Subject: Re: FRS Calibration Issue
Posted by SMilne on Fri, 16 Jan 2015 00:53:23 GMT
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So upon second inspection of the calibrated FRS ToF plot (I don't know why I ignored this first time round!), there is this weird single bin stack at ~210ns.

So what I did was plot my calibrated FRS PID (using either the TPCs or the Scintillators) with a gate on FRS ToF<209ns, and what can be seen is that it removes the weird 'blob' on the right hand side which does not appear to correspond with any isotope of Ti. The slightly 'repeated' FRS PID 'plots' as you can see in my post (2 previous to yours) seems to be the result of those very small separated 'bumps' in the FRS ToF spectrum at lower values.

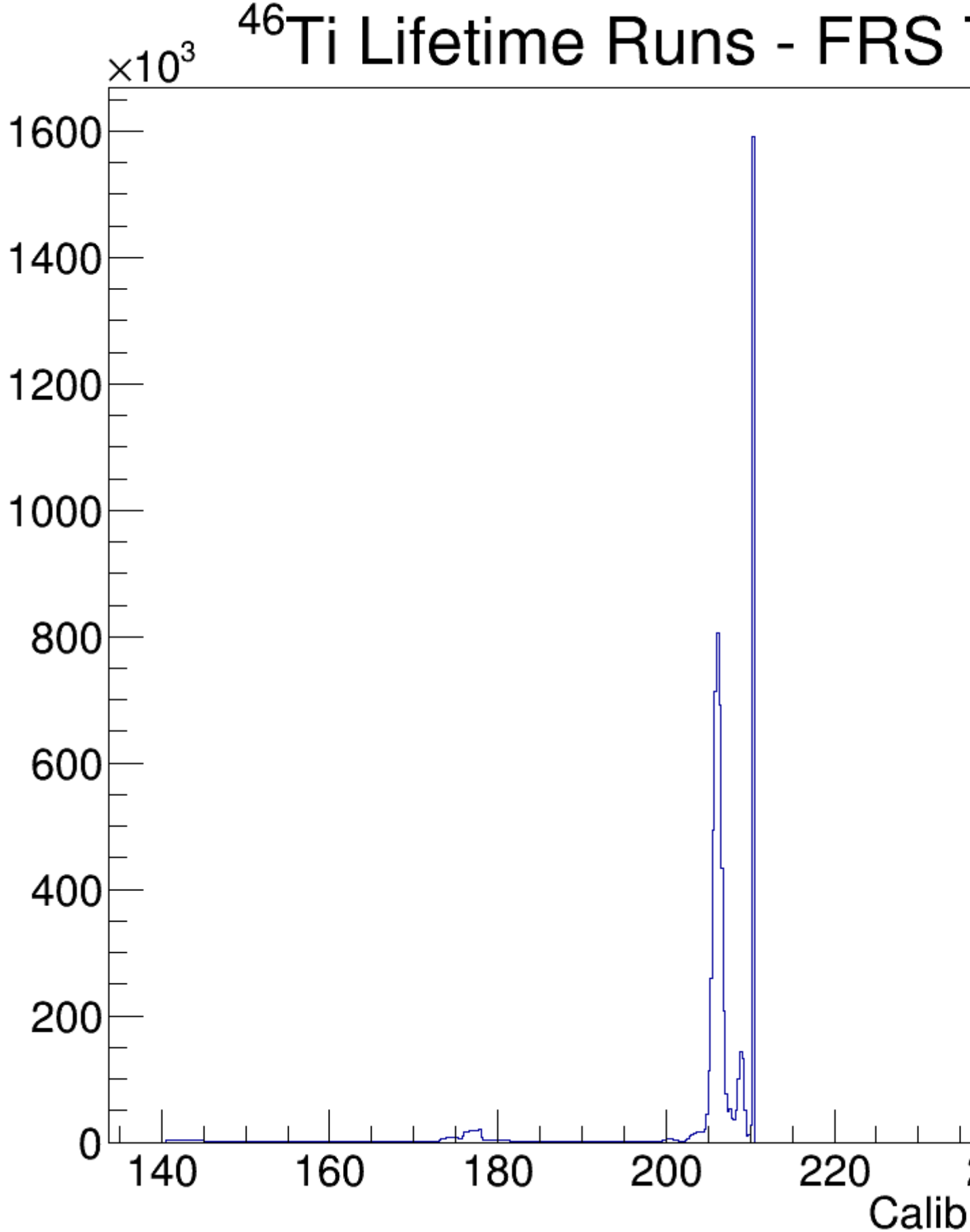
I'll probably try produce a gamma spectrum gated on this 'blob' later and see if it corresponds with anything.

So I guess my follow up questions would be:
- What is the reason for this single bin stack in the FRS ToF spectrum?
- Do my calibrations look fine other than this? The only issues I see are that my Z seems to have an offset of ~0.5 and some of the 'blobs' appear slightly doubled.

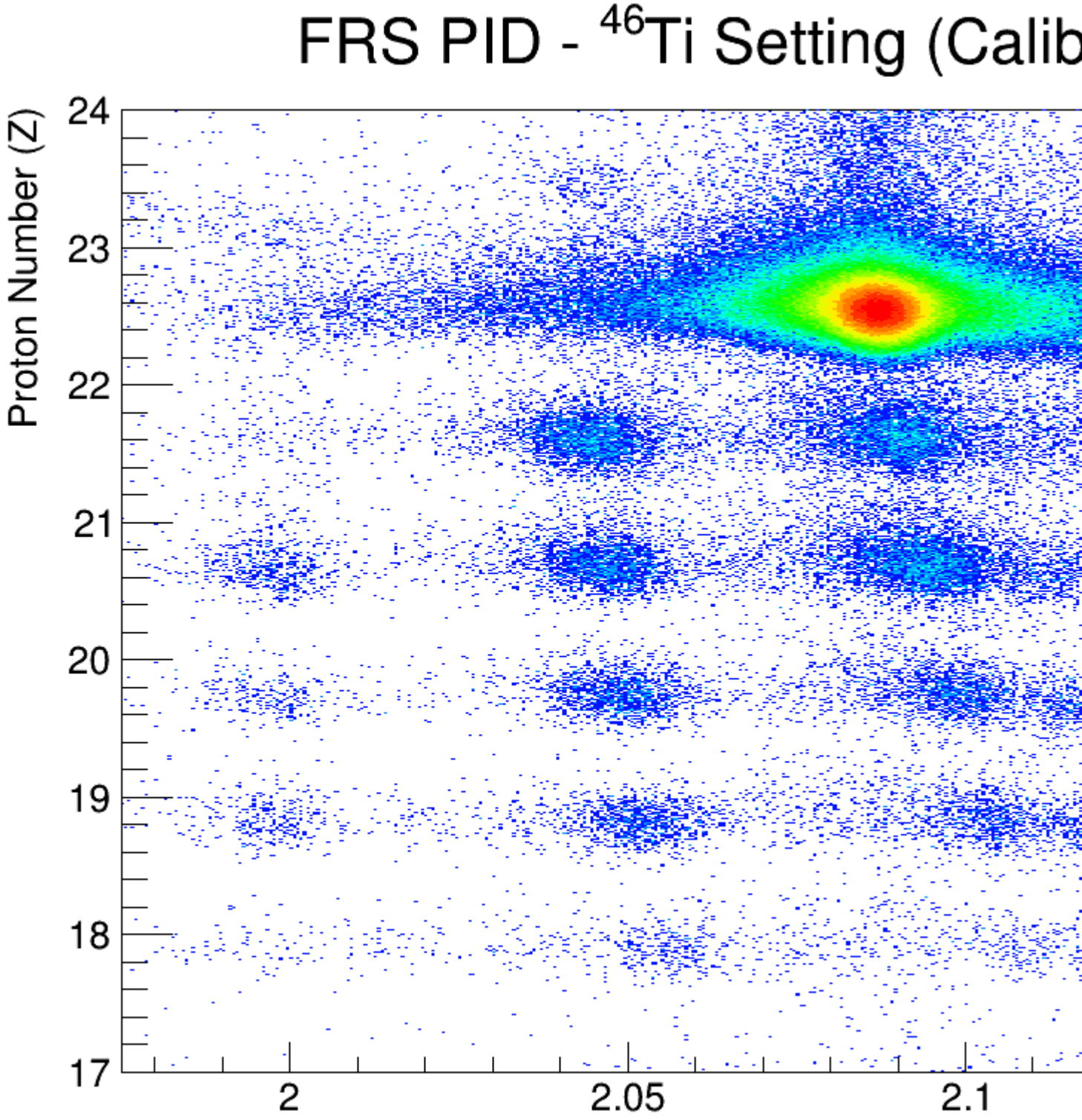
Thanks!
Scott

File Attachments

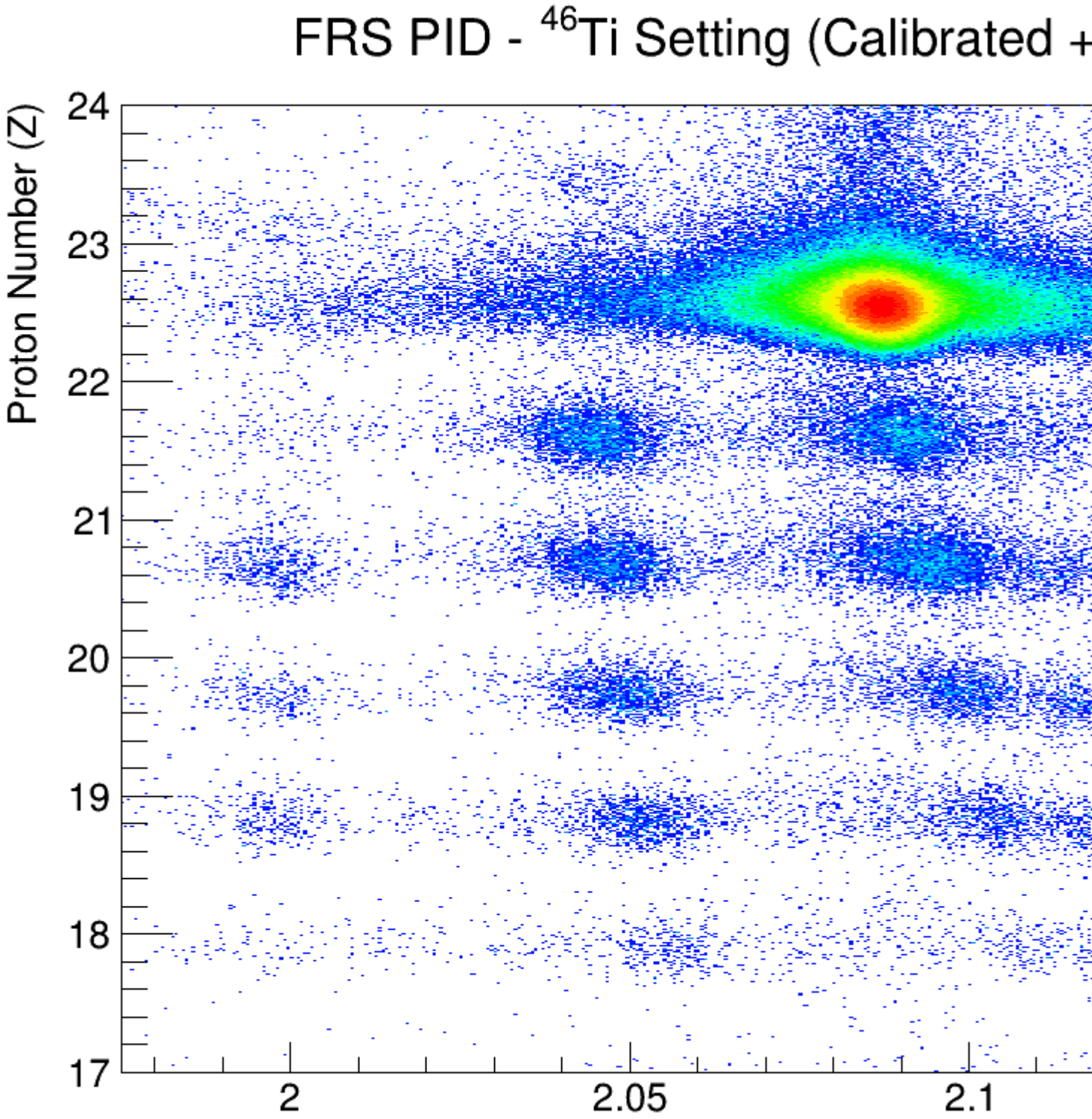
1) 46Ti-ToF.png, downloaded 1496 times


^{46}Ti Lifetime Runs - FRS
×10^3
1600
1400
1200
1000
800
600
400
200
0
140
160
180
200
220
Calib

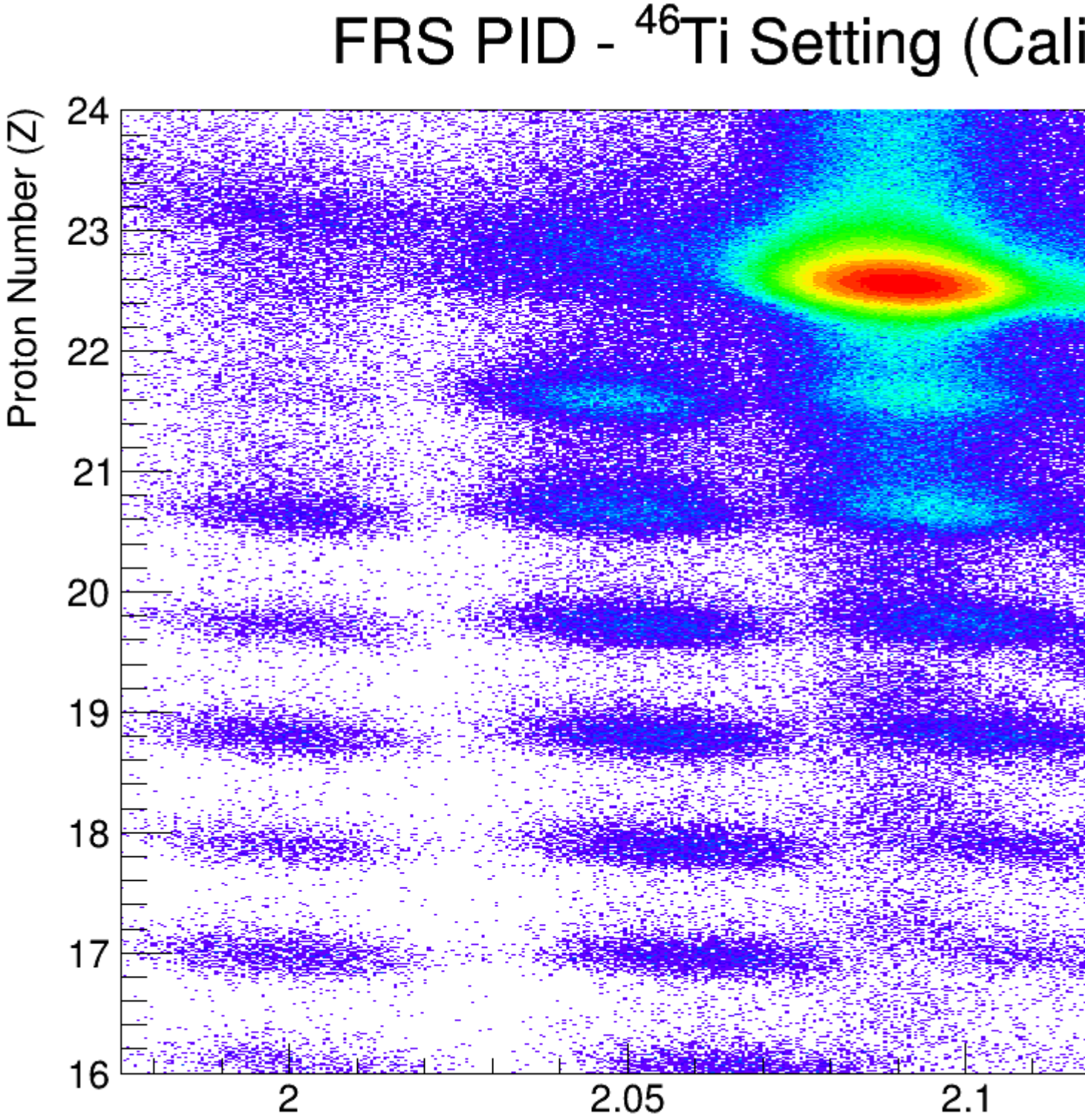
2) 46Ti-FRSID-TPCs.png, downloaded 1501 times



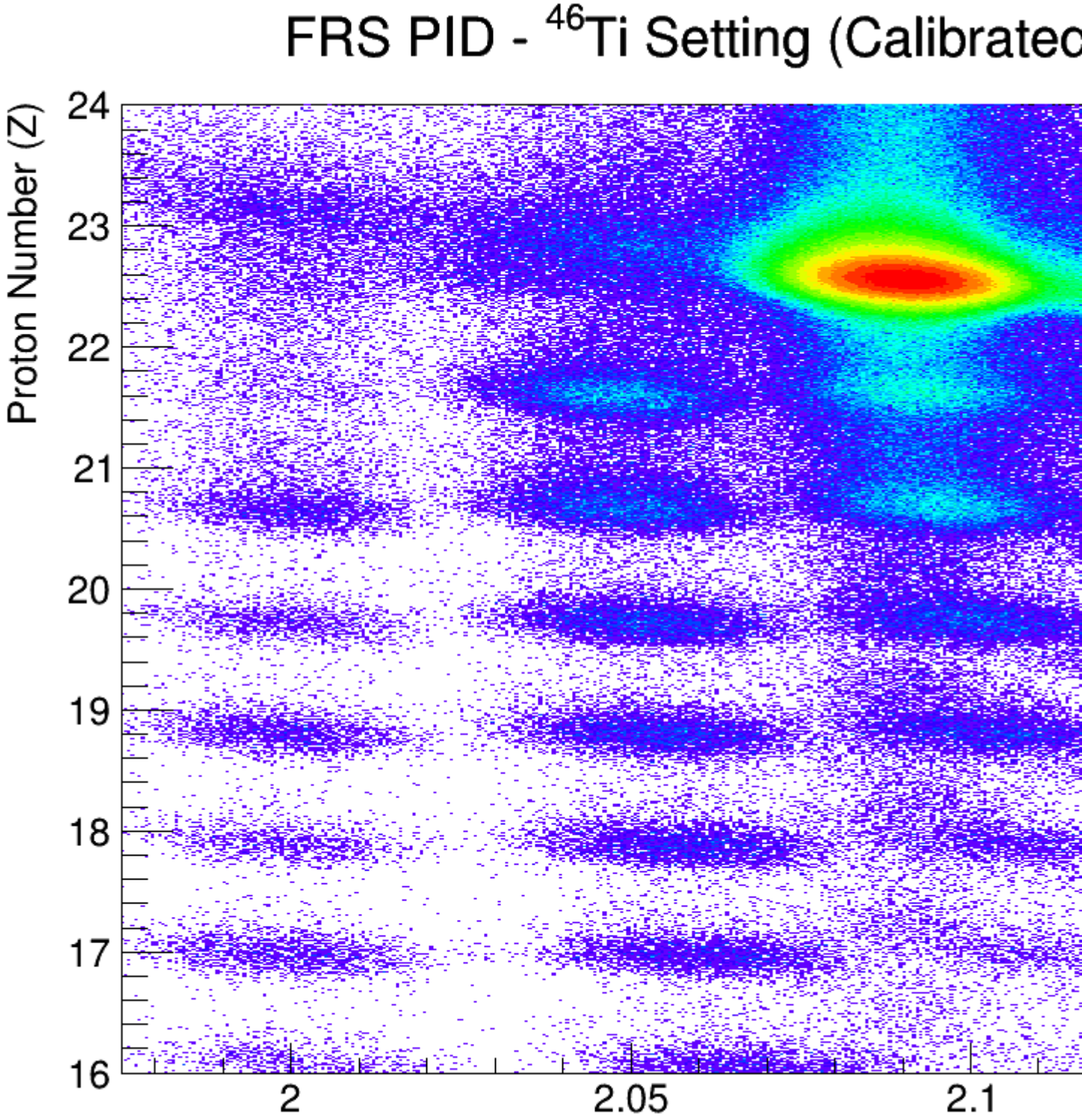
3) 46Ti-FRSID-TPCs-Corrected.png, downloaded 1618 times



4) 46Ti-FRSID-Sci.png, downloaded 1567 times



5) 46Ti-FRSID-Sci-Corrected.png, downloaded 1537 times


FRS PID - 46Ti Setting (Calibrated
Proton Number (Z)
24
23
22
21
20
19
18
17
16
2
2.05
2.1