



Agios Nikolaos
Crete 2007

Second Announcement

XX International Symposium on
Ion-Atom Collisions &
SPARC Topical meeting:
Electron Spectrometry in the
New Experimental Storage Ring



August 1 - 4, 2007

Hotel
Mirabello Beach
Agios Nikolaos
Crete
GREECE

XX ISIAC





Second Announcement XX ISIAC

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Crete 2007

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Local Organizing committee

Manolis Benis, *IESL-FORTH, Heraklion, Crete, Greece*
Christina Dimopoulou, *GSI, Darmstadt, Germany*

Program in Brief

Aug. 1, *Arrival, Evening Reception*
Aug. 2, *1st day of XX ISIAC talks, poster session,
afternoon excursion to the island of Spinalonga*
Aug. 3, *Final day of XX ISIAC talks, gala dinner*
Aug. 4, **SPARC topical meeting:**
***Electron spectrometry in the
New Experimental Storage Ring (NESR)***

The **detailed conference program** with confirmed **list of speakers** is at <http://isiac-2007.physics.uoc.gr/program.html>

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Scope and Program

Traditionally, this is a two-day biennial satellite meeting taking place right after ICPEAC attracting about 60-90 participants from all over the world giving participants the opportunity to present and exchange detailed information at a smaller specialized meeting set in a congenial and personalized atmosphere.

The symposium covers all ion-atom collision phenomena including excitation, ionization and capture reactions from sub-thermal to relativistic velocities, as well as interactions of ions with surfaces, molecules and clusters. Present topics include collisions with atoms in magnetic optical traps, interaction with laser and FEL beams and results from ion-atom collisions at the ESR.

This year XX ISIAC has been extended to also include a session on **Electron Spectrometry at the New Experimental Storage Ring** as a special **SPARC** topical meeting/workshop including review talks, status reports and round table discussions on future applications of electron emission from relativistic high-Z few-electron ion-atom collisions. All XX ISIAC participants are invited to attend free of cost.

Deadlines

Abstract submission:	May 15, 2007
Early registration	June 1, 2007
Hotel reservation	June 1, 2007

Registration Fee

Full participant, **250 €** Student **150 €**
Accompanying person **100 €** Late registration **300 €**
All fees include reception, excursion and gala dinner.

Limited financial help (waiving of registration, etc.) might become available as increased sponsorship materializes. This will only be known by late May. Interested participants (primarily students) may apply now by filling out the **Request for Financial Assistance** form found at <http://isiac2007.physics.uoc.gr/support/support.html>. Applicants will be notified by e-mail when and if their request is approved.

XX ISIAC homepage

<http://isiac-2007.physics.uoc.gr>

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SPARC Topical meeting: *Electron spectrometry in the New Experimental Storage Ring* **Saturday August 4**

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General Information

The **SPARC** topical meeting on *Electron spectrometry in the New Experimental Storage Ring (NESR)* will take place on the **morning** of **Saturday August 4** as an integral part of XX ISIAC. All XX ISIAC participants are invited to attend free of charge.

Scope and Program

The SPARC - **Stored Particles Atomic physics Research Collaboration** - has been formed within the project FAIR - Facility for Antiproton and Ion Research – to be built at GSI, Darmstadt - Germany. The aim of this collaboration is to bring together expertise in atomic physics with highly charged ions at the international level and to address a broad variety of atomic physics experiments from fundamental physics to applications in Quantum Electrodynamics, Strong Fields and Ion -Matter Interactions.

The particular **SPARC topical meeting** on *Electron spectrometry in the New Experimental Storage Ring (NESR)* is organized by the **SPARC electron spectrometers** group. It will include review talks on conversion/Auger electron and positron emission from relativistic high-Z few electron ion-atom collisions and progress reports on the NESR and the proposed magnetic spectrometers. The session will close with a discussion of future scientific and practical organizational plans.

The detailed program of this session can also be found in the XX ISIAC **detailed conference program** with confirmed **list of speakers** at

<http://isiac2007.physics.uoc.gr/program.html>

More information is available on the www at:

FAIR: <http://www.gsi.de/fair>

SPARC: <http://www.gsi.de/fair/experiments/sparc>

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Confirmed Invited Speakers

- A. Alnaser** (American University Sharjah, United Arab Emirates)
- N. Andersen** (Nils Bohr Institute, Denmark)
- T. Azuma** (Tokyo Metropolitan University, Japan)
- A. de Brito** (LNLS-Campinas, Brazil)
- K. Carnes** (Kansas State University, USA)
- S. Das** (Western Michigan University, USA)
- C. Dimopoulou** (GSI-Darmstadt, Germany)
- A. Dubois** (Université Pierre et Marie Curie - Paris, France)
- N. Faria** (Universidade Federal do Rio de Janeiro, Brazil)
- X. Flechard** (Université de Basse Normandie, France)
- S. Fritzsche** (Universität Kassel, Germany)
- S. Götz** (Universität Freiburg, Germany)
- S. Hagmann** (GSI-Darmstadt, Germany)
- Y. Jiang** (MPIK-Heidelberg, Germany)
- Z. Juhasz** (ATOMKI-Debrecen, Hungary)
- U. Kadhane** (University of Aarhus, Denmark)
- K.-U. Kühnel** (MPIK-Heidelberg, Germany)
- A. Kumar** (GSI-Darmstadt, Germany)
- T.-G. Lee** (ORNL, USA)
- L. Menchero** (TU-Clausthal, Germany)
- J. Miraglia** (Universidad de Buenos Aires, Argentina)
- D. Mitnik** (Universidad de Buenos Aires, Argentina)
- P. Moretto-Capelle** (Université Paul Sabatier -Toulouse, France)
- B. Najjari** (MPIK-Heidelberg, Germany)
- S. Otranto** (Univ. Nacional del Sur - Bahia Blanca, Argentina)
- M. Schöffler** (Universität Frankfurt, Germany)
- M. Schulz** (University of Missouri-Rolla, USA)
- J. Schweinzer** (IPP-Garching, Germany)
- S. Selstø** (Stockholm University, Sweden)
- M. Shah** (Queen's University Belfast, UK)
- J. Steinmann** (MPIK-Heidelberg, Germany)
- N. Stolterfoht** (HMI-Berlin, Germany)
- H. Torii** (University of Tokyo, Japan)
- G. Veshapidze** (Kansas State University, USA)
- A. Voitkiv** (MPIK-Heidelberg, Germany)
- C. Whelan** (Old Dominion University, USA)
- X. Zhu** (Institute of Modern Physics - Lanzhou, China)

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Program of talks and events

All talks will take place at the conference center at **Mirabello Beach Hotel**.

Indication: (R) Reviews (25'), (S) SPARC presentations (20') and (P) Progress reports (15') with an extra 5' allowed for discussion.

All other accepted contributions will appear as posters.



Wednesday afternoon August 1, 2007

17:00 19:00 Arrivals - Hotel check-in and Conference Registration - Mirabello Beach Hotel

19:00 20:30 Welcome reception - Mirabello Beach Hotel Pool Bar

Free evening to explore the town of Agios Nikolaos and surrounding area



Thursday morning August 2, 2007

From	To	Speaker	Tentative Title
8:00	8:50	Registration - outside lecture hall - Mirabello Beach Hotel	
8:50	9:00	Welcome/Announcements	
9:00	11:00	Ion interactions with solids and surfaces (chair: Uwe Thumm)	
9:00	9:25	N. Stolterfoht (HMI-Berlin - 25')	R1 <i>HCI collisions with surfaces: A tribute to the legacy of HP Winter</i>
9:30	9:45	D. Mitnik (Univ. Buenos Aires - 15')	P1 <i>Time-dependent simulations of electron emission in grazing ion-surface collisions</i>
9:50	10:05	S. Das (Western Michigan Univ.- 15')	P2 <i>Electron guiding in polymer PET foils</i>
10:10	10:25	Z. Juhasz (ATOMKI-Debrecen - 15')	P3 <i>Ion-insulator interactions inside ion-guiding nanocapillaries</i>
10:30	10:55	T. Azuma (Tokyo Metropolitan Univ.- 25')	R2 <i>Crystal-dressed HCI observed through doubly-resonant coherent excitation</i>
11:00	11:30	30' Coffee Break	
11:30	13:20	Ion interactions with atoms (chair: Burkhard Fricke)	
11:30	11:55	M. Schulz (Univ. of Missouri-Rolla - 25')	R3 <i>Fully differential data on one- and two-electron processes in ion-atom collisions</i>
12:00	12:15	K-U. Kühnel (MPIK-Heidelberg - 15')	P4 <i>First collision experiments using the in-ring reaction-microscope in the ESR at GSI</i>
12:20	12:35	X. Zhu (IMP- Lanzhou - 15')	P5 <i>Transfer Ionization Studied in Low Energy He²⁺ on He collisions</i>
12:40	12:55	M. Schöffler (Univ. Frankfurt - 15')	P6 <i>Two- and three-electron dynamics in transfer ionization</i>
13:00	13:15	N. Faria (Univ. Federal do Rio de Janeiro- 15')	P7 <i>Ionization of swift negative ions</i>
13:20	14:30	70' Lunch break	



Thursday afternoon August 2, 2007

14:30 16:00 **Poster session** 90' Poster exhibition at Hotel Mirabello

16:00 18:40 **Excursion to the island of Spinalonga**

16:00 16:10 Bus from Mirabello Hotel entrance
 16:10 16:30 Drive to Elounda port
 16:30 17:00 Boat to Spinalonga
 17:00 18:00 Tour of Spinalonga fortress
 18:00 18:20 Return to Elounda
 18:20 18:40 Return to Mirabello Beach Hotel



Free evening to explore the town of Agios Nikolaos and surrounding area



Friday morning August 3, 2007

From	To	Speaker		Tentative Title
8:50	9:00	Announcements/News		
9:00	11:10	Ion and antiproton interactions with matter (chair: Joe Macek)		
9:00	9:25	J. Miraglia (Univ. Buenos Aires - 25')	R4	Multiple ionization of atoms by heavy ions.
9:30	9:45	H. Torii (Univ. of Tokyo - 15')	P8	First measurements of ionization cross-section of He by slow pbar impact
9:50	10:05	B. Najjari (MPIK-Heidelberg - 15')	P9	Few-body quantum dynamics of two-center electronic transitions in high-energy ion-atom collisions
10:10	10:25	P. Moretto-Capelle (Univ. Toulouse - 15')	P10	Electron spectroscopy in proton collisions with dry gas-phase uracil base
10:30	10:45	U. Kadhane (Univ. Aarhus - 15')	P11	Multiple ionization of C_{60} under fast ion collisions and the effect of giant plasmon resonance
10:50	11:05	T.-G. Lee (Oak Ridge National Laboratory - 15')	P12	Exact quantum treatment of continuum electrons in the fields of moving charges
11:10	11:40	30' Coffee Break		
11:40	13:40	Ion interactions with molecules and plasmas (chair: Carmen Cisneros)		
11:40	12:05	M. Shah (Queen's Univ. Belfast - 25')	R5	Fragmentation of water near the Bragg peak
12:10	12:25	A. Dubois (U. P & M Curie-Paris - 15')	P13	Quantum interferences in electron emission from molecules
12:30	12:45	S. Otranto (Univ. Bahia Blanca - 15')	P14	Electron capture collisions relevant to X-ray emission from comets
12:50	13:05	A. Kumar (GSI-Darmstadt - 15')	P15	Selective population of $1s2s$ states after K-shell ionization of lithiumlike heavy ions
13:10	13:35	J. Schweinzer (IPP-Garching 25')	R6	Atomic collision processes in plasmas of ASDX Upgrade, JET and ITER
13:40	15:30	110' Lunch break - beach activities/siesta		



Friday afternoon August 3, 2007

From	To	Speaker		Tentative Title
15:30	17:40	Interaction with cold trapped atoms and ions (chair: Brett DePaola)		
15:30	15:55	N. Andersen (Nils Bohr Institute - 25')	R7	Ion-atom collision processes investigated with laser cooled targets
16:00	16:15	G. Veshapidze (Kansas State U. - 15')	P16	Charge transfer as a diagnostic of excitation dynamics in a MOT
16:20	16:35	S. Götz (Univ. Freiburg - 15')	P17	Ultra cold molecule formation using a shaped ultra fast laser
16:40	16:55	J. Steinmann (MPIK-Heidelberg - 15')	P18	A Lithium MOT in a reaction Microscope: a new Target for particle and Photon Impact experiments
17:00	17:15	A. de Brito (LNLS-Campinas - 15')	P19	Synchrotron based photoelectron anisotropy determination on laser cooled and trapped atoms
17:20	17:35	X. Flechard (Univ. Basse Normandie - 15')	P20	Tests of the Standard Model with trapped and cooled radioactive ions using a transparent Paul trap
17:40	18:10	30' Coffee Break		
18:10	20:00	Interaction with Lasers (chair: Jan Petter Hansen)		
18:10	18:35	A. Alnaser (American Univ. Sharjah - 25')	R8	Double electron removal from H_2 by short laser pulses
18:40	18:55	K. Carnes (Kansas State Univ. - 15')	P21	Picosecond Ion Pulses from an EN Tandem Created by a Femtosecond Ti:Sapphire Laser
19:00	19:15	Y. Jiang (MPIK-Heidelberg - 15')	P22	Two-photon double ionization of atoms by the Hamburg FEL
19:20	19:35	L. Menchero (TU-Clausthal - 15')	P23	Excitation and ionization of diatomic (quasi-) molecules by short laser pulses
19:40	19:55	S. Selstø (Univ. of Stockholm - 15')	P24	Geometrical effects in H_2^+ interactions with strong fields
20:00	20:15	(15')		presentations and bids for the next ISIAC 2009
20:45		Bus from Mirabello Hotel entrance		Conference Dinner

From	To	Speaker	Tentative Title
10:00 11:40 Electron emission in fast high-Z ion-atom collisions (chair: Xinwen Ma)			
10:00	10:20	A. Voitkiv (MPIK- Heidelberg - 20')	S1 <i>Electron and positron emission in energetic heavy ion/antiproton-atom collisions</i>
10:25	10:45	C. Whelan (Old Dominion Univ. - 20')	S2 <i>The simultaneous ionization of projectile and target in multicharged-ion neutral atom collisions at relativistic energies</i>
10:50	11:10	S. Fritzsche (Univ. Kassel - 20')	S3 <i>Auger electron and X-ray emission from high-Z few-electron ions</i>
11:15	11:35	A. Kumar (GSI-Darmstadt - 20')	S4 <i>High resolution Conversion electron spectrometry</i>
11:40	12:00	20' Coffee Break	
12:00 14:00 Update on NESR & spectrometers - discussion (chair: John Tanis)			
12:00	12:20	C. Dimopoulou (GSI-Darmstadt - 20')	S5 <i>The New Experimental Storage Ring (NESR) for Atomic Physics: Experiments with Heavy Highly Charged Ions and Deceleration of Antiprotons</i>
12:25	12:45	S. Hagmann (GSI-Darmstadt - 20')	S6 <i>Trends in forward electron spectroscopy at heavy ion storage rings</i>
12:50	14:00	SPARC spectrometer group members	<i>Round table discussion/future plans/organization</i>
14:00	End of meeting		

Last up to date version of this program can be found at:
http://isiac-2007.physics.uoc.gr/XX_ISIAC_program.html



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Conference Site and Hotel Accommodation

The conference will take place at the picturesque coastal town of [Agios Nikolaos](#) (25,000 inhabitants) and about 70 km east of the entry port of [Heraklion](#), Crete. Together with the nearby fishing village of [Elounda](#) this area is one of the most spectacular of coastal northern Crete and a very attractive summer resort for tourists. The actual meeting will take place at the elegant four/five star [Mirabello Beach Hotel](#) and its state-of-the art conference center, where most of the participants are expected to stay. Additionally, the nearby, three/two star [Ormos-Crystal](#) hotels will also be available for cheaper accommodations primarily targeted for students. All three hotels have been reserved for XX ISAC participants at preferential rates on a first-come first serve basis..

[Iberostar MIRABELLO Beach Hotel](#)

An elegant complex with suites (4 star) and bungalows (5 star) situated on the beach, surrounded by gardens, pools, the Bay of Mirabello and mountain views, 2km from the center of the city of Agios Nikolaos and 45 minutes from Heraklion international airport. This is the conference venue. All talks and poster session will be held here.

The hotel also has a pool bar, 4 tennis courts, a diving center, water sports including kayak, pedalo, windsurfing and water-ski, spa and gym. Child day-care and entertainment is also provided through the hotel Mini Club operated from 10:00-13:00 and 15:30-17:30 as well as the Mini Disco from 20:00-21:30.

Internet access: wireless in all rooms-fast ADSL for 8€/3hrs, two internet corners for people without laptops

Meal times: BREAKFAST:07:30 - 10:30, LUNCH:13:00-14:30, DINNER:18:30-21:00

Half-pension: 130€single, 200€twin, 100€share

[ORMOS \(3 star\) and CRYSTAL \(2 star\) Hotels](#)

These two adjacent hotels are within 300 meters from the venue hotel overlooking a picturesque boat marina providing simple, clean and quiet accommodations with pool and game room for the more budget oriented participant. Limited supply of rooms - primarily for students.

Bed and Breakfast: ORMOS - 48€single, 65€twin, 32.50€share

CRYSTAL - 40€single, 55€twin, 27.50€share

Both the conference registration and hotel reservation are secured simultaneously by completing the special [Conference Registration and Hotel Reservation Form](#) and sending it to Mrs. [Efi Galanaki](#) the conference secretary as early as possible. Payment methods are listed on the form. Please follow instructions carefully.

To share a room please supply on the same form the name of your roommate participant (if known) or indicate that you would like the organizers to match you up with such a roommate.



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Other Information

- **Crete** legendary birth place of Zeus, the mystical Labyrinth, the terrible Minotaur, Daedalus and Ikarus and many more, is the 5th largest island of the Mediterranean and one of the most popular tourist summer destinations. Beautiful beaches, precipitous coastlines, picturesque villages, high and rugged mountain ranges with deep gorges and many hiking trails all add up to offer a most memorable experience. Rich in history, Crete has been at the cross roads of many civilizations including the Minoan, Ancient Greek, Roman, Byzantine, Venetian, Ottoman and modern Greek.

- **Agios Nikolaos** (or just plain Agios as it is locally known) where ISAC will take place is the capital of the Lassithi prefecture about 70 km east of Heraklion the main port of entry and one of the most picturesque towns of Crete. Overlooking the bay of **Mirabello** its sea is superb and the surrounding area of the city is noted for its sandy beaches and beautiful bays. The landmark of the city is a small lake, known as **Voulismeni** that is located in the center of the city, at the foot of the cliffs. Its shape is circular with a diameter of 137 m. According to the mythology, the goddess **Athena** used to take her bath in this lake. The depth of the lake is 64 m and was connected to the sea only recently, with a canal opened in 1870. It is an especially picturesque site with many open-air cafes and restaurants along the bank. Small boats leave the harbor to visit the Venetian fortress of **Spinalonga**, near **Elounda**. Every summer the Municipality organizes cultural music and dance events, theatrical performances, exhibitions and shows. The city is named after the small Byzantine church of Agios Nikolaos, located on the peninsula. The church has fine frescoes from the 8th, 10th and 11th century. Agios Nikolaos history stretches back to ancient times when it was the harbor of **Lato Etera**, an important and powerful city located near today's village of **Kritsa**. It possesses the second finest Archaeological Museum in Crete, where splendid archaeological findings from throughout the area are exhibited.

Getting to the conference

The airport of **Heraklion** is the closest international destination and can be reached directly by charter flights from many cities in Europe as well as by many daily flights from Athens. Heraklion can also be reached by ferry boat from Athens daily and on some days twice daily. The 70km final leg from Heraklion to Agios Nikolaos may be reached by:

- Car rental from the airport, recommended if staying for more than the conference duration. The best way to see Crete in a short time.
- taxi (about 60 €) that can be shared by participants
- public transportation (bus from Heraklion stops at airport on its way to Agios Nikolaos, Sitia and Ierapetra). There is a bus running every half hour between Heraklion and Agios for 6.20€. Please check the [bus schedule from Heraklion](#) or [bus schedule from Agios Nikolaos](#).
- special conference bus if enough participants arrive at the same time to make it cost effective. Please consult the homepage for latest information on this eventuality.

Once at the bus terminal in down town Agios Nikolaos, one can either take the local bus that stops outside hotel Mirabello on its way to Elounda or better take a taxi directly to the hotel for about 8€.

Social Program

Visits to museums, archeological sites, excursions and cruises in general will be available through the local conference excursion agencies. For more details please consult the homepage at <http://isiac-2007.physics.uoc.gr>. We have recently been informed that the Heraklion archaeological museum exhibiting artifacts from the Minoan civilization will be closed due to renovations during the entire summer. The Knossos archaeological site, a must see for first time visitors, will however be open as usual.

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Things to do while in Crete

Crete is the 5th biggest island in the Mediterranean and has plenty of interesting and beautiful places to visit. Some of these are listed below:

Heraklion: Knossos Palace, Kazantzakis grave, Venetian Fortress (Koules) in port, down town (Lion square).

Eastern Crete: Agios Nikolaos, Kritsa village and gorge, Elounda, Sitia, Vai, Palekastro, Zakros, Lassithi plateau, Ierapetra (Venetian fortress)

Rethymno: Old town, port and Venetian Fortress

North Western Crete: Chania (port), Georgioupolis, Falassarna, Samaria Gorge

Southern Crete: Matalla, Festos, Gortys, Agios Pavlos, Moni Preveli, Frangokastello, Sfakia, Paleohora, Elafonisi, Gavdos, Imbros Gorge

Day trips to other nearby islands:

- **Santorini** from the main port of Heraklion - daily
- **Gavdos** from Sfakia (southwestern Crete) - daily
- **Chrisi** from Ierapetra (southeastern Crete) - daily

More information about these places may be readily found from various internet sites or from the Conference and hotel tourist services.

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