

2nd International Conference on New Frontiers in Physics (ICNFP 2013)

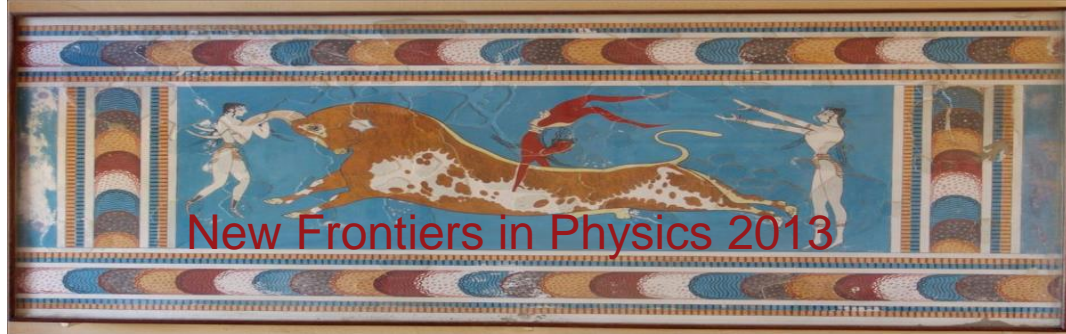
August 28 – September 5 2013, Kolymbari, Crete, Greece

## 1st Bulletin

The [International Conference on new Frontiers in Physics](#) aims to promote scientific exchange and development of novel ideas in science with a particular emphasis on interdisciplinarity. The conference will bring together worldwide experts and promising young scientists working on experimental and theoretical aspects of Particle and Nuclear physics, Astrophysics, Cosmology, Gravity, Mathematical Physics, Quantum Physics, Quantum Entanglement, studies of Foundations of Quantum Mechanics and other.

The conference will be hosted in the Conference Center of the [Orthodox Academy of Crete \(OAC\)](#), a beautiful location only a few metres from the Mediterranean sea. OAC offers a rare combination of a modern conference center, full accommodation with excellent local cuisine, in an inspiring environment of pure nature near Chania, the most charming city of Crete, and other cultural and natural beauties.



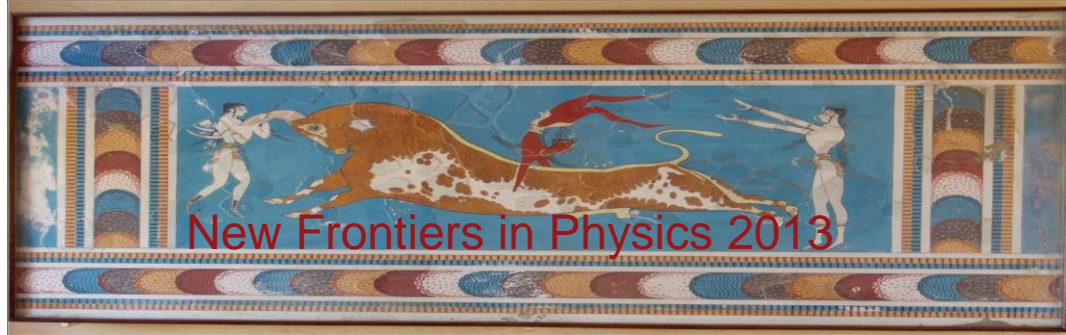


## Aim and Scientific program of ICNFP 2013

The conference series "New Frontiers in Physics" aims to promote **interdisciplinarity** and **cross-fertilization of ideas** between different disciplines addressing **fundamental physics**. While different fields each face a distinct set of field-specific challenges in the coming decade, a significant set of commonalities has emerged in the technical nature of some of these challenges, or are underlying the fundamental concepts involved. A Grand Unified Theory should in principle reveal this underlying relationship.

For instance, techniques from string theory have become relevant in recent years for improving perturbative techniques in high energy physics or identifying material properties of non-abelian plasmas that share essential features with the systems studied in heavy ion collisions. Fluctuation analyses of the cosmic microwave background involve techniques and concepts that are becoming increasingly relevant for the study of the quickly expanding little bangs in heavy ion collisions. Cosmological models are developed in close interplay with searches for new physics at the LHC. There is a multitude of examples illustrating that cross-talk between neighboring fields is relevant or even crucial for progress in either field.

The conference series "New Frontiers in Physics" aims at identifying interdisciplinary topics on which cross-talk between different disciplines of fundamental physics can contribute to further progress. The conference series aims at bringing together key scientists of different fields to discuss the state of the art and the nature of open questions in a language suitable for a physics educated interdisciplinary audience, and to discuss avenues for further progress.



## Main topics of the Conference

### A High Energy Particle Physics :

Searches for new particles and new phenomena at the LHC and other colliders (Higgs boson, SUSY, top quarks, extra dimensions, flavour physics, precision electroweak measurements and other), neutrino experiments, and related theoretical topics.

### B Heavy Ion Collisions and Critical Phenomena :

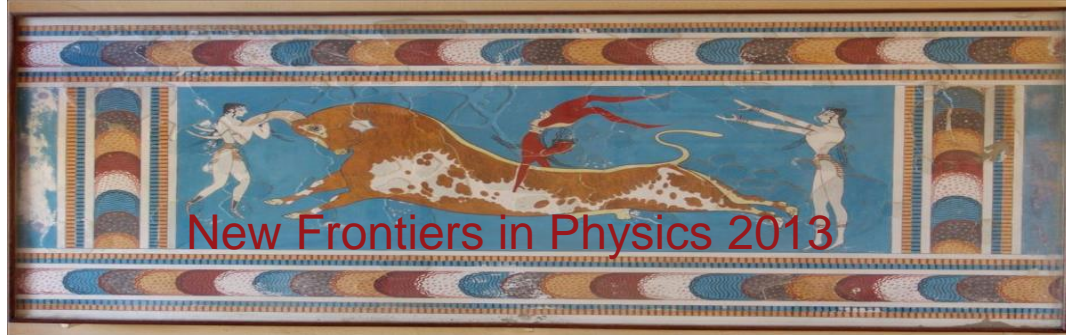
Establishing the properties of QCD matter at extreme conditions and the QCD phase diagram with Heavy Ion Collisions and related theoretical topics. Branching out to neighboring disciplines, including Superconductivity and Critical Phenomena, Neutron Stars, Quark Stars, Exotics.

### C Quantum Physics and Quantum Entanglement :

Quantum Physics, Quantum Optics, Quantum Entanglement, Foundations of Quantum Mechanics, Entanglement and our Universe: Black Holes and Cosmology, Quantum Non-Localities.

### D Cosmology, Astrophysics, Gravity, Mathematical Physics :

Cosmic Microwave Background, Dark Energy, Modified Gravity, direct and indirect searches for Dark Matter, Astroparticle Physics, Quantum Gravity, String Theory, Non Commutative Geometry, Holography, Black Holes.



## Venue

The conference will take place at the [Orthodox Academy of Crete \(OAC\)](#) in [Kolymbari](#) on the north western coast of the island of Crete, Greece. The OAC is a modern Conference Center, inaugurated in 1995, and next to the 17th century [Gonia Monastery](#). The OAC provides a multi-purpose main hall, with a capacity for ~700 persons, 7 meeting rooms, offices for consultations, areas for posters, and areas for outdoor events. Most facilities are air-conditioned. An internet room is at the disposal of the conference participants. Furthermore, there is wireless internet connection on the ground floor and in the area outside.

The conference rooms are equipped with video projector, screen, speaker-podium with microphone, table microphones for the panel as well as standing microphones for the aisles, laser pointer, but also OH-projector, slides-projector, 30 poster boards [can be used on both sides, dimensions 1,40x1,40m and 0,90x1,40m]).

Kolymbari is about 30 km away from Chania, the most beautiful city of Crete.

Contact details:

OAC administration

730 06 Kolymbari, Chania

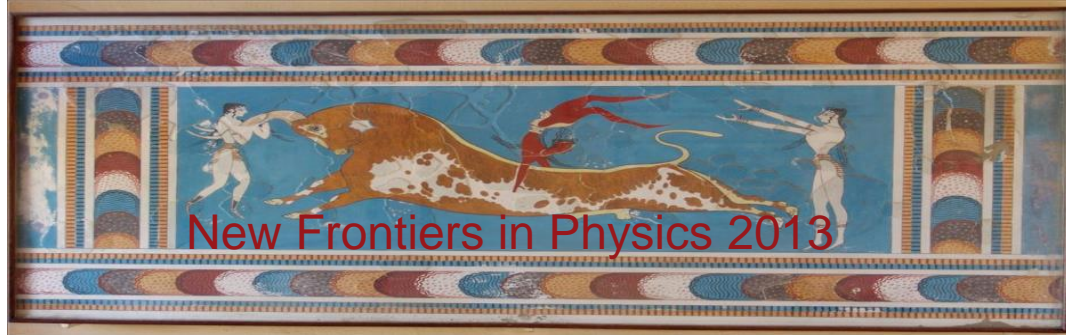
Tel.: 0030-28240 22245/22500

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## Deadlines

Abstract submission opening: 15 January 2013

Abstract submission deadline: 1 June 2013

Late abstract submission: 10 June 2013

Abstract submission acceptance notification: 20 June 2013

Registration deadline : 1 July 2013

Earliest possible date of arrival at OAC: 27 August 2013

Latest possible date of departure from OAC: 7 September 2013 (early morning)

Payment of the conference fee will be possible also in place upon arrival (only cash). Please note: failure to pay the conference fee **upon arrival** will result in a “late payment” penalty of 50 EUR.

## Conference registration and fees

Registration, payment of conference fee and abstract submission are possible via the conference webpage <http://indico.cern.ch/event/icnfp2013>

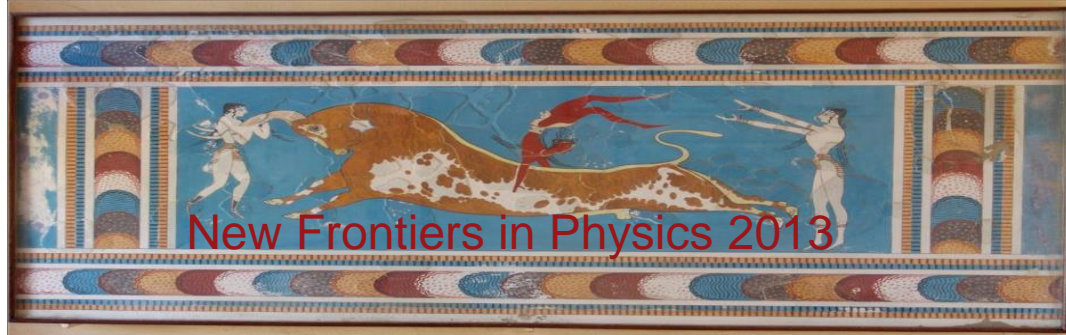
Conference fees : 2000 NOK (ca. 265 EUR) regular

1400 NOK (ca 185 EUR) for students

The conference fee includes: Conference Proceedings, Conference Dinner and Excursion.

## Proceedings

There will be peer reviewed proceedings of the conference (EPJ Web of Conferences).



## Accommodation

OAC has 60 rooms, which are all double, with either two beds or a double bed, and out of which 5 are suites. All have their own bathroom and most have a sea-view and air-conditioning. The cost, which includes accommodation at OAC, full board, coffee breaks and conference facilities is 115 Euros per day per person in a single occupation room and 90 Euros per person per day in a double room.

The cost for accompanying persons staying in OAC and sharing a double room is 60 Euros per day including accommodation and meals. OAC provides breakfast and two meals per day, following the traditional Cretan cuisine.

Payments at the academy can be made in one of the two following ways:

- In cash (in Euros only). Note that there is a bank with an ATM in Kolymbari accepting VISA, Master, and Maestro cards.
- By Credit Card (Mastercard or Visa)
- By bank transfer to the OAC Bank Account (see the conference web page).

For Bank Transfers the participants should make sure to provide their name, the name of the conference, the dates of conference and they have to send to OAC an email with a confirmation of the payment.

OAC bank account:

Cooperative Bank of Chania

Account holder: Orthodox Academy of Crete

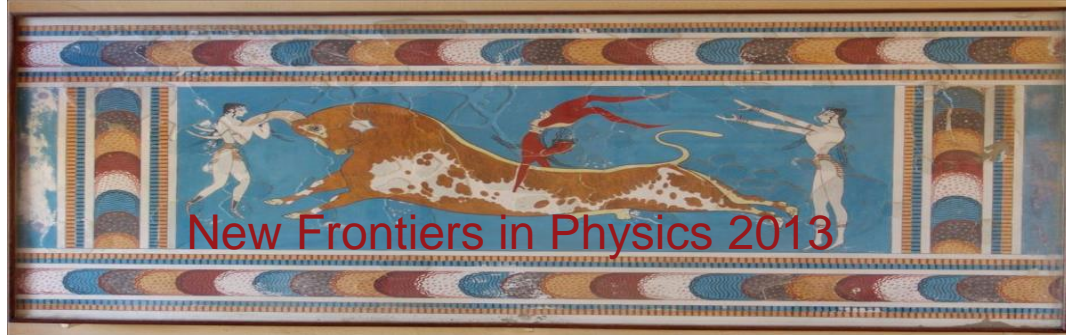
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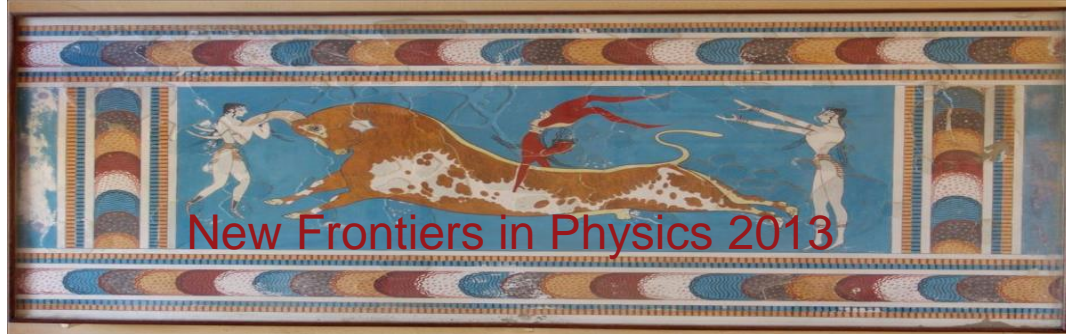
Webpage of the conference

<http://indico.cern.ch/event/icnfp2013>

## Agenda

The Program of the Conference foresees:

- Arrival and Registration Tuesday the 27th August.
- Introductory (Student) Lectures Wednesday the 28th August.
- Presentations will take place from 8h30-13h30, and from 17h00-20h00, with two coffee breaks per day.
- The Conference Dinner and a Cultural Event will take place on Tuesday 3rd September.
- A poster session will be organized on Friday 30th August.
- On Sunday 1st September the Conference Excursion is organized.
- The Conference will close Thursday 5 September at 18h00.

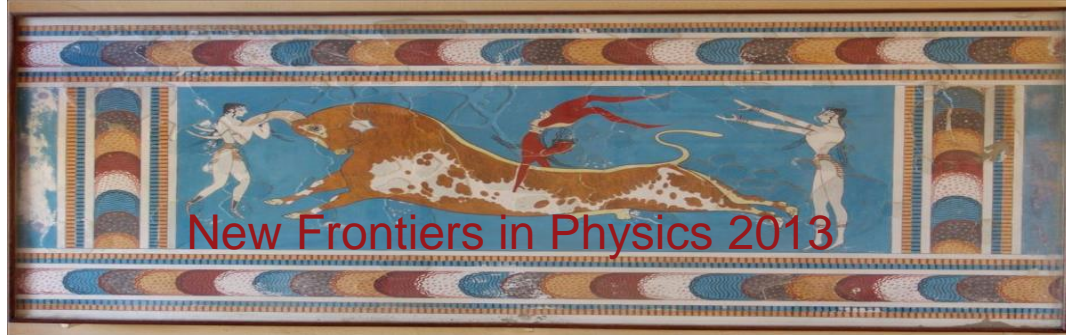


## Agenda

A draft agenda of the conference is shown below:

Tuesday 27/August	Wednesday 28/August	Thursday 29/August	Friday 30/August	Saturday 31/August	Sunday 1/September	Monday 2/September	Tuesday 3/September	Wednesday 4/September	Thursday 5/September
	08h30-11h00 Session I	08h30-11h00 Session I	08h30-11h00 Session I	08h30-11h00 Session I	Conference Excursion	08h30-11h00 Session I	08h30-11h00 Session I	08h30-11h00 Session I	08h30-11h00 Session I
	11h00 Coffee break	11h00 Coffee break	11h00 Coffee break	11h00 Coffee break		11h00 Coffee break	11h00 Coffee break	11h00 Coffee break	11h00 Coffee break
	11h20-13h00 Session II	11:20-13h20 Session II	11:20-13h20 Session II	11:20-13h20 Session II		11:20-13h20 Session II	11:20-13h20 Session II	11:20-13h20 Session II	11:20-13h40 Parallel Sessions
	13h00 Lunch	13h30 Lunch	13h30 Lunch	13h30 Lunch		13h30 Lunch	13h30 Lunch	13h30 Lunch	13h40 Lunch
	16h10-17h50 Session III	17h00-18h00 Session III	15h40-16h40 Session III	15h40-16h40 Session III		16h45-17h50 Session III	15h30-17h50 Session III	17h00-17h50 Session III	16h00-17h30 Session II
Registration 18h00	17h50 Coffee break	18h00 Coffee break	16h40 Coffee break	16h40 Coffee break		17h50 Coffee break	17h50 Coffee break	17h50 Coffee break	17h30 Coffee break
	18h10-19h50 Session IV	18h20-19h20 Session IV	17h00-18h40 Parallel Sessions	17h00-19h30 Parallel Sessions		18h30-20h00 Masterclass Poster Session	18h10-19h50 Parallel Sessions	18h10-19h50 Parallel Sessions	17h50-19h00 Session III
20h00 Dinner	20h00 Dinner 20h30 After dinner talk 21h30 Welcome drink	19h30 Dinner 21h00 Public talk 22h00 Drink in AVRA	20h00 Dinner 21h00 Public talk	19h30 Dinner 21h00 After dinner talk	20h00 Dinner	20h00 Dinner	20h30 Conference dinner	20h00 Dinner	19h00 End of the Conference





## Contacts

**Email of the conference:** [icnfp2013@gmail.com](mailto:icnfp2013@gmail.com)

**Emails of organizers :** [larissa.bravina@fys.uio.no](mailto:larissa.bravina@fys.uio.no)

[Yiota.Foka@cern.ch](mailto:Yiota.Foka@cern.ch)

[Sonja.Kabana@cern.ch](mailto:Sonja.Kabana@cern.ch)

For accommodation in OAC please contact

OAC administration

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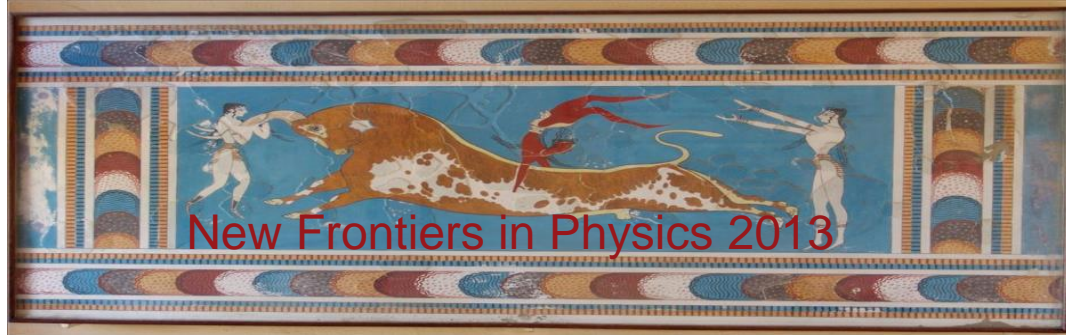
[oac@otenet.gr](mailto:oac@otenet.gr)

## Social events

### Conference Dinner

The **Conference Dinner** will take place on Tuesday the 3<sup>rd</sup> September 2013, including a “Cretan night” with traditional dances and songs. **Cretan musicians and a dancing group** dressed in traditional costumes will present musical treasures of Crete and the whole of Greece. The conference participants have the opportunity to sing, dance and enjoy an unforgettable night.

Accompanying persons wishing to join the conference dinner are kindly asked to arrange it on site with the OAC administration.



## Conference Excursion

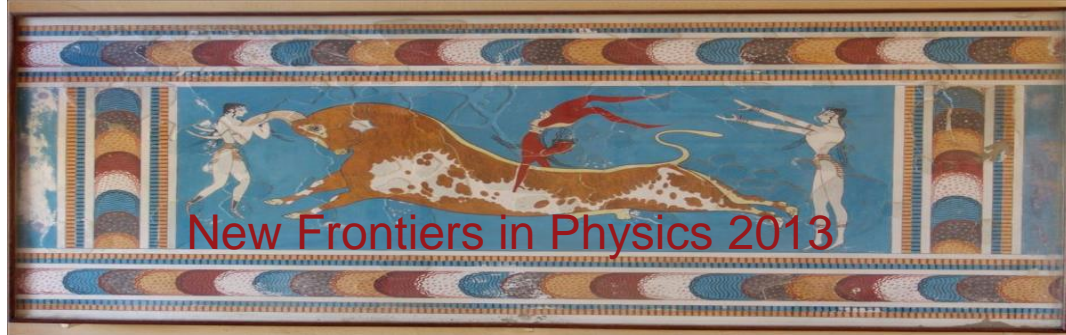
The Conference Excursion will take place on Sunday 1st September 2013, and will include a full day's guided visit to the archeological site of Knossos, the archeological Museum of Herakleion, and Rethymnon. Accompanying persons wishing to join the conference excursion are kindly asked to arrange it on site with the OAC administration.

Knossos



Disc of Phaistos, Archeological Museum of Herakleion





## Travel

There are many direct flights to Heraklion and Chania from various European cities.

The recommended airport, closest to the conference site, is Chania International Airport (CHQ). OAC is located 39 km west of CHQ airport. The best way to reach the conference site from the airport is by taxi. The full fare including airport surcharge is about 50 Euros. A cheaper way is by bus (line Hania - Castelli). However, the bus stop is located at a distance of about 1 km from OAC.

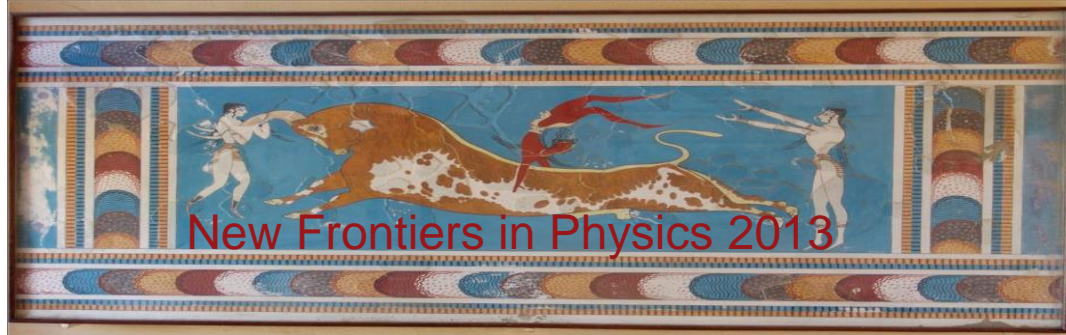
If you decide to fly to Heraklion, you can reach the conference site by taxi (one-way fare around 140 Euros) or by bus from Heraklion to Chania (one bus per hour, line Heraklion-Rethymnon-Hania, duration about three hours) and then to the OAC as explained above.

Chania can also be reached from Athens daily by boat. The company operating the route is ANEK Lines (see ferry schedules at this link). Boats dock at Chania's port Souda bay, which is located about 7 km east of the city of Chania. From there you can reach Chania and Kolymbari by bus or taxi.

## Local transport

Once the flight schedule of participants is settled, OAC will offer options for transportation to the centre by bus (only on the arrival day - 27th August, and the departure Day - 6th of September)





## Crete

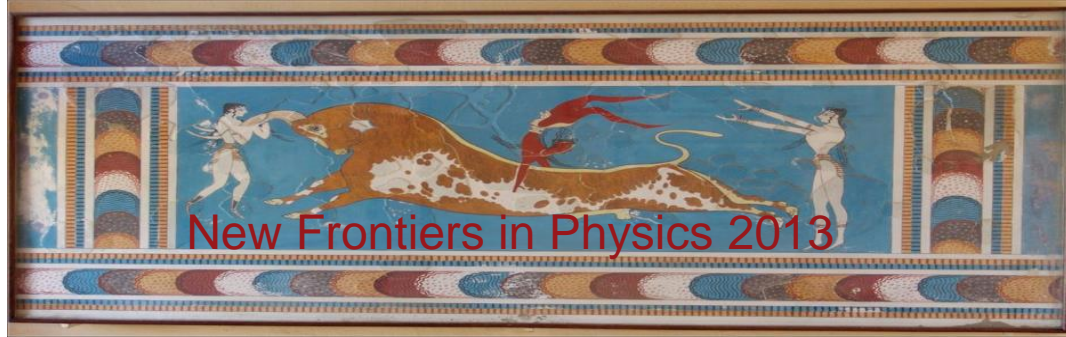
Crete is the biggest island in Greece and the fifth in the Mediterranean. It consists of four prefectures: Chania, Rethymnon, Heraklion and Lasithi. The OAC is located at Kolymbari, a small scenic village on the coast, situated at the inlet of the homonymous bay. Kolymbari is in the prefecture of Chania, about 30 km from the city of Chania.

Kolymbari is a waterfront village at the base of the Rodopou Peninsula with a long, pebble beach. Once a rural village with olive-trees and vineyards, today Kolymbari is a quiet, natural, holiday resort with a developing touristic village.

Kolymbari has several quality tavernas serving seafood and traditional food. You can try these special dishes in one of the downtown fish tavernas or at the waterfront next to the beach. There are few cafes and bars for a coffee or a drink. The village is served by a Post Office, the Bank of Chania, and several ATMs.

A short walk from downtown Kolymbari takes you to the 17th century Gonia Monastery, which is located 1 km to the north of the village and offers a magnificent view. The monastery was built as a fortress overlooking the bay and is surrounded by verdant vegetation. A centre of resistance during the revolution of 1821, today it hosts an important collection of precious post-Byzantine icons, relics, and other rare religious treasures.

A short boat trip takes you to the north-eastern edge of the Rodopou Peninsula, where you can visit the ruins of the ancient town of Diktyнна, the Gramvousa island with the Gramvousa castle at its top, and the beach Balos. (Balos can also be reached on foot from Kolymbari.)



The nearby beaches of Falasarna and Balos are regarded as two of the purest beaches of Crete. The famous Elafonissi beach is within one hour driving distance from Kolymbari.

## Weather in Crete

The weather in Crete in September normally is sunny with moderate-to-hot temperatures. Note that the hottest season in Greece ends in August. In September the sea water is still warm enough for swimming. Day time Temperature peaks between 23 and 29 degrees.



Chrysoskalitissa - Elafonnisos