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Description automatically generated

x=[4,5,6.7,10,] # actual freq (Hz)

y=[4.3,5.4,7.2,10.8,] # measured freq

yerr=[0.1,0.2,0.2,0.2] # measured err

* We imitated the bubble signal by assuming it to be a square pulse which is 10-15 ms wide.
  + Actual bubble should be around 20 ms wide, consisting of 2 pulses.
* Frequency is estimated by counting the number of signals in 5 sec, taking 100 samples every second
* We looked at 4 different frequencies between 4-10 Hz
  + Actual bubbling rate might be less or within this range, more than this should be alarming
* Signal was sent to the first and last channel of the multiplexer, separately and all the four ADCs, two at a time
  + The maximum possible error range that was seen is reported
* **Frequency measured is higher than actual frequency because in the script, we assume that it takes a fixed amount of time to run the script. The actual time taken is slightly longer than what we assume**.
* **There is an easy fix to this by instead of assuming how long it takes, find out how long it takes in the script.**
* Pictures of how a 10 Hz and 5 Hz signal looks is below

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Description automatically generated "Ibktronix 
TBS 1202B.EDU 
Digital Oscilloscope 
200 MHz 
2 GS/s 
Chl Probe 
Voltage 
Attenuation 
Back 
<10Hz 
Enabling Teaching 
Oct 2Q 2022 05:18 
Built-in access to fully customizable 
courseware content 