

# Temperature Profile and new Stave with Flaws

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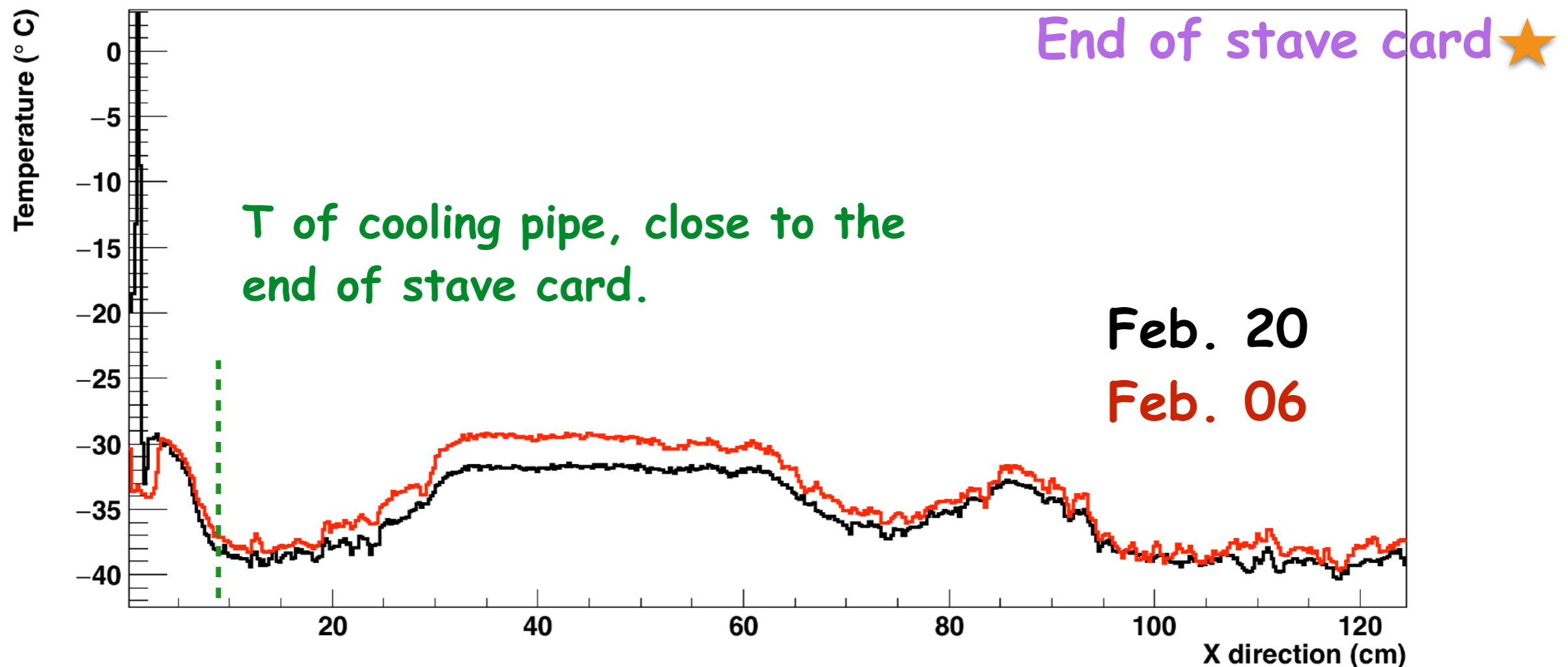
Iowa State University

Stave QC discussion, Feb.8.2017



# Edge Temperature Profile

- Test with Stave #2.
  - ◆ Chiller at -55 C (Feb 06)
  - ◆ Chiller at -55 C (edge cover, Feb 20)
  - ◆ no obvious difference found!

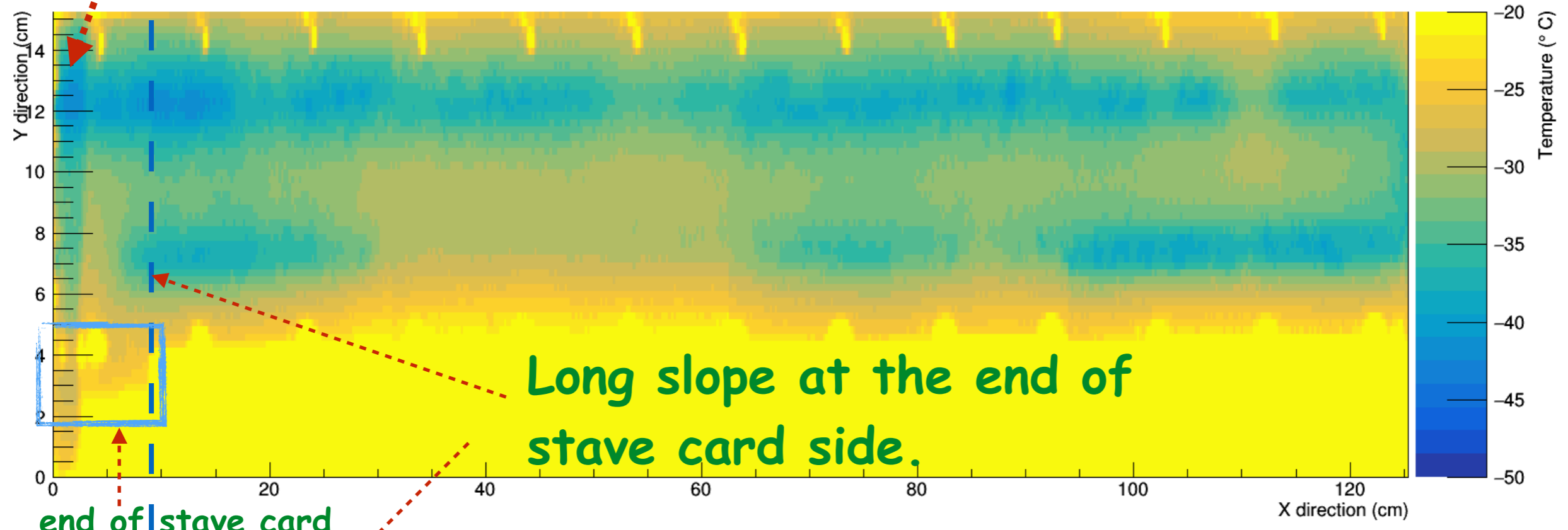


# Stave #2: Temperature profile @ -55C

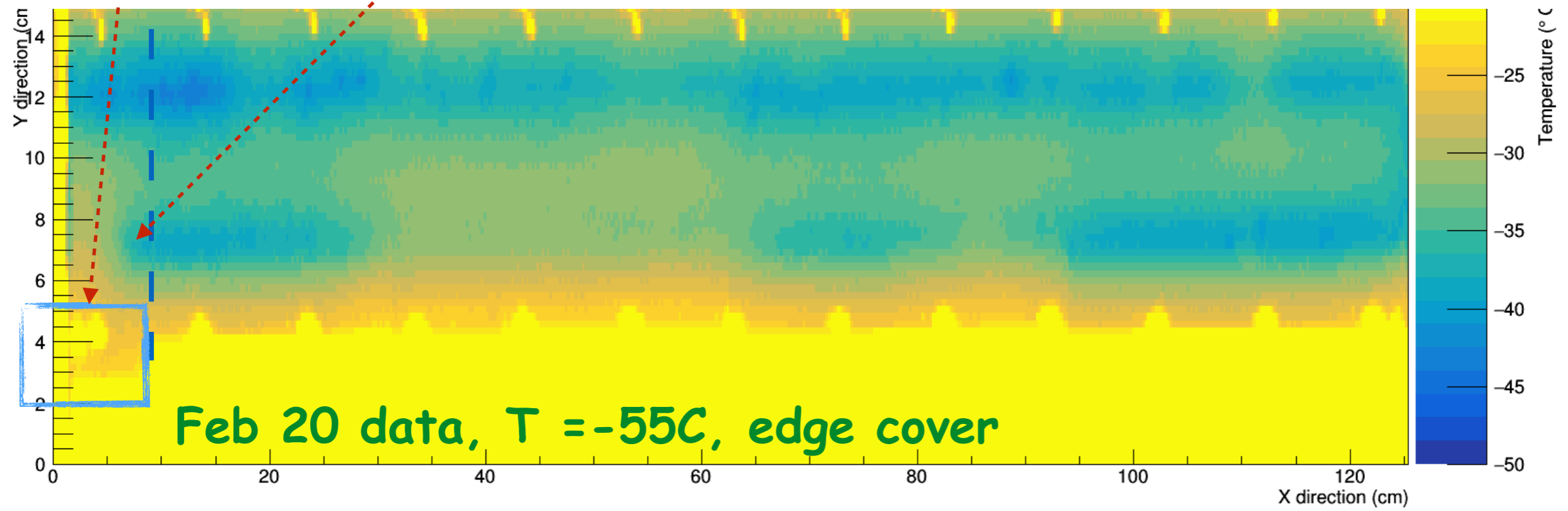


Feb 06, T = -55C

!!! Stave #2 with flaws



end of stave card

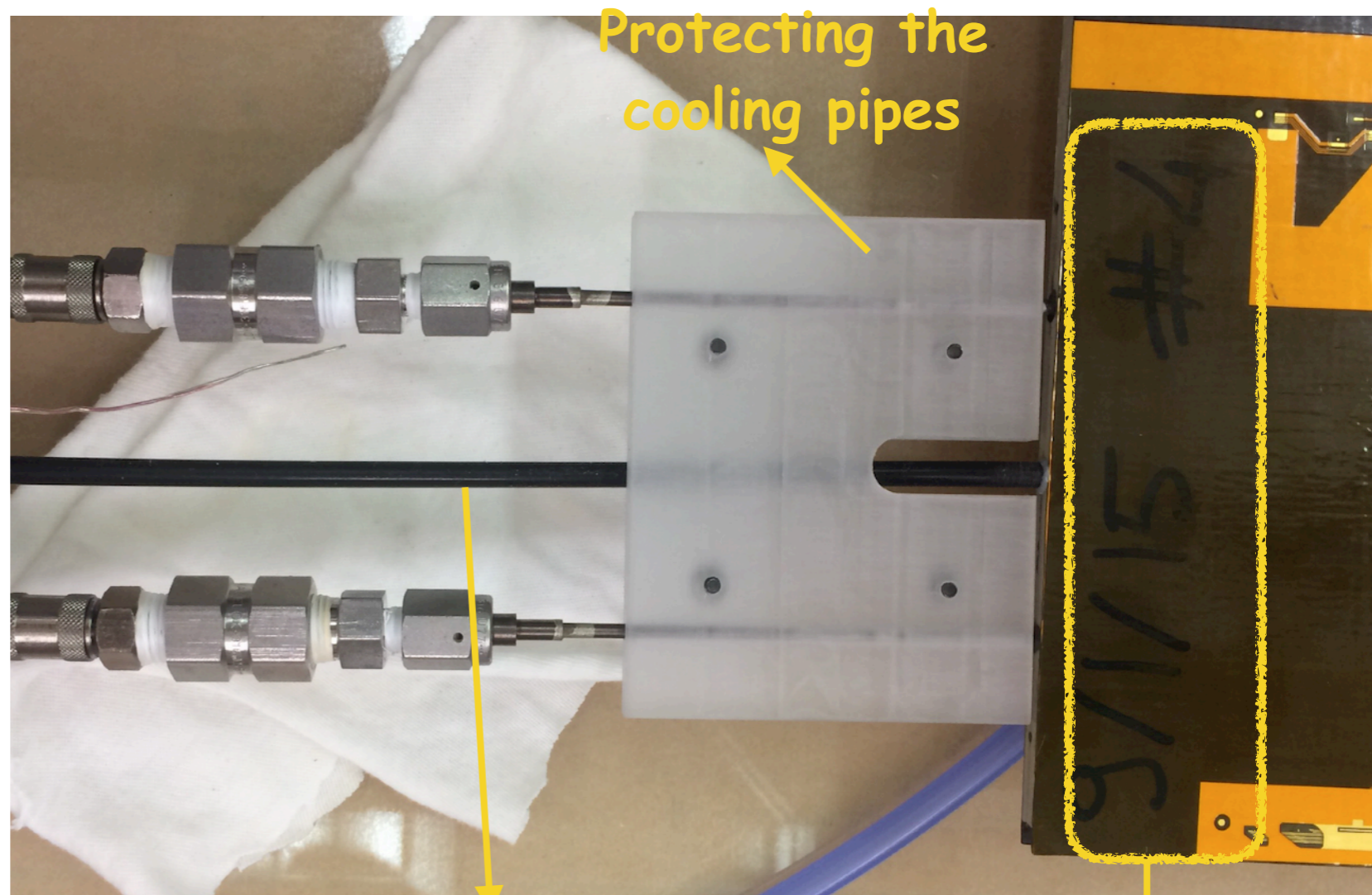
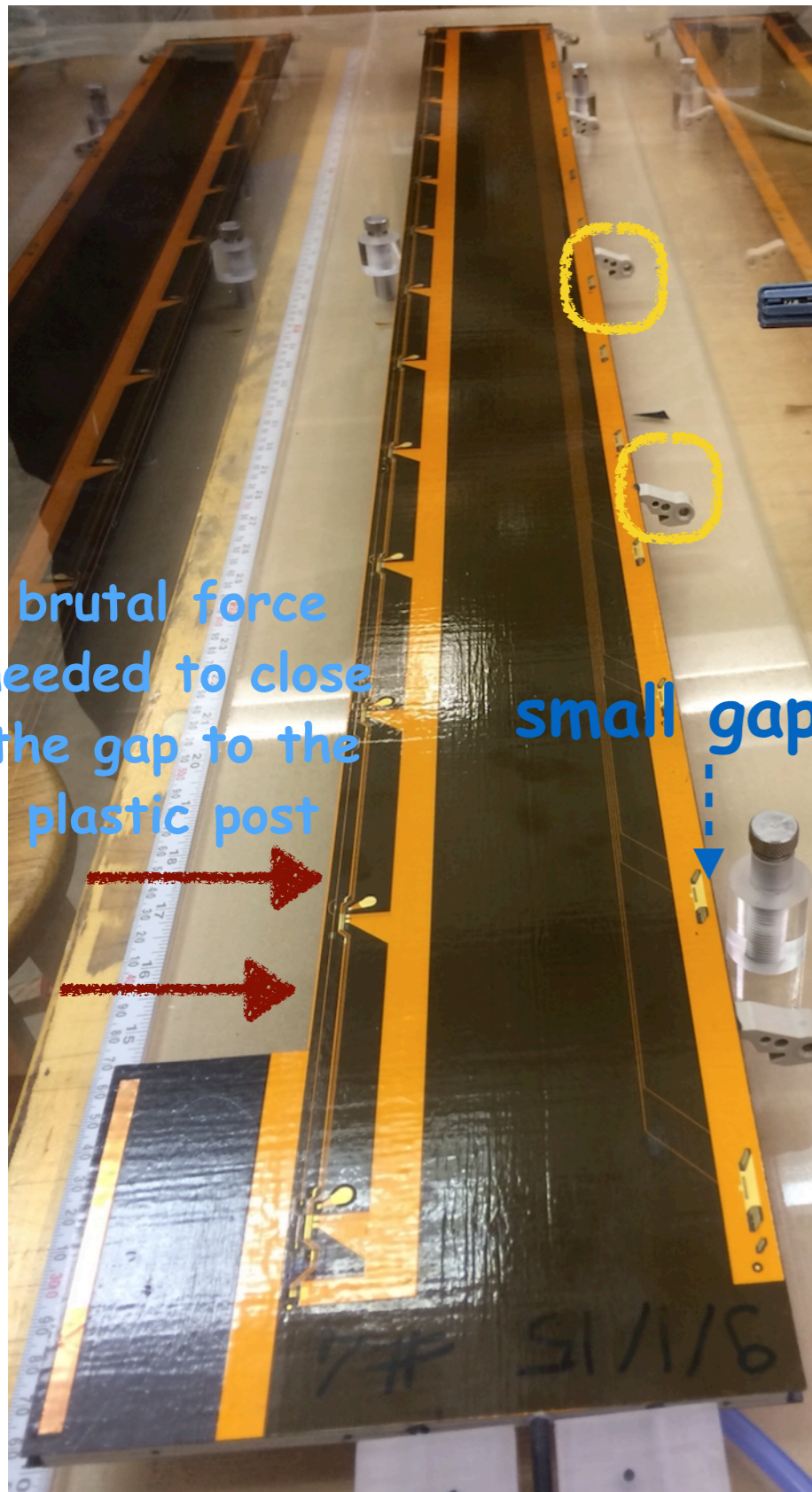


Feb 20 data, T = -55C, edge cover

New Flaw Stave  
#2 revised (#4)



# New Stave (#2 revised = #4)



• Data taken in Feb 20 (Will, Jie).

• Chiller at -55 & 50 C

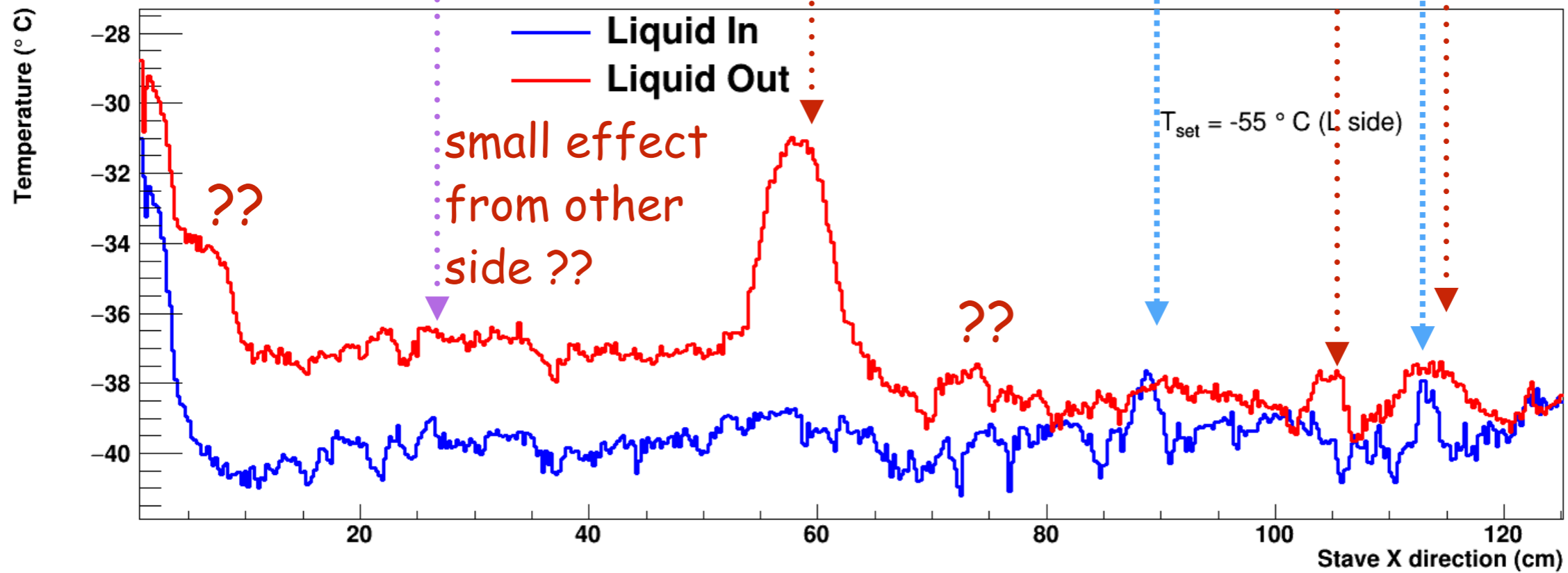
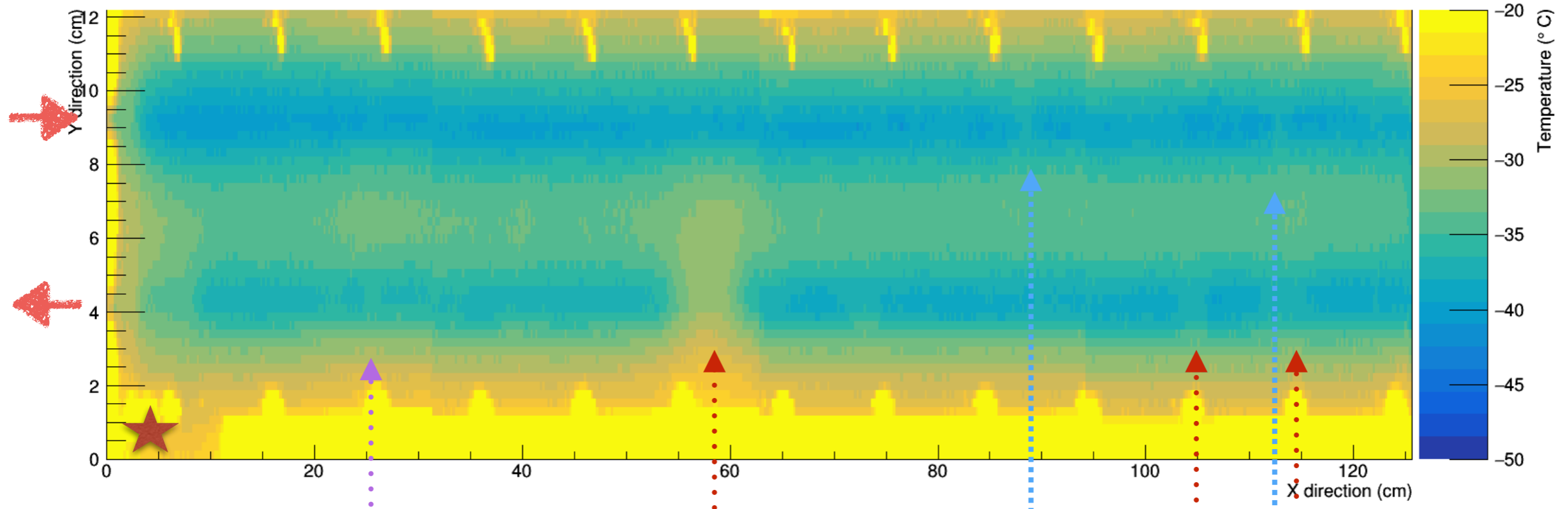
• J side and L side

• → to find the flaws (doing a blind analysis !!! )

made 2 years ago???

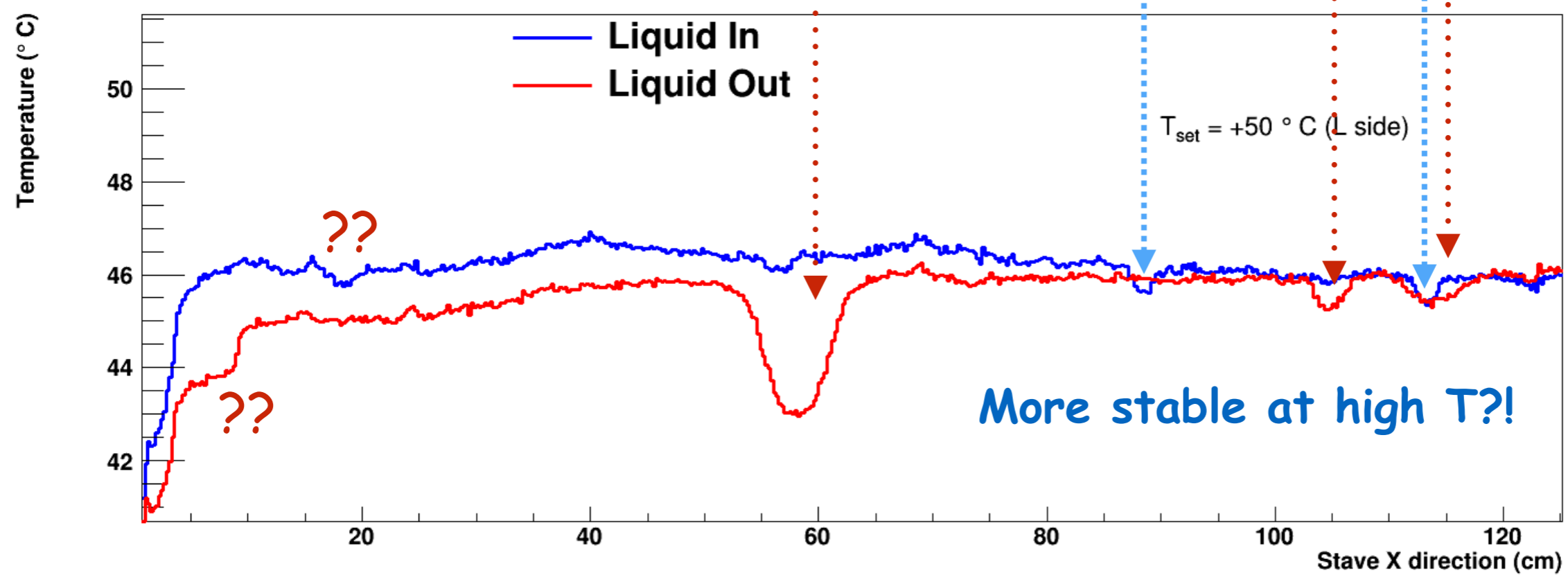
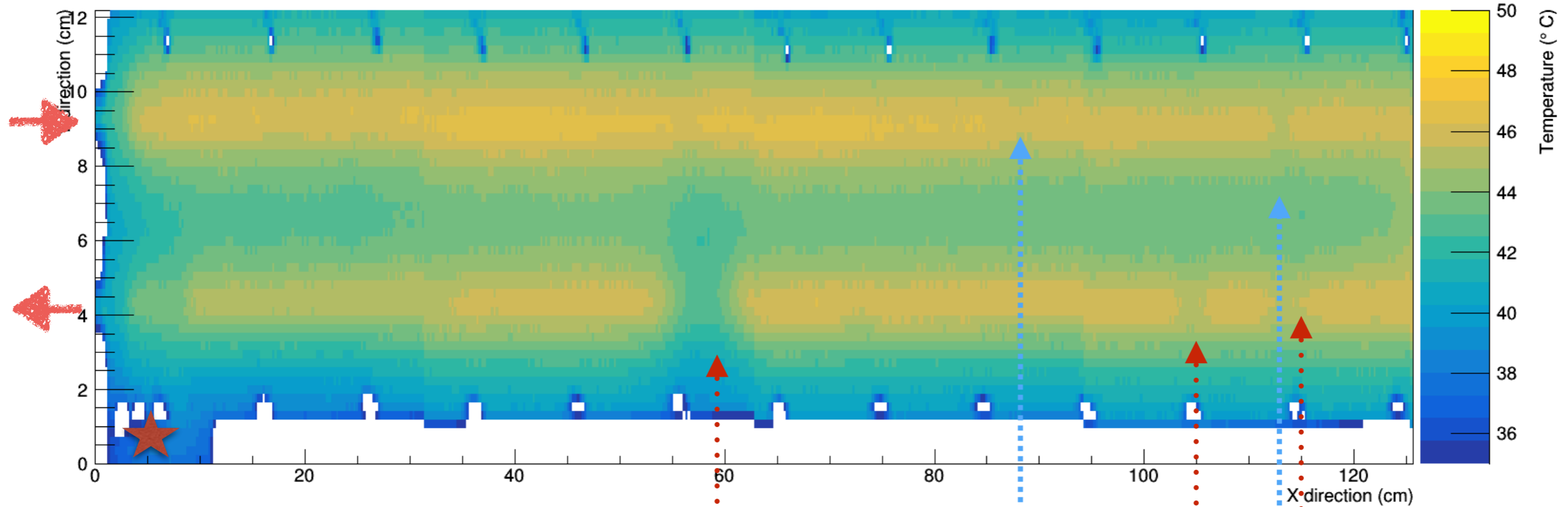


# L side, -55 C



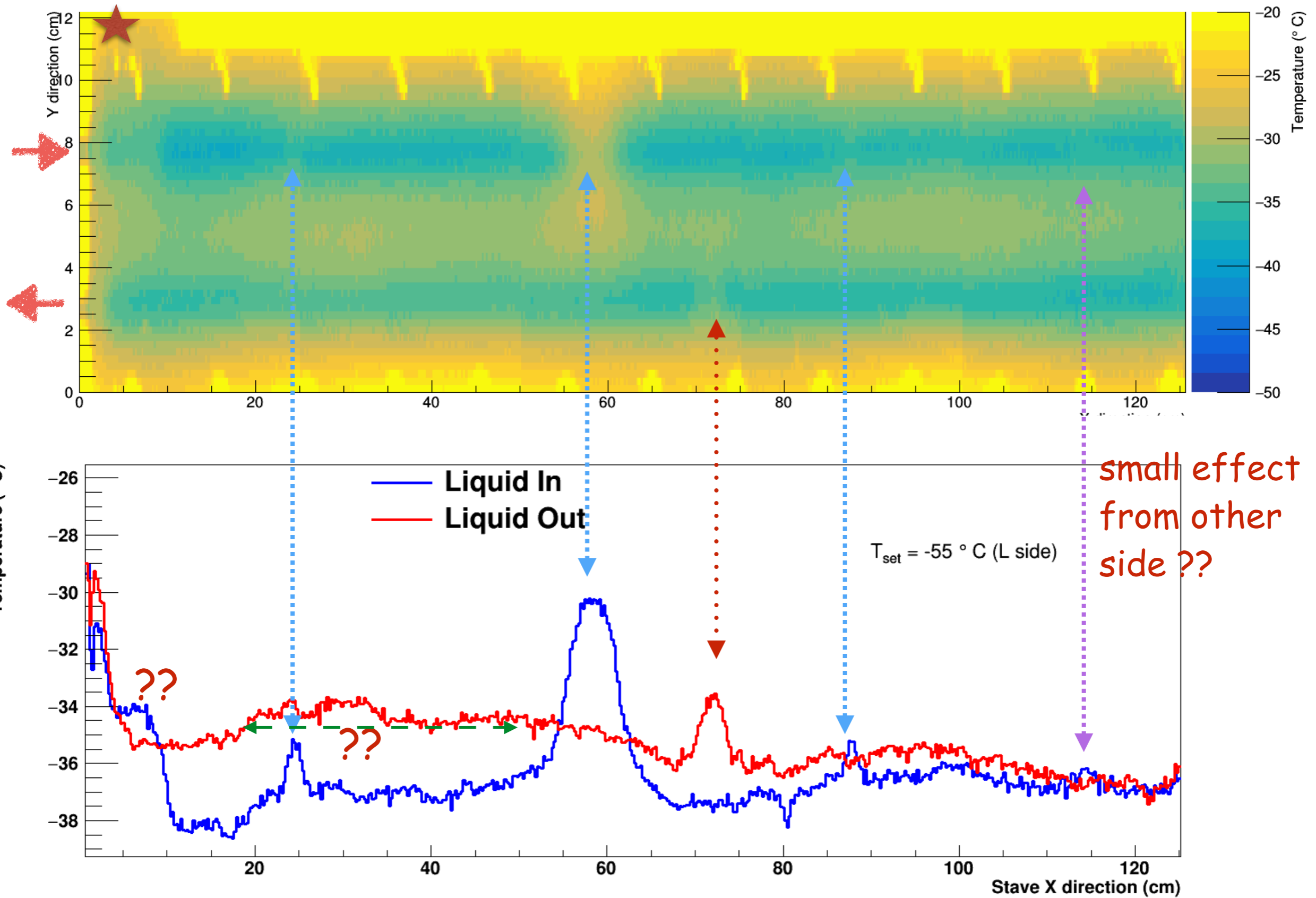
Temperature: averaged over central line.

# L side, +50 C



Temperature: averaged over central line.

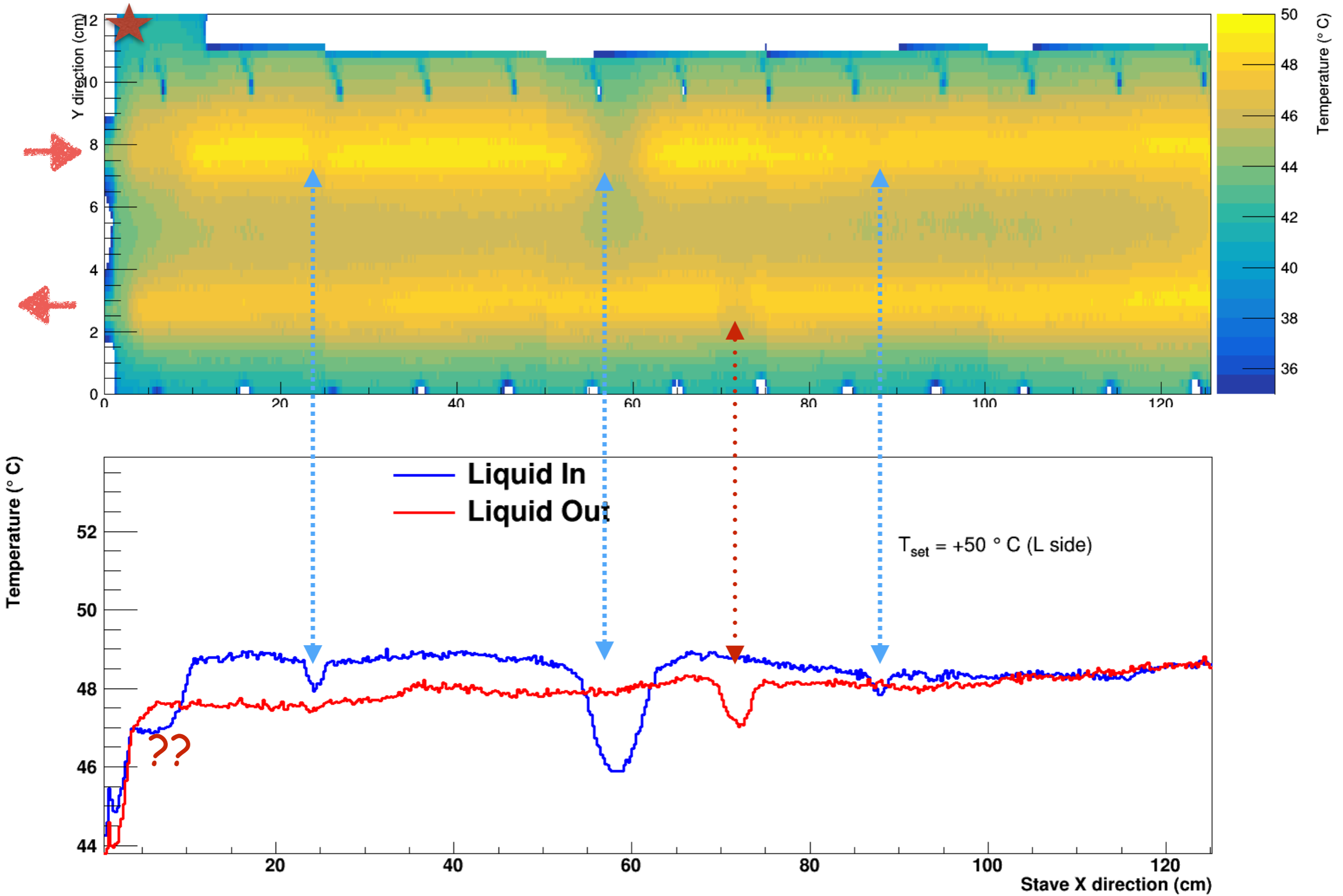
# J side, -55 C



Temperature: averaged over central line.

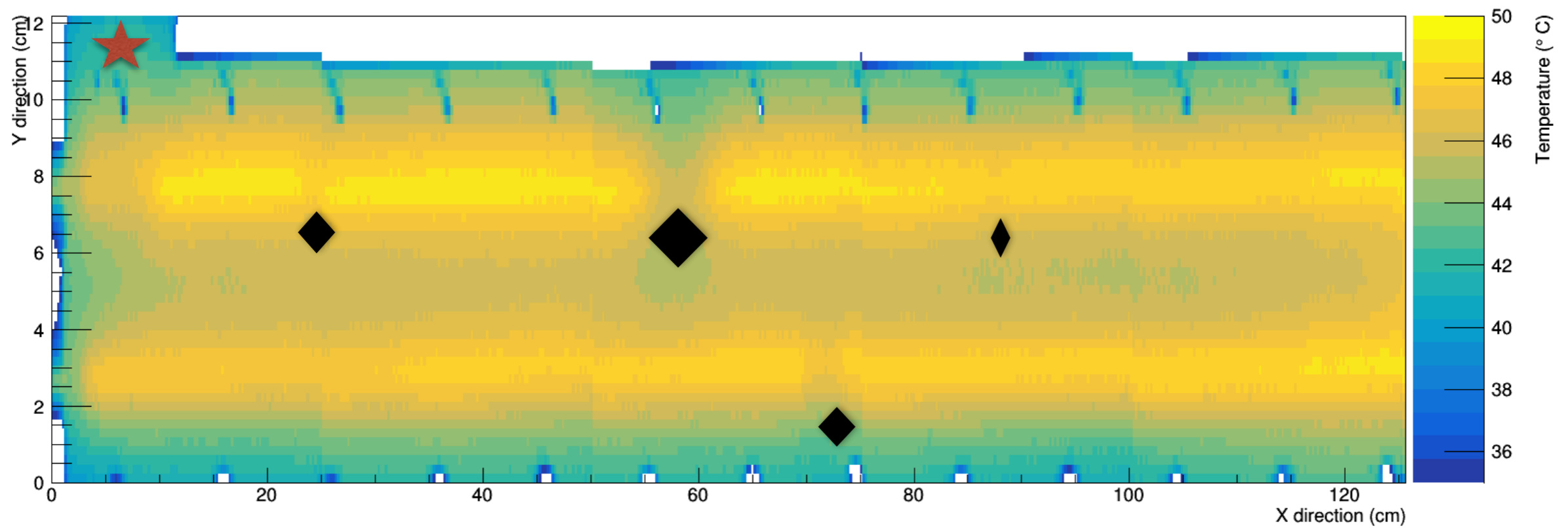
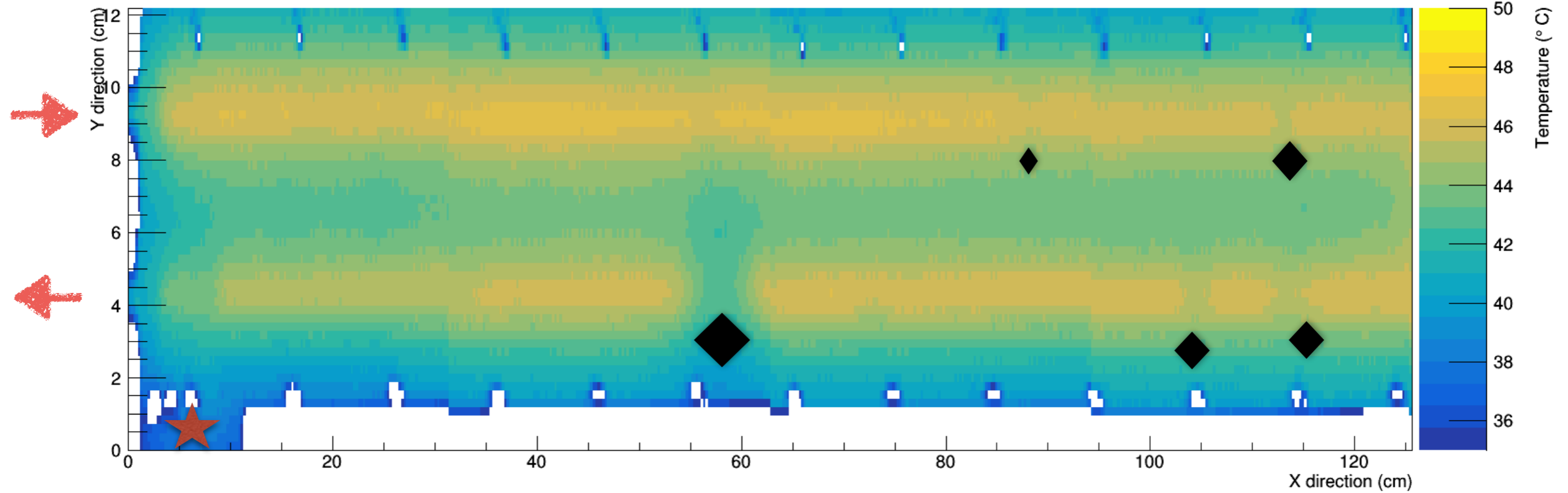


# J side, +50 C



Temperature: averaged over central line.

# Flaws on L side and J side, +50 C



- ◉ Temperature edge profile, coverage of aluminum foil:
  - ✦ Experiment using stave #2 with intended flaws → no difference found.
- ◉ New stave with intended flaws No.4:
  - ✦ Experiments on L side and J side at -55 C and +50 C.
  - ✦ L side: 5 clear intended flaws
  - ✦ J side: 4 clear intended flaws
  - ✦ One of them is huge and is found on both sides.
  - ✦ Temperature curve is smoother at +50 C, but small flaws are clearer at -55 C.
  - ✦ Effects from flaws on the other side of the stave can be seen (not clearly) at -55C.



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