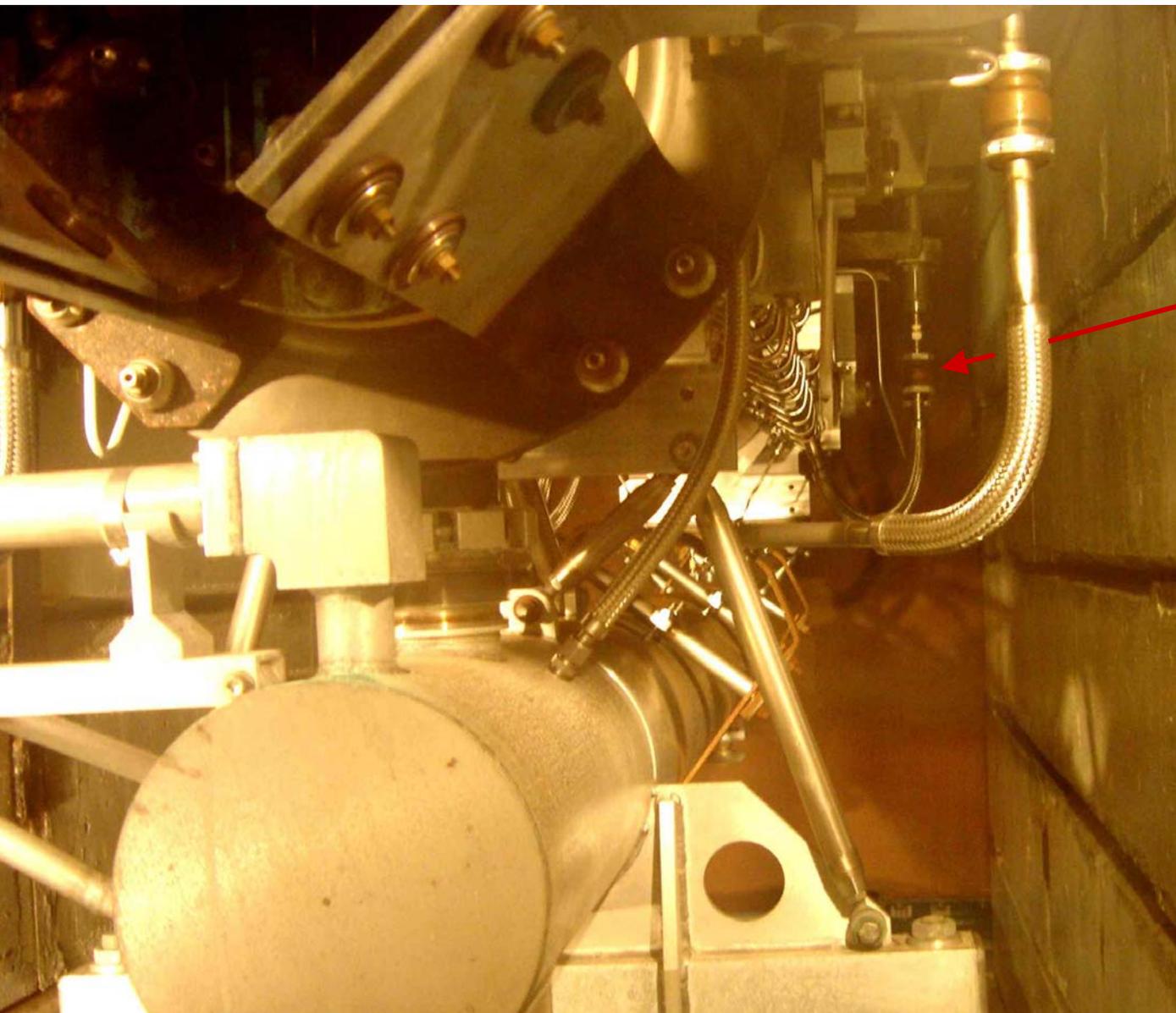




# NuMI / MINOS Status



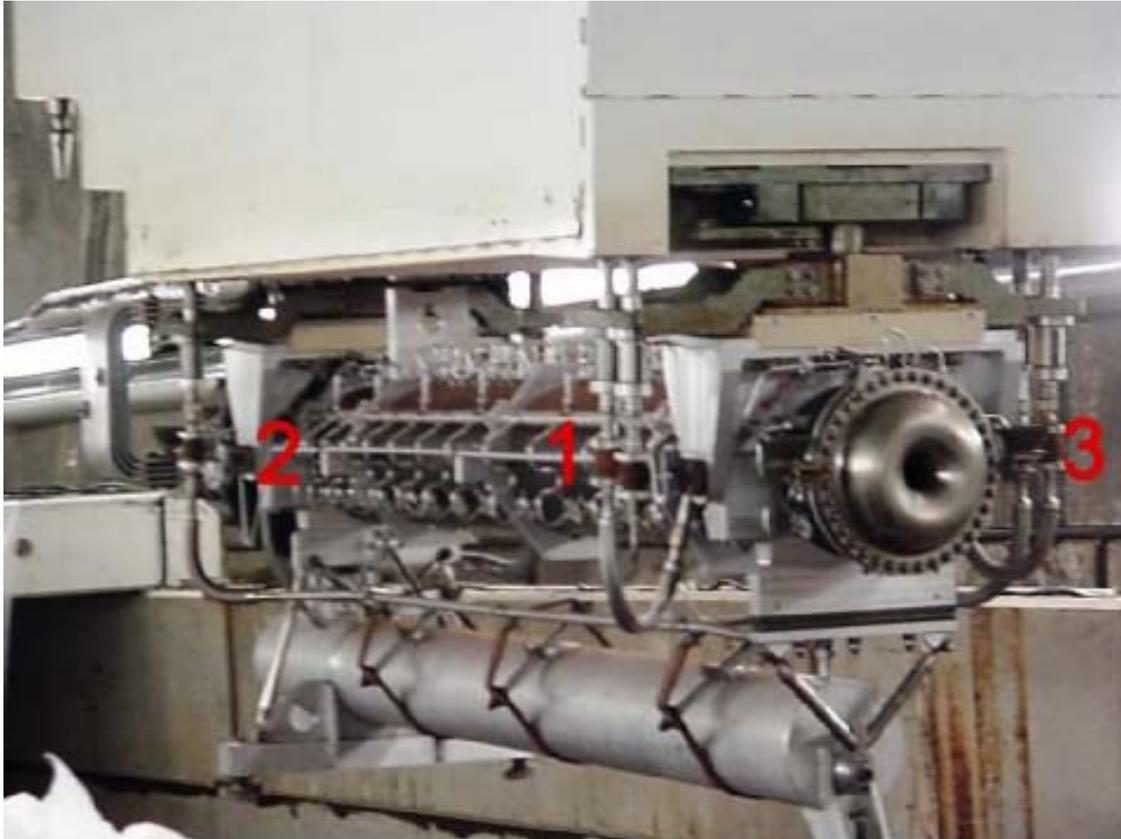
Horn 1 has  
drip, drip, drip...  
7 gal/day water leak

Leak is at ceramic  
electrical break  
for water spray line

Would be trivial to  
fix, except horn is  
very radio-activated



Radiation: 75 r/hr on contact  
35 r/hr at 1 foot



Point	Doserate @ 1 foot (mr/hour)	Doserate On Contact (mr/hour)
1	35000	75000
2	40000	75000
3	35000	80000

This is 10x as much as we had for the recent Horn 2 repair !

Repair person will get weekly dose limit in a few seconds



# Shielding for job



Are building an extension of the work-cell with a slot for work

( Horn is in work-cell, behind the door )



## Mock-up and practice

NuMI/MINOS Status  
All Exp. Mtg.  
August 21, 2006  
Jim Hylan/FNAL  
Page 4



Mock-up of shield window  
and horn water headers

Plan, practice and time  
repair

Need to undo two  
Swagelok fittings,  
remove old section,  
insert new section,  
and tighten two fittings.

Current time est: 2 min.

Trying to reduce this  
by building another tool



Repair effort being led by Engineer Vladimir Sidorov and Hiep Le's target hall tech group, in close cooperation with Rad Safety

BUT techs already have most of allowed dose for quarter from the recent horn bead removal repair.

Other techs are being recruited and trained, may need 8 to 20.

### Schedule:

Finish shielding and camera installation today

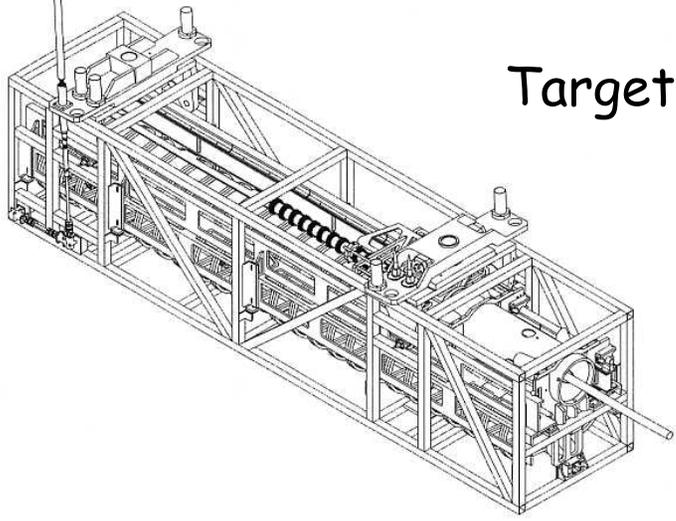
Measure rates with shielding Tuesday,

finish special tooling, complete ALARA plan

Practice Wednesday

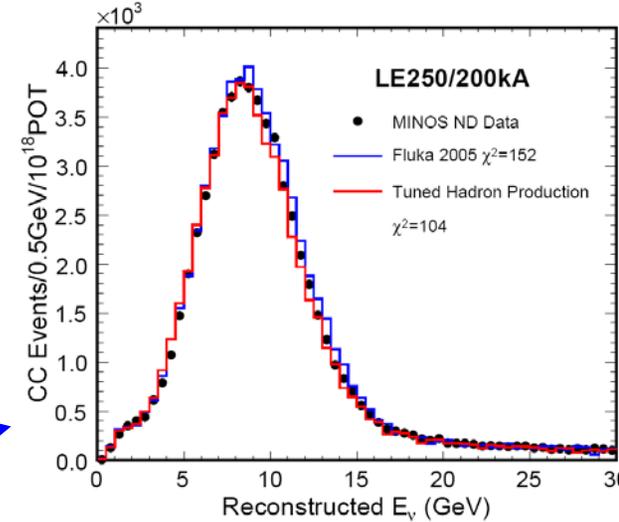
Do repair on Thursday.

Then takes about 2 days to re-install horn and seal up target hall.



# Target carrier problem

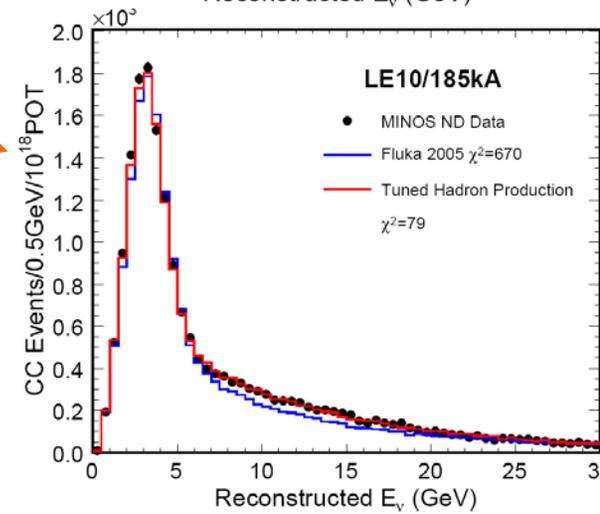
MINOS has been doing a special run with target in position to produce high energy neutrinos



Want to move target back to standard low energy position, but it is stuck.

(Target hall has an extremely corrosive atmosphere; e.g. water condensed from the air has pH 2.6)

With target pile open, we can try to fix this when horn repair is finished.



If we can't un-stick the target drive, it would take ~ 1 week to replace target+carrier with spare. (Under discussion).