

# MEXICO

## Grants for the Third Year (2007-2008)

### FIRST CALL

## CENTRO DE INVESTIGACION Y DE ESTUDIOS AVANZADOS DEL IPN

### Local Committee:

**Arnulfo Zepeda (Chair)**  
**Gerardo Herrera**  
**Miguel Angel Perez**

### Latin America to Europe

| Grant | Type | Work Program                                                                                                                                         | Months | Host Institution<br>Country | Grant-Holder               |
|-------|------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------|----------------------------|
| 1.    | RT   | Installation of V0A in P2 of ALICE. <i>Tutor: J. P. Revol</i>                                                                                        | 1      | CERN<br>Switzerland         | <i>Luis Manuel Montaña</i> |
| 2.    | STT  | Data taking with VOL at LHC.<br><i>Tutor: J. P. Revol</i>                                                                                            | 2      | CERN<br>Switzerland         | <i>Not assigned</i>        |
| 3.    | RT   | Adjustment of CMS trigger and data taking.<br><i>Tutor: Lucia Silvestris</i>                                                                         | 2      | CERN<br>Switzerland         | <i>Not assigned</i>        |
| 4.    | RT   | Work on ALICE commissioning and on accelerator technology.<br><i>Tutor: Juergen Schukraft</i>                                                        | 4      | CERN<br>Switzerland         | <i>Not assigned</i>        |
| 5.    | AT   | H1: K0s Analysis of all DIS HERA II data. Measurement of x-section. Use of K0s to find other particles; e.g. Lambda_c.<br><i>Tutor: Dr. E. Elsen</i> | 6      | DESY<br>Germany             | <i>Julia Ruiz</i>          |
| 6.    | STT  | <i>Work on the construction of the LIBO accelerator for proton therapy.</i><br><i>Tutor: Prof. Ugo Amaldi</i>                                        | 2      | CERN<br>Switzerland         | <i>Enrique Camacho</i>     |
| 7.    | RT   | ALICE: First data taking in pp collisions. <i>Tutor: Dr. A.</i>                                                                                      | 1      | CERN<br>Switzerland         | <i>Guillermo Contreras</i> |

|           |           |                                                                                                          |          |                                                    |                              |
|-----------|-----------|----------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------|------------------------------|
|           |           | <b><i>Morsch</i></b>                                                                                     |          |                                                    |                              |
| <b>8.</b> | <b>RT</b> | Analysis of inclined cosmic ray showers at pierre Auger Observatory,<br><b><i>Tutor: Enrique Zas</i></b> | <b>6</b> | <b>Universidad de Santiago de Compostela Spain</b> | <b><i>Rodrigo Pelayo</i></b> |

## Latin America to Latin America

| <b>Grant</b> | <b>Type</b> | <b>Work Program</b>                                                                                      | <b>Months</b> | <b>Host Institution Country</b>           | <b><i>Grant-Holder</i></b>   |
|--------------|-------------|----------------------------------------------------------------------------------------------------------|---------------|-------------------------------------------|------------------------------|
| <b>1.</b>    | <b>RT</b>   | Installation of the muon detector and calibration.<br><b><i>Tutor: Ingomar Allekotte</i></b>             | <b>1.5</b>    | <b>Pierre Auger Observatory Argentina</b> | <b><i>Jorge Martinez</i></b> |
| <b>2.</b>    | <b>RT</b>   | Take FD and SD data, take Lidar data, install electronics in SD.<br><b><i>Tutor: Julio Rodriguez</i></b> | <b>1</b>      | <b>Pierre Auger Observatory Argentina</b> | <b><i>Rodrigo Pelayo</i></b> |

# UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO

## Local Committee:

**Dr. Arturo Menchaca (Chair) – IFUNAM**  
**Dr. Jorge Hirsch Ganievich – ICN-UNAM**  
**Dr. Mercedes Rodríguez Villafuerte – IFUNAM**

## Alternating Members:

**Dr. Alejandro Frank – ICN-UNAM**

## Latin America to Europe

| Grant | Type | Work Program                                                                          | Months | Host Institution<br>Country                    | Grant-Holder             |
|-------|------|---------------------------------------------------------------------------------------|--------|------------------------------------------------|--------------------------|
| 1.    | RT   | V0A integration in ALICE<br><i>tutor/responsible:</i><br><i>Paolo Giubellino</i>      | 1      | CERN<br>Switzerland                            | <i>Ernesto Belmont</i>   |
| 2.    | RT   | V0A beam test in ALICE<br><i>tutor/responsible:</i><br><i>Paolo Giubellino</i>        | 1      | CERN<br>Switzerland                            | <i>Ruben Alfaro</i>      |
| 3.    | RT   | V0A beam test in ALICE<br><i>tutor/responsible:</i><br><i>Paolo Giubellino</i>        | 1      | CERN<br>Switzerland                            | <i>Arnulfo Martinez</i>  |
| 4.    | RT   | Theory Group: Supersymmetry<br><i>tutor/responsible:</i><br><i>Luis Alvarez Gaume</i> | 1      | CERN<br>Switzerland                            | <i>Jaime Besprosvany</i> |
| 5.    | RT   | Parton energy loss<br><i>tutor/responsible:</i><br><i>Nestor Armesto</i>              | 0.5    | Universidad de Santiago de Compostela<br>Spain | <i>Not assigned</i>      |
| 6.    | RT   | Physics of neutrinos<br><i>tutor/responsible:</i> <i>Jose Bernabeu</i>                | 1      | Universidad de Valencia<br>Spain               | <i>Not assigned</i>      |

|     |     |                                                                                                                             |      |                                             |                             |
|-----|-----|-----------------------------------------------------------------------------------------------------------------------------|------|---------------------------------------------|-----------------------------|
| 7.  | RT  | Cosmic Ray composition<br><i>tutor/responsible: Fernando Arqueros</i>                                                       | 0.75 | Universidad Complutense Spain               | <i>Gustavo Medina Tanco</i> |
| 8.  | RT  | Baryon production in gamma jet events<br><i>tutor/responsible: Andreas Morsch</i>                                           | 1    | CERN Switzerland                            | <i>Eliazar Cuautle</i>      |
| 9.  | RT  | Aperture and acceptance for inclined air showers in the Pierre Auger Observatory".<br><i>tutor/responsible: Enrique Zas</i> | 0.5  | Universidad de Santiago de Compostela Spain | <i>Not assigned</i>         |
| 10. | STT | V0A integration in ALICE<br><i>tutor/responsible: Paolo Giubellino</i>                                                      | 1    | CERN Switzerland                            | <i>Laura Gonzalez</i>       |
| 11. | STT | V0A integration in ALICE<br><i>tutor/responsible: Paolo Giubellino</i>                                                      | 2    | CERN Switzerland                            | <i>Lizardo Valencia</i>     |
| 12. | STT | V0A integration in ALICE<br><i>tutor/responsible: Paolo Giubellino</i>                                                      | 2    | CERN Switzerland                            | <i>Andres Anzo</i>          |
| 13. | STT | V0A data taking in ALICE<br><i>tutor/responsible: Paolo Giubellino</i>                                                      | 1    | CERN Switzerland                            | <i>Alejandro Roman</i>      |
| 14. | STT | AMS-RICH tests<br><i>tutor/responsible: M. Buenerd</i>                                                                      | 2    | LPSC, Grenoble France                       | <i>Temilotzin Ibarra</i>    |
| 15. | STT | GRID computing middleware<br><i>tutor/responsible: F. Carminati</i>                                                         | 1    | CERN Switzerland                            | <i>Luciano Diaz</i>         |
| 16. | STT | Optimization of the jet analysis in pp at 14 TEV<br><i>tutor/responsible: A. Morsch</i>                                     | 1    | CERN Switzerland                            | <i>Leonid Serkin</i>        |
| 17. | STT | Preparation for first pp physics data<br><i>tutor/responsible: J-P Revol</i>                                                | 2    | CERN Switzerland                            | <i>Antonio Ortiz</i>        |
| 18. | STT | Reconstruction of strange hadrons<br><i>tutor/responsible: A.</i>                                                           | 1.5  | CERN Switzerland                            | <i>Ivonne Maldonado</i>     |

|            |            |                                                                                                                    |            |                     |                                |
|------------|------------|--------------------------------------------------------------------------------------------------------------------|------------|---------------------|--------------------------------|
|            |            | <b><i>Morsch</i></b>                                                                                               |            |                     |                                |
| <b>19.</b> | <b>STT</b> | Optimization of jet analysis algorithms in heavy ion collisions<br><b><i>tutor/responsible: Andreas Morsch</i></b> | <b>1.5</b> | CERN<br>Switzerland | <b><i>Isabel Dominguez</i></b> |

## Latin America to Latin America

| <b>Grant</b> | <b>Type</b> | <b>Work Program</b>                                                                                            | <b>Months</b> | <b>Host Institution<br/>Country</b>               | <b><i>Grant-Holder</i></b>     |
|--------------|-------------|----------------------------------------------------------------------------------------------------------------|---------------|---------------------------------------------------|--------------------------------|
| <b>1.</b>    | <b>RT</b>   | Installation of the BATATA muon detector and calibration<br><b><i>tutor/responsible: Ingomar Allekotte</i></b> | <b>1</b>      | <b>Pierre Auger<br/>Observatory<br/>Argentina</b> | <b><i>Not assigned</i></b>     |
| <b>2.</b>    | <b>RT</b>   | Calibration of the BATATA muon detector and data taking<br><b><i>tutor/responsible: Ingomar Allekotte</i></b>  | <b>1</b>      | <b>Pierre Auger<br/>Observatory<br/>Argentina</b> | <b><i>Federico Sanchez</i></b> |

# UNIVERSIDAD MICHOACANA DE SAN NICOLAS DE HIDALGO

## Local Committee:

**Dr. Cupatitzio Ramirez (Chair)**

**Dr. Jesus Toscano**

**Dr. Victor Villanueva**

## Alternating Members:

**Dr. Arturo Fernandez**

**Dr. Luis Villasenor**

## Latin America to Latin America

| Grant | Type | Work Program                                                                                                                                          | Months | Host Institution<br>Country                                                | Grant-Holder                                   |
|-------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------------------------------------------------------------------------|------------------------------------------------|
| 1.    | STT  | Graduate student<br>Work on the AMIGA<br>upgrade for the Pierre<br>Auger Observatory.<br><i>Tutor/responsible:</i><br><i>Joao Dos Anjos</i>           | 2.0    | Centro Brasileiro<br>de<br>Pesquisas Físicas,<br>Rio de Janeiro,<br>Brazil | <i>Hugo Raymundo<br/>Marquez Falcon</i>        |
| 2.    | RT   | AUGER. Person with<br>PhD. Work on the<br>AMIGA upgrade for<br>the Pierre Auger<br>Observatory.<br><i>Tutor/responsible:</i><br><i>Joao Dos Anjos</i> | 0.75   | Centro Brasileiro<br>de<br>Pesquisas Físicas,<br>Rio de Janeiro,<br>Brazil | <i>Luis Manuel<br/>Villaseñor<br/>Cendejas</i> |

# BENEMÉRITA UNIVERSIDAD AUTÓNOMA DE PUEBLA

## Local Committee:

**Cupatitzio Ramírez Romero (Chair)**  
**Jesús Toscano Chávez**  
**Víctor Manuel Villanueva Sandoval**

## Alternating Members:

**Arturo Fernández Téllez**  
**Luis Villaseñor Cendejas**

## Latin America to Europe

| Grant | Type | Work Program                                                                                                                                    | Months | Host Institution<br>Country | Grant-Holder                            |
|-------|------|-------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------------------|-----------------------------------------|
| 1.    | RT   | ALICE. Graduate student to get acquainted with the Electronics of the ACORDE detector.<br><i>Tutor/responsible:</i><br><i>Fabio Formenti</i>    | 2      | CERN<br>Switzerland         | <i>Humberto Gonzalez Santos</i>         |
| 2.    | RT   | ALICE. Training in the installation/management of the ACORDE Data acquisition system.<br><i>Tutor/responsible:</i><br><i>Pierre Vandervevre</i> | 4      | CERN<br>Switzerland         | <i>Mario Rodriguez Cahuantzi</i>        |
| 3.    | RT   | ALICE. Training in the configuration of the ACORDE-ALICE trigger processor.<br><i>Tutor/responsible:</i><br><i>Pierre Vandervevre</i>           | 3      | CERN<br>Switzerland         | <i>Arturo Fernandez Tellez</i>          |
| 4.    | RT   | ALICE. Training in the configuration of the ACORDE-ALICE Detector Control System<br><i>Tutor/responsible:</i><br><i>Lennart Jirden</i>          | 3      | CERN<br>Switzerland         | <i>Mario Ivan Martinez Hernandez</i>    |
| 5.    | STT  | ALICE-SIMULATION. Graduate student, to get                                                                                                      | 3      | CERN<br>Switzerland         | <i>Mario Alberto Castillo Maldonado</i> |

|           |            |                                                                                                                                                                              |          |                             |                                    |
|-----------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------|------------------------------------|
|           |            | acquainted with ALICE simulation software operation.<br><i>Tutor/responsible: Andreas Morsh</i>                                                                              |          |                             |                                    |
| <b>6.</b> | <b>STT</b> | ALICE Trigger system. Graduate student, to get acquainted with the monitoring of the single and multi-muon cosmic trigger signals.<br><i>Tutor/responsible: Chris Fabjan</i> | <b>3</b> | <b>CERN<br/>Switzerland</b> | <i>Ismael Cortes<br/>Maldonado</i> |

### Latin America to Latin America

| <b>Grant</b> | <b>Type</b> | <b>Work Program</b>                                                                                                                                                | <b>Months</b> | <b>Host Institution<br/>Country</b>               | <b>Grant-Holder</b>               |
|--------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------------------------------------|-----------------------------------|
| <b>1.</b>    | <b>RT</b>   | AUGER. Training on the computer simulations of the Auger Observatory in collaboration with the Surface Detector group<br><i>Tutor/responsible: Adalberto Avila</i> | <b>1</b>      | <b>Pierre Auger<br/>Observatory<br/>Argentina</b> | <i>Ibrahim Torres<br/>Aguilar</i> |
| <b>2.</b>    | <b>RT</b>   | AUGER. Training with the data tacking procedure of the Surface Detector.<br><i>Tutor/responsible: Adalberto Avila</i>                                              | <b>1</b>      | <b>Pierre Auger<br/>Observatory<br/>Argentina</b> | <i>Oscar Martinez<br/>Bravo</i>   |