

Progress Update

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Progress on Theo's Code

- I think TensorFlow is working
- Something strange is going on with /scratch on SciNet
 - no errors when I ran the machine learning algorithm, but not sure how to access /scratch to check the files

Aluminum Pipe Sourcing and PVC Considerations

- Got updated quote from TTGStar:
 - \$162,403 US for 250m of *high precision grade* 6063 T5 aluminum piping
 - \$195 per mPMT module, with 30cm per piece for each module
 - Cheaper than before (was ~\$220 per module)
 - Tolerance of their high precision grade:
 - OD: $\pm 6.5\text{mm}$
 - WT: $\pm 10\%$
- In NuPRISM photosensor meeting last week, it was mentioned that OD should ideally have tolerance of $\pm 2\text{mm}$ or so
 - We would have to machine piping regardless, so possibility of machining it down if OD is too large
- Should still contact some more companies to see if we can get better precision and/or price
- Considering PVC as an alternative
 - Cost significantly lower
 - Heat dissipation may not be an issue – would still have aluminum mounting plate with “double cheeseburger” design
 - Thermal expansion should be considered since mounting plate is aluminum
 - Gadolinium compatibility will have to be investigated (less of a concern for aluminum)

mPMT Progress

- Tom spent a lot of time looking at the mPMT issues this weekend
- Found a bug in official WCSim as well as in the 3" PMT related to the glass thickness
- I hope to discuss the issues with him in detail sometime this week