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

**Scope of Work**

DPNC Geneva

Teresa Montaruli

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

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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 |
| KE | MONTARULI, TERESA | TFT Coordination | TFT Board Member |  |  |  | 0.10 |  | 0.10 |
|  |  | Administration | ICB member | 0.10 |  |  |  |  | 0.10 |
|  |  | Physics Filters | Online filtering |  |  |  | 0.10 |  | 0.10 |
|  | **MONTARULI, TERESA Total** | | | **0.10** |  |  | **0.20** |  | **0.30** |
| PO | AGUILAR, JUANAN | Physics Filters | Online filtering |  |  |  | 0.10 |  | 0.10 |
| Physics Filters | Muon working group co-Chair |  |  |  | 0.25 |  | 0.25 |
|  |  | Data Quality | Data and Simulation Quality |  |  |  |  | 0.15 | 0.15 |
| **AGUILAR, JUANAN Total** | | |  |  |  | **0.35** | **0.15** | **0.50** |
| VALLECORSA, SOFIA | Physics Filters | DeepCore filtering |  |  |  | **0.20** |  | **0.20** |
| Data Quality | Data and Simulation Quality for low energy searches |  |  |  |  | **0.30** | **0.30** |
| **VALLECORSA, SOFIA Total** | | |  |  |  | **0.20** | **0.30** | **0.50** |
|  | ASEN  CHRISTOV | Detector monitoring | Detector monitoring |  | 0.10 |  |  |  | 0.10 |
| GR |
|  | Physics Filters | Online Filter |  |  |  | 0.10 |  | 0.10 |
|  | Data Quality | Data and Simulation Quality |  |  |  |  | 0.30 | 0.30 |
|  | **ASEN CHRISTOV Total** | | |  | **0.10** |  | **0.10** | **0.30** | **0.50** |
|  | RAAMEZ MOHAMED | Detector monitoring | Detector monitoring |  | 0.10 |  |  |  | 0.10 |
|  | Physics Filters | Muon/EHE Filter |  |  |  | 0.10 |  | 0.10 |
|  | Data Quality | Data and Simulation Quality |  |  |  |  | 0.30 | 0.30 |
|  | **RAAMEZ MOHAMED Total** | | |  | **0.10** |  | **0.10** | **0.30** | **0.50** |
| **DPNC Total DPNC Total** | |  | | **0.10** | **0.20** |  | **0.95** | **1.05** | **2.30** |

**Faculty:**

Teresa Montaruli – Trigger-Filter-Transmission board; collaboration board, point source analysis, simulation

**Scientists and Post Docs:**

Juanan Aguilar - Muon WG co-lead. Data and simulation comparison at L3, GRB database, Final data selection for point sources.

Analysis topics: point source analysis, extended sources and Galactic plane.

Sofia Vallecorsa - Data and simulation quality for low energy searches. WIMP simulation.

Analysis topics: WIMPs from the Sun and combination with ATLAS.

**Ph.D. Students:**

Asen Christov - Data Quality monitoring online, L2 online processing, Final data selection for point sources, AGN flare analysis, temperature monitoring at South Pole.

Thesis/analysis topics: Online analysis of AGN and magnetar flares with IceCube in a multi-messenger approach.

Mohamed Raamaez - Data Quality monitoring, Muon filter, L2 and L3 filter for WIMPs, adaptation of point source methods to WIMP analysis from the Sun.

Thesis/analysis topics: Point-source analysis with multi-years of IceCube and Dark matter searches.

**Diploma/Master Students:**