

AGENDA

IceCube Neutrino Observatory ICNO Management & Operations – NSF’s Mid-Term Review

Location: Wisconsin IceCube Particle Astrophysics Center (WIPAC)
222 West Washington Avenue, Suite 500, Madison, WI 53703
<https://wipac.wisc.edu/about/contact>

Monday, March 11, 2019 (CDT)

Supernova Conference Room

Web link: <https://docushare.icecube.wisc.edu/dsweb/View/Collection-15435>

08:00 – 08:15 **Coffee/tea, snacks**

08:15 – 08:30 Introductions, panel overview, logistics (**Don Hartill / Kael Hanson**)

08:30 – 10:10 **ICNO Science and Technical Management (Don Hartill)**

1. Science Overview (30+10 min) – **Francis Halzen**
2. IceCube Collaboration (15+5 min) – **Darren Grant**
3. Technical progress (detector performance, calibration, R&D efforts, 30+10 min) – **Albrecht Karle**

10:10 – 10:30 **Coffee/tea break**

10:30 – 12:30 **ICNO Science and Technical Management (Jim Annis)**

4. Detector operations (IceCube and IceTop, data movement, data quality, field support & logistics, hardware upgrades, 20+10 min) – **John Kelley**
5. Data management (software, local & remote computing, simulation, and reconstruction tools, 45+15 min) – **Benedikt Riedel**
6. Multi-messenger real-time operations (20+10 min) – **Erik Blaufuss**

12:30 – 13:00 **Working Lunch**

7. Education & Outreach (20+10 min) – **James Madsen**

13:00 – 14:00 **ICNO Science and Technical Management (Antoine Kouchner)**

8. IceCube Calibration Program (20+10 min) – **Summer Blot**
9. Analysis coordination and publications (20+10 min) – **Dawn Williams**

14:00 – 14:50 **ICNO Project and Administrative Business Management Systems:**

A. Program Organizational Structure (Carol Wilkinson)

10. WBS and reporting structures of the U.S. and in-kind contributions (20+5 min) – **Catherine Vakhnina / Kael Hanson**
11. Change Management (software, detector configuration, data processing) (20+5 min) – **John Kelley / Erik Blaufuss**

14:50 – 15:10 **Coffee/tea break**

Monday, March 11, 2019 (CDT, cont'd)

Supernova Conference Room

15:10 – 15:50 A. Program Organizational Structure (Carol Wilkinson) - cont'd

12. IceCube M&O Financial Management and Common Fund (15+5 min) - **Catherine Vakhnina**

13. Coordination with NSF and Antarctic Support Contractor (15+5 min) – **Jim Haugen**

15:50 – 16:30 ICNO Project and Administrative Business Management Systems:

B. University and WIPAC administrative structure (Richard Partridge)

14. UW Perspective (15+5 min) – **Norman Drinkwater**

15. Advisory mechanisms (Science Advisory Committee, Software & Computing Advisory Panel, International Oversight and Finance Group, 15+5 min) – **Kael Hanson**

16:30 – 17:15 Executive Session (discussion, wrap-up, homework assignments)

17:15 – 18:00 Meeting with Project for homework assignments

18:00 **Adjourn**

Video Teleconference Information

Topic: ICNO M&O & Upgrade Review Meeting

Description: Maintenance & Operations Mid-Term & ICNO/Upgrade Panel Review

Time: March 11-14, 2019, 08:00 – 18:00 Central Time (US and Canada)

Web Link: <https://wipac-science.zoom.us/j/585082285>

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ICNO/M&O Review – presentations and supporting materials:

<https://docushare.icecube.wisc.edu/dsweb/View/Collection-15435>

AGENDA

IceCube Neutrino Observatory ICNO/Upgrade Project - NSF Readiness Review

Location: Wisconsin IceCube Particle Astrophysics Center (WIPAC)
222 West Washington Avenue, Suite 500, Madison, WI 53703
<https://wipac.wisc.edu/about/contact>

Tuesday, March 12, 2019 (CDT)

Supernova Conference Room

Web link to presentations and supporting documents for [Panelist/ASC](#) and [NSF personnel](#).

08:00 – 08:30 Coffee/tea, Panel Overview, Logistics **Don Hartill/Jim Yeck**

08:30 – 09:00 2-1. Upgrade Science and Project Goals **Kael Hanson**

1. Does the Project have a well-defined technical scope? Do the Project's technical requirements align with the ICNO scientific objectives?

09:00 – 09:30 2-2. Upgrade Project **Jim Yeck**

2. Does the Project's team have an appropriate management structure with proper interfaces to the relevant stakeholders? Are there coherent and effective leadership, management, and organizational structures?
3. If de-scoping becomes necessary, could it cause significant deviations from the original scientific objectives? Have these de-scoping options been adequately planned for?

09:30 – 10:10 2-3. Upgrade Drill, WBS 1.2 **Tom Hutchings**

4. Is the IceCube Enhanced Hot Water Drill (EHWD, built under the MREFC project), in a satisfactory condition to be refurbished for the Upgrade Project's drilling activities?
5. Does the proposed EHWD refurbishment strategy sufficiently address the availability of necessary hardware and control software and updates where needed?

10:30 – 10:45 2-4. Deep Ice Sensor Modules, WBS 1.3 **Timo Karg**

10:45 – 11:00 2-5. Communications, Power, and Timing, WBS 1.4 **Tyce DeYoung**

11:00 – 11:15 2-6. Characterization and Calibration Systems, WBS 1.5 **Dawn Williams**

11:15 – 11:30 2-7. Data Systems and M&O Integration, WBS 1.6 **Erik Blaufuss**

11:30 – 12:30 2-8. Project Management, WBS 1.1 **Jim Yeck**

6. Have each of the project management components been scaled appropriately for the project's size? Is there a strategy for the overlap between the current/part-time and new-coming project managers?
7. Is the proposed strategy for engaging, assigning, and integrating the different partners and layers of project management effective for supporting the project?

12:30 – 13:00 Working Lunch

Tuesday, March 12, 2019 (CDT, cont'd)

Supernova Conference Room

13:00 – 17:00 Project Management, Cost and Schedule

2-9. Overview, Status of 13 Readiness Deliverables (PEP/Aug-2018) Jim Yeck

8. Is the Upgrade PEP sufficiently mature so that the Project can initiate procurement per the Schedule and have all the previous concerns been addressed?

9. As described, does the WIPAC facility have sufficient financial and audit control?

2-10. Office Staffing and Budget / Cost Book Development Catherine Vakhnina

10. Are the scope and total project costs appropriately captured and allocated in the WBS and WBS dictionary? Are the estimate of labor mix and level of effort reasonable? If there are consultants, are the types and hours of consulting services estimated reasonable?

2-11. Schedule Development Pam Laundrie

11. Is the Project's Schedule reasonable and achievable, with well-defined milestones that can be used to track Project's progress and success?

15:00 – 15:30 Coffee/Tea Break

2-12. Project Management Control System & In-kind Deliverables Catherine Vakhnina

12. Will the proposed Earned Value Management System (EVMS) be used routinely and effectively to inform project decision-making and authorizing changes/revisions, such as to the scope (e.g., de-scoping) and schedule?

13. Is the nature of and progress with oversight of Organizations providing in-kind contribution sufficient to provide the Project with necessary insights?

2-13. Contingency Management Jim Yeck

14. Are the Project's cost estimates reasonable, justified, and documented? Are the used cost estimating methodology reasonable and cost-influencing assumptions detailed?

15. Is the cost estimating process complete and accounting for all anticipated actions? Are the vendor quotes reasonable?

16. Do the plans for contingency align with the NSF's major facility requirements?

17:00 – 17:30 Executive Session (discussion, wrap-up, homework assignments) Don Hartill

17:30 – 18:00 Meeting with Project for Homework Assignments Jim Yeck

18:00 Adjourn

19:00 Dinner

Wednesday, March 13, 2019 (CDT, cont'd)

Supernova Conference Room

08:00 – 08:15 Coffee/tea

08:15 – 12:15 Project Management, Cost and Schedule

2-14. ES&H and Quality Management

Mike Zernick

17. Does the schedule for documenting safety requirements and training/performance standards seem reasonable?

2-15. Project Engineering

Perry Sandstrom

18. Is there a system to document the process from conceptual design to production?

**2-16. Technical Scope Def & Coordination/
Configuration Management System**

Michael DuVernois

19. Are there appropriate points for reconciliation of key project management information?
Is the team likely to succeed in delivering the complete upgrade baseline scope?
20. Is the Change Management approval process well described and appropriate? Is the Change Management System functional?

10:15 – 10:30 Coffee/Tea Break

2-17. Instrumentation Production Coordination

Jim Haugen

21. Are there accountability measures in place to track production of both NSF and in-kind funded items?

2-18. Risk Management

Mike Zernick

22. Have the Project's major risks been identified and does the Project have a sensible strategy to deal with risks, contain costs, and maintain schedule?

12:15 – 13:45 Lunch and move to PSL (coffee available in conference room to take to seat)

UW Physical Sciences Laboratory (PSL)

Robert Paulos

13:45 – 15:15 Upgrade Drill

- **2-19. Overview** Terry Benson
- **2-20. Current Status (Generators/Hose/Drill Modelling/Installation)**
Barbara Birrittella/ Jeff Cherwinka/Lee Greenler/Delia Tosi
- **Site plan for 2022/23 and Field Seasons Logistics (cargo, traverse, pop, etc.)** Project/ASC

15:15 – 15:45 Coffee/Tea at PSL

15:45 – 16:30 Test Bed and PDOM Refurbishment Tour

PSL / Project

16:30 – 17:00 Executive Session (discussion, wrap-up, homework assignments) Don Hartill

17:00 – 17:30 Meeting with Project for Homework Assignments Don Hartill / Jim Yeck

17:30 Adjourn, return to WIPAC or hotel

ICNO/Upgrade Project and M&O Mid-term Reviews – Closing

Thursday, March 14 (CDT, cont'd)

Supernova Conference Room

08:00 – 08:30	Coffee/tea and snacks	
08:30 – 09:30	Response from the Upgrade Project to homework assignment	Jim Yeck
09:30 – 10:10	Executive Session (work on the panel's summary)	Don Hartill
10:10 – 10:30	Coffee/tea break	
10:30 – 11:00	Executive Session (cont'd)	Don Hartill
11:00 – 12:00	Q & A and concluding discussion with the Upgrade project	
12:00 – 12:30	Working Lunch	
12:30 – 13:30	Response from the M&O Project to homework assignments	Kael Hanson
13:30 - 14:15	Executive Session (work on the panel's summary)	Don Hartill
14:15 – 14:30	Coffee/tea break	
14:30 – 15:15	Q & A and concluding discussion with the M&O project	
15:15 – 16:00	Discussion on remaining issues (e.g., field season 2019-2020)	
16:00	Adjourn	

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Upgrade Project Review – presentations and supporting materials:

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