canvas - Bug #17609

Problem building larsoft with art v2_08_02

08/29/2017 04:47 PM - Lynn Garren

Status:	Closed		**Start date:**	08/29/2017
Priority:	Normal		**Due date:**	
Assignee:	Kyle Knoepfel		**% Done:**	100%
Category:			**Estimated time:**	0.00 hour
Target version:	2.08.03		**Spent time:**	8.00 hours
Scope:	Internal		**SSI Package:**	art
Experiment:	-			

Description

The uboonecode unit test production.sh fails when attempting to use art v2_08_02.

The error shown is

```
    Invalid FindManyP
    ---- ProductNotFound BEGIN
      getByLabel: Found zero products matching all criteria
      Looking for type: art::Assns<recob::Track,recob::Hit,void>
```

Gianluca points out that

```
1) the nested exception messed with the name of the label for the error message;
   in the test, the label should be "pandoraCosmicKHit"

2) art is failing to fetch art::Assns<recob::Track, recob::Hit, void>
   given that there is also a art::Assns<recob::Track, recob::Hit, recob::TrackHitMeta> available.
   This used to work in the past.
```

```
McRecoStage2 | pandoraCosmicKHit....... | .................... | art::Assns<recob::SpacePoint,rec
ob::Hit,void>.......... | 1442
McRecoStage2 | pandoraCosmicKHit....... | .................... | art::Assns<recob::Track,recob::S
pacePoint,void>........ | .708
McRecoStage2 | pandoraCosmicKHit....... | .................... | art::Assns<recob::PFParticle,rec
ob::Track,void>........ | ...2
McRecoStage2 | pandoraCosmicKHit....... | .................... | art::Assns<recob::Track,recob::H
it,void>............... | 2143
McRecoStage2 | pandoraCosmicKHit....... | .................... | art::Assns<recob::Track,recob::H
it,recob::TrackHitMeta> | 2143
McRecoStage2 | pandoraCosmicKHit....... | .................... | std::vector<recob::Track>.......
..................... | ...2
McRecoStage2 | pandoraCosmicKHit....... | .................... | std::vector<recob::SpacePoint>..
..................... | .708
```

There is no release candidate for this build, but there is a local build on woof. The build uses branch feature/team_for_art_2_08. The installed build is available at /home/garren/scratch/larsoft/v06_47_01_01/p/localProducts_larsoft_v06_47_01_01_e14_prof This product directory also includes local builds of updated dependencies.

mrb t -j40 will reproduce the problem. Gianluca has also supplied a shorter fcl file which reproduces the problem.

To reproduce the problem, make a mrb build of uboonecode and ubutil, using /products and the above local product directory. Make sure you use the feature branch.

History

#1 - 08/29/2017 05:01 PM - Kyle Knoepfel

- Status changed from New to Feedback

Can you provide a debug build so that we can more easily diagnose?

#2 - 08/29/2017 05:01 PM - Gianluca Petrillo

The product list Lynn showed above is from the shorter FHiCL configuration (attached), re-enabling the output module and omitting the last, failing module.
The *art* RootOutput file was processed via *art* event dumper, and the output shows only the data products produced by pandoraCosmicKHit module instance, which is used as input by the failing module.

The failing module is larana:source:larana/CosmicRemoval/CosmicTrackTagger_module.cc#L128 .

#3 - 08/29/2017 05:20 PM - Gianluca Petrillo

- File reco_uboone_mcc8_driver_stage2_n1.root added

#4 - 08/29/2017 05:26 PM - Gianluca Petrillo

- File reco_uboone_mcc8_driver_stage2_taggerOnly.fcl added

I can reproduce the problem using a reduced input file (attached) and a simpler configuration (reco_uboone_mcc8_driver_stage2_taggerOnly.fcl, also attached).
Probably a module with a single well-crafted Event::get() line would be enough.

Note that this situation is slightly different from the original one, since in that one the association data product is present in the event but not in the input file, while using the input file I provide the situation is the opposite.

#5 - 08/29/2017 09:18 PM - Lynn Garren

A debug build is now available in /scratch/garren/larsoft/v06_47_01_01/d/localProducts_larsoft_v06_47_01_01_e14_debug

#6 - 08/30/2017 10:10 AM - Kyle Knoepfel

- Status changed from Feedback to Assigned

- Assignee set to Kyle Knoepfel

Exception throw confirmed. Now debugging.

#7 - 08/30/2017 11:54 AM - Kyle Knoepfel

- Project changed from cet-is to canvas

- Subject changed from problem building larsoft with art v2_08_02 to Problem building larsoft with art v2_08_02

- SSI Package art added

The problem is understood. The lookup of Assns products has not changed. Instead, a reference to a temporary InputTag object was unintentionally introduced in art [2.08.00](2.08.00). The effect is that the module label of the InputTag used in the FindMany object was garbled--unsurprisingly, the lookups failed due to searching for a garbled module label.

In fact, the mangled module label that was reported in the original exception was not a problem with the exception message, but it was an indication of the problem itself.

Lynn, is there a good reason to introduce a bug-fix release (i.e. art 2.08.03), instead of just including the fix in art [2.09.00](2.09.00)? I believe the features for art [2.09.00](2.09.00) are complete, and we could tag maybe even today if desired.

#8 - 08/30/2017 12:25 PM - Kyle Knoepfel

- Status changed from Assigned to Resolved

- % Done changed from 0 to 100

Implemented with commit canvas:bee13b3.

#9 - 08/30/2017 01:35 PM - Lynn Garren

After consulting with Kyle and Marc Paterno, we have requested art 2.08.03.

#10 - 08/30/2017 03:59 PM - Kyle Knoepfel

- Status changed from Resolved to Closed

#11 - 08/31/2017 08:31 AM - Kyle Knoepfel

- Target version set to 2.08.03

Files

reco_uboone_mcc8_driver_stage2_shorter.fcl	1.03 KB	08/29/2017	Lynn Garren
reco_uboone_mcc8_driver_stage2_n1.root	1.11 MB	08/29/2017	Gianluca Petrillo
reco_uboone_mcc8_driver_stage2_taggerOnly.fcl	433 Bytes	08/29/2017	Gianluca Petrillo