

**Exhibit 4: Statement of Work –
IceCube Neutrino Observatory Surface Enhancement**

**Karlsruhe Institute of Technology
1 October 2018 through 30 September 2024**

Scientific and Technical Contributions

This document describes the equipment that will be designed and built as part of the Memorandum of Understanding (MoU) for IceCube Maintenance and Operations that is in place between the University of Wisconsin – Madison and Karlsruhe Institute of Technology (KIT).

KIT will make every effort to carry out their responsibilities consistent with the project schedule and contribute the following items for the IceCube surface detector project:

Surface Enhancement	Quantity	Item
Scintillators *	296	Scintillator Panels

* This is a preliminary statement subject to a positive approval of the surface extension by the IceCube Collaboration and by the NSF, which is expected in September 2019.

**The Board of Regents of the
University of Wisconsin System**

Dr. Kael Hanson September 1, 2019
Principal Investigator Date
IceCube Gen2 Phase 1

Karlsruhe Institute of Technology



Prof. Ralph Engel Date
The Institutional Lead of IceCube at KIT



Dr. Andreas Haungs 14/08/2019 Date
The Lead of the IceCube group at KIT