- links to FEL electron beam optics related CEBAF/JLAB technical notes. ***WARNING*** - you need to either download and print the Postscript files or have a Postscript-capable viewer (such as Ghostview) to look at these!
- links to schedules for election-beam optics related tasks,
- a link to a little levity, and
- a link to a recent ICFA report on the project.

Site Maintenance

Please direct comments, queries, suggestions, abuse or ridicule to

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- an overview of the 42 MeV project linked, in order, to
- a description of the design process for an accelerator beam transport system,
- an application of this process to the design of a high-power IR FEL,
- documentation of the resulting solution for the accelerator beam handling system,
- a discussion of the performance of the system,
- the impact of errors in the design, and
- potential upgrade paths for the system.

All topics can be accessed using either a clickable map, reproduced below (Figure 1) or a trailing set of text links.

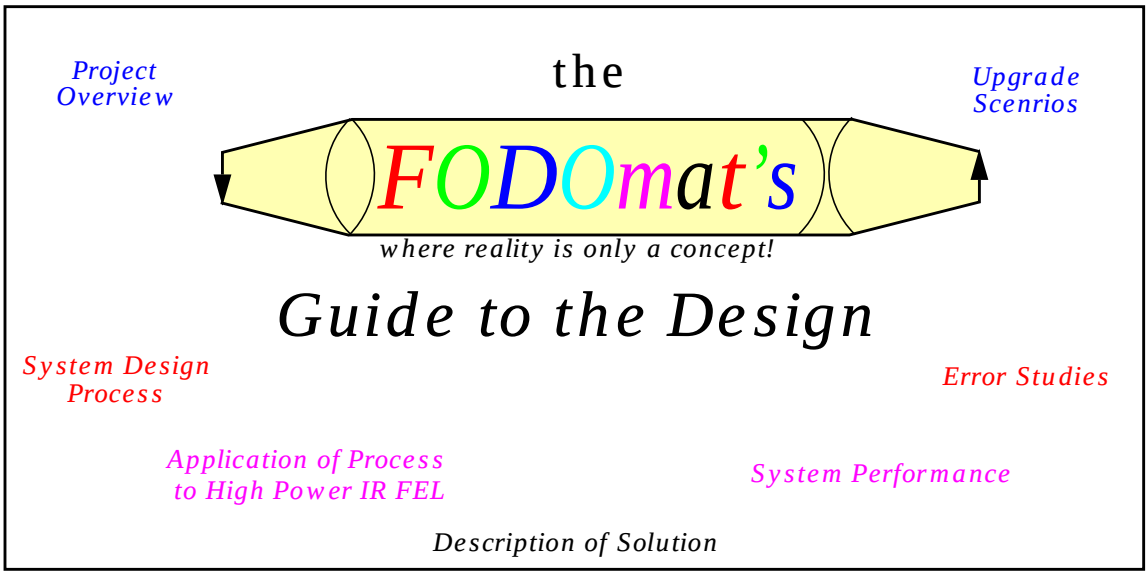

Figure 1: Image of clickable map "Guide to the Design"

Each link on the map has one to several pages of documentation on the indicated topic; several links have embedded other layers of documentation accessible through similar maps and text links.

Miscellaneous Text Links. The third and final area of the "master index" contains a set of assorted text links. These allow access to the following information:

- basic features of the 42 MeV driver design
  - a link to a Postscript file containing design specifications for the 10 December 1996 version of the machine (this is actually JLAB-TN-96-068). ***WARNING*** - you need to either download and print the Postscript file or have a Postscript-capable viewer (such as Ghostview) to look at this!
  - links to gif files displaying machine layouts, beam envelopes, and beam spot sizes

A Guide to the FEL Driver E-Beam Optics Design Web Site

D. Douglas

Abstract

A WWW site describing electron beam optics designs for FEL drivers has been built. It provides documentation for the 42 MeV IR-FEL Demo Driver, and discusses various upgrade scenarios. It is accessible at the following URL:

`http://www.jlab.org/~douglas/FELmasterindex.html`

This note provides a guide to the site.

Introduction

We have built a small World Wide Web site to provide ready access to e-beam optics design information for FEL drivers. This site provides detailed technical and schedule documentation for electron beam optical related issues in the 42 MeV IR FEL Demo Driver accelerator. It also presents potential upgrade scenarios for taking the device from 42 MeV/1 kW/IR to both 200 MeV/100 kW/UV and 100 MeV/1 MW/IR.

The purpose of this note is to document the organization of the site; it is, however, more or less self-guiding. Built in HTML, the site is accessible at

`http://www.jlab.org/~douglas/FELmasterindex.html`

and is best viewed using a color-capable, graphics browser.

Site Organization

The primary access link to this site is “The FODOmat’s FEL Page”, the URL of which is given immediately above. This page has three principal parts;

1. A *brief description* of the 42 MeV IR FEL Demo Project,
2. a “clickable-map” (and text-based set) of links comprising a detailed g*uide to the design* of FEL driver accelerator beam handling systems, and
3. a conglomeration of other useful but *miscellaneous text based links*.

Brief Description. This serves as an abstract to the rest of the site, and is a prototypical abstract for most of the other transport system documentation that has or will be produced about the 42 MeV system.

Design Guide. This is the “core” of the site; the preponderance of the technical discussion is given here. In this area, we find: