TrajCluster - Bug #19935

Use of std::nearbyint in Utils.cxx

05/13/2018 09:35 AM - Tingjun Yang

Status:	Resolved	**Start date:**	05/13/2018
Priority:	Normal	**Due date:**	
Assignee:	Bruce Baller	**% Done:**	0%
Category:		**Estimated time:**	0.00 hour
Target version:		**Spent time:**	0.00 hour

Description

There are several places in Utils.cxx that use std::nearbyint. Here is one example around line 3410:

```
      // next make TPs on the wires that don't have real TPs
      TrajPoint ltp;
      // put ltp at the vertex position with direction towards the end point
      MakeBareTrajPoint(vx2.Pos, tj.Pts[tj.EndPt[end]].Pos, ltp);
      if(ltp.Dir[0] == 0) continue;
      unsigned int wire = std::nearbyint(ltp.Pos[0]);
      ltp.Chg = 0;
      unsigned short indx = wire - loWire;
      // Break if we found a real TP
      if(tjpt[indx].Chg == 0) tjpt[indx] = ltp;
```

In one event, ltp.Pos[0] is negative (-0.642913) and wire was assigned the maximal unsigned integer value 4294967295.

We need to review the code and protect against the case where Pos is negative.

History

#1 - 05/18/2018 06:41 PM - Tingjun Yang

Hi Bruce,

I saw you pushed lots of changes today. Did you fix this problem?

Do you need an example to test it?

Thanks,
Tingjun

#2 - 05/19/2018 07:04 PM - Tingjun Yang

- Status changed from New to Resolved

- Assignee set to Bruce Baller

I confirm this problem is fixed. Thanks, Bruce.