

FAST/IOTA SCIENTIFIC PROGRAM MEETING

Tuesday 14 June 2016 - Tuesday 14 June 2016

OTE (IARC)

Book of Abstracts

Contents

A System for Synchronization of Electron Bunches and Laser Pulses using a Photoconductive Antenna	1
Commissioning and Plans of the IOTA Electron Injector	1
Director's Welcome and Group Photo	1
Discussion on IOTA / FAST Experimental Program Progress - Summary and Closeout . .	1
Discussion on the IOTA/FAST Experimental Program Progress - Summary and Closeout	1
Electron/Electrino Double Slit Experiment in IOTA	1
FACET Science Program- Opportunities at FAST	2
Gamma-ray Production via Inverse Compton Scattering with 300 MeV Electrons	2
IOTA Optics Update: Flexibility for Experiments	2
IOTA electron lens: nonlinear optics, cooling, and space-charge compensation	2
Introduction- IOTA/FAST Facility Plan, Timeline and Meeting Goals	2
On the injection system for IOTA-ring based on the electron beam accelerated by a laser radiation	2
Plans and Status for X-rays Generation via Channeling with 50 MeV Electrons	2
Progress of the TESLA-type Cavity Transfer Matrix measurement at FAST	3
Results of the Electron Column SCC Simulations	3
Simulating the Compensation of Space Charge Effects for Intense Beams in Accelerator Lattices: a New Opportunity for Collaboration	3
Simulations of the IOTA Integrable Optics Experiment	3
Status of the IOTA Ring Construction	3
Status of the OSC Experiment Preparations	3
Status of the RFQ Injector Commissioning	3
TOUR IOTA FAST Facility	3
UMER Experimental Program News	4

29

A System for Synchronization of Electron Bunches and Laser Pulses using a Photoconductive Antenna

Corresponding Author: jacobson@radiabeam.com

1

Commissioning and Plans of the IOTA Electron Injector

Corresponding Author: broemmel@fnal.gov

0

Director's Welcome and Group Photo

Corresponding Author: lockyer@fnal.gov

20

Discussion on IOTA / FAST Experimental Program Progress - Summary and Closeout

Corresponding Author: shiltsev@fnal.gov

19

Discussion on the IOTA/FAST Experimental Program Progress - Summary and Closeout

23

Electron/Electrino Double Slit Experiment in IOTAAuthor: Roger Dixon¹¹ *Fermilab*

Corresponding Author: roger@fnal.gov

25

FACET Science Program- Opportunities at FAST**Corresponding Author:** yakimenk@slac.stanford.edu

30

Gamma-ray Production via Inverse Compton Scattering with 300 MeV Electrons**Corresponding Author:** mihalcea@fnal.gov

16

IOTA Optics Update: Flexibility for Experiments**Corresponding Author:** aromanov@fnal.gov

13

IOTA electron lens: nonlinear optics, cooling, and space-charge compensation**Corresponding Author:** stancari@fnal.gov

2

Introduction- IOTA/FAST Facility Plan, Timeline and Meeting Goals**Corresponding Author:** shiltsev@fnal.gov

Vladimir will give a brief Introduction of the IOTA/FAST Facility Plan and Review the Timeline and Goals of the meeting.

18

On the injection system for IOTA-ring based on the electron beam accelerated by a laser radiation

5

Plans and Status for X-rays Generation via Channeling with 50 MeV Electrons

Corresponding Author: hyon@post.kek.jp

24

Progress of the TESLA-type Cavity Transfer Matrix measurement at FAST

Corresponding Author: aliaksei@fnal.gov

14

Results of the Electron Column SCC Simulations

22

Simulating the Compensation of Space Charge Effects for Intense Beams in Accelerator Lattices: a New Opportunity for Collaboration

Corresponding Author: chadmitchell@lbl.gov

12

Simulations of the IOTA Integrable Optics Experiment

11

Status of the IOTA Ring Construction

Corresponding Author: valishev@fnal.gov

15

Status of the OSC Experiment Preparations

Corresponding Author: val@fnal.gov

4

Status of the RFQ Injector Commissioning

21

TOUR IOTA FAST Facility

Shuttle to New Muon Lab (NML)

26

UMER Experimental Program News

Corresponding Author: kruisard@umd.edu