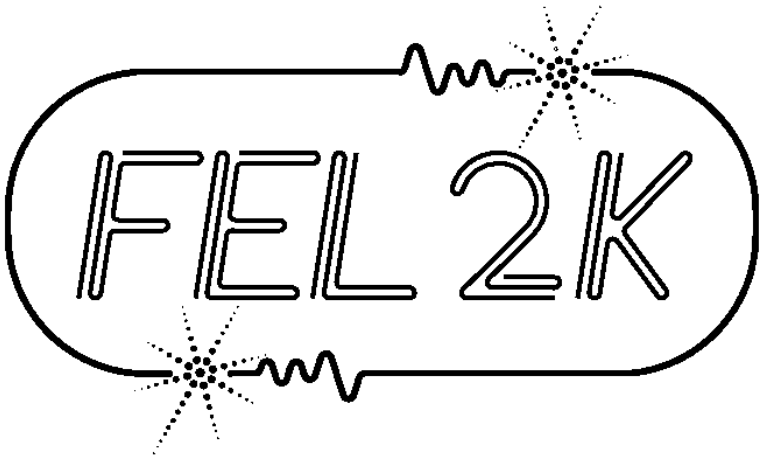

Book of Abstracts

22nd International Free Electron Laser Conference
and 7th FEL Users Workshop

13 to 18 August 2000 — Durham, North Carolina USA

Welcome

On behalf of everyone involved in the organization of this conference, we would like to welcome you to Durham, North Carolina and Duke University for the 22^{nd} International Free Electron Laser Conference and the 7^{th} FEL Users Workshop.

We would like to thank the members of both the Conference and Workshop Program Committees and all of the Session Chairs. This year's program promises to present exciting new research in the field of Free Electron Lasers including ground breaking applications of the FEL.

Thanks also goes to the members of the Local Organizing Committee, the International Executive Committee and to everyone else involved.

Vladimir Litvinenko	Ying Wu	Michelle Shinn
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11.11 Design of a Double Focusing Beam Transport System for the 25 MeV Electron Beam

(MO-3-11)

I. V. Volokhine, J. W.J. Verschuur, F. F. de Wit, G. J. Ernst, J. I.M. Botman,K. J. Boller [1]

University of Twente (Enschede), Technical University of Eindhoven (Eindhoven)

At the University of Twente in collaboration with the Technical University of Eindhoven a Free Electron Laser is being realised with a set-up of two accelerators. The injector is a 6 MeV photo cathode linac producing a high brightness beam. The second accelerator is a Race-Track-Microtron. For the Free Electron Laser project TUEFEL fase II a system was designed to transport the electron beam with an energy of 25 MeV from the racetrack microtron to the undulator. The constructive features of the undulator and resonator demand a detailed matching between electron beam and undulator. The relative small length of the resonator requires a compact injection part of the transport system. Matching of the electron beam is performed in two steps general fixed focusing is done with quadrupoles in a dispersive section. Fine tuned focusing is done in the dispersion free part of the transport line. Dynamic 3-D simulations with space charge were done to obtain the design parameters of the beam transport system. Optimal matching of the electron beam at the undulator's entrance is obtained.

[1]This work supported by STW