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

**Scope of Work**

**Friedrich-Alexander-Universität Erlangen-Nürnberg**

**Erlangen Centre for Astroparticle Physics**

**Gisela Anton**

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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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 | ANTON, GISELA  | 2.1.1 Administration | Institutional lead | 0.20 |   |   |   |  |  | 0.20 |
|  | **ANTON, GISELA TOTAL** | **0.20** |  |  |  |  |  | **0.20** |
| PO | GLÜSENKAMP, THORSTEN  | SimulationSoftware 2.5.2 / 2.5.3 | Track/Cascade reconstruction and simulation |  |  |  |  | 0.20 |  | 0.20 |
|  | **GLÜSENKAMP, THORSTEN TOTAL** |  |  |  |  |  | **0.20** |  | **0.20** |
| GR | KITTLER, Thomas  | Simulation Software 2.5.2 / 2.5.3 | Simulation verification, reconstruction development |  |  |  |  | 0.20 |  | 0.20 |
|  |  | Core Software | Software strike team |  |  |  |  | 0.25 |  | 0.25 |
|  | **KITTLER, THOMAS Total** |  |  |  |  |  | **0.45** |  |  **0.45** |
| GR | Wrede, Gerrit | Simulation Software 2.5.2 / 2.5.3 | Novel reconstruction algorithms |  |  |  |  | 0.20 |  | 0.20 |
|  | **WREDE, GERRIT TOTAL** |  |  |  |  |  | **0.20** |  | **0.20** |
| **Erlangen Total** |  |  | **0.20** |  |  |  | **0.85** |  | **1.05** |  |  |  |  |  |  |  |  |

**Faculty:**

Gisela Anton – Institutional Lead

Ulrich Katz - Faculty

**Post Docs:**Thorsten Glüsenkamp **–** Simulation and reconstruction of event signatures (cascades and tracks)

**Grad Students:**

Thomas Kittler (PhD student) – work includes verification of IceCube simulation software and reconstruction development

Thesis/Analysis topics: performance studies for high-energy detector with multi-PMT DOMs

Gerrit Wrede (PhD student) – work includes reconstruction studies and developments
in new deep-learning strategies for neutrino events

Thesis/Analysis topics: Deep-learning reconstructions of neutrino-induced signatures in IceCube

**Contribution to IceCube-Gen2:**

mDOM development by Dr. Oleg Kalekin