**IceCube Institutional Memorandum Of Understanding (MOU)**

**Scope of Work**

**University of Gent**

**Dirk Ryckbosch**

**Ph.D Scientists** (Faculty Scientist/Post Doc Grads): **3** (1 2 6)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Labor Cat.** | **Names** | **WBS L3** | **Tasks** | **WBS 2.1** | **WBS 2.2** | **WBS 2.3** | **WBS 2.4** | **WBS 2.5** | **Grand Total** |
| Program Management | Detector Maintenance & Operations | Computing & Data Management | Triggering & Filtering | Data Quality, Reconstruction & Simulation Tools |
| SC | UGENT SC | Engineering and R&D Support | Acoustic R&D Support | 0.05 |   |   |   |   | 0.05 |
|   | **UGENT SC Total** |  | **0.05** |  |  |  |  | **0.05** |
| GR | UGENT GR | Detector Monitoring | Detector Monitoring |   | 0.03 |   |   |   | 0.03 |
|   |   | Engineering and R&D Support | Acoustic R&D Support | 0.05 |   |   |   |   | 0.05 |
|   |   | Simulation Programs | Support IceTop Simulations, IceTop Calibrations, IceTop Reconstruction |   |   |   |   | 0.40 | 0.40 |
|   | **UGENT GR Total** |  | **0.05** | **0.03** |  |  | **0.40** | **0.48** |
| **UGENT Total** |  |  | **0.10** | **0.03** |  |  | **0.40** | **0.53** |

**Faculty:**

Dirk Ryckbosch Institutional lead

**Scientists and Post Docs:**

Mathieu Labare Tau-neutrino simulations

 Analysis topics: Tau-neutrinos

Athina Meli IceTop analysis

 Analysis topics: Cosmic rays, energy spectrum

**Ph.D. Students:**

Karim Hajismail IceTop simulations, IceTop InIce reconstructions

 Thesis/Analysis topics: Icetop, low-energy extension using InFill array

Tom Feusels IceTop simulations, IceTop-InIce reconstructions

 Thesis/Analysis topics: Cosmic ray energy spectrum and composition; coincident IceTop/IceCube analysis

Ola Jlelati Detector monitoring

 Thesis/Analysis topics: Tau-neutrinos: double-puls events

Matthias Vraeghe DOM Calibration

 Thesis/Analysis topics: Tau-neutrinos: double-bang events

Sam De Ridder IceTop simulations, IceTop-InIce reconstructions

 Thesis/Analysis topics: Cosmic ray energy spectrum and composition; 3-year analysis; inclined showers

Sander Vanheule Thesis/Analysis topics: PINGU detector development

**Diploma/Master Students:**

Simon Vercaemer Tau-neutrino double-bang analysis

Matthias Vereecken Cosmic ray acceleration in AGN jets

Jonathan D'Haese Tau-neutrino analysis using DeepCore

Simon Apers Wavelength shifter optical module test