



OCTOBER 27, 2017

IARC Lecture Hall
Kirk Rd
Batavia, IL 60510

Registration: 8:15 AM – Opening Remarks at 9 AM –Tours at 1:45 PM – Close Meeting at ~ 4 PM

Tentative Program Speakers/Topics:

9:15 AM— **Vedat Batu, Ph.D, P.E.**— “Well Hydraulics Solutions in Cartesian Coordinates Under Partially Penetrating Well Conditions”

9:45 AM— **Joseph M. Krienert, M.S. (candidate)** – “Reevaluating contaminant transport in the Henry aquifer, Gallatin County, Illinois”

10:15 AM— **Joseph Miller, M.S. (candidate)** – “Diurnal and seasonal variation in groundwater nitrate-N concentration in a saturated buffer zone”

10:45 AM—break

11:00 AM— **Madan Maharjan, Ph. D**— “Heat as a tracer for studying groundwater-surface water interaction within a bank storage zone”

11:30 AM— **Chris Greer, Ph.D**—“Fermilab Hydrogeology: the intersection of groundwater and subsurface accelerator systems”

12:00 PM— Lunch

1:00 PM— Announcements and preparation for tours

1:45 PM— DZero and MINOS Tours

3:15 PM —Tours complete

3:30 PM—Meeting Adjourned

*1:45 – 3:30 PM--optional Midwest Geosciences Webinar: [DESIGNING AND OPTIMIZING GROUND WATER MONITORING SYSTEMS IN SEDIMENTARY SEQUENCES: PART 3](#) : Case Studies Illustrating Efficiencies and Failures



IGA Members and Friends:

In addition to our typical format of presentations at the meeting, Fermilab will be offering guided tours for Fermilab's DZero and MINOS experiment Areas. Please wear appropriate attire: Non-heel closed-toe shoes are required and comfortable attire. Visitors must be able to walk up and down staircases. The tours will occur during the afternoon at 1:45 PM. There is a limit of only 10 people per group. Therefore, you must choose only one.

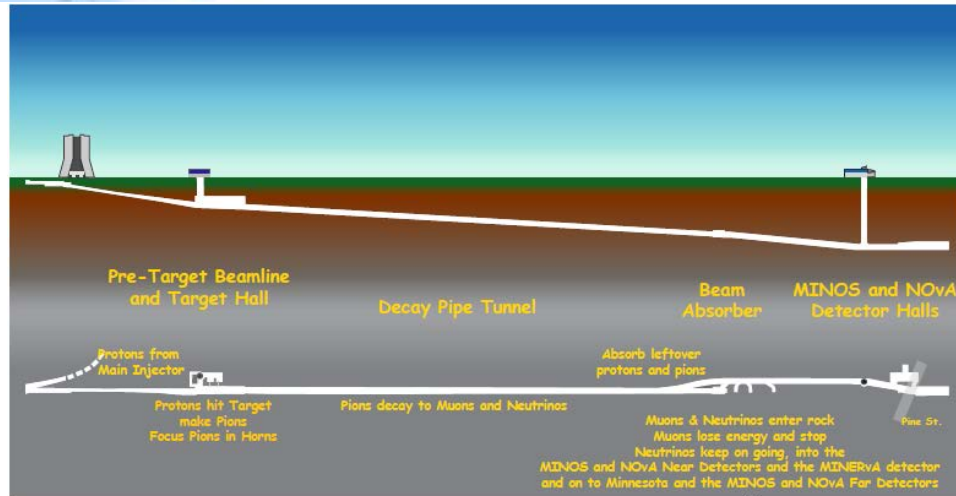
1. DZero (maximum of ~30 feet below ground surface, stairwell access):

The tour will include stops at the DZero assembly hall, the control room (where the screens replay images captured during DZero detector operation) and the decommissioned Tevatron tunnel. They culminate in the decommissioned detector and its collision hall. In the assembly hall area there is a special explanatory display. Scientist Dmitri Denisov says: "It is a great opportunity for Fermilab employees and for the public to see the wonder of the engineering and the technology that goes into a complex particle accelerator detector... When people tour here, they feel that it is like a rocket launch. It really makes you say, 'Wow! People can really do such complex, amazing, wonderful things.'" Like most of the Fermilab accelerator complex enclosures, the D0 detector and collision hall are at an average depth of about 30 feet below ground surface, constructed within the clay-dominated diamicton facies of the Yorkville Formation. An intermittent perched groundwater zone is monitored at this depth across the Fermilab site.

2. MINOS (~400 feet below ground surface; elevator access, but with a long, damp, inclined walk and stairs to exit in case of emergency):

After being checked in at the Main Control Room, the tour will access the MINOS underground experiment areas through the MINOS elevator shaft. The MINOS underground areas are at the bottom of the NuMI tunnel system and house numerous experiments such as the MINERvA detector and the NOvA near detector, used to study neutrino changes between Fermilab and the far detector in Minnesota. The MINOS elevator shaft is constructed through the unconsolidated units of the Yorkville and Batestown Formations and the dolostone and shale units of the Silurian Dolostone and Maquoketa Shale groups. The NuMI bedrock tunnel system acts as a large french drain and the MINOS underground hall includes a sump lift station to pump the collected groundwater back to the surface and into the accelerator industrial cooling water system.

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NuMI Beam and MINOS Underground Areas



For those that are not interested in either guided tour, we will also be offering a viewing of Part 3 of the Midwest Geosciences Webinar on **“Designing and Optimizing Groundwater Monitoring Systems in Sedimentary Sequences, PART 3”**

[Fill this out if you are attending the Fall Meeting](#)

CEU credits available for meeting attendance

You may **pre-register** and pay at the door or **register on-line** at <http://illinoisgroundwater.org/join.html>

Early Registration thru October 7th Send Contact Information,

Member: \$ 65.00 **Registration and/or Membership dues**

Non-member: \$100.00 Steve Bennett -- sw-bennett1@wiu.edu

Student: \$ 20.00 Geology Dept, WIU

Late Registration 1 University Circle

Late Member \$ 75.00 Macomb, IL 61455

Late Non-member: \$110.00 Fax: (309) 298-3399

Late Student: \$ 20.00 Phone: (309) 298-1256



Membership Dues

Renewal or New Member: \$25.00

Student Member \$ 5.00

If you have any questions, please feel free to email me at

Cheers!

Amy Gahala

Vice-Chair

Illinois Groundwater Association