Group 10.

Preparation:

→ Sharpen the tip by cutting a wire and ~~putting~~ use it as tip.

→ Take a sample of the material with adhesive film, obtaining a sample with a few hundred layers.

→ Use the manual screw to approach the tip to the material, then use the motor to approach

→ Once the tip is close enough we can remove the motor and start measuring

Measurements:

Task 1: Area scanning counting steps.

P: 0.15 $I = 0.075$ $V_{bias} = 1V$

Size: 20nm   Speed: 0.7 lines/s $I_{set} = 1 nA$
and 30nm

Task 2: Find a flat surface for atomic resolution

○ Resolution: ~~was increased to~~ 256 ~~512px~~   ○ Bias = ~~100~~ 00-10 mV

○ P= 0.15 ~~○~~ ○ Size = 3nm ○ $I_{set} = 2 - 6$ nA   and -50mV to -10mV

Task 3: Calibration of P and I:

○ 1st: P=0.3 I=0.15   ○ 2nd: P=0.6   I=0.3

   Size= 3nm Speed= 1 line/s   Size= 3nm Speed= 1 line/s

○ 3rd: P=0.9 I=0.45 ○ 4th: P=1.2   I=0.6

   Size=3nm Speed=1 line/s   Size=3nm Speed=1 line/s

Atomic resolution could not be achieved. The tip was not sharp enough to achieve such resolution.