:10: error: '<anonymous>.showerreco::ShowerCluster_t::plane_id' may be used uninitial
ized in this function [-Werror=maybe-uninitialized]
cclplus: all warnings being treated as errors

```

lardata/test/Utilities/NestedIterator_test.cc

```

[ 57%] Building CXX object lardata/test/Utilities/CMakeFiles/NestedIterator_test.dir/NestedIterato
r_test.cc.o
/home/garren/scratch/larsoft/v06_90_00_rc/srcs/lardata/test/Utilities/NestedIterator_test.cc: In f
unction 'void RunVectorMapTest()':
/home/garren/scratch/larsoft/v06_90_00_rc/srcs/lardata/test/Utilities/NestedIterator_test.cc:109:2
2: error: call of overloaded 'insert(<brace-enclosed initializer list>)' is ambiguous
    data.insert({0, {}});
        ^

```

```

In file included from /products/gcc/v7_3_0/Linux64bit+3.10-2.17/include/c++/7.3.0/map:61:0,
                from /home/garren/scratch/larsoft/v06_90_00_rc/srcs/lardata/test/Utilities/Nested
Iterator_test.cc:16:
/products/gcc/v7_3_0/Linux64bit+3.10-2.17/include/c++/7.3.0/bits/stl_map.h:621:7: note: candidate:
std::map<_Key, _Tp, _Compare, _Alloc>::insert_return_type std::map<_Key, _Tp, _Compare, _Alloc>::
insert(std::map<_Key, _Tp, _Compare, _Alloc>::node_type&&) [with _Key = int; _Tp = std::vector<int
>; _Compare = std::less<int>; _Alloc = std::allocator<std::pair<const int, std::vector<int> > >; s
td::map<_Key, _Tp, _Compare, _Alloc>::insert_return_type = std::_Node_insert_return<std::_Rb_tree_
iterator<std::pair<const int, std::vector<int> > >, std::_Node_handle<int, std::pair<const int, st
d::vector<int> >, std::allocator<std::_Rb_tree_node<std::pair<const int, std::vector<int> > > >
>; std::map<_Key, _Tp, _Compare, _Alloc>::node_type = std::_Node_handle<int, std::pair<const int,
std::vector<int> >, std::allocator<std::_Rb_tree_node<std::pair<const int, std::vector<int> > > >
>]
    insert(node_type&& __nh)
        ^~~~~~

```

```

/products/gcc/v7_3_0/Linux64bit+3.10-2.17/include/c++/7.3.0/bits/stl_map.h:795:7: note: candidate:
std::pair<typename std::_Rb_tree<_Key, std::pair<const _Key, _Tp>, std::_Select1st<std::pair<cons
t _Key, _Tp> >, _Compare, typename __gnu_cxx::__alloc_traits<Allocator>::rebind<std::pair<const _
Key, _Tp> >::other>::iterator, bool> std::map<_Key, _Tp, _Compare, _Alloc>::insert(const value_typ
e&) [with _Key = int; _Tp = std::vector<int>; _Compare = std::less<int>; _Alloc = std::allocator<s
td::pair<const int, std::vector<int> > >; typename std::_Rb_tree<_Key, std::pair<const _Key, _Tp>,
std::_Select1st<std::pair<const _Key, _Tp> >, _Compare, typename __gnu_cxx::__alloc_traits<Alloc
ator>::rebind<std::pair<const _Key, _Tp> >::other>::iterator = std::_Rb_tree_iterator<std::pair<co
nst int, std::vector<int> > >; std::map<_Key, _Tp, _Compare, _Alloc>::value_type = std::pair<const
int, std::vector<int> >]
    insert(const value_type& __x)
        ^~~~~~

```

```

/products/gcc/v7_3_0/Linux64bit+3.10-2.17/include/c++/7.3.0/bits/stl_map.h:802:7: note: candidate:
std::pair<typename std::_Rb_tree<_Key, std::pair<const _Key, _Tp>, std::_Select1st<std::pair<cons
t _Key, _Tp> >, _Compare, typename __gnu_cxx::__alloc_traits<Allocator>::rebind<std::pair<const _
Key, _Tp> >::other>::iterator, bool> std::map<_Key, _Tp, _Compare, _Alloc>::insert(std::map<_Key,
_Tp, _Compare, _Alloc>::value_type&&) [with _Key = int; _Tp = std::vector<int>; _Compare = std::le
ss<int>; _Alloc = std::allocator<std::pair<const int, std::vector<int> > >; typename std::_Rb_tree
<_Key, std::pair<const _Key, _Tp>, std::_Select1st<std::pair<const _Key, _Tp> >, _Compare, typenam
e __gnu_cxx::__alloc_traits<Allocator>::rebind<std::pair<const _Key, _Tp> >::other>::iterator = s
td::_Rb_tree_iterator<std::pair<const int, std::vector<int> > >; std::map<_Key, _Tp, _Compare, _Al
loc>::value_type = std::pair<const int, std::vector<int> >]
    insert(value_type&& __x)
        ^~~~~~

```

History

#1 - 07/23/2018 04:05 PM - Gianluca Petrillo

Lynn Garren wrote:

```
lardata/test/Utilities/NestedIterator_test.cc  
[...]
```

Since that is my code, I attempted to reword the line so that GCC might be happier ([lardata:e53e208c](#) now in develop).

#2 - 07/23/2018 04:27 PM - Christopher Green

Re: larsim/LArG4/NestAlg.cxx, use: if ((WIN == 0) ...

#3 - 07/23/2018 04:38 PM - Lynn Garren

Thanks Chris and Gianluca. I confirm that larsim and lardata now build without complaining. I was also able to run the lardata unit tests successfully.

#4 - 07/24/2018 07:30 PM - Lynn Garren

- *Status changed from New to Resolved*

Kyle fixed the last remaining problems. The feature/team_for_e17 branch now builds with e17. This is just for larsoft itself.

#5 - 07/26/2018 01:12 PM - Lynn Garren

- *% Done changed from 0 to 100*