

## LArSoft - Necessary Maintenance #15446

### BezierTrack should be removed from LArSoft

02/02/2017 02:33 PM - Gianluca Petrillo

<b>Status:</b>	Closed	<b>Start date:</b>	02/02/2017
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	Gianluca Petrillo	<b>% Done:</b>	100%
<b>Category:</b>	Data products	<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>	2017-4-quarter	<b>Spent time:</b>	12.00 hours
<b>Experiment:</b>	-		
<b>Description</b>			
<p>The class BezierTrack has been deprecated since long time, and it was never well supported. The <a href="#">LArSoft coordination meeting on January 31, 2017</a> has agreed to get rid of it.</p> <p>This will include the data product itself and the modules which produce it, in addition to chopping away parts of other analysers that optionally support it.</p> <p>If a class similar is ever needed, we'll use a new design.</p>			
<b>Related issues:</b>			
Related to LArSoft - Task #14281: Provide an interface for access of reconstr...		<b>Accepted</b>	<b>10/26/2016</b>

#### Associated revisions

##### Revision 7b30de69 - 12/27/2017 04:00 PM - Gianluca Petrillo

Updates for issue #15446 (Bezier tracking)

##### Revision e2c36fb0 - 12/27/2017 04:00 PM - Gianluca Petrillo

Updates for issue #15446 (Bezier tracking)

##### Revision 7b30de69 - 12/27/2017 04:00 PM - Gianluca Petrillo

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**Revision 7b30de69 - 12/27/2017 04:00 PM - Gianluca Petrillo**

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**Revision 83376b67 - 12/27/2017 04:00 PM - Gianluca Petrillo**

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**Revision 5fb3704f - 12/27/2017 04:00 PM - Gianluca Petrillo**

Updates for issue #15446 (Bezier tracking)

**Revision 2169e8e0 - 12/27/2017 04:00 PM - Gianluca Petrillo**

Updates for issue #15446 (Bezier tracking)

**Revision 35d703f9 - 12/27/2017 04:02 PM - Gianluca Petrillo**

Updates for issue #15446 (Bezier tracking)

## History

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**#1 - 02/06/2017 10:32 AM - Lynn Garren**

- Status changed from *New* to *Accepted*

This will be coupled to recob::Track stage 2.

**#2 - 02/06/2017 10:32 AM - Lynn Garren**

- Related to Task #14281: Provide an interface for access of reconstructed track information added

**#3 - 05/11/2017 02:56 PM - Katherine Lato**

- Target version set to 2017-4-quarter

**#4 - 12/13/2017 11:09 AM - Gianluca Petrillo**

- Assignee set to Gianluca Petrillo

**#5 - 12/20/2017 09:39 AM - Gianluca Petrillo**

- Status changed from *Accepted* to *Feedback*

- % Done changed from 0 to 10

The total eradication of Bézier tracking has proven to be trouble, in the tradition of spaghetti code. Its removal dragged into oblivion:

- event display feature of interactive creation of seeds (MakeSeeds)
- probably some other minor feature of the event display
- optical detector related modules: BeamFlashCompatibilityCheck, FlashPurityCheckAna, TrackTimeAssoc and TrackTimeAssocAna
- tracking module FeatureTracker
- some calorimetry features

Numerous experiment job configuration files had to be cleaned, presumably outdated ones. In addition, **DUNE 35t unit tests became broken** because of the use of some of the modules that have been chopped away. I haven't even tried to execute the integration tests.

It should be pointed out that the code that has been removed has been, to my knowledge, unmaintained for long time.

This intervention has been carried out using a sledgehammer. Maybe a different, bistoury-based, approach is possible.

**#6 - 12/27/2017 04:19 PM - Gianluca Petrillo**

- Status changed from *Feedback* to *Resolved*

- % Done changed from 10 to 100

I have taken a different, softer approach, and introduced some design. The proposed solution is in branch [feature/gp\\_Issue15446\\_light](#) of the LArSoft repositories [lardataobj](#), [larreco](#) and [larana](#), and the experiment code [uboonecode](#), [dunetpc](#) and [icaruscode](#).

The deprecated object `trk::BezierTrack` (<larreco:source:larreco/Deprecated/BezierTrack.h>) does not inherit from `recob::Track` any more, but it contains a `recob::Trajectory` data member. It can be initialised from a `recob::Track` (or `recob::Trajectory` plus a numeric ID), but it can't be turned into a `recob::Track` (it can be turned into a `recob::Trajectory` in the sense that the internal trajectory can be retrieved; the ID information is not carried on).

- the few times user code called `recob::Track` inherited interface have been corrected to call the trajectory equivalent
- the `BezierTrackerModule` producer that used to produce `recob::Track` produces `recob::Trajectory` instead

Most important, `recob::Track`, `recob::TrackTrajectory` and `recob::Trajectory` are now completely independent (and not friend) of `trk::BezierTrack`.

**#7 - 02/19/2018 02:38 PM - Gianluca Petrillo**

- *Status changed from Resolved to Closed*