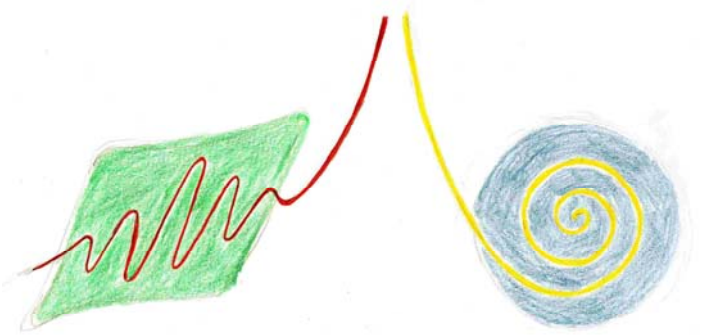
Lasers and Accelerators

Particle Acceleration with High Intensity Lasers



Stellenbosch Institute of Advanced Study Stiαs, Wallenberg Centre

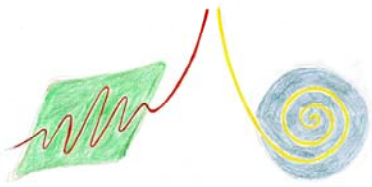
12 - 16 January 2009

program

Overview

Monday, Jan 12 17:30 -20:00: registration, opening and finger food at Stias, 19:00 opening

	Tuesday, Jan 13	**Wednesday, Jan 14**	**Thursday, Jan 15**	**Friday, Jan 16**
8:00	tea and coffee	tea and coffee	tea and coffee	8:30 tea and coffee
8:30 – 9:30	**K. Baruth Ram** **opening**	**F Amiranoff** **theory II**	**F Amiranoff** **theory IV**	9:00 **M Downer** **laser plasma exp IV**
9:30 – 10:30	**F Amiranoff** **theory I**	**M Downer** **laser plasma exp II**	**I Pogorelsky** **high int CO2 lasers I**	10:00 **U Köster** **radioactive beams III**
10:30 – 11:00	tea and coffee	tea and coffee	tea and coffee	tea and coffee
11:00 – 12:00	**C-G Wahlström** **lasers I**	**T Heinzl** **QED II**	**I Moore** **radioact beams FIN II**	11:30 **I Pogorelsky** **high int CO2 lasers II**
12:00 – 13:00	**M Downer** **laser plasma exp I**	**U Köster** **radioactive beams II**	**C-G Wahlström** **lasers II**	
13:00	lunch at Stias	lunch at Stias	lunch at Stias	lunch at Stias
16:00	tea and coffee	tea and coffee	tea and coffee	14:00 tea and coffee
16:30 – 17:30	**T Heinzl** **QED I**	**F Amiranoff** **theory III**	**M Downer** **laser plasma exp III**	14:30 **T Heinzl** **QED III**
17:30 – 18:30	**U Köster** **radioactive beams I**	**I Moore** **radioact beams FIN I**	C Dominguez QED SA	15:30 **C-G Wahlström** **summary**
19:00	dinner at Stias	dinner at Stias	dinner at Stias	16:30 Closing remarks



Tuesday, Jan 13

8:00 tea, coffee, juice and rusks

8:30 **H Schwoerer**
welcome, technical remarks

8:45 **Krish Baruth-Ram**
introduction E Rohwer

The South African research landscape, government funded research: DST, NRF and universities
National Facilities: iThembaLabs

9:30 **Francois Amiranoff**
introduction H Schwoerer

Theory of laser plasma interaction I
high intensity lasers, motion of charge in intense electromagnetic fields, ponderomotive force

10:30 tea, coffee, juice and rusks

11:00 **Claes-Göran Wahlström**
introduction H Schwoerer

High intensity laser technology I

12:00 **Mike Downer**
introduction E Rohwer

Experimental laser plasma physics I
Who needs plasmas? Observations of laser interaction with, and radiation from, individual charged particles

13:00 **lunch at Stias**

16:00 tea, coffee, juice and rusks

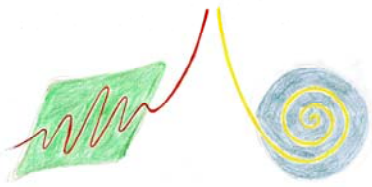
16:30 **Tom Heinzl**
introduction H Schwoerer

Strong Field Quantumelectrodynamics I

17:30 **Ulli Köster**
introduction K Lawrie

Radioactive beams I
Production and separation of radioactive isotopes

19:00 **dinner at Stias**



Wednesday, Jan 14

8:00 tea, coffee, juice and rusks

8:30 **Francois Amiranoff**

Theory of laser plasma interaction II
laser-solid interactions: absorption mechanisms, high energy electron beams

9:30 **Mike Downer**

Experimental laser plasma physics II
Seeing what intense lasers do to solid targets

10:30 tea, coffee, juice and rusks

11:00 **Tom Heinzl**

Strong Field Quantumelectrodynamics II

12:00 **Ulli Köster**

Radioactive beams II
Use of resonant laser ionisation in the ISOL method

13:00 **lunch at Stias**

16:00 tea, coffee, juice and rusks

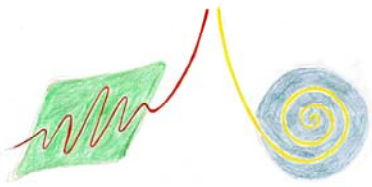
16:30 **Francois Amiranoff**

Theory of laser plasma interaction III
propagation of high energy electrons, proton acceleration, new regimes at highest intensities, x and γ emission and nuclear reactions

17:30 **I Moore**
introduction C Lawrie

Radioactive Beams Finland I

19:00 **dinner at Stias**



Thursday, Jan 15

8:00 tea, coffee, juice and rusks

8:30 **Francois Amiranoff**

Theory of laser plasma interaction IV
underdense plasmas, nonlinear effects, wakefield, electron acceleration betatron x-ray emission

9:30 **I Pogorelsky**
introduction L Botha

High intensity CO_2 lasers I

10:30 tea, coffee, juice and rusks

11:00 **I Moore**

Radioactive Beams Fin II

12:00 **Claes-Göran Wahlström**

High intensity laser technology II
ELI and HiPER

13:00 **lunch at Stias**

16:00 tea, coffee, juice and rusks

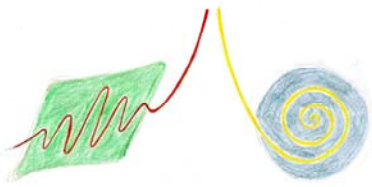
16:30 **Mike Downer**

Experimental laser plasma physics III
Fruit of our labor: observations of accelerated particles from laser driven-plasmas

17:30 **C Dominguez**
introduction S Wyngaard

QED in SA

19:00 **dinner at Stias**



Friday, Jan 16

8:30 tea, coffee, juice and rusks

9:00 **Mike Downer**

Experimental laser plasma physics IV
laser wakefields: seeing is believing

10:00 **Ulli Köster**

Radioactive beams III
Applications of radioactive ion beams

10:30 tea, coffee, juice and rusks

11:30 **I Pogorelsky**

High int CO_2 lasers II

13:00 **lunch at Stias**

14:00 tea, coffee, juice and rusks

14:30 **Tom Heinzl**

Strong Field Quantumelectrodynamics III

15:30 **C-G Wahlström**

Summary of the workshop

16:30 **H Schwoerer**

Closing remarks