### Yichao

For shutting off, go through the checklist in the following order

- Turn off equipments
- Turn off power supplies
- Turn off computers

Wait before everyone else finish their corresponding steps before starting the next one. For powering up, go through the checklist in the following order

- Turn on computers
- Turn on power supplies
- Turn on equipments
- Check computer connection to devices

Also wait before everyone else finish their corresponding steps before starting the next one.

Equipments and power supplies are mostly located around the laser table facing the wall.

### Equipment list

ID	Equipment	Location
	Laser table facing computer or	the wall west $\rightarrow$ south
1	Benchtop power 2chn for Cs MOT beat lock	Lv1 above 1.0 Cs MOT
2	PLL for Cs MOT	Below Cs MOT
3	Home power $(\pm 15,5)$	Lv2 above Cs MOT
4	Valan	1.5 amplifier stack Lv1 above 1.0 Cs MOT
5	Till driver v2 for 1.5 Na Raman	Lv1 above 1.5 Na Raman
6	Temp servo for 1.5 Na Raman seed	Lv1 above 1.5 Na Raman
7	Temp servo for 1.5 Na Raman doubler	Lv1 above 1.5 Na Raman
8	PLL for Cs Raman	Next to 1.0 Cs Raman
9	New Focus driver x2 for Cs Raman	Lv1 above 1.0 Cs Raman

10	Benchtop power (x3)	Lv2 above 1.0 Cs $MOT$
11	Home power (24V) x2	Lv2 above 1.0 Cs Raman
12	Benchtop power	Lv1 next to New Focus drivers
13	Shutter driver	Lv1 above 1.0 Cs Raman
14	New Focus lock box for 1.0 Cs Raman	Lv1 above 1.0 Cs Raman
15	Thorlabs temp servo for 1.0 Na Raman doubler	Lv1 above 1.0 Na seed
16	Timebase drivers for 1.0 Na Raman and Na D2	Lv1 above Thorlabs temp servo
17	Benchtop power for 1.0 Cs Raman	Lv2 above New Focus lock box
18	High voltage power	Lv2 above timebase drivers
19	Home lock box for Na D2	Lv1 above 1.0 Na seed
20	MPB Raman laser	Lv1 above 1.0 Na MOT
21	Oscilloscope for Na D2 lock	Lv1 above MPB Raman laser
22	Benchtop power for 1.0 Na Raman seed	Lv2 above oscilloscope

### 1 Equipments

## • PLL for Cs MOT [2] Below Cs MOT

### Turn off check list

- Unplug all signals (zip tie together)
- Unplug 15V and 5V powers (zip tie together)

### Turn on check list

- Plugin 15V and 5V powers
- Plugin all signals
- Apply settings

### • Off Valan [4]

1.5 amplifier stack Lv1 above 1.0 Cs MOT Check with 1.5 to record setting

Frequency	
Amplitude	

### Turn on check list

- Restore settings

## • Till driver v2 for 1.5 Na Raman [5]

Lv1 above 1.5 Na Raman

Record current values:

Current	
---------	--

### Turn off check list

- Turn off
- Unplug power (zip tie to controller)

- Plug in power
- Turn on
- Temp servo for 1.5 Na Raman seed [6]
  Lv1 above 1.5 Na Raman
  Check plugged into UPS.
- Temp servo for 1.5 Na Raman doubler [7]
  Lv1 above 1.5 Na Raman
  Check plugged into UPS.

•	Off	On	PLL fo	or Cs	Raman	[8
	<b>-</b>					-

Next to 1.0 Cs Raman

### Turn off check list

- Unplug all signals (zip tie together)
- Unplug 15V and 5V powers (zip tie together)

### Turn on check list

- Plugin 15V and 5V powers
- Plugin all signals
- Apply settings

### • New Focus driver x2 for Cs Raman [9]

Lv1 above 1.0 Cs Raman

Record Temperature, Current, Piezo voltage Temperature is accessible in the menu under system status

F3 Current	
F3 Piezo Voltage	
F3 Temperature	
F4 Current	
F4 Piezo Voltage	
F4 Temperature	

### Turn off check list

- Turn off output.
- Check plugged into UPS.

### Turn on check list

- (Turn on)

•	Off	On	Shutter	driver	[13]
---	-----	----	---------	--------	------

Lv1 above 1.0 Cs Raman
Switch off/on with the switch on the back.

New Focus lock box for 1.0 Cs Raman [14]
Lv1 above 1.0 Cs Raman
Unplug power.

• Thorlabs temp servo for 1.0 Na Raman doubler [15]

Lv1 above 1.0 Na seed

Record temperature settings

Setpoint	

Check plugged into UPS.

• Timebase drivers for 1.0 Na Raman and Na D2 [16]

Lv1 above Thorlabs temp servo Record current and T1 settings

Raman Current	
Raman T1	
D2 Current	
D2 T1	

### Turn off check list

- Turn off output.
- Check plugged into UPS.

### Turn on check list

– Turn on

### • Home lock box for Na D2 [19]

Lv1 above 1.0 Na seed

Turn on-off together with the adjustable high voltage power supply above

Record high voltage power supply output

Voltage
---------

#### Turn off check list

- Unlock
- Turn down the voltage of the high voltage power supply to 0
- Unplug high voltage power on lockbox (zip tie)
- Unplug 15V from lockbox (zip tie)
- Turn off high voltage power supply
- Unplug high voltage power supply from wall

### Turn on check list

- Plug high voltage power supply into the wall
- Turn on high voltage power supply (make sure the output is 0)
- Plug in 15V to lockbox
- Plug in high voltage to lockbox
- Turn up the voltage of the high voltage power supply
- Check HV output

## • MPB Raman laser [20] Lv1 above 1.0 Na MOT

### Turn off check list

- Power off
- Unplug from wall

### Turn on check list

- Plug into wall
- Power on

## • Oscilloscope for Na D2 lock [21]

Lv1 above MPB Raman laser

– Unplug from wall

### 2 Power supplies

### • Benchtop power 2chn for Cs MOT beat lock [1]

Lv1 above 1.0 Cs MOT

Record voltage/current values:

Left Voltage	
Left Current	
Right Voltage	
Right Current	

### Turn off check list

- Unplug loads
- Label and zip tie loads to the power supply
- Turn off the power supply
- Unplug from wall

- Plug into the wall
- Turn on the power supply Do NOT do this with loads pluged in
- Plug the load back in

## • Home power $(\pm 15,5)$ [3] Lv2 above Cs MOT

### Turn off check list

- Unplug load
- Label and zip tie loads to the power supply
- Switch off on the back

### Turn on check list

- Switch on
- Plug the load back in

## • Benchtop power (x3) [10] Lv2 above 1.0 Cs MOT

Record voltage/current values:

No. 1 Voltage	
No. 1 Current	
No. 2 Voltage	
No. 2 Current	
No. 3 Voltage	
No. 3 Current	

### Turn off check list

- Unplug loads
- Label and zip tie loads to the power supply
- Turn off the power supply
- Unplug from wall

- Plug into the wall
- Turn on the power supply Do NOT do this with loads pluged in
- Plug the load back in

•	Off	Home	power	(24V)	x2	[11]
	Lv2 abo	ve 1.0 Cs	Raman			

### Turn off check list

- Unplug load
- Label and zip tie loads to the power supply
- Switch off on the back

### Turn on check list

- Switch on
- Plug the load back in

### Benchtop power [12]

Lv1 next to New Focus driver Record voltage/current values:

Voltage	
Current	

### Turn off check list

- Unplug loads
- Label and zip tie loads to the power supply
- Turn off the power supply
- Unplug from wall

### Turn on check list

- Plug into the wall
- Turn on the power supply Do NOT do this with loads pluged in
- Plug the load back in

## • Benchtop power for 1.0 Cs Raman [17]

Lv2 above New Focus lock box Record voltage/current values:

Voltage	
Current	

### Turn off check list

- Unplug loads
- Label and zip tie loads to the power supply
- Turn off the power supply
- Unplug from wall

### Turn on check list

- Plug into the wall
- Turn on the power supply Do NOT do this with loads pluged in
- Plug the load back in

### • If High voltage power [18]

Lv2 above timebase drivers Follow home lock box for Na D2 [19].

### • Benchtop power for 1.0 Na Raman seed [22]

Lv2 above oscilloscope

Record voltage/current values:

Voltage	
Current	

Check plugged into UPS.

#### Computers 3

## Control computers Turn off check list

- Check update.
- Turn off.
- Unplug from UPS.

### Turn on check list

- Get UPS back
- Turn on.

## Computer UPS Turn off check list

- Move to the lab.
- Plug into backup power.
- Plug in pump/temp controllers.

- Plug load back into the wall (or where they belongs).
- Move back.
- Plug computers back in.

### Kenneth

For shutting off, go through the checklist in the following order

- Turn off equipments
- Turn off power supplies
- Turn off computers

Wait before everyone else finish their corresponding steps before starting the next one. For powering up, go through the checklist in the following order

- Turn on computers
- Turn on power supplies
- Turn on equipments
- Check computer connection to devices

Also wait before everyone else finish their corresponding steps before starting the next one.

Equipments and power supplies are mostly located between the machine table and the laser table.

### Equipment list

ID	Equipment	Location		
	$\textbf{Laser table side facing machine table north} \rightarrow \text{east}$			
1	671 EOM stack	Floor		
2	$1550~\mathrm{Amp}$	Floor		
3	Radio computer	Lv2		
4	Benchtop power 2chn	Lv2 next to radio computer		
5	High voltage power	Lv2 next to benchtop power		
6	Variac for Na cell	Lv1 above 1.0 Na MOT		
7	Shutter driver	Lv1 next to variac		
8	Home lock box for 1.0 Na D1	Lv1 next to shutter driver		
9	1038 Amp	Floor		
10	1038 Timebase laser	Table		

11	FPGA box for 1.0	Lv2
12	Thorlabs temp servo for Na D1 doubler	Lv1 above Na D1
13	Thorlabs temp servo for Na D1 seed	Lv1 above Na D1
14	Thorlabs current for Na D1 seed	Lv1 above Na D1
15	Benchtop power 2chn	Lv2 above Thorlabs controllers for Na D1 seed
16	Home power (24)	Lv2 next to benchtop power
17	Benchtop power x2 (2chn x1)	Lv2 next to Home power (24)
18	Till driver v2 for 976	Lv1 above Na D1 doubler
19	Thorlabs temp servo for Cs tweezer	Lv1 above Timebase 1038 beam
20	Thorlabs current (2A) (off)	Lv1 above Thorlabs temp servo
21	Till driver v2 for 671	Lv1 above Thorlabs current
22	Temp servo x2	Lv1 above Timebase 1038 control box
23	Oscilloscope	Lv1
Machine table side facing laser table south		
24	Thorlabs current for 1.5 Cs MOT	Lv1 above 1.5 Cs
25	Till driver v2 for 1.5 Cs RP	Lv1 above 1.5 Cs
26	Temp servo (x2) for 1.5 Cs MOT/RP	Lv1 above 1.5 Cs
27	Oscilloscope for 1.5 Cs	Lv1 above 1.5 Cs
28	Home lock box for $1.5~\mathrm{Cs}$	Lv1 above 1.5 Cs
29	Novatec for 1.5 Cs lock	Lv1 above 1.5 Cs
30	Benchtop power 2chn	Lv2 1.5 Cs MOT/RP current
31	Home power (24) x2	Lv2 next to benchtop power
32	Benchtop power	Lv2 on two home power (24)
33	Home power $(\pm 15,5)$	Lv2 middle
34	Benchtop power (x2) for uWave Amp	Lv2 next to home power $(\pm 15,5)$

35	Benchtop power (x2)	Lv1 above 1.5 Na
36	High voltage power	Lv1 next to 2 benchtop power
37	Function generator for 1.0 MOT piezo	Lv1
38	Temperature and pump controllers for cavity	Lv1 next to function generator
39	Water chiller for uWave breadboard	Floor
40	SAES pump	Lv1 above 1.0 chamber
41	Benchtop power x2 (2chn x1)	Lv2 next to coil servo

1 Equipments
--------------

### • 671 EOM stack [1]

#### Floor

Record voltage/current values:

No. 1 Left Voltage	
No. 1 Left Current	
No. 1 Right Voltage	
No. 1 Right Current	
Thorlabs Current	
No. 2 Voltage	
No. 2 Current	

### Turn off check list

- Unplug loads
- Label and zip tie loads to the power supply
- Turn off the power supply
- Unplug from wall
- \_

### Turn on check list

- Plug into the wall
- Turn on the power supply Do NOT do this with loads pluged in
- Plug the load back in
- \_

### • 50 Amp [2]

Floor

Turn off check list

\_

Turn on check list

- \_
- Variac for Na cell [6]

Lv1 above 1.0 Na MOT

Record temperature and voltage settings

Voltage	
Temperature	

Check if we can use the backup power. (Through the UPS) **Turn off check list** 

- Turn voltage to 0
- Switch off
- Unplug from wall

### Turn on check list

- Plug into wall
- Switch on
- Turn the voltage up **SLOWLY** and monitor the temperature at the same time.

### • Shutter driver [7]

Lv1 next to variac

Switch off/on with the switch on the back.

• Home lock box for 1.0 Na D1

Lv1 next to shutter driver

Turn on-off together with the fixed high voltage
power supply above

### Turn off check list

- Unlock
- Unplug high voltage power on lockbox (zip tie)
- Unplug 15V from lockbox (zip tie)
- Unplug high voltage power supply from walls

### Turn on check list

- Plug high voltage power supply into the wall
- Plug in 15V to lockbox
- Plug in high voltage to lockbox
- Check HV output



Turn off check list

- \_
- \_

Turn on check list

- \_
- \_

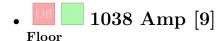
• Thorlabs temp servo for Na D1 doubler [12]

Lv1 above Na D1

Record temperature settings

Setpoint	

Check plugged into UPS.



### Turn off check list



### Turn on check list



• Thorlabs temp servo for Na D1 seed [13]

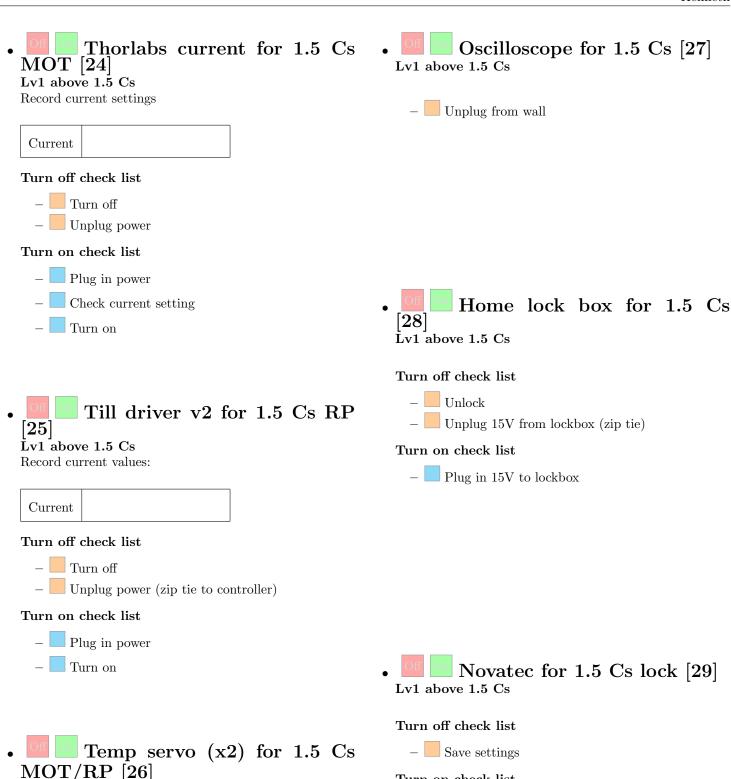
Lv1 above Na D1

Record temperature settings

Setpoint

Check plugged into UPS.

Thorlabs current for Na D1 seed [14] Lv1 above Na D1 Record current settings	Thorlabs temp servo for Cs tweezer [19] Lv1 above Timebase 1038 beam Record temperature settings
Current	Setpoint
Turn off check list	Check plugged into UPS.
<ul><li>Turn off</li><li>Unplug power</li></ul>	
Turn on check list	
<ul> <li>Plug in power</li> <li>Check current setting</li> <li>Turn on</li> </ul>	Till driver v2 for 671 [21] Lv1 above Thorlabs current Record current values:  Current
	Turn off check list  - Turn off  - Unplug power (zip tie to controller)
	Turn on check list  - Plug in power  - Turn on
Till driver v2 for 976 [18] Lv1 above Na D1 doubler Record current values:  Current	Temp servo x2 [22] Lv1 above Timebase 1038 control box Check plugged into UPS.
Turn off check list	
<ul> <li>Turn off</li> <li>Unplug power (zip tie to controller)</li> <li>Turn on check list</li> </ul>	• Oscilloscope [23]
<ul><li>Plug in power</li><li>Turn on</li></ul>	– Unplug from wall



Lv1 above 1.5 Cs

Check plugged into UPS.

Turn on check list

Restore settings

# • Function generator for 1.0 MOT piezo [37]

Turn on-off together with the HV amplifiers for 1.0 piezo mirrors above and the high voltage power supply on the left

Turn off check list

- Turn off the function generator
- Unplug function generator output (zip tie and label)
- Unplug HV power supply from the wall

#### Turn on check list

- Plugin HV power supply to the wall
- Plugin function generator output
- Turn on the function generator

# • Temperature and pump controllers for cavity [38] Lv1 next to function generator

Check plugged into UPS.

# • Water chiller for uWave breadboard [39]

## • SAES pump [40] Lv1 above 1.0 chamber

Check plugged into UPS.

### 2 Power supplies

### • Benchtop power 2chn [4]

Lv2 next to radio computer Record voltage/current values:

Left Voltage	
Left Current	
Right Voltage	
Right Current	

### Turn off check list

- Unplug loads
- Label and zip tie loads to the power supply
- Turn off the power supply
- Unplug from wall

### Turn on check list

- Plug into the wall
- Turn on the power supply **Do NOT do this with** loads pluged in
- Plug the load back in

# • High voltage power [5] Lv2 next to benchtop power Follow home lock box for Na D2 [8].

# • Benchtop power 2chn [15] Lv2 above Thorlabs controllers for Na D1 seed Record voltage/current values:

Left Voltage	
Left Current	
Right Voltage	
Right Current	

### Turn off check list

- Unplug loads
- Label and zip tie loads to the power supply
- Turn off the power supply
- Unplug from wall

### Turn on check list

- Plug into the wall
- Turn on the power supply Do NOT do this with loads pluged in
- Plug the load back in

## • Home power (24) [16] Lv2 next to benchtop power

### Turn off check list

- Unplug load
- Label and zip tie loads to the power supply
- Switch off on the back

#### Turn on check list

- Switch on
- Plug the load back in

## Benchtop power $x^2$ (2chn $x^2$ ) [17]

Lv2 next to Home power (24) Record voltage/current values:

No. 1 Voltage	
No. 1 Current	
No. 2 Left Voltage	
No. 2 Left Current	
No. 2 Right Voltage	
No. 2 Right Current	

### Turn off check list

- Unplug loads
- Label and zip tie loads to the power supply
- Turn off the power supply
- Unplug from wall

- Plug into the wall
- Turn on the power supply Do NOT do this with loads pluged in
- Plug the load back in

### • Benchtop power 2chn [30]

### Lv2 1.5 Cs MOT/RP current

Record voltage/current values:

Left Voltage	
Left Current	
Right Voltage	
Right Current	

### Turn off check list

- Unplug loads
- Label and zip tie loads to the power supply
- Turn off the power supply
- Unplug from wall

### Turn on check list

- Plug into the wall
- Turn on the power supply Do NOT do this with loads pluged in
- Plug the load back in

### • Benchtop power [32]

Lv2 on two home power (24)

Record voltage/current values:

Voltage	
Current	

### Turn off check list

- Unplug loads
- Label and zip tie loads to the power supply
- Turn off the power supply
- Unplug from wall

### Turn on check list

- Plug into the wall
- Turn on the power supply Do NOT do this with loads pluged in
- Plug the load back in

## • Home power (24) x2 [31] Lv2 next to benchtop power

### Turn off check list

- Unplug load
- Label and zip tie loads to the power supply
- Switch off on the back

#### Turn on check list

- Switch on
- Plug the load back in

## • Home power $(\pm 15,5)$ [33]

### Turn off check list

- Unplug load
- Label and zip tie loads to the power supply
- Switch off on the back

- Switch on
- Plug the load back in

## • Benchtop power (x2) for uWave Amp [34]

Lv2 next to home power (±15,5) Record voltage/current values:

No. 1 Voltage	
No. 1 Current	
No. 2 Voltage	
No. 2 Current	

### Turn off check list

- Unplug uWave input (tie).
- − Turn low voltage one to (-)5V.
- Turn down higher voltage one to 0.
- Unplug load, label/tie.
- Switch off power supplies.
- Unplug from wall.

### Turn on check list

- Plug into the wall.
- Turn on the power supply Do NOT do this with loads pluged in.
- Plug -5V.
- Plug higher voltage one.
- Turn higher voltage up to original value.
- Turn low voltage one down.
- Plug uWave back in.

### • Benchtop power (x2) [35]

Lv1 above 1.5 Na

Record voltage/current values:

No. 1 Voltage	
No. 1 Current	
No. 2 Voltage	
No. 2 Current	

### Turn off check list

- Unplug loads
- Label and zip tie loads to the power supply
- Turn off the power supply
- Unplug from wall

### Turn on check list

- Plug into the wall
- Turn on the power supply Do NOT do this with loads pluged in
- Plug the load back in

• High voltage power [36]

Lv1 next to 2 benchtop power

## • Benchtop power x2 (2chn x1) [41]

Lv2 next to coil servo

Record voltage/current values:

No. 1 Left Voltage	
No. 1 Left Current	
No. 1 Right Voltage	
No. 1 Right Current	
No. 2 Voltage	
No. 2 Current	

### Turn off check list

- Unplug loads
- Label and zip tie loads to the power supply
- Turn off the power supply
- Unplug from wall

### Turn on check list

- Plug into the wall
- Turn on the power supply Do NOT do this with loads pluged in
- Plug the load back in

### • FPGA box for 1.0 [11]

### Lv2

### Turn off check list

- (Do following three steps quickly)
- Turn off the box by flipping the switch on the front side of the box
- Unplug the high voltage (48V) power supply (circular plug) on the front side of the box. Then unplug the power supply itself fromm the outlet.
- Unplug the 12V board power supply. (L.T.E. one with a rectangular connector in the front)
- Unplug USB power on the front side near the fan.
- Zip tie the three unpluged powers to the computer control box.

### Turn on check list

- Connect to 3.5G Windfrek clock generator from Tweezer1. Set frequency to 3.5G and amplitude to max.
- (Remove power connection zip ties and) Plug in USB power supply.
- (Do following three steps quickly)
- Plug in the 12V board power supply.
- Plug in high voltage power supply.
- Turn on the power switch of the box. The fans should start spinning.

### 3 Computers

• Radio computer [3]

### Jessie

For shutting off, go through the checklist in the following order

- Turn off equipments
- Turn off power supplies
- Turn off computers

Wait before everyone else finish their corresponding steps before starting the next one. For powering up, go through the checklist in the following order

- Turn on computers
- Turn on power supplies
- Turn on equipments
- Check computer connection to devices

Also wait before everyone else finish their corresponding steps before starting the next one.

## Equipments and power supplies are mostly located between the machine table and the 1.5 table.

### Equipment list

ID	Equipment	Location	
	Machine table Facing the wall north		
1	Benchtop power 2chn	Lv2	
2	Home power (24)	Lv2 above 1.0 tweezer breadboard	
3	Home power $(\pm 15,5)$	Lv2 above home power (24)	
4	Benchtop power x9 (2chn x3)	Lv2 next to home power (24) and ( $\pm 15,5$ )	
5	Current servo for compensation coil	Lv1 below home power (24)	
6	Kenneth servo for 1.0 Cs tweezer	Lv1	
7	High voltage Amp for 630 lock	Lv1	
8	Vincent servo x2 for STIRAP lasers	Lv1	
9	Greiner servo for 1.0 Na tweezer	Lv1 above Vincent servos	
10	Rack for STRAP	Lv1 next to Vincent servos	

11	Till driver v2 x2 for STIRAP lasers	Lv1 above rack for 1.5	
12	Temp servo x3 for STIRAP	Lv2 next to 9x benchtop power	
13	FPGA box for 1.5	$\mathrm{Lv2}$	
14	Home power $(\pm 15,5)$	Lv2 next to FPGA box	
15	Benchtop power x2	Lv2 on home power ( $\pm 15,5$ )	
16	Benchtop power	Lv2 next to home power $(\pm 15,5)$	
17	Benchtop power x2 (2chn x1)	Floor rack Lv1	
18	Till driver v2 x2 for 1.5 Cs Raman	Floor rack Lv2	
19	Kenneth servo for 1.5 Cs Raman phase lock	Floor rack Lv2 above Till drivers	
20	Benchtop power	Floor rack Lv2 next to Till drivers	
21	Temp servo x2 for 1.5 Cs Raman	Floor rack Lv2	
22	Piezo driver for 1.5 Cs Raman	Floor rack Lv2 above home temp servos	
23	Delay generator for 1.5 Na	Lv1 below 1.5 output panel	
24	Till driver v2 for 1.0 Innolume	Lv1 next to delay generator	
25	Kenneth servo for 1.5 tweezers	Lv1	
26	Temp servo for 1.0 Innolume	Lv1	
27	Shutter driver	Lv1 on M2 controller	
28	TiSapph	Floor	
29	Function generator for 1.0 Na switching	Lv1 above TiSapph	
30	Keithley power for 1.0 Innolume	Lv2 above TiSapph	
31	Till driver v2 for 1.0 Cs MOT	Lv2 above 1.5 Cs MOT	
32	Temp servo for 1.0 Cs MOT	Lv2 on Till driver v2	
33	Benchtop power 2chn	Lv2 facing computer	
34	High voltage power	Above Lv2 on power outlet	
	1.5 Rack		

35	Home power (24)	Bottom level	
36	SEAS pump controller	Middle left	
37	Benchtop power	Middle next to pump controller	
38	Oscilloscope for 1.5 monitor	Above pump controller	
39	Benchtop power 2chn for 1.5 coil	Above oscilloscope	
40	High voltage Amp for 1.5 MOT piezo	Top level	
41	Function generator for 1.5 MOT piezo	Top level on high voltage Amp	
	Below 1.5 table		
42	Benchtop power x3	Near outer edge	
43	IGBT stack	Floor	
44	LED driver	Near inner edge	
45	AWG computer	Floor	
Above 1.5 table			
46	Benchtop power	Lv1	
47	Benchtop power	Lv2	
48	Radio computer	Lv2	

- 1 Equipments
  - Current servo for compensation coil [5]
    Lv1 below home power (24)
- Temp servo x3 for STIRAP

  [12]

  Lv2 next to 9x benchtop power
- Kenneth servo for 1.0 Cs tweezer [6]
- FPGA box for 1.5 [13]
- High voltage Amp for 630 lock [7]
- Till driver v2 x2 for 1.5 Cs Raman [18] Floor rack Lv2
- Vincent servo x2 for STI-RAP lasers [8]
- Kenneth servo for 1.5 Cs Raman phase lock [19] Floor rack Lv2 above Till drivers
- Greiner servo for 1.0 Na tweezer [9] Lv1 above Vincent servos
- Temp servo x2 for 1.5 Cs
  Raman [21]
  Floor rack Lv2

- Rack for STRAP [10]

  Lv1 next to Vincent servos
- Piezo driver for 1.5 Cs Raman [22]
  Floor rack Lv2 above home temp servos
- Till driver v2 x2 for STIRAP lasers [11]
  Lv1 above rack for 1.5
- Delay generator for 1.5 Na [23]
  Lv1 below 1.5 output panel

- Till driver v2 for 1.0 Innolume [24]
  Lv1 next to delay generator
- Till driver v2 for 1.0 Cs MOT
  [31]
  Lv2 above 1.5 Cs MOT
- $\sum_{\text{ers}}^{\text{off}}$  Kenneth servo for 1.5 tweez-
- Temp servo for 1.0 Cs MOT

  [32]

  Lv2 on Till driver v2
- Temp servo for 1.0 Innolume  $\begin{bmatrix} 26 \end{bmatrix}$
- SEAS pump controller [36]

  Middle left

• Shutter driver [27]

Lv1 on M2 controller

• Oscilloscope for 1.5 monitor [38]
Above pump controller

• TiSapph [28]

- High voltage Amp for 1.5 MOT piezo [40]
- Function generator for 1.0 Na switching [29] Lv1 above TiSapph
- Function generator for 1.5 MOT piezo [41]
  Top level on high voltage Amp
- Keithley power for 1.0 Innolume [30]
  Lv2 above TiSapph
- IGBT stack [43]



• TiSapph

Turn off check list

- Turn off pump, unplug from wall
- Turn off controller, unplug from wall
- Turn off chiller, unplug from wall

- Plug into wall, turn on chiller
- Plug into wall, turn on controller
- Plug into wall, turn on pump
- Quantel Laser
  1st level in the middle, facing 1.5 table
  Ask Frederic.
- Intensity servo for Na
  1st level above Na tweezer, below 1.0 computer control box
  Unplug power
- 1st version Till's current controller for butterfly laser
  1st level above TiSapph
  Turn off check list
  - Turn off
  - Unplug power (zip tie to controller)

- Homebuilt temperature servo for butterfly laser
  1st level above TiSapph
  Switch off/on the front switch
- 2 Power supplies
  - Benchtop power 2chn [1]
  - Home power (24) [2]
    Lv2 above 1.0 tweezer breadboard
  - Home power  $(\pm 15,5)$  [3] Lv2 above home power (24)
  - Benchtop power x9 (2chn x3) [4]
    Lv2 next to home power (24) and  $(\pm 15,5)$
  - Home power  $(\pm 15,5)$  [14]
  - Benchtop power x2 [15] Lv2 on home power  $(\pm 15,5)$

- Benchtop power [16] Lv2 next to home power  $(\pm 15,5)$
- Benchtop power 2chn for 1.5 coil [39]
  Above oscilloscope
- Benchtop power x2 (2chn x1) [17]
  Floor rack Lv1
- Benchtop power x3 [42]
  Near outer edge

- Benchtop power [20]
  Floor rack Lv2 next to Till drivers
- Benchtop power [46]
- Benchtop power 2chn [33]
  Lv2 facing computer
- Benchtop power [47]
- High voltage power [34]

  Above Lv2 on power outlet
- Home power (24) [35]
- Benchtop power [37]
  Middle next to pump controller

- Homebuilt 24V power supply 2nd level above NaCs 1.0 chamber, facing the drawers/wall Turn off check list
  - Unplug load
  - Label and zip tie loads to the power supply
  - Switch off on the back

- Switch on
- Plug the load back in

## • Benchtop power supply for dispensers

1st level above NaCs 1.0 chamber Turn off check list

- Unplug loads
- Label and zip tie loads to the power supply
- Turn off the power supply
- Unplug from wall

### Turn on check list

- Plug into the wall
- Turn on the power supply Do NOT do this with loads pluged in
- Plug the load back in

# • • Homebuilt $\pm 15,5$ V power supply 2nd level above TiSapph Turn off check list

- Unplug load
- Label and zip tie loads to the power supply
- Switch off on the back

### Turn on check list

- Switch on
- Plug the load back in

## • Benchtop power supply for 1.5 computer control clock

2nd level next to 1.5 computer control box Record voltage/current values:

Voltage	
Current	

### Turn off check list

- Unplug loads
- Label and zip tie loads to the power supply
- Turn off the power supply
- Unplug from wall

### Turn on check list

- Plug into the wall
- Turn on the power supply **Do NOT do this with** loads pluged in
- Plug the load back in

### 3 Computers

• AWG computer [45]

• Radio computer [48]

### • Computer control box for 1.5

### Turn off check list

- (Do following three steps quickly)
- Turn off the box by flipping the switch on the front side of the box
- Unplug the high voltage (48V) power supply (circular plug) on the left side of the box. Then unplug the power supply itself fromm the outlet.
- Unplug the 12V board power supply. (L.T.E. one with a rectangular connector in the front)
- Unplug USB power on the front side near the fan.
- Zip tie the three unpluged powers to the computer control box.

- Connect to 3.5G Windfrek clock generator from Tweezer1. Set frequency to 3.5G and amplitude to max.
- (Remove power connection zip ties and) Plug in USB power supply.
- − (Do following three steps quickly)
- Plug in the 12V board power supply.
- Plug in high voltage power supply. The fans should start spinning.
- Turn on the power switch of the box.