Version 4.4 - 6/28/2010

Parameter	Value	Units	Quality	Notes
Anode Plane Assembly (APA)				
Wire spacing - X plane	3	mm	***	
Wire spacing - U,V plane	3.3	mm	**	Should be ~3mm. Size chosen to have an integral num of readout cards
Wire angle	45	deg	***	
APA length	2.52	m	**	Should be ~2.5m. Size chosen to have integral number of readout cards
Num grid wires	1680			Assume grid wires have same orientation as the X plane
Num U wires	1080			
Num V wires	1080			
Num X wires	1680			
APA num readout wires	3840			
Num readout channels	30			
APA total num wires	5520			
Drift distance	2.47	m	***	Any value near 2.5m is OK. Set to give 2.5m cell incl APA thickness
Wire wrap length	2.52	m		
Num wire wraps	2.78			
APA height	7.0	m	***	Any value near 7m is OK
APA thickness	7	cm	***	2" thick SS frame + 3 wire planes on both sides
APA weight	250	kg	**	
Cathode plane weight	100	kg	**	
U,V Wire length	9.9	m		
Wire capacitance (in air)	15	pF/m		H. Jostlein measurement of prototype
U,V wire capacitance (in LAr)	238	pF		Apply dielectric constant for LAr
APA Cell Volume	87	m^3		Each cell has one APA in the middle
APA Cell Active Mass	0.122	kton		
APA Transverse Fiducial cut	0.3	m	*	Approx value for neutrino oscillation physics
APA Fiducial Volume	73	m^3		Transverse fid cut on both sides of APA + one cut at the top/bottom)
APA Fiducial Fraction	84%			
APA Fiducial Mass	0.102	kton		
Detector				
Num Vertical APA's	2		***	
Detector Vertical APA gap	2	cm	*	Reasonable guess. No detailed design yet
Detector Height	14.0	m		
Num Transverse APA's	3		***	
Detector Width	15.0	m		
Num Longitudinal APA's	28		***	
Detector Longitudinal APA gap	2	cm	*	No detailed design yet. Allow space for cell stiffeners
Detector Length	71.1	m		
Total number of APAs	168			
Total number of cathode planes	224			
Detector Longitudinal Fid cut	1.5	m	*	Approx value for neutrino oscillation physics. 10cm US, 140cm DS
Longitudinal Fid fraction	98%			
Detector Fiducial Mass	16.8	kton		
Number of readout wires	645,065			
Number of readout channels	5040			
Number of grid wires	282,240			
Cryostat				
Distance btw cathode plane & wall	0.5	m	**	No design yet. Space for purity monitors, instrumentation, etc
Cryostat Width	16.0	m		
APA height above floor	0.5	m	*	No design yet. Space for LAr piping, APA suppt rail, electronics
LAr depth above APA	0.5	m	*	No design yet. Space for electronics
LAr Depth	15.0	m		
Ullage %	5.0%		***	
Ullage depth	0.8	m		
Cryostat Depth	16.0	m		Should be integral # of meters for membrane panels
Distance btw detector & far end wall	0.5	m	*	No design yet. Space for purity monitors, instrumentation, etc
Hatch & pump clearance at near end	2.0	m	*	No design yet. Space for access hatch, LAr recirc pumps
Cryostat Length	74.0	m		Should be integral # of meters for membrane panels
Cryostat Volume	18944	m^3		
Total LAr Mass	25	kton		