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

**Scope of Work**

**Universität Wuppertal**

**Klaus Helbing**

**Ph.D Scientists** (Faculty Scientist/Post Doc Grads) : **2** (1 1 5)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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 | HELBING, KLAUS | Online Filter (Pnf)  | BSM WG chair |  | 0.25 |   |  |   |  | 0.25 |
|   | **HELBING, KLAUS Total** |  |  | **0.25** |  |  |  |  | **0.25** |
| PO | POLLMANN, ANNA | Online Filter (Pnf) | SLOP filter, Monopole filter |  | 0.25 |  |  |  |  | 0.25 |
|   | **POLLMANN, ANNA Total** |  |  | **0.25** |  |  |  |  | **0.25** |
| GR | Wuppertal GR | Detector Monitoring | Monitoring shifts  |  | 0.03 |   |   |   |  | 0.03 |
|  | Bindig, Daniel  | Surface Detector Operations | Laterally separated muons in IceTop |  | 0.20 |  |  |  |  | 0.20 |
|  | Kopper, Sandro  | Reconstruction | Direct SUSY detection through double tracks |  |  |  |  | 0.20 |  | 0.20 |
|  | Soldin, Dennis  | Reconstruction | High transverse momentum muons InIce |  |  |  |  | 0.20 |  | 0.20 |
|  | Hoffmann, Ruth  | Ice Properties  | Acoustic and radio ice properties |  |  |  |  |  | 0.20 | 0.20 |
|  | Lauber, Frederik | Online Filter (Pnf) | Detection of Magnetic Monopoles through radio luminescence. |  | 0.20 |  |  |  |  | 0.20 |
|  | **WUPPERTAL GR Total** |  |  | **0.43** |  |  | **0.40** | **0.20** | **1.03** |
| **WUPPERTAL Total** |  |  |  | **0.93** |  |  | **0.40** | **0.20** | **1.53** |

**Faculty:**

K. Helbing (L) – BSM WG chair, Outreach.

**Scientists and Post Docs:**

Anna Pollmann – SLOP filter, Monopole filter

**Ph.D. Students:**

Daniel Bindig – laterally separated muons in IceTop;

Sandro Kopper – direct SUSY detection through double tracks;

Dennis Soldin – high transverse momentum muons InIce;

Ruth Hoffmann – Acoustic and radio ice properties;

Frederik Lauber – Detection of Magnetic Monopoles through radio luminescence.

**Diploma/Master Students:**

Sarah Pieper - Efficiency of light production through luminescence in ice

**Wuppertal Computing resources**

For centralized production: on average 300 CPUs.

For local production and development: 200 CPUs and 64 GPU cards.