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Bearbeiter/in: Ferdinand Bastian
Verantwortlich: Herr Prof. Dr. Zohm
Arbeitsbereich: E2M
Arbeitsplatz/Tätigkeit: Praktikumsversuch Plasmainterferometrie

BETRIEBSANWEISUNG

Students experiment

Plasma interferometry



Max-Planck-Institut
für Plasmaphysik

ANWENDUNGSBEREICH

These operation instructions apply for the work with high voltage facilities and He- Ne Lasers at the students experiment 'plasma interferometry' building L5.

GEFAHREN FÜR MENSCH UND UMWELT



Hazards for staff and environment

Work with high voltage is regulated by appropriate electrotechnical rules (IEC, VDE) by accident prevention regulations BGV A1 and BGV A2, by BGR 120 - Guidelines for laboratories and by the leaflet MBL 28 - First aid for accidents with electric current.

With all operations the five safety rules have to be applied:

- Disconnect the power supply;
- Prevent reclosing of the isolation switches;
- Test absence of voltage;
- Ensure grounding and/or short circuiting by approved means

Protect adjacent live parts by covers and barriers and fit suitable warning notices; Lasers dürfen nur bestimmungsgemäß nach der Unfallverhütungsvorschrift VBG 93 betrieben werden. Laser der Klassen 2 dürfen nur von unterwiesenen Personen betrieben werden.



Danger! Do not touch high voltage installations!

Lasers of class 2 (up to 1 mW) are not very dangerous. They emit radiation within the visible spectral range (400nm to 700nm). At short exposure times (about 0,25s) this radiation is not dangerous for the eye.



Hochspannung
Lebensgefahr

SCHUTZMAßNAHMEN UND VERHALTENSREGELN



Safety measures and precautions

- Never look directly into a laser beam
- Before starting work on high voltage installations the authorized person has to make sure, that all high voltage devices are switched off at the control unit and that all feedings are grounded and shorted correctly.
- You must use the earth bar for additional safety. After finishing the work all device covering plates must be refitted.
- There must be somebody within earshot of the experimenter who is informed about the type and duration of the work.
- If there are several people working on the same experiment everyone has to know the switching state. Switching actions have to be announced to all people involved.
- Modifications on the wiring of the safety systems are strictly forbidden.
- Switched on high voltage is indicated automatically by the warning "HV - ON" on the control unit.
- Escape and rescue routes have to be kept free!

VERHALTEN BEI STÖRUNGEN

Incidental events

Incidental events or visible deficiencies on grounding or high voltage devices have to be reported immediately to the responsible test leader **Dr. R. Dux, Tel: 1256** or an electrically qualified person (**Mr. Markus Teschke Tel.: 1296**)

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VERHALTEN BEI UNFÄLLEN; ERSTE HILFE



Instructions in case of an accident, first aid

- Shut down the facility by the emergency stop device (**NOT- AUS**). Casualties have to be brought out of dangerous regions.
- **Do not touch the casualty until power is switched off.**
- Further instructions in case of accidents with electrical current can be found in the leaflet MBL 28 "Erste Hilfe bei Unfällen mit elektrischem Strom" (in German).
- Accidents resulting in personal injury must be immediately reported to rescue services by an emergency call

• **NOT RUF NR. 112.**

You find a list of first aider in the glass case vis-a-vis of the registry L5

INSTANDHALTUNG; ENTSORGUNG

Maintenance on Repair

- Repairs should be done only by experts
- For maintenance and repairs only original spare parts should be used
- Maintenance schedule of the manufacturer has to be respected