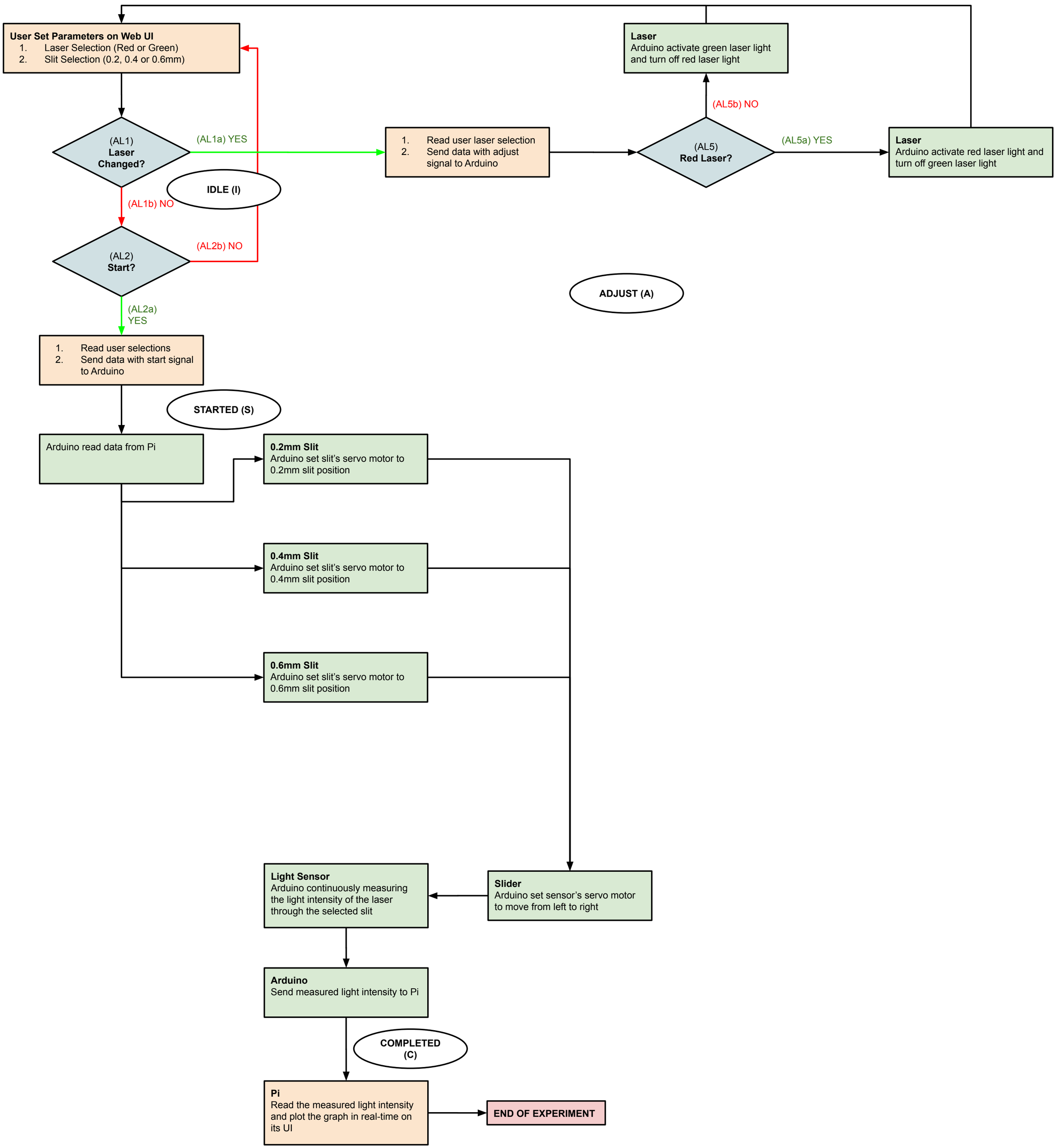
User Set Parameters on Web UI
1. Laser Selection (Red or Green)
2. Slit Selection (0.2, 0.4 or 0.6mm)
(AL1) Laser Changed?
(AL1a) YES
(AL1b) NO
IDLE (I)
(AL2) Start?
(AL2b) NO
(AL2a) YES
1. Read user selections
2. Send data with start signal to Arduino
STARTED (S)
Arduino read data from Pi
0.2mm Slit
Arduino set slit's servo motor to 0.2mm slit position
0.4mm Slit
Arduino set slit's servo motor to 0.4mm slit position
0.6mm Slit
Arduino set slit's servo motor to 0.6mm slit position
Slider
Arduino set sensor's servo motor to move from left to right
Light Sensor
Arduino continuously measuring the light intensity of the laser through the selected slit
Arduino
Send measured light intensity to Pi
COMPLETED (C)
Pi
Read the measured light intensity and plot the graph in real-time on its UI
END OF EXPERIMENT
1. Read user laser selection
2. Send data with adjust signal to Arduino
(AL5) Red Laser?
(AL5b) NO
(AL5a) YES
Laser
Arduino activate green laser light and turn off red laser light
Laser
Arduino activate red laser light and turn off green laser light
ADJUST (A)