IceCube Institutional Memorandum Of Understanding (MOU)

Scope of Work

DPNC Geneva

Teresa Montaruli

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

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Labor Cat. | Names | WBS L3 | | Tasks | | WBS 2.1 | WBS 2.2 | WBS 2.3 | WBS 2.4 | | WBS 2.5 | WBS 2.6 | Grand Total |
| Program Coordination | Detector Maintenance & Operations | Computing & Data Management | Data Processing & Simulation | | Software | Calibration |
| KE | **MONTARULI, TERESA** | WBS 2.1.1 Administration | | ICB member  UHECR-neutrino coordinator | | 0.15 |  |  |  | |  |  | 0.15 |
|  | WBS 2.5.3 Education & Outreach | | Responsible of Analysis Output of the group, Advising of students, Masterclass | | 0.10 |  |  |  | |  |  | 0.10 |
|  | **MONTARULI, TERESA Total** | | | | | **0.25** |  |  |  | |  |  | **0.25** |
| PO | **AL SAMARAI IMEN** | WBS 2.5.3 Reconstruction | | online filter quality and monthly data analysis  Time dependent flare search | |  |  |  |  | | 0.50 |  | 0.50 |
| **AL SAMARAI IMEN Total** | | | | |  |  |  |  | | **0.50** |  | **0.50** |
|  | **BARBANO ANASTASIA** | WBS 2.5.3 Reconstruction | | UHECR – neutrino analysis | |  |  |  |  | | 0.25 |  | 0.25 |
|  | **BARBANO ANASTASIA Total** | | | | |  |  |  |  | | **0.25** |  | **0.25** |
|  | **STEPHANIE BRON** | WBS 2.2.4 Detector monitoring | | Detector monitoring | |  | 0.05 |  |  | |  |  | 0.05 |
|  | WBS 2.5.3 Reconstruction | | L3Muon filter and reconstruction for muon diffuse searches  Monthly time dependent search | |  |  |  |  | | 0.70 |  | 0.70 |
|  | WBS 2.1.4 Education & Outreach | | Masterclass IceCube et Nuit de La Science 2018 | | 0.05 |  |  |  | |  |  | 0.05 |
|  | **STEPHANIE BRON Total** | | | | | **0.05** | **0.05** |  |  | | **0.70** |  | **0.80** |
|  | TESSA CARVER | | WBS 2.2.4 Detector monitoring | | Detector monitoring |  | 0.05 |  | |  |  |  | 0.05 | |
| WBS 2.1.4 Education & Outreach | | MasterClass IceCube and Nuit de la Science 2018 | 0.05 |  |  | |  |  |  | 0.05 | |
| WBS 2.5.3 Reconstruction  WBS 2.4.2 Simulation production | | Final filter for point sources (L3&L4), Pointsource Analysis  Simulation production verification |  |  |  | | 0.30  0.10 | 0.30 |  | 0.60  0.10 | |
|  | **TESSA CARVER Total** | | | | | **0.05** | **0.05** |  | **0.40** | | **0.30** |  | **0.80** |
| **DPNC Total DPNC Total** | | | | | | **0.35** | **0.10** |  | **0.40** | | **1.75** |  | **2.60** |

**Faculty:**

Teresa Montaruli – collaboration board, coordination the UHECR-neutrino working group, supervising DPNC analysis, procuring funds.

**Scientists and Post Docs:**

Imen Al Samarai - Postdoc, supervising of students, will conclude on Aug 31, 2018. Analysis of TXS blazar (historical data science paper) and time dependent scan

Anastasia Barbano - Postdoc, supervising of students, will start on May 1, 2018. UHECR-HESE analysis.

**Ph.D. Students:**

Tessa Carver- Monitoring shifts, PS L3-L4, PSLab SkyLab comparison. Started in Aug. 2015.

Thesis/analysis topics: Unification of diffuse and point-source filtering and point-source searches with multiple years of IceCube data.

Stephanie Bron: Monitoring shifts, PS-diffuse L4 comparison. Energy and track reconstruction. Started in April 2016. Thesis/analysis topics: Time dependent point-source searches.

Thesis/analysis topics: Flare analysis and online monitoring.

Tessa Carver should defend her thesis in October 2018 and a new student will start.

**Diploma/Master Students:** -