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Niagara College, Technology Department.

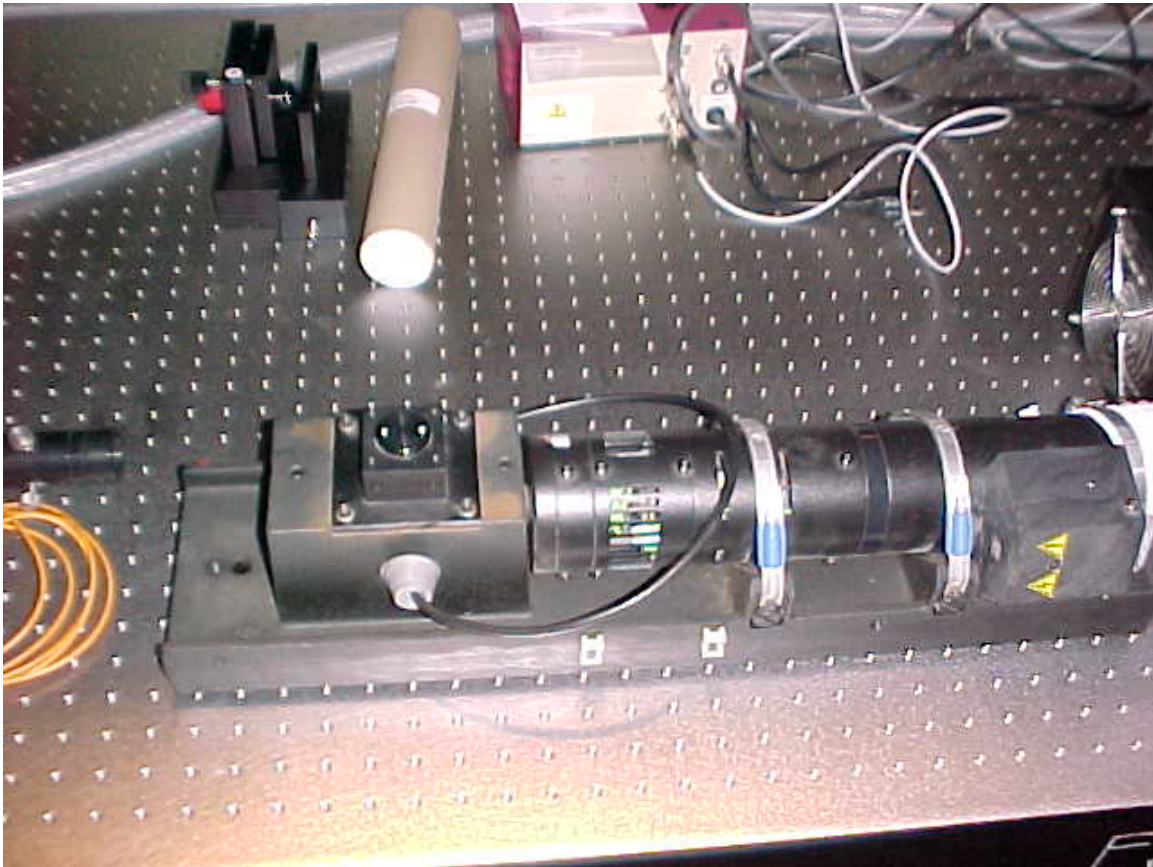
Standard Operating Procedures for JDS Uniphase Argon Laser Model 2214-10-SL

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1. Laser Description:



Model 2214-10-SL :

488nm, 10 mW TEM₀₀.

Power supply 2114-10SLPU (120V power supply).

Controller from Laser Resale.

Actual power from this laser measured 08-17-05 is much higher than specified as is often the case with these lasers.

Power full current = >50 mW

Power with controller in idle position = 4.5 mW

Laser location: V15

2. Operation:

Start-up

Safety should always be your first consideration. Before starting any equipment inspect equipment to make sure everything is in good condition (no damaged wires etc..). The operator should be aware of all safety regulations regarding Class 3B lasers.

1. Put on Safety goggles for Argon laser 488 nm radiation.
2. Check beam path. Control for stray beams and ensure proper beam termination is in place.
3. Make sure the laser interlock key on the power supply is in the off position.
4. Plug in the fan to cool the laser (The correct direction for the air flow is to suck from the laser).
Plug in the laser power supply.
Note: make sure fan and power supply are plugged into separately fused outlets.
5. Laser head is controlled with a controller from Laser Resale (see photo).
Set switches as follows:
Idle/Run = Idle
Light/current regulation = current
Laser discharge = off

Laser Controller



6. Turn interlock key to the on position. Switch the laser discharge switch to the on position. After a brief warm up the laser will start in a low power “idle” mode (<5mW). Changing from idle to the run mode will allow the laser to operate at higher power as set on the current potentiometer. The power out can be accurately measured with an external power meter or approximated by measuring the voltage across TP1 and TP3.
7. If desired, one can now change from current to light regulation and adjust output power using the current or power pots on the controller, respectively.

Shutdown

1. Turn switch from run to idle.
2. Turn discharge switch = off
3. Turn interlock key = off
4. Allow laser head and power supply to cool for two minutes.
5. Unplug the power supply and cooling fan.

Reference:

<http://www.jdsu.com/>