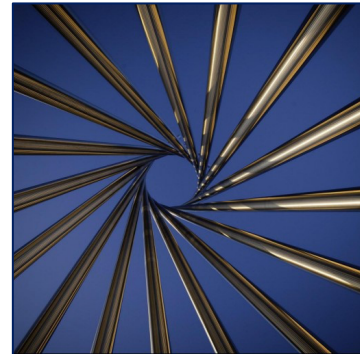# LArSoft [issue #23013](): status and implications

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LArSoft coordination meeting

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[Issue #23013](#) Synopsis

- Reported by Chris Backhouse (DUNE).

- When reading older data with newer LArSoft, vertex point information in **recob::Vertex** is lost (read as **(0,0,0)**).

- Data were written using LArSoft v7_06_02 and attempted to be read using v08_27_00.

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[Issue #23013](#) Status

Per investigations:

- Last known good release is v08_15_01, first known bad release is v08_17_00.
- Problem may be coincident with migration from ROOT 6.12/06 to 6.16/00.
- Inquiries suggest problems with ROOT's I/O rules were discovered with 6.16/00 and fixed with 6.18/00.
- Attempts to reproduce the problem outside DUNE and/or LArSoft and/or *art* are ongoing.

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[Issue #23013](#) Implications

- Any data read with ROOT >= 6.16/00 for which an I/O rule is triggered is suspect. Symptoms of a problem would be unexpected zeros in read data.
- Specifically, problems have been spotted with **recob::Vertex** where the data were written prior to the tracking double -> float (Double_32) conversion (LArSoft v07_11_00, 2018-11-14).
- Thus far, the problem has only been verified for **recob::Vertex::pos**_. **recob::Vertex::cov**_ might also be at issue and implications for other data are unknown at this time.
- Please be aware of this issue, and apply extra scrutiny when reading old data.

We are working to localize this issue as a matter of urgency, and identify a solution. This solution may involve a quick transition to a patched (v6_16_00a) or newer (v6_18_00) version of ROOT.

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