



# ORCA Workshop in Paris

**Date/Time:** from Wednesday, April 17, 2013 (13:00) to Thursday, April 18, 2013 (18:30) (Europe/Paris)

**Location:** Paris APC ( Aphithéâtre Pierre-Gilles de Gennes )

**Description:** Practical informations on the workshop venue can be found here:  
<https://indico.in2p3.fr/conferenceDisplay.py?confId=8261>

Wednesday, April 17, 2013 14:00-  
 >Thursday, April 18, 2013 10:00

[Perspectives in Mass Hierarchy Measurements](#)

Wednesday, April 17, 2013 20:30 -  
 >22:30

[Workshop dinner](#) (TBD)

Wednesday, April 17, 2013 14:00-  
 >Thursday, April 18, 2013 10:00

[Perspectives in Mass Hierarchy Measurements](#)

Thursday, April 18, 2013 10:00 ->18:00

[ORCA studies](#)

## Wednesday, April 17, 2013

13:00 Registration (1h0')

### Perspectives in Mass Hierarchy Measurements (14:00 ->19:00)

*General session with highlight talks*

**Chairperson:** Antoine David Kouchner (Universite de Paris VII (FR))

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|-------|--|--|
| 14:00 | <b>Overview on the phenomenology of neutrino oscillations and mass hierarchy (30')</b> | Silvia Pascoli (University of Durham (GB))               |
| 14:30 | <b>Neutrino mass hierarchy in the atmospheric sector: Earth matter effects. (30')</b>  | Sergio Palomares-Ruiz (IFIC, Valencia & CFTP-IST Lisboa) |
| 15:00 | <b>Neutrino mass hierarchy with atmospheric neutrinos in ORCA and PINGU (30')</b>      | Mathieu Ribordy (EPFL, Lausanne)                         |
| 15:30 | <b>Neutrino mass hierarchy with supernovae (30')</b>                                   | Cristina Volpe (APC /CNRS)                               |
| 16:00 | Coffee Break (30')   |  |
| 16:30 | <b>Very long baseline neutrino experiments and mass hierarchy (30')</b>                | Francesco Vissani (INFN-LNGS)                            |
| 17:00 | <b>A long baseline beam from Protvino to ORCA (20')</b>                                | Jurgen Brunner (CPPM)                                    |
| 17:20 | <b>LAGUNA perspectives for neutrino mass hierarchy measurement (20')</b>               | Margherita Buizza Avanzini (APC/CNRS)                    |
| 17:40 | <b>Neutrino mass hierarchy in reactor neutrino experiments (20')</b>                   | Pau Novella Garijo (APC/CNRS)                            |
| 18:00 | <b>Recent results from Cosmology (30')</b>   | Jim Rich (CEA/IRFU/SPP)                                  |

### Workshop dinner (20:30 ->22:30)

**Location:** TBD

## Thursday, April 18, 2013

### Perspectives in Mass Hierarchy Measurements (09:00 ->10:00)

*General session with highlight talks*

**Chairperson:** Antoine David Kouchner (Universite de Paris VII (FR))

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|-------|--|--|
| 09:00 | <b>PINGU overview (30')</b>  | Rezo Shanidze (DESY, Zeuthen)                                      |
| 09:30 | <b>Mass hierarchy discrimination with atmospheric neutrinos in large volume ice/water Cherenkov detectors: a toy MC approach (30')</b> | Anselmo Mereaglia (Institut Pluridisciplinaire Hubert Curien (FR)) |

### ORCA studies (10:00 ->18:00)

*Closed session: workshop participants only.*

**Chairperson:** Veronique Van Elewyck (APC)

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|-------|---|-----------------------------------|
| 10:00 | <b>Technical constraints on ORCA geometry (TBC) (30')</b> | Marco Circella (INFN Bari, Italy) |
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- 10:30 NMH sensitivity with ORCA: a global fit approach (30')** Aart Heijboer (NIKHEF)
- 11:00 Coffee Break (30')**
- 11:30 Reconstruction and Flavor identification: update on HOU studies (TBC) (30')** Apostolos Tsirigotis (Hellenic Open University (HOU))
- 12:00 Muon energy reconstruction and effective volume: update from LNS studies (30')** Agata Trovato (INFN-LNS, Catania)
- 12:30 Lunch break (1h15')**
- 13:45 The filteringFit approach (20')** Dorothea Samtleben (NIKHEF)
- 14:05 LNS studies (TBC) (40')**
- 14:45 Erlangen studies (TBC) (40')**
- 15:25 Atmospheric muon studies (TBC) (20')** Annarita Margiotta (INFN & University of Bologna)
- 15:45 Coffee break (30')**
- 16:15 Discussions (official plots, reference document...) (1h45')**