# IceCube M&O Staffing Matrix sort by WBS and Tasks v8.3 2010.0518.xls

| Cat. | Description | Cat. | Description | Cat. | Description | Cat. | Description |
|---|---|---|---|---|---|---|---|
| AD | Administration | GR | Graduate Student | PO | Postdoctoral Scientist | TE | Technician |
| CS | Computer Science Eng. | KE | Key Personnel/Faculty | SC | Scientist | WO | Winterover |
| EN | Engineer | MA | Management | SE | Senior Engineer | | |

| WBS L2 | WBS L3 | US / Non-US | Institution | Labor Cat. | Names | Tasks | NSF M&O Core | U.S. IN KIND | Non U.S. In-Kind | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 2.1 Program Management | 2.1.1 Administration | US | GTECH | KE | TABOADA, IGNACIO | Chair of speakers' committee | | 0.25 | | 0.25 |
| 2.1 Program Management | 2.1.1 Administration | US | LBNL | KE | KLEIN,SPENCER | Supervise LBNL effort | 0.00 | | | 0.00 |
| 2.1 Program Management | 2.1.1 Administration | US | LBNL | KE | KLEIN,SPENCER | Publications Comm. Member | | 0.10 | | 0.10 |
| 2.1 Program Management | 2.1.1 Administration | US | PSU | KE | COWEN, DOUG | ExecCom member | | 0.20 | | 0.20 |
| 2.1 Program Management | 2.1.1 Administration | US | PSU | PO | TOALE, PATRICK | Software Coordinator | 0.38 | | | 0.38 |
| 2.1 Program Management | 2.1.1 Administration | US | UCB | KE | PRICE, BUFORD | Education & Outreach | | 0.10 | | 0.10 |
| 2.1 Program Management | 2.1.1 Administration | US | UCB | SC | WOSCHNAGG, KURT | Speakers Comm member | | 0.10 | | 0.10 |
| 2.1 Program Management | 2.1.1 Administration | US | UD | KE | GAISSER, TOM | Spokesperson | | 0.30 | | 0.30 |
| 2.1 Program Management | 2.1.1 Administration | US | UMD | KE | SULLIVAN, GREG | ExecCom member | | 0.20 | | 0.20 |
| 2.1 Program Management | 2.1.1 Administration | US | UMD | PO | OLIVAS, ALEX | Pubcom member | | 0.10 | | 0.10 |
| 2.1 Program Management | 2.1.1 Administration | US | UMD | PO | WISSING, HENRIKE | Pubcom member | | 0.10 | | 0.10 |
| 2.1 Program Management | 2.1.1 Administration | US | UW | KE | HALZEN, FRANCIS | Principle Investigator | 0.08 | 0.33 | | 0.42 |
| 2.1 Program Management | 2.1.1 Administration | US | UW | KE | KARLE, ALBRECHT | Associate Director for Science | 0.08 | 0.33 | | 0.42 |
| 2.1 Program Management | 2.1.1 Administration | US | UW | KE | WESTERHOFF, STEFAN | Pubcom member | | 0.10 | | 0.10 |
| 2.1 Program Management | 2.1.1 Administration | US | UW | KE | YECK, JAMES | Project Director | 0.75 | | | 0.75 |
| 2.1 Program Management | 2.1.1 Administration | US | UW | SC | HILL, GARY | Weekly call, ICC support | | 0.20 | | 0.20 |
| 2.1 Program Management | 2.1.1 Administration | US | UW | MA | MERCK, MARTIN | Computing Infrastructure Management | 1.00 | | | 1.00 |
| 2.1 Program Management | 2.1.1 Administration | US | UW | MA | PELES, ADI | Resource Coordinator | 0.50 | | | 0.50 |
| 2.1 Program Management | 2.1.1 Administration | US | UW | AD | UW AD | Administrative Support | 0.50 | | | 0.50 |
| 2.1 Program Management | 2.1.1 Administration | US | UW | AD | UW AD | Host Spring collaboration meeting | | 0.50 | | 0.50 |
| 2.1 Program Management | 2.1.1 Administration | **US** | **US Total** | | | | **3.29** | **2.92** | | **6.21** |
| 2.1 Program Management | 2.1.1 Administration | Non-US | DESY | KE | SPIERING, CHRISTIAN | ExecCom member | | | 0.15 | 0.15 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | DESY | AD | DESY AD | Host Fall Collaboration Meeting | | | 0.00 | 0.00 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | MPI | KE | RESCONI, ELISA | Analysis Coordinator | | | 0.50 | 0.50 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | RWTH | KE | WIEBUSCH, CHRISTOPHER | Coordinate BMBF Funding | | | 0.10 | 0.10 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | SU | KE | HULTH, PER OLOF | ExecCom member | | | 0.20 | 0.20 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | SU | KE | HULTH, PER OLOF | Outreach | | | 0.15 | 0.15 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | SU | KE | HULTH, PER OLOF | ICB Member | | | 0.05 | 0.05 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | SU | KE | WALCK, CHRISTIAN | Pubcom member | | | 0.10 | 0.10 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | SU | SC | FINLEY, CHAD SU | Coordination with LIGO | | | 0.10 | 0.10 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | ULB | KE | BERTRAND, DANIEL | ExecCom member | | | 0.20 | 0.20 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | UU | KE | BOTNER, OLGA | Outreach | | | 0.05 | 0.05 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | UU | KE | BOTNER, OLGA | Pubcom Chair | | | 0.40 | 0.40 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | UU | KE | HALLGREN, ALLAN | Outreach | | | 0.05 | 0.05 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | UU | KE | HALLGREN, ALLAN | Speakers Comm member | | | 0.10 | 0.10 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | WUPPERTAL | KE | HELBING, KLAUS | Speakers Comm member | | | 0.10 | 0.10 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | MAINZ | KE | KÖPKE, LUTZ | ExecCom member | | | 0.15 | 0.15 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | HUMBOLDT | SC | WALDENMAIER, TILO | ICC member for reconstruction | | | 0.15 | 0.15 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | BONN | KE | KOWALSKI, MAREK | Pubcom member | | | 0.10 | 0.10 |
| 2.1 Program Management | 2.1.1 Administration | Non-US | BOCHUM | KE | BECKER, JULIA | Pubcom member | | | 0.10 | 0.10 |
| 2.1 Program Management | 2.1.1 Administration | **Non-US** | **Non-US Total** | | | | | | **2.75** | **2.75** |
| 2.1 Program Management | **2.1.1 Administration** | **WBS L3** | | | | | **3.29** | **2.92** | **2.75** | **8.96** |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | US | KU | KE | BESSON, DAVE | EMI - Radio R&D | | 0.10 | | 0.10 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | US | UMD | KE | HOFFMAN, KARA | Detector R&D | | 0.20 | | 0.20 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | US | UW | SC | LANDSMAN, YAEL HAGAR | Science Support | 0.25 | | | 0.25 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | US | UW | SE | LAUNDRIE, ANDREW | EMI, Instrumentation, I/F | 0.25 | | | 0.25 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | US | UW | SE | LAUNDRIE, ANDREW | Engineering Support | 0.65 | | | 0.65 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | US | UW | SE | SANDSTROM, PERRY | EMI, Instrumentation, I/F | 0.25 | | | 0.25 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | US | UW | SE | SANDSTROM, PERRY | Engineering Support | 0.25 | | | 0.25 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | US | UW | EN | UW EN | Engineering Support | 0.10 | | | 0.10 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | US | UW | TE | UW TE | EMI, Instrumentation, I/F | 0.25 | | | 0.25 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | **US** | **US Total** | | | | **2.00** | **0.30** | | **2.30** |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | Non-US | DESY | KE | NAHNHAUER, ROLF | Acoustic R&D Support | | | 0.10 | 0.10 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | Non-US | EPFL | KE | EPFL KE | Acoustic R&D Support | | | 0.10 | 0.10 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | Non-US | RWTH | SC | RWTH SC | Acoustic R&D Support | | | 0.10 | 0.10 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | Non-US | ULB | KE | HANSON, KAEL ULB | EMI/R&D | | | 0.10 | 0.10 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | Non-US | UU | KE | HALLGREN, ALLAN | Acoustic R&D Support | | | 0.20 | 0.20 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | Non-US | WUPPERTAL | KE | HELBING, KLAUS | R&D Lead | | | 0.10 | 0.10 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | Non-US | WUPPERTAL | KE | WUPPERTAL KE | RFI | | | 0.10 | 0.10 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | Non-US | WUPPERTAL | PO | KARG, TIMO | Acoustic Lead | | | 0.10 | 0.10 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | Non-US | GENT | SC | UGENT SC | Acoustic R&D Support | | | 0.05 | 0.05 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | Non-US | GENT | GR | UGENT GR | Acoustic R&D Support | | | 0.05 | 0.05 |
| 2.1 Program Management | 2.1.2 Engineering And R&D Su | **Non-US** | **Non-US Total** | | | | | | **1.00** | **1.00** |
| 2.1 Program Management | **2.1.2 Engineering And R&D S** | **WBS L3** | | | | | **2.00** | **0.30** | **1.00** | **3.30** |
| 2.1 Program Management | 2.1.3 Usap Support | US | UW | MA | PAULOS, ROBERT | USAP Support | 0.25 | | | 0.25 |
| 2.1 Program Management | 2.1.3 Usap Support | **US** | **US Total** | | | | **0.25** | | | **0.25** |
| 2.1 Program Management | **2.1.3 Usap Support** | **WBS L3** | | | | | **0.25** | | | **0.25** |
| 2.1 Program Management | 2.1.4 Education & Outreach | US | OSU | PO | OSU PO | Outreach | | 0.05 | | 0.05 |
| 2.1 Program Management | 2.1.4 Education & Outreach | US | PSU | KE | COWEN, DOUG | Education & Outreach | | 0.05 | | 0.05 |
| 2.1 Program Management | 2.1.4 Education & Outreach | US | PSU | KE | DEYOUNG, TYCE | Education & Outreach | | 0.05 | | 0.05 |
| 2.1 Program Management | 2.1.4 Education & Outreach | US | UMD | KE | UMD KE | E&O | | 0.10 | | 0.10 |
| 2.1 Program Management | 2.1.4 Education & Outreach | US | UW | AD | MALKUS, EVELYN | Education & Outreach Coordination | 0.75 | | | 0.75 |
| 2.1 Program Management | 2.1.4 Education & Outreach | US | UW | AD | UW AD | Teachers | 0.25 | | | 0.25 |
| 2.1 Program Management | 2.1.4 Education & Outreach | US | UWRF | KE | MADSEN, JIM | Teachers' program and UWRF Upward Bound | | 0.10 | | 0.10 |
| 2.1 Program Management | 2.1.4 Education & Outreach | US | UWRF | TE | UWRF TE | Teachers Program | | 0.15 | | 0.15 |
| 2.1 Program Management | 2.1.4 Education & Outreach | **US** | **US Total** | | | | **1.00** | **0.50** | | **1.50** |
| 2.1 Program Management | **2.1.4 Education & Outreach** | **WBS L3** | | | | | **1.00** | **0.50** | | **1.50** |
| **2.1 Program Management** | **WBS L2 Total** | | | | | | **6.54** | **3.72** | **3.75** | **14.01** |
| 2.2 Detector Operations & M | 2.2 Detector Operations & Mai | US | LBNL | KE | NYGREN,DAVID R | Track Engine Trigger | | 0.10 | | 0.10 |
| 2.2 Detector Operations & M | 2.2 Detector Operations & Mai | US | UW | MA | LAITSCH, DENISE | Detector Operations Manager | 0.88 | | | 0.88 |
| 2.2 Detector Operations & M | 2.2 Detector Operations & Mai | **US** | **US Total** | | | | **0.88** | **0.10** | | **0.98** |
| 2.2 Detector Operations & M | **2.2 Detector Operations & M** | **WBS L3** | | | | | **0.88** | **0.10** | | **0.98** |
| 2.2 Detector Operations & M | 2.2.1 Run Coordination | US | UW | SC | KRASBERG, MARK | Winterovers coordinator | 0.25 | | | 0.25 |
| 2.2 Detector Operations & M | 2.2.1 Run Coordination | US | UW | WO | UW WO | Operate Detector (Winter-Overs) | 3.00 | | | 3.00 |
| 2.2 Detector Operations & M | 2.2.1 Run Coordination | **US** | **US Total** | | | | **3.25** | | | **3.25** |
| 2.2 Detector Operations & M | 2.2.1 Run Coordination | Non-US | UC | GR | UC GR | Flasher Runs | | | 0.10 | 0.10 |
| 2.2 Detector Operations & M | 2.2.1 Run Coordination | Non-US | BONN | PO | BOESER SEBASTIAN | Run Coordinator | | | 0.50 | 0.50 |
| 2.2 Detector Operations & M | 2.2.1 Run Coordination | **Non-US** | **Non-US Total** | | | | | | **0.60** | **0.60** |
| 2.2 Detector Operations & M | **2.2.1 Run Coordination** | **WBS L3** | | | | | **3.25** | | **0.60** | **3.85** |
| 2.2 Detector Operations & M | 2.2.10 Supernova Operations | Non-US | MAINZ | GR | KROLL, GÖSTA | SuperNova Operations | | | 0.50 | 0.50 |
| 2.2 Detector Operations & M | 2.2.10 Supernova Operations | Non-US | MAINZ | GR | WIEBE, KLAUS | SuperNova IceCube Live integration | | | 0.10 | 0.10 |
| 2.2 Detector Operations & M | 2.2.10 Supernova Operations | **Non-US** | **Non-US Total** | | | | | | **0.60** | **0.60** |
| 2.2 Detector Operations & M | **2.2.10 Supernova Operations** | **WBS L3** | | | | | | | **0.60** | **0.60** |

# IceCube M&O Staffing Matrix sort by WBS and Tasks v8.3 2010.0518.xls

| Cat. | Description | Cat. | Description | Cat. | Description | Cat. | Description |
|---|---|---|---|---|---|---|---|
| AD | Administration | GR | Graduate Student | PO | Postdoctoral Scientist | TE | Technician |
| CS | Computer Science Eng. | KE | Key Personnel/Faculty | SC | Scientist | WO | Winterover |
| EN | Engineer | MA | Management | SE | Senior Engineer | | |

| WBS L2 | WBS L3 | US / Non-US | Institution | Labor Cat. | Names | Tasks | NSF M&O Core | U.S. IN KIND | Non U.S. In-Kind | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 2.2 Detector Operations & M | 2.2.2 Data Acquisition | US | LBNL | CS | BEATTIE,KEITH S | Maintain DAQ Software Systems (incl. triggers, DOM SW, etc. up to Event Builder) | 0.00 | | | 0.00 |
| 2.2 Detector Operations & M | 2.2.2 Data Acquisition | US | LBNL | EN | STEZELBERGER,THORSTEN | Maintain DAQ Hardware (Hubs, DOR, Clocks, GPS,...) | 0.15 | | | 0.15 |
| 2.2 Detector Operations & M | 2.2.2 Data Acquisition | US | UD | KE | UD KE | DAQ Monitoring | | 0.05 | | 0.05 |
| 2.2 Detector Operations & M | 2.2.2 Data Acquisition | US | UW | SC | KRASBERG, MARK | DOM Cal Maintenance, DOM Monitoring snd Troubleshooting | 0.35 | | | 0.35 |
| 2.2 Detector Operations & M | 2.2.2 Data Acquisition | US | UW | SC | KRASBERG, MARK | Provide Real-time System Monitoring and Paging | 0.20 | | | 0.20 |
| 2.2 Detector Operations & M | 2.2.2 Data Acquisition | US | UW | SC | WENDT, CHRISTOPHER | DOM CAL Maintenance | 0.25 | | | 0.25 |
| 2.2 Detector Operations & M | 2.2.2 Data Acquisition | US | UW | SE | GLOWACKI, DAVID | Maintain DAQ Software Systems (incl. triggers, DOM SW, etc. up to Event Builder) | 1.00 | | | 1.00 |
| 2.2 Detector Operations & M | 2.2.2 Data Acquisition | US | UW | SE | SANDSTROM, PERRY | Maintain DAQ Hardware (Hubs, DOR, Clocks, GPS,...) | 0.25 | | | 0.25 |
| 2.2 Detector Operations & M | 2.2.2 Data Acquisition | US | UW | CS | JACOBSEN, JOHN (NPX) | Maintain DAQ Hardware (Hubs, DOR, Clocks, GPS,...) | 0.15 | | | 0.15 |
| 2.2 Detector Operations & M | 2.2.2 Data Acquisition | US | UW | GR | WEAVER, CHRISTOPHER | DOM CAL Maintenance | | 0.20 | | 0.20 |
| 2.2 Detector Operations & M | 2.2.2 Data Acquisition | **US** | **US Total** | | | | **2.35** | **0.25** | | **2.60** |
| 2.2 Detector Operations & M | 2.2.2 Data Acquisition | Non-US | DESY | SC | SULANKE, K.-H. | DAQ Firmware Support | | | 0.15 | 0.15 |
| 2.2 Detector Operations & M | 2.2.2 Data Acquisition | Non-US | ULB | KE | HANSON, KAEL ULB | Data Acquisition | | | 0.20 | 0.20 |
| 2.2 Detector Operations & M | 2.2.2 Data Acquisition | **Non-US** | **Non-US Total** | | | | | | **0.35** | **0.35** |
| 2.2 Detector Operations & M | **2.2.2 Data Acquisition** | **WBS L3** | | | | | **2.35** | **0.25** | **0.35** | **2.95** |
| 2.2 Detector Operations & M | 2.2.3 Online Filter (Pnf) | US | UMD | SC | BLAUFUSS, ERIK | Maintain PnF Software and Online Filters | 0.20 | | | 0.20 |
| 2.2 Detector Operations & M | 2.2.3 Online Filter (Pnf) | US | UMD | SC | SCHMIDT, TORSTEN | Maintain PnF Software and Online Filters | 0.25 | | | 0.25 |
| 2.2 Detector Operations & M | 2.2.3 Online Filter (Pnf) | US | UMD | GR | REDL, PETER | Online Filter Testing | | 0.25 | | 0.25 |
| 2.2 Detector Operations & M | 2.2.3 Online Filter (Pnf) | **US** | **US Total** | | | | **0.45** | **0.25** | | **0.70** |
| 2.2 Detector Operations & M | **2.2.3 Online Filter (Pnf)** | **WBS L3** | | | | | **0.45** | **0.25** | | **0.70** |
| 2.2 Detector Operations & M | 2.2.4 Sps Operations | US | UW | SE | SANDSTROM, PERRY | Maintain South Pole Computing Hardware Infrastructure and operating systems | 0.25 | | | 0.25 |
| 2.2 Detector Operations & M | 2.2.4 Sps Operations | US | UW | CS | SOUNDARAPANDIAN, KARTH | Maintain South Pole Computing Hardware Infrastructure and operating systems | 0.75 | | | 0.75 |
| 2.2 Detector Operations & M | 2.2.4 Sps Operations | US | UW | EN | WISNIEWSKI, PAUL | Networking and Security Maintenance | 0.25 | | | 0.25 |
| 2.2 Detector Operations & M | 2.2.4 Sps Operations | **US** | **US Total** | | | | **1.25** | | | **1.25** |
| 2.2 Detector Operations & M | **2.2.4 Sps Operations** | **WBS L3** | | | | | **1.25** | | | **1.25** |
| 2.2 Detector Operations & M | 2.2.5 Spts Operations | US | UW | SE | LAUNDRIE, ANDREW | Maintain South Pole Test System Hardware and Operating Systems | 0.10 | | | 0.10 |
| 2.2 Detector Operations & M | 2.2.5 Spts Operations | US | UW | CS | SOUNDARAPANDIAN, KARTH | Maintain South Pole Test System Hardware and Operating Systems | 0.25 | | | 0.25 |
| 2.2 Detector Operations & M | 2.2.5 Spts Operations | US | UW | EN | UW EN | Maintain South Pole Test System Hardware and Operating Systems | 0.50 | | | 0.50 |
| 2.2 Detector Operations & M | 2.2.5 Spts Operations | **US** | **US Total** | | | | **0.85** | | | **0.85** |
| 2.2 Detector Operations & M | **2.2.5 Spts Operations** | **WBS L3** | | | | | **0.85** | | | **0.85** |
| 2.2 Detector Operations & M | 2.2.6 Experiment Control | US | UW | CS | JACOBSEN, JOHN (NPX) | IceCube Live Maintenance and Upgrades | 0.85 | | | 0.85 |
| 2.2 Detector Operations & M | 2.2.6 Experiment Control | **US** | **US Total** | | | | **0.85** | | | **0.85** |
| 2.2 Detector Operations & M | **2.2.6 Experiment Control** | **WBS L3** | | | | | **0.85** | | | **0.85** |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | CAU | KE | JAPARIDZE, GEORGE | Monitoring shifts | | 0.02 | | 0.02 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | GTECH | GR | GTECH GR | Monitoring shifts | | 0.03 | | 0.03 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | KU | KE | BESSON, DAVE | Monitoring shifts | | 0.02 | | 0.02 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | LBNL | SC | KIRYLUK,JOANNA | BadDomList | | 0.20 | | 0.20 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | LBNL | PO | LBNL PO | Monitoring shifts | | 0.09 | | 0.09 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | OSU | PO | OSU PO | Monitoring shifts | | 0.02 | | 0.02 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | OSU | PO | ROTT, CARSTEN | Maintain good run list | | 0.20 | | 0.20 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | OSU | GR | DAVIS, JAMES | Monitoring shifts | | 0.01 | | 0.01 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | PSU | PO | LAFEBRE, SVEN | Monitoring shifts | | 0.03 | | 0.03 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | PSU | GR | PSU GR | Monitoring shifts | | 0.03 | | 0.03 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | SUBR | SC | TER-ANTONYAN, SAMVEL | Detector Monitoring | | 0.02 | | 0.02 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | UA | GR | XU, DONGLIAN | Monitoring shifts | | 0.03 | | 0.03 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | UAA | KE | RAWLINS, KATHERINE | Monitoring shifts | | 0.02 | | 0.02 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | UCB | SC | FILIMONOV, KIRILL | Coordinate Monitoring | | 0.50 | | 0.50 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | UCB | SC | UCB SC | Monitoring shifts | | 0.02 | | 0.02 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | UCB | GR | UCB GR | Monitoring shifts | | 0.02 | | 0.02 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | UCI | PO | SILVERSTRI, ANDREA | Monitoring shifts | | 0.01 | | 0.01 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | UCI | GR | HANSON, JORDAN | Monitoring shifts | | 0.01 | | 0.01 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | UD | PO | KUWABARA, TAKAO | Temp. & Pressure atmospheric monitoring | | 0.25 | | 0.25 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | UMD | PO | UMD PO | Monitoring shifts | | 0.03 | | 0.03 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | UMD | GR | UMD GR | Monitoring shifts | | 0.06 | | 0.06 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | UW | PO | UW PO | Monitoring shifts | | 0.12 | | 0.12 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | UW | GR | BAKER, MICHAEL | Stability | | 0.10 | | 0.10 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | US | UW | GR | UW GR | Monitoring shifts | | 0.12 | | 0.12 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | **US** | **US Total** | | | | | **1.94** | | **1.94** |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | CHIBA | GR | CHIBA GR | Detector Monitoring | | | 0.03 | 0.03 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | DESY | SC | DESY SC | Detector Monitoring | | | 0.06 | 0.06 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | DESY | SC | BENABDERRAHMANE, LOFTI | Deputy Monitoring Coordinator | | | 0.20 | 0.20 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | DESY | GR | DESY GR | Detector Monitoring | | | 0.12 | 0.12 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | DTMND | GR | DTMD GR | Detector Monitoring | | | 0.03 | 0.03 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | EPFL | GR | EPFL GR | Detector Monitoring | | | 0.03 | 0.03 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | MPI | GR | MPI GR | Detector Monitoring | | | 0.05 | 0.05 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | RWTH | GR | RWTH GR | Monitoring (3 weeks) | | | 0.09 | 0.09 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | SU | GR | SU GR | Detector Monitoring | | | 0.06 | 0.06 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | UC | GR | UC GR | Detector Monitoring | | | 0.02 | 0.02 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | ULB | GR | ULB GR | Detector Monitoring | | | 0.03 | 0.03 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | UMH | GR | KOHNEN, GEORGE | Detector Monitoring | | | 0.03 | 0.03 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | UOX | KE | SARKAR, SUBIR | Detector Monitoring | | | 0.02 | 0.02 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | UU | GR | UU GR | Detector Monitoring | | | 0.03 | 0.03 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | VUB | PO | VUB PO | Monitoring shifts | | | 0.06 | 0.06 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | VUB | GR | VUB GR | Detector Monitoring | | | 0.03 | 0.03 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | WUPPERTAL | GR | WUPPERTAL GR | South Pole EMI Monitoring | | | 0.15 | 0.15 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | WUPPERTAL | GR | WUPPERTAL GR | AURA, SPATS, surface antenna operations (RICE) | | | 0.45 | 0.45 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | MAINZ | GR | UM GR | Detector Monitoring | | | 0.05 | 0.05 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | MAINZ | GR | SCHATTO, KAI | Monitoring IceCube Live integration | | | 0.35 | 0.35 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | HUMBOLDT | SC | HUMB SC | Detector Monitoring | | | 0.03 | 0.03 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | GENT | GR | UGENT GR | Detector Monitoring | | | 0.03 | 0.03 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | BONN | GR | UBONN GR | Detector Monitoring | | | 0.03 | 0.03 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | Non-US | BOCHUM | GR | UBOCHUM GR | Detector Monitoring | | | 0.03 | 0.03 |
| 2.2 Detector Operations & M | 2.2.7 Detector Monitoring | **Non-US** | **Non-US Total** | | | | | | **2.01** | **2.01** |
| 2.2 Detector Operations & M | **2.2.7 Detector Monitoring** | **WBS L3** | | | | | | **1.94** | **2.01** | **3.95** |

# IceCube M&O Staffing Matrix sort by WBS and Tasks v8.3 2010.0518.xls

| Cat. | Description | Cat. | Description | Cat. | Description | Cat. | Description |
|---|---|---|---|---|---|---|---|
| AD | Administration | GR | Graduate Student | PO | Postdoctoral Scientist | TE | Technician |
| CS | Computer Science Eng. | KE | Key Personnel/Faculty | SC | Scientist | WO | Winterover |
| EN | Engineer | MA | Management | SE | Senior Engineer | | |

| WBS L2 | WBS L3 | US / Non-US | Institution | Labor Cat. | Names | Tasks | NSF M&O Core | U.S. IN KIND | Non U.S. In-Kind | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 2.2 Detector Operations & M | 2.2.8 Detector Calibration | US | GTECH | GR | DAUGHHETEE, JACOB | Standard Candle Vertex and Energy Calibration | | 0.20 | | 0.20 |
| 2.2 Detector Operations & M | 2.2.8 Detector Calibration | US | LBNL | SC | KIRYLUK,JOANNA | Flasher Runs | | 0.10 | | 0.10 |
| 2.2 Detector Operations & M | 2.2.8 Detector Calibration | US | UA | KE | WILLIAMS, DAWN | managing flasher runs and other calibrations (stage 2 geometry) | | 0.15 | | 0.15 |
| 2.2 Detector Operations & M | 2.2.8 Detector Calibration | US | UA | PO | ZARZHITZKY, PAVEL | taking flasher runs | | 0.20 | | 0.20 |
| 2.2 Detector Operations & M | 2.2.8 Detector Calibration | US | UA | GR | XU, DONGLIAN | geometry systematic | | 0.25 | | 0.25 |
| 2.2 Detector Operations & M | 2.2.8 Detector Calibration | US | UCB | SC | WOSCHNAGG, KURT | Calibration Lead | | 0.15 | | 0.15 |
| 2.2 Detector Operations & M | 2.2.8 Detector Calibration | US | UCB | GR | UCB GR | Calibration | | 0.10 | | 0.10 |
| 2.2 Detector Operations & M | 2.2.8 Detector Calibration | US | UW | SC | WENDT, CHRISTOPHER | Prepare and Evaluate Flasher Calibrations 0.25 Evaluate (DomCal) Calibration Runs and update Calibration constants 0.1 | 0.28 | | | 0.28 |
| 2.2 Detector Operations & M | 2.2.8 Detector Calibration | US | UW | GR | GLADSTONE, LAURA | Moon Shadow | | 0.15 | | 0.15 |
| 2.2 Detector Operations & M | 2.2.8 Detector Calibration | US | UW | GR | SANTANDER, MARCOS | Calibration with flashers | | 0.20 | | 0.20 |
| 2.2 Detector Operations & M | 2.2.8 Detector Calibration | **US** | **US Total** | | | | **0.28** | **1.50** | | **1.78** |
| 2.2 Detector Operations & M | 2.2.8 Detector Calibration | Non-US | DESY | GR | ACHIM STOESSL | Flasher Analysis | | | 0.20 | 0.20 |
| 2.2 Detector Operations & M | 2.2.8 Detector Calibration | Non-US | DESY | GR | EIKE MIDDELL | Flasher Analysis | | | 0.10 | 0.10 |
| 2.2 Detector Operations & M | 2.2.8 Detector Calibration | **Non-US** | **Non-US Total** | | | | | | **0.30** | **0.30** |
| 2.2 Detector Operations & M | **2.2.8 Detector Calibration** | **WBS L3** | | | | | **0.28** | **1.50** | **0.30** | **2.08** |
| 2.2 Detector Operations & M | 2.2.9 Icetop Operations | US | UD | SC | UD SC | Coordinate IceTop Operations | 1.00 | | | 1.00 |
| 2.2 Detector Operations & M | 2.2.9 Icetop Operations | US | UWRF | KE | SPICZAK, GLENN | IceTop tank Monitoring | | 0.03 | | 0.03 |
| 2.2 Detector Operations & M | 2.2.9 Icetop Operations | US | UWRF | SC | TAMBURRO, ALESSIO | IceTop tank Monitoring | | 0.03 | | 0.03 |
| 2.2 Detector Operations & M | 2.2.9 Icetop Operations | **US** | **US Total** | | | | **1.00** | **0.05** | | **1.05** |
| 2.2 Detector Operations & M | 2.2.9 Icetop Operations | Non-US | HUMBOLDT | SC | WALDENMAIER, TILO | IceTop Operations | | | 0.10 | 0.10 |
| 2.2 Detector Operations & M | 2.2.9 Icetop Operations | **Non-US** | **Non-US Total** | | | | | | **0.10** | **0.10** |
| 2.2 Detector Operations & M | **2.2.9 Icetop Operations** | **WBS L3** | | | | | **1.00** | **0.05** | **0.10** | **1.15** |
| **2.2 Detector Operations &** | **WBS L2 Total** | | | | | | **11.15** | **4.09** | **3.96** | **19.20** |
| 2.3 Computing And Data M | 2.3.1 Core Software | US | UMD | SC | BLAUFUSS, ERIK | Core Software | | 0.00 | | 0.00 |
| 2.3 Computing And Data M | 2.3.1 Core Software | US | UMD | SC | SCHMIDT, TORSTEN | Maintain Core Analysis Framework (IceTray) | 0.50 | | | 0.50 |
| 2.3 Computing And Data M | 2.3.1 Core Software | US | UMD | CS | UMD CS | Maintain Core Software Repository | 0.25 | | | 0.25 |
| 2.3 Computing And Data M | 2.3.1 Core Software | US | UMD | GR | UMD GR | Core Software | | 0.25 | | 0.25 |
| 2.3 Computing And Data M | 2.3.1 Core Software | US | UMD | GR | EHRLICH, RALF | Core Software | | 0.50 | | 0.50 |
| 2.3 Computing And Data M | 2.3.1 Core Software | US | UMD | TE | STRASZHEIM, TROY | Maintain Core Analysis Framework (IceTray) | 0.88 | | | 0.88 |
| 2.3 Computing And Data M | 2.3.1 Core Software | US | UW | TE | DIAZ-VELEZ, JUAN CARLOS | Simulation Programs: diplopia | 0.80 | | | 0.80 |
| 2.3 Computing And Data M | 2.3.1 Core Software | US | UW | TE | FADIRAN, OLADIPO | Maintain Data Processing Software | 0.20 | | | 0.20 |
| 2.3 Computing And Data M | 2.3.1 Core Software | US | UW | TE | UW TE | Maintain Data Processing Software | 0.30 | | | 0.30 |
| 2.3 Computing And Data M | 2.3.1 Core Software | **US** | **US Total** | | | | **2.93** | **0.75** | | **3.68** |
| 2.3 Computing And Data M | 2.3.1 Core Software | Non-US | RWTH | SC | RWTH SC | Maintain Reconstruction Framework | | | 0.10 | 0.10 |
| 2.3 Computing And Data M | 2.3.1 Core Software | Non-US | RWTH | GR | RWTH GR | Maintain Reconstruction Framework | | | 0.15 | 0.15 |
| 2.3 Computing And Data M | 2.3.1 Core Software | Non-US | ULB | PO | MAROTTA, ALBERTO | Maintain and Operate Database Systems (I3OmDb) | | | 0.20 | 0.20 |
| 2.3 Computing And Data M | 2.3.1 Core Software | **Non-US** | **Non-US Total** | | | | | | **0.45** | **0.45** |
| 2.3 Computing And Data M | **2.3.1 Core Software** | **WBS L3** | | | | | **2.93** | **0.75** | **0.45** | **4.13** |
| 2.3 Computing And Data M | 2.3.2 Data Storage & Transfer | US | UW | EN | MACKENZIE, CYNTHIA | Transfer Data from S. Pole to UW Data Warehouse and Archive at S. Pole<br>Maintain Data Transfer Software (SPADE)<br>Maintain Data Warehouse Standards, Software (Ingest), Data Access (FTP), and Web Interface | 0.50 | | | 0.50 |
| 2.3 Computing And Data M | 2.3.2 Data Storage & Transfer | US | UW | AD | RICHARDS, JOHN | Maintain and Operate Data Storage Infrastructure | 1.00 | | | 1.00 |
| 2.3 Computing And Data M | 2.3.2 Data Storage & Transfer | US | UW | TE | FADIRAN, OLADIPO | Transformation of Data for Long-Term Persistence and Archival, e.g., HDF5<br>Maintain Data Warehouse Standards, Software (Ingest), Data Access (FTP), and Web Interface | 0.20 | | | 0.20 |
| 2.3 Computing And Data M | 2.3.2 Data Storage & Transfer | US | UW | TE | MCGUIRE, PAUL | Maintain and Operate Data Storage Infrastructure | 0.50 | | | 0.50 |
| 2.3 Computing And Data M | 2.3.2 Data Storage & Transfer | US | UW | TE | UW TE | Transformation of Data for Long-Term Persistence and Archival, e.g., HDF5<br>Maintain Data Warehouse Standards, Software (Ingest), Data Access (FTP), and Web Interface | 0.30 | | | 0.30 |
| 2.3 Computing And Data M | 2.3.2 Data Storage & Transfer | US | UW | TE | MEADE, PATRICK | Transfer Data from S. Pole to UW Data Warehouse and Archive at S. Pole<br>Maintain Data Transfer Software (SPADE)<br>Maintain Data Warehouse Standards, Software (Ingest), Data Access (FTP), and Web Interface | 0.50 | | | 0.50 |
| 2.3 Computing And Data M | 2.3.2 Data Storage & Transfer | **US** | **US Total** | | | | **3.00** | | | **3.00** |
| 2.3 Computing And Data M | **2.3.2 Data Storage & Transfe** | **WBS L3** | | | | | **3.00** | | | **3.00** |
| 2.3 Computing And Data M | 2.3.3 Computing Resources | US | PSU | PO | PSU PO | Coordination and Support for Grid and distributed computing | 0.25 | | | 0.25 |
| 2.3 Computing And Data M | 2.3.3 Computing Resources | US | SUBR | SC | TER-ANTONYAN, SAMVEL | LONI Grid computing | | 0.30 | | 0.30 |
| 2.3 Computing And Data M | 2.3.3 Computing Resources | US | UMD | TE | UMD TE | Coordination and Support for Grid and distributed computing | 0.25 | | | 0.25 |
| 2.3 Computing And Data M | 2.3.3 Computing Resources | US | UW | EN | BARNET, STEVE | 0.75 Maintain Core High Performance Computing Systems<br>0.25 Coordination and Support for Grid and distributed computing | 1.00 | | | 1.00 |
| 2.3 Computing And Data M | 2.3.3 Computing Resources | US | UW | EN | BOGEN, DAVID | Maintain Data Center Infrastructure | 1.00 | | | 1.00 |
| 2.3 Computing And Data M | 2.3.3 Computing Resources | US | UW | EN | WISNIEWSKI, PAUL | Maintain Data Center Networking and Security | 0.75 | | | 0.75 |
| 2.3 Computing And Data M | 2.3.3 Computing Resources | US | UW | TE | MCGUIRE, PAUL | Maintain Data Center Infrastructure | 0.50 | | | 0.50 |
| 2.3 Computing And Data M | 2.3.3 Computing Resources | US | UW | TE | UW TE | Maintain Core High Performance Computing Systems | 0.44 | | | 0.44 |
| 2.3 Computing And Data M | 2.3.3 Computing Resources | **US** | **US Total** | | | | **4.19** | **0.30** | | **4.49** |
| 2.3 Computing And Data M | 2.3.3 Computing Resources | Non-US | DESY | GR | KISLAT, FABIAN | Reconstruciton Coordinator (acting), Maintain Reconstruction Framework | | | 0.15 | 0.15 |
| 2.3 Computing And Data M | 2.3.3 Computing Resources | Non-US | DESY | TE | DESY TE | European Data Center -Distributed Computing and Labor | | | 2.00 | 2.00 |
| 2.3 Computing And Data M | 2.3.3 Computing Resources | Non-US | DTMND | SC | PIELOTH, DAMIAN | Coordinate GRID computing in Germany | | | 0.25 | 0.25 |
| 2.3 Computing And Data M | 2.3.3 Computing Resources | Non-US | SU | SC | SU SC | Computing Resources | | | 0.50 | 0.50 |
| 2.3 Computing And Data M | 2.3.3 Computing Resources | Non-US | UMH | GR | KOHNEN, GEORGE | IC database management | | | 0.30 | 0.30 |
| 2.3 Computing And Data M | 2.3.3 Computing Resources | **Non-US** | **Non-US Total** | | | | | | **3.20** | **3.20** |
| 2.3 Computing And Data M | **2.3.3 Computing Resources** | **WBS L3** | | | | | **4.19** | **0.30** | **3.20** | **7.69** |

# IceCube M&O Staffing Matrix sort by WBS and Tasks v8.3 2010.0518.xls

| Cat. | Description | Cat. | Description | Cat. | Description | Cat. | Description |
|---|---|---|---|---|---|---|---|
| AD | Administration | GR | Graduate Student | PO | Postdoctoral Scientist | TE | Technician |
| CS | Computer Science Eng. | KE | Key Personnel/Faculty | SC | Scientist | WO | Winterover |
| EN | Engineer | MA | Management | SE | Senior Engineer | | |

| WBS L2 | WBS L3 | US / Non-US | Institution | Labor Cat. | Names | Tasks | NSF M&O Core | U.S. IN KIND | Non U.S. In-Kind | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 2.3 Computing And Data M | 2.3.4 Data Production Process | US | UW | PO | TOSCANO, SIMONA | Cascade data processing | | 0.35 | | 0.35 |
| 2.3 Computing And Data M | 2.3.4 Data Production Process | US | UW | TE | MEADE, PATRICK | 0.2 Unpacking, Decoding and Calibration of Raw Data in the North (Level1)<br>0.3 Run Common Reconstructions on UW IceCube Compute Cluster (Level2) | 0.50 | | | 0.50 |
| 2.3 Computing And Data M | 2.3.4 Data Production Process | **US** | **US Total** | | | | **0.50** | **0.35** | | **0.85** |
| 2.3 Computing And Data M | 2.3.4 Data Production Process | Non-US | RWTH | GR | SCHUKRAFT, ANNE | Photonics Production | | | 0.25 | 0.25 |
| 2.3 Computing And Data M | 2.3.4 Data Production Process | **Non-US** | **Non-US Total** | | | | | | **0.25** | **0.25** |
| 2.3 Computing And Data M | **2.3.4 Data Production Proce** | **WBS L3** | | | | | **0.50** | **0.35** | **0.25** | **1.10** |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | US | GTECH | PO | TEPE, ANDREAS | Simulation Production | | 0.20 | | 0.20 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | US | LBNL | SC | KIRYLUK,JOANNA | Simulation Production on PDSF | | 0.20 | | 0.20 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | US | PSU | PO | PSU PO | Simulation Production | | 0.17 | | 0.17 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | US | UD | PO | HUSSAIN, SHAHID | IceTop Simulation Production | | 0.15 | | 0.15 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | US | UMD | GR | CHRISTY, BRIAN | Simulation Production coordination | | 0.25 | | 0.25 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | US | UW | SC | DESIATI, PAOLO | Coordination of Simulation Production | 0.70 | | | 0.70 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | US | UW | PO | HOSHINA, K | Photon prop. Calibration | | 0.10 | | 0.10 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | US | UW | GR | EISCH, JONATHAN | IceTop Simulation Production | | 0.30 | | 0.30 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | US | UW | TE | FADIRAN, OLADIPO | 0.30 Coordination of Simulation Production<br>0.30 Maintain production configurations, manage test production and maintain web portal. | 0.60 | | | 0.60 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | **US** | **US Total** | | | | **1.30** | **1.37** | | **2.67** |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | Non-US | DESY | KE | WALTER, MICHAEL | Simulation Production Cluster | | | 0.20 | 0.20 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | Non-US | DESY | SC | BERGMANN, JENS | Simulation Production Cluster | | | 0.25 | 0.25 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | Non-US | DESY | GR | DESY GR | Simulation Production Cluster | | | 0.15 | 0.15 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | Non-US | DTMND | GR | DTMD GR | Simulation Production | | | 0.40 | 0.40 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | Non-US | RWTH | SC | RWTH SC | Simulation Production on cluster/GRID | | | 0.10 | 0.10 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | Non-US | RWTH | GR | RWTH GR | Simulation Production on cluster/GRID | | | 0.85 | 0.85 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | Non-US | SU | GR | JOHANSSON, HENRIK | GRID/Simulation production & development | | | 0.20 | 0.20 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | Non-US | ULB | PO | MAROTTA, ALBERTO | Computer Cluster - simulation | | | 0.30 | 0.30 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | Non-US | VUB | PO | STRAHLER, ERIK | simulation of ice properties and DOM sensitivities | | | 0.25 | 0.25 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | Non-US | ALBERTA | KE | GRANT, DARREN | WestGrid computing | | | 0.10 | 0.10 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | Non-US | WUPPERTAL | PO | KARG, TIMO | Simulation Production | | | 0.20 | 0.20 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | Non-US | WUPPERTAL | GR | WUPPERTAL GR | Simulation Production | | | 0.20 | 0.20 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | Non-US | MAINZ | SC | AHRENS, JENS | Simulation Production | | | 0.15 | 0.15 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | Non-US | MAINZ | GR | WIEBE, KLAUS | Simulation Production | | | 0.30 | 0.30 |
| 2.3 Computing And Data M | 2.3.5 Simulation Production | **Non-US** | **Non-US Total** | | | | | | **3.65** | **3.65** |
| 2.3 Computing And Data M | **2.3.5 Simulation Production** | **WBS L3** | | | | | **1.30** | **1.37** | **3.65** | **6.32** |
| **2.3 Computing And Data I** | **WBS L2 Total** | | | | | | **11.92** | **2.77** | **7.55** | **22.23** |
| 2.4 Triggering And Filtering | 2.4.1 Tft Coordination | US | PSU | KE | COWEN, DOUG | TFT Board member | | 0.10 | | 0.10 |
| 2.4 Triggering And Filtering | 2.4.1 Tft Coordination | US | UD | KE | SECKEL, DAVID | TFT Board member | | 0.10 | | 0.10 |
| 2.4 Triggering And Filtering | 2.4.1 Tft Coordination | US | UMD | SC | BLAUFUSS, ERIK | Coordinate process for filter requests, bandwidth | 0.30 | | | 0.30 |
| 2.4 Triggering And Filtering | 2.4.1 Tft Coordination | US | UMD | GR | UMD GR | Prepare datasets for filter testing and common MC datasets for testing | | 0.20 | | 0.20 |
| 2.4 Triggering And Filtering | 2.4.1 Tft Coordination | US | UW | KE | MONTARULI, TERESA | TFT Board member | | 0.10 | | 0.10 |
| 2.4 Triggering And Filtering | 2.4.1 Tft Coordination | **US** | **US Total** | | | | **0.30** | **0.50** | | **0.80** |
| 2.4 Triggering And Filtering | 2.4.1 Tft Coordination | Non-US | ULB | KE | HANSON, KAEL ULB | TFT Board member | | | 0.10 | 0.10 |
| 2.4 Triggering And Filtering | 2.4.1 Tft Coordination | Non-US | UU | KE | DE LOS HEROS, CARLOS | TFT Board member | | | 0.10 | 0.10 |
| 2.4 Triggering And Filtering | 2.4.1 Tft Coordination | Non-US | BONN | KE | KOWALSKI, MAREK | TFT Board member | | | 0.10 | 0.10 |
| 2.4 Triggering And Filtering | 2.4.1 Tft Coordination | **Non-US** | **Non-US Total** | | | | | | **0.30** | **0.30** |
| 2.4 Triggering And Filtering | **2.4.1 Tft Coordination** | **WBS L3** | | | | | **0.30** | **0.50** | **0.30** | **1.10** |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | US | LBNL | KE | KLEIN,SPENCER | Co. Chair of Cascade WG | | 0.25 | | 0.25 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | US | OSU | GR | DAVIS, JAMES | Vertical Events Filter | | 0.15 | | 0.15 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | US | PSU | KE | COWEN, DOUG | Hybrid/Tau WG Chair | | 0.25 | | 0.25 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | US | PSU | KE | DEYOUNG, TYCE | Deep Core WG - Co Chair | | 0.25 | | 0.25 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | US | PSU | PO | KOSKINEN, JASON | develop and verify Deep Core filters | | 0.18 | | 0.18 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | US | UCB | SC | WOSCHNAGG, KURT | Diffuse / atmosnu WG chair | | 0.25 | | 0.25 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | US | UD | PO | BERGHAUS, PATRICK - UD | moun channel WG Co. Chair | | 0.25 | | 0.25 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | US | UMD | SC | BLAUFUSS, ERIK | GRB WG Chair | | 0.25 | | 0.25 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | US | UMD | PO | OLIVAS, ALEX | exotics- WG chair | | 0.25 | | 0.25 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | US | UW | SC | MARUYAMA, REINA | Supernova WG Chair | | 0.25 | | 0.25 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | US | UW | PO | AGUILAR SANCHEZ JUAN AN | muon filter | | 0.15 | | 0.15 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | US | UW | PO | TOSCANO, SIMONA | Cascade Online filter | | 0.15 | | 0.15 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | US | UW | GR | GLADSTONE, LAURA | Deep Core online Filter | | 0.15 | | 0.15 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | US | UW | GR | WHITEHORN, NATHAN | GRB Filter | | 0.15 | | 0.15 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | **US** | **US Total** | | | | | **2.93** | | **2.93** |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | CHIBA | KE | YOSHIDA, SHIGERU | EHE WG Lead | | | 0.25 | 0.25 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | CHIBA | GR | ONO, MIO | EHE Filters | | | 0.15 | 0.15 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | DESY | GR | FRANKE, ROBERT | Online Filter for Alerts | | | 0.10 | 0.10 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | DESY | GR | FRANKE, ROBERT | Rate Data Bank South Pole | | | 0.10 | 0.10 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | RWTH | PO | BOERSMA, DAVID RWTH | Gal Cen Filter (Moon Filter) | | | 0.15 | 0.15 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | RWTH | PO | BOERSMA, DAVID RWTH | muon channel WG Co. Chair | | | 0.25 | 0.25 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | SU | KE | HULTH, PER OLOF | Low Energy DeepCore WG Lead | | | 0.25 | 0.25 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | SU | SC | SEO, SEON-HEE | Develop & verify filters | | | 0.05 | 0.05 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | SU | SC | FINLEY, CHAD SU | Point Sou\rce WG Lead | | | 0.25 | 0.25 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | SU | GR | JOHANSSON, HENRIK | UHE Trigger & Filter | | | 0.10 | 0.10 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | SU | GR | DANNINGER, MATTIAS | WIMP Trigger & Filter | | | 0.15 | 0.15 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | ULB | GR | ULB GR | Study of Tau Filters at South Pole | | | 0.10 | 0.10 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | UU | KE | HALLGREN, ALLAN | online filter development | | | 0.05 | 0.05 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | UU | KE | DE LOS HEROS, CARLOS | WIMP WG Lead | | | 0.25 | 0.25 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | UU | GR | STROM, RICKARD | Online filter development & testing | | | 0.10 | 0.10 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | VUB | PO | LABARE, MATHIEU | Filter for Southern sky muons | | | 0.25 | 0.25 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | VUB | PO | SINGH, KALPANA | Filter for Southern sky muons | | | 0.25 | 0.25 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | BARBADOS | KE | SEUNARINE, SURUJ | Work on cascade filter | | | 0.15 | 0.15 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | WUPPERTAL | GR | WUPPERTAL GR | New SUSY Filter | | | 0.20 | 0.20 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | HUMBOLDT | SC | WALDENMAIER, TILO | CR-WG Lead | | | 0.25 | 0.25 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | HUMBOLDT | SC | WALDENMAIER, TILO | CR-WG Filter | | | 0.15 | 0.15 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | BONN | KE | KOWALSKI, MAREK | cascades WG Co-Lead | | | 0.25 | 0.25 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | BONN | GR | FRANCKOWIAK, ANNA | Alert System for follow-up | | | 0.10 | 0.10 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | Non-US | BONN | GR | HOMRIER, ANDREAS | Alert System for follow-up | | | 0.10 | 0.10 |
| 2.4 Triggering And Filtering | 2.4.2 Physics Filters | **Non-US** | **Non-US Total** | | | | | | **4.00** | **4.00** |
| 2.4 Triggering And Filtering | **2.4.2 Physics Filters** | **WBS L3** | | | | | | **2.93** | **4.00** | **6.93** |
| **2.4 Triggering And Filterir** | **WBS L2 Total** | | | | | | **0.30** | **3.43** | **4.30** | **8.03** |

# IceCube M&O Staffing Matrix sort by WBS and Tasks v8.3 2010.0518.xls

| Cat. | Description |
|---|---|
| AD | Administration |
| CS | Computer Science Eng. |
| EN | Engineer |
| GR | Graduate Student |
| KE | Key Personnel/Faculty |
| MA | Management |
| PO | Postdoctoral Scientist |
| SC | Scientist |
| SE | Senior Engineer |
| TE | Technician |
| WO | Winterover |

| WBS L2 | WBS L3 | US / Non-US | Institution | Labor Cat. | Names | Tasks | NSF M&O Core | U.S. IN KIND | Non U.S. In-Kind | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 2.5 Data Quality, Reconstru | 2.5 Data Quality, Reconstructio | Non-US | UC | SC | GROSS, ANDREAS | Data Quality, Reco. & Sim. Tools Coordinator ("Low-level" Analysis Coordinator) | | | 0.50 | 0.50 |
| 2.5 Data Quality, Reconstru | 2.5 Data Quality, Reconstructio | Non-US | BARBADOS | KE | SEUNARINE, SURUJ | Analysis of flasher runs for inice calibration of saturation, and flasher and Standard Candle runs for absolute energy calibration for cascades. | | | 0.15 | 0.15 |
| 2.5 Data Quality, Reconstru | 2.5 Data Quality, Reconstructio | **Non-US** | **Non-US Total** | | | | | | **0.65** | **0.65** |
| 2.5 Data Quality, Reconstru | **2.5 Data Quality, Reconstruc** | **WBS L3** | | | | | | | **0.65** | **0.65** |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | LBNL | PO | BUITIN,STIJN | DOM simulator & calibrator | | 0.35 | | 0.35 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | LBNL | PO | GERHARDT,LISA | Simulation Programs: cmc | | 0.20 | | 0.20 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | PSU | PO | TOALE, PATRICK | maintain tau simulation tools | | 0.10 | | 0.10 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | SUBR | KE | FAZELY, ALI | GEANT Simulation | | 0.15 | | 0.15 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | SUBR | KE | IMLAY, RICHARD | Simulation Programs | | 0.15 | | 0.15 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | UA | PO | ZARZHITZKY, PAVEL | Simulation verification | | 0.30 | | 0.30 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | UAA | KE | RAWLINS, KATHERINE | SPASE / IceTop simulation; flat n-tuple | | 0.40 | | 0.40 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | UCB | SC | WOSCHNAGG, KURT | Maintain and Verify Simulation of Photon Propagation and update Ice Properties | 0.50 | | | 0.50 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | UD | PO | HUSSAIN, SHAHID | Ice Properties Simulation | | 0.30 | | 0.30 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | UD | GR | RUZYBAEV , BAKHTIYAR | Ice Properties Simulation | | 0.30 | | 0.30 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | UD | GR | XU, CHEN | Simulation Programs: sim-services | | 0.30 | | 0.30 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | UMD | PO | OLIVAS, ALEX | Simulation Software Programs coordinator | 0.40 | | | 0.40 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | UMD | PO | WISSING, HENRIKE | Maintain Detector Simulation (IceSim) | | 0.25 | | 0.25 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | UMD | GR | REDL, PETER | Maintain Detector Simulation (IceSim) | | 0.25 | | 0.25 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | UW | SC | CHIRKIN, DMITRY | Simulation Programs: mmc/mmc-icetray and ucr-icetray | | 0.20 | | 0.20 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | UW | SC | HILL, GARY | Maintain and Verify Simulation of Photon Propagation and update Ice Properties | 0.25 | | | 0.25 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | UW | PO | ABBASI, RASHA | DST data checking | | 0.10 | | 0.10 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | UW | PO | AGUILAR SANCHEZ JUAN AN | low level moun data verification (data/mc) | | 0.10 | | 0.10 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | UW | PO | UW PO | Maintain IceSim | | 0.40 | | 0.40 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | UW | GR | WHITEHORN, NATHAN | Photonics tables | | 0.10 | | 0.10 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | UW | GR | SANTANDER, MARCOS | Flasher Analysis | | 0.15 | | 0.15 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | US | UW | TE | DIAZ-VELEZ, JUAN CARLOS | Maintain Simulation Production Software | 0.20 | | | 0.20 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | **US** | **US Total** | | | | **1.35** | **4.10** | | **5.45** |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | Non-US | DTMND | GR | MILKE, NATALIE | Simulation Programs: noise-generator | | | 0.20 | 0.20 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | Non-US | SU | KE | WALCK, CHRISTIAN | Photonics/Simulation Work | | | 0.05 | 0.05 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | Non-US | SU | KE | HULTQVIST, KLAS | Photonics/Simulation Work, hit-maker | | | 0.15 | 0.15 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | Non-US | SU | SC | FINLEY, CHAD SU | Simulation Programs: neutrino-generator | | | 0.20 | 0.20 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | Non-US | UOX | KE | SARKAR, SUBIR | Yellow Book-maintenance | | | 0.10 | 0.10 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | Non-US | UU | PO | MILLER, JONATHAN | Simulation Programs: photonics | | | 0.20 | 0.20 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | Non-US | GENT | SC | UGENT SC | Support IceTop Simulations, IceTop Calibrations, IceTop Reconstruction | | | 0.10 | 0.10 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | Non-US | GENT | GR | UGENT GR | Support IceTop Simulations, IceTop Calibrations, IceTop Reconstruction | | | 0.40 | 0.40 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | Non-US | BOCHUM | PO | DREYER, JENS | Update MMC from Java to C++ | | | 0.25 | 0.25 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | Non-US | BOCHUM | PO | DREYER, JENS | Simulation Programs: neutrino-generator | | | 0.20 | 0.20 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | Non-US | BOCHUM | GR | OLIVO, MARTINO | Update MMC from Java to C++ | | | 0.25 | 0.25 |
| 2.5 Data Quality, Reconstru | 2.5.1 Simulation Programs | **Non-US** | **Non-US Total** | | | | | | **2.10** | **2.10** |
| 2.5 Data Quality, Reconstru | **2.5.1 Simulation Programs** | **WBS L3** | | | | | **1.35** | **4.10** | **2.10** | **7.55** |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | US | LBNL | KE | KLEIN,SPENCER | co-chair of Diffuse WG | | 0.25 | | 0.25 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | US | PSU | PO | KOSKINEN, JASON | Coordinate Deep Core reconstruction for production | | 0.12 | | 0.12 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | US | PSU | PO | LAFEBRE, SVEN | develop starting track reconstruction | | 0.19 | | 0.19 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | US | PSU | GR | HA, CHANG HYON | develop starting track reconstruction | | 0.13 | | 0.13 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | US | SUBR | KE | FAZELY, ALI | Reconstruction/ Analysis tools | | 0.15 | | 0.15 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | US | SUBR | KE | IMLAY, RICHARD | Reconstruction/ Analysis tools | | 0.15 | | 0.15 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | US | UMD | PO | WISSING, HENRIKE | develop & test reconstruction | | 0.25 | | 0.25 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | US | UMD | GR | REDL, PETER | Reconstruction/ Analysis tools | | 0.25 | | 0.25 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | US | UW | SC | CHIRKIN, DMITRY | Direct photon tracking / iceproperties calibration 0.3 ; FE/pulse extractor 0.1 ; reco software 0.1 | | 0.30 | | 0.30 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | US | UW | GR | DUMM, JONATHAN | Reconstruction Tools | | 0.15 | | 0.15 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | US | UW | GR | RODRIGUES, JOAO-PAULO | Supernova simulation / moun energy reconstruction | | 0.20 | | 0.20 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | US | UWRF | KE | MADSEN, JIM | Cosmic ray shower simulations and reconstruction | | 0.10 | | 0.10 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | US | UWRF | SC | TAMBURRO, ALESSIO | Shower simulations, TankTop simulation | | 0.20 | | 0.20 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | **US** | **US Total** | | | | | **2.43** | | **2.43** |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | CHIBA | KE | CHIBA KE | Maintain Romeo, EHE Simulations | | | 0.20 | 0.20 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | CHIBA | SC | CHIBA SC | Maintain Romeo, EHE Simulations, Maintain reconstruction projects (Portia), MC/Data comparison for EHE-filtered and IceTop events, Standard Candle Analysis | | | 0.20 | 0.20 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | CHIBA | GR | CHIBA GR | Improve the Ice Model, Afterpulse Simulator, Standard Candle Analysis, Maintain reconstruction projects (Ophelia, ehe-star) | | | 0.20 | 0.20 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | DESY | GR | MIDDELL, EIKE | Cascade Reconstruction | | | 0.30 | 0.30 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | EPFL | SC | EPFL SC | SLF, Low Energy, Energy reconstruction (development) | | | 0.25 | 0.25 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | RWTH | GR | RWTH GR | Reconstruction Software | | | 0.30 | 0.30 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | RWTH | GR | WALLRAFF, MARIUS | New Feature Extractor | | | 0.50 | 0.50 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | SU | SC | SEO, SEON-HEE | Photonics/Simulation Work | | | 0.15 | 0.15 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | VUB | KE | VUB KE | development of reconstruction tools (IcePack framework) | | | 0.25 | 0.25 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | VUB | PO | BOSE, DEBANJAN | muon track reconstruction in IceCube and DeepCore, waveform feature extractor | | | 0.25 | 0.25 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | VUB | PO | LABARE, MATHIEU | muon track reconstruction in IceCube and DeepCore | | | 0.13 | 0.13 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | VUB | PO | SINGH, KALPANA | muon track reconstruction in IceCube and DeepCore, waveform feature extractor | | | 0.13 | 0.13 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | ALBERTA | KE | GRANT, DARREN | Maintenance of IceCube-Photonics interface | | | 0.10 | 0.10 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | ALBERTA | PO | ALBERTA, PO | Maintenance of IceCube-Photonics interface | | | 0.30 | 0.30 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | WUPPERTAL | GR | WUPPERTAL GR | New SUSY Reconstruction, Simulation, Propagation, Monopole, Photonics | | | 0.50 | 0.50 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | MAINZ | GR | LÜNEMANN, JAN | Reconstruction Tools | | | 0.20 | 0.20 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | HUMBOLDT | SC | HUMB SC | Reconstruction/ Analysis tools | | | 0.10 | 0.10 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | BONN | GR | UBONN GR | Reconstruction/ Analysis tools | | | 0.20 | 0.20 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | Non-US | BONN | GR | PANKNIN, SEBASTIAN | IC-40 L3 processing | | | 0.20 | 0.20 |
| 2.5 Data Quality, Reconstru | 2.5.2 Reconstruction/ Analysis | **Non-US** | **Non-US Total** | | | | | | **4.45** | **4.45** |
| 2.5 Data Quality, Reconstru | **2.5.2 Reconstruction/ Analys** | **WBS L3** | | | | | | **2.43** | **4.45** | **6.88** |

| WBS L2 | WBS L3 | US / Non-US | Institution | Labor Cat. | Names | Tasks | NSF M&O Core | U.S. IN KIND | Non U.S. In-Kind | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 2.5 Data Quality, Reconstru | 2.5.3 Data Quality | US | OSU | PO | ROTT, CARSTEN | Data Quality | | 0.10 | | 0.10 |
| 2.5 Data Quality, Reconstru | 2.5.3 Data Quality | US | UA | KE | WILLIAMS, DAWN | Data Quality Lead | | 0.15 | | 0.15 |
| 2.5 Data Quality, Reconstru | 2.5.3 Data Quality | **US** | **US Total** | | | | | **0.25** | | **0.25** |
| 2.5 Data Quality, Reconstru | 2.5.3 Data Quality | Non-US | MPI | PO | MPI PO | Data Quality & DeepCore | | | 0.60 | 0.60 |
| 2.5 Data Quality, Reconstru | 2.5.3 Data Quality | Non-US | VUB | KE | VUB KE | data quality verification | | | 0.25 | 0.25 |
| 2.5 Data Quality, Reconstru | 2.5.3 Data Quality | Non-US | VUB | PO | STRAHLER, ERIK | verification Deep Core data quality | | | 0.25 | 0.25 |
| 2.5 Data Quality, Reconstru | 2.5.3 Data Quality | Non-US | VUB | PO | BOSE, DEBANJAN | verification Deep Core data quality | | | 0.25 | 0.25 |
| 2.5 Data Quality, Reconstru | 2.5.3 Data Quality | Non-US | VUB | PO | LABARE, MATHIEU | verification Deep Core data quality | | | 0.13 | 0.13 |
| 2.5 Data Quality, Reconstru | 2.5.3 Data Quality | Non-US | VUB | PO | SINGH, KALPANA | verification Deep Core data quality | | | 0.13 | 0.13 |
| 2.5 Data Quality, Reconstru | 2.5.3 Data Quality | **Non-US** | **Non-US Total** | | | | | | **1.60** | **1.60** |
| 2.5 Data Quality, Reconstru | **2.5.3 Data Quality** | **WBS L3** | | | | | | **0.25** | **1.60** | **1.85** |
| 2.5 Data Quality, Reconstru | 2.5.4 Offline Data Processing | US | UW | SC | HILL, GARY | Offline processing | 0.25 | | | 0.25 |
| 2.5 Data Quality, Reconstru | 2.5.4 Offline Data Processing | US | UW | GR | DUMM, JONATHAN | Offline Data Processing | | 0.15 | | 0.15 |
| 2.5 Data Quality, Reconstru | 2.5.4 Offline Data Processing | **US** | **US Total** | | | | **0.25** | **0.15** | | **0.40** |
| 2.5 Data Quality, Reconstru | **2.5.4 Offline Data Processing** | **WBS L3** | | | | | **0.25** | **0.15** | | **0.40** |
| **2.5 Data Quality, Reconst** | **WBS L2 Total** | | | | | | **1.60** | **6.93** | **8.80** | **17.33** |
| | | | | | | | **31.51** | **20.93** | **28.36** | **80.79** |

| Cat. | Description | Cat. | Description | Cat. | Description | Cat. | Description |
|---|---|---|---|---|---|---|---|
| AD | Administration | GR | Graduate Student | PO | Postdoctoral Scientist | TE | Technician |
| CS | Computer Science Eng. | KE | Key Personnel/Faculty | SC | Scientist | WO | Winterover |
| EN | Engineer | MA | Management | SE | Senior Engineer | | |