−Table of Contents

Ba15 - Rayleigh-Streuung

Raum: 0.4.02 Telefon: 55485

Tutor: Kenichi Ataka

- eMail: ataka@zedat.fu-berlin.de [mailto:ataka@zedat.fu-berlin.de]
- room: 1.1.39
- phone: 030 838 55069

Dear all students, please come to the practicum room 0.4.02 at 10:00. I will wait for you there on time.

IMPORTANT INFORMATION: Please, write all protocols and preparations in English!

IMPORTANT INFORMATION: Please, bring your preparations in a printed version!

For the Lab course each group must bring a preparation (not longer than 5 pages) which consists of:

1. Introduction to this lab work including description of Rayleigh scattering and its observation in nature.

2. Theoretical description of the Cavity Ring-Down Spectroscopy and Rayleigh scattering. Calculation of the ring-down times and Rayleigh scattering coefficient.

3. Description of the experimental setup and experimental technique.

In file Versuchsanleitung.pdf the chapters 1-4 give you one of ways how to write proper preparation.

Before the experiment each student must know:

1. Basic principles Rayleigh scattering and observation of this scattering in nature. Other types of light scattering in nature. Criteria of applicability of these light scatterings.

2. How to explain Rayleigh scattering using classical electrodynamics.

3. Basic information about optical resonators. Criterion of stability of optical resonators.

4. Basic information about Cavity-Ring-Down Spectroscopy. Its advantages and disadvantages.

5. How to detect Rayleigh scattering using our experimental setup.

Rules of this practicum

Die Regeln

Versuchsanleitung

versuchsanleitung.pdf

Here you can find information about short description of Rayleigh scattering and experimental technique

Literature about Rayleigh Scattering and Cavity Ring-Down Spectroscopy

Laser Rayleigh scattering Detailed information about Rayleigh scattering

Cavity ring-down spectroscopy.pdf Here you can find detailed information about Cavity Ring-Down Spectroscopy. Please, pay attention to pages 566-572, where you can find basic principles of this spectroscopy, which are quite necessary for understanding of this lab work.

Letzte Änderung: 27. Oktober 2016