CO2 - CO_2 Laser

Signature Sheet

Student's Name _____ Partner's Name _____

Pre-Lab Discussion Questions

It is your responsibility to discuss this lab with an instructor before your first day of your scheduled lab period. This signed sheet must be included as the first page of your report. Without it you will lose grade points. You should be prepared to discuss at least the following before you come to lab:

1. How does a laser work, in general?
2. What is the purpose of the different gases (i.e. N_2, CO_2, and He)?
3. What are the necessary characteristics of the medium, and the cavity?
4. How are the practical requirements for laser action satisfied in a CO2 laser in this lab?
5. What does a grating do when one is used in place of a mirror in the laser?
6. What are the safety requirements for working with this laser?

Staff Signature _____ Date _____

Completed before the first day of lab? (Circle one) Yes / No

Mid-Lab Discussion Questions

1. On day 4 of this lab, you should have successfully aligned the laser and observed a lasing spectrum in the spectrum analyzer. How many lines are lasing? On what does this number depend? Demonstrate your progress to an instructor and ask for a signature.

Staff Signature _____ Date _____

Completed by day 4 of lab? (Circle one) Yes / No

Checkpoint Signatures

1. Laser Goggle Safety Check

   Staff Signature _____

2. Back Mirror Alignment

   Staff Signature _____

3. Proper Gas Flow

   Staff Signature _____

4. Spectrum Analyzer Signal Line

   Staff Signature _____

5. P(20) Line

   Staff Signature _____

6. CO_2 Spectrum

   Staff Signature _____