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

**Scope Of Work**

**Universite Libre de Bruxelles**

**Kael Hanson**

**Ph.D Scientists** (Faculty Scientist/Post Doc Grads): **3** (1 2 4)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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 | HANSON, KAEL  | Administration | ExecCom member | 0.20 |  |  |  |  | 0.20 |
|  | Data Acquisition | Data Acquisition |   | 0.20 |   |   |   | 0.20 |
|  | Engineering and R&D Support | EMI/R&D | 0.10 |   |   |   |   | 0.10 |
|  | **HANSON, KAEL Total** |  | **0.30** | **0.20** |  |  |  | **0.50** |
| PO | Amary, Samir | Simulation Production | Computer Cluster - simulation |   |   | 0.20 |   |   | 0.20 |
| O’Murchadha, Aongus | Engineering and R&D Support | EMI Measurements | 0.10 |  |  |  |  | 0.10 |
| **PO Total** |  | **0.10** |  | **0.20** |  |  | **0.30** |
| GR | ULB GR | Detector Monitoring | Detector Monitoring |   | 0.06 |   |  |  | 0.06 |
| Heereman, David | Data Acquisition | Develop Hit Spooling for Supernova & others |  | 0.50 |  |  |  | 0.50 |
| Meures, Thomas | Engineering and R&D Support | EMI Measurements | 0.25 |  |  |  |  | 0.25 |
| DeWasseige, Gwen | Data Acquisition | Detector Noise Studies |  | 0.10 |  |  |  | 0.10 |
| Pinat, Elisa | Data Acquisition  | DAQ  |  | 0.20 |  |  |  | 0.20 |
| **ULB GR Total** |  | **0.25** | **0.86** |  |  |  | **1.11** |
| **ULB Total** |  |  | **0.65** | **1.06** | **0.20** |  |  | **1.91** |

**Faculty:**

Daniel Bertrand – retired Nov 2011 – continues to sign papers at least through 2013.

Kael Hanson (PI – ULB) – **DAQ (ceded DetOps to John Kelley)**, ExecCom

**Scientists/post-docs:**

Samir Amary – Computer Scientist

A. O’Murchadha – ARA/IceCube

**Students:**

David Heereman – IceCube Supernova WG and DAQ – HitSpooling

Thomas Meures – ARA/IceCube

Elisa Pinat – New PhD student (2012 – 2015) – DAQ and EHE

Gwenhael DeWasseige – New master’s student 2013-2014