

GAS filter modification plan for 40kg test mass

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Test mass

23kg → 40kg

Blade in GAS filter

Blade thickness: 2.4mm (from yield limit)

Load capacity: 40kg/blade

Maximum number of blade: 12

Body design

Closed cup → Open frame

Keep rigidity to avoid deformation

Reduced body mass

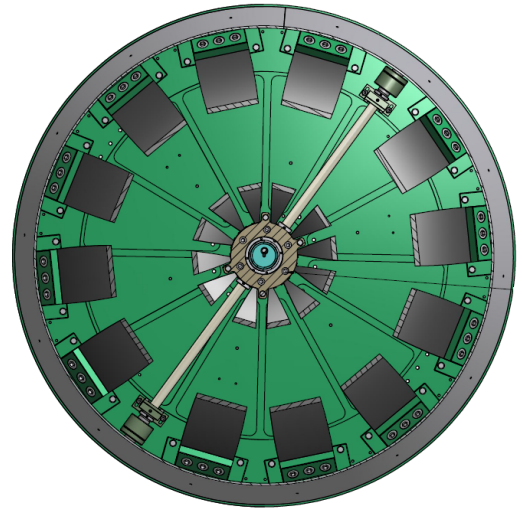
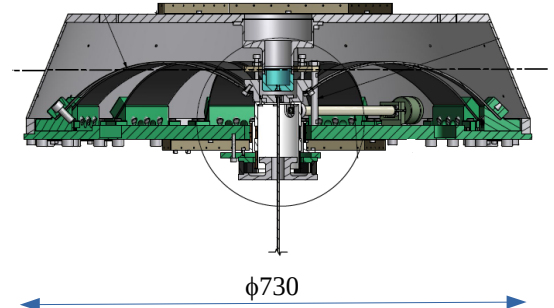
Function

Fishing rod with strong spring

Magic wand (for SF)

Connector anchor

Moving mass and primary coil (for BF)

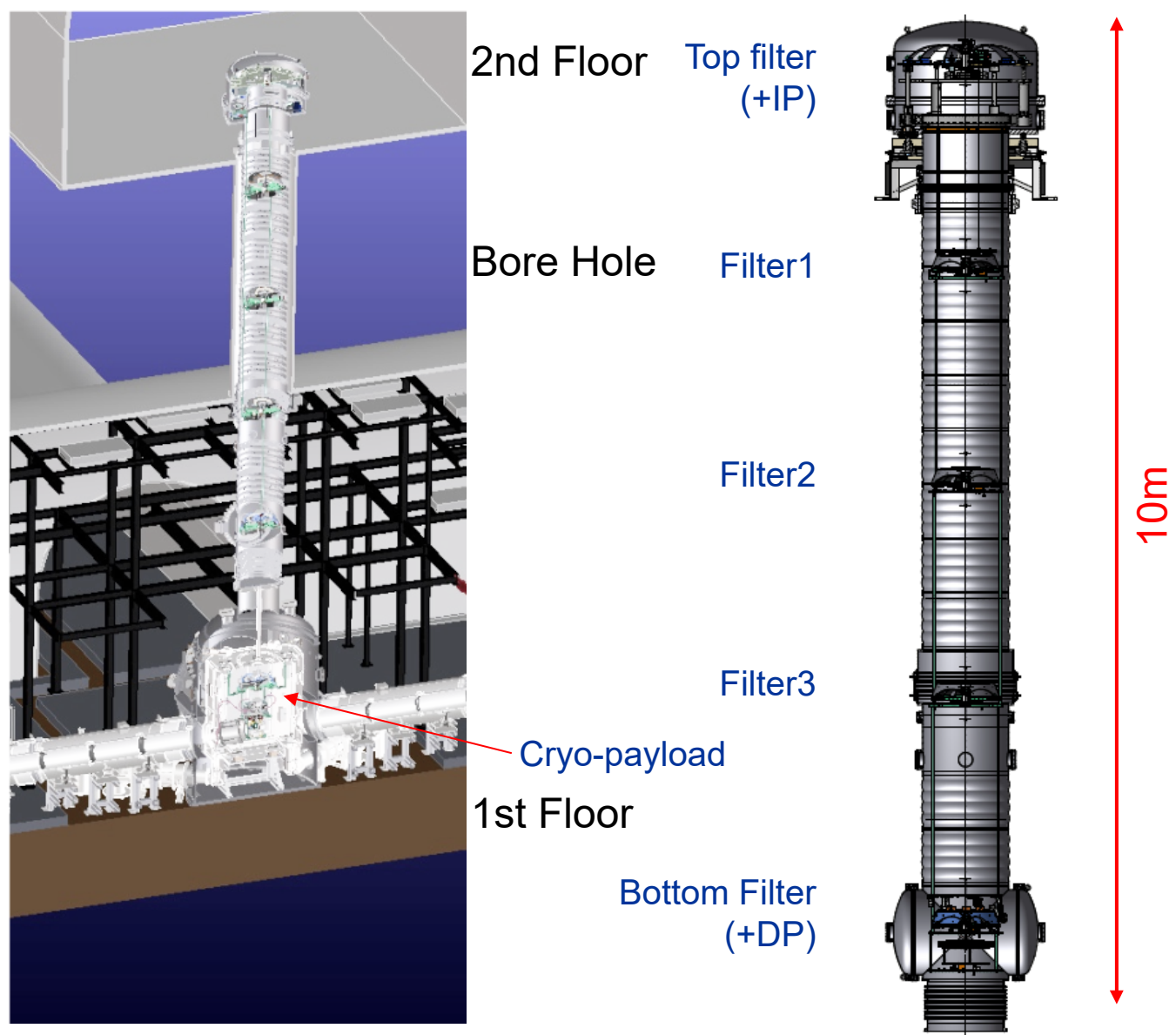


Mass Budget

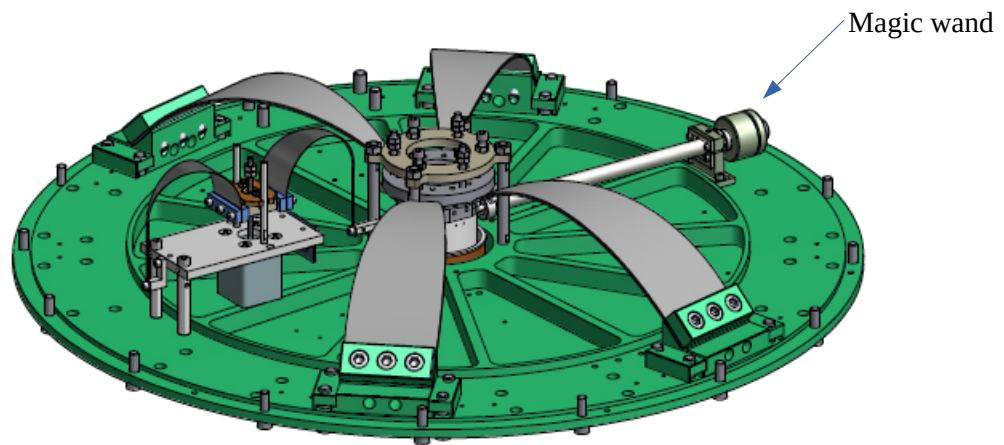
	Original body [kg]	New body [kg]	Reduction [kg]	Blade capacity [kg/blade]	Original #blade	New #blade	Load capacity [kg]	Total load [kg]
Top filter				115	6	6	690	566
Filter 1	100	90	-10.0	40	12	12	480	476
Filter 2	86	76	-10.0	40	10	10	400	400
Filter 3	83	73	-12.6	40	8	10	400	327
Bottom filter	105	87	-19.3	40	5	6	240	240
Payload	200	240	+40.0					

	Original body [kg]	Original base [kg]	Original cup [kg]	Blade block [kg]	Original #blade	All blade [kg]	base+cup+blade [kg]	Ballast [kg]
Top filter					6			
Filter 1	100	27.0	40.2	1.3	12	15.6	82.8	
Filter 2	86	27.0	40.2	1.3	10	13.0	80.2	0~+6
Filter 3	83	27.0	40.2	1.3	8	10.4	77.6	-3~+6
Bottom filter	105	40.5	38.3	1.3	5	6.5	85.3	-3~+5
Payload	200							

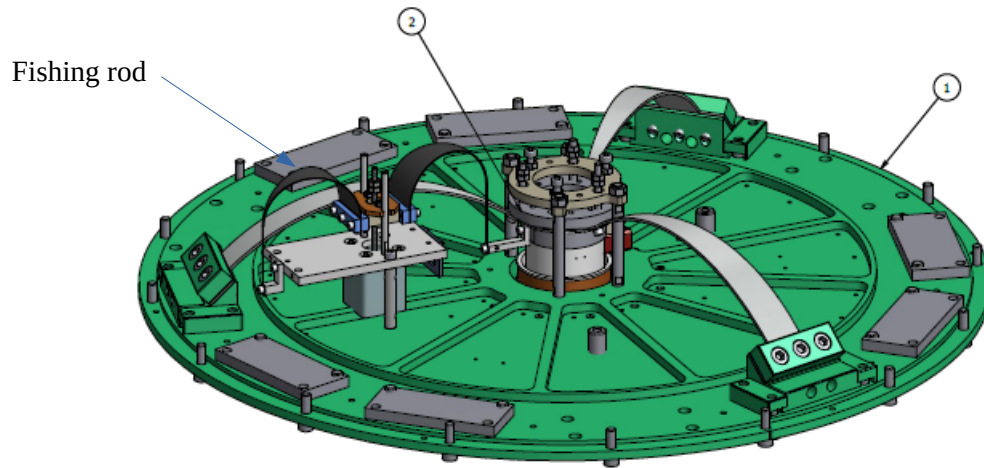
Type-A Tower



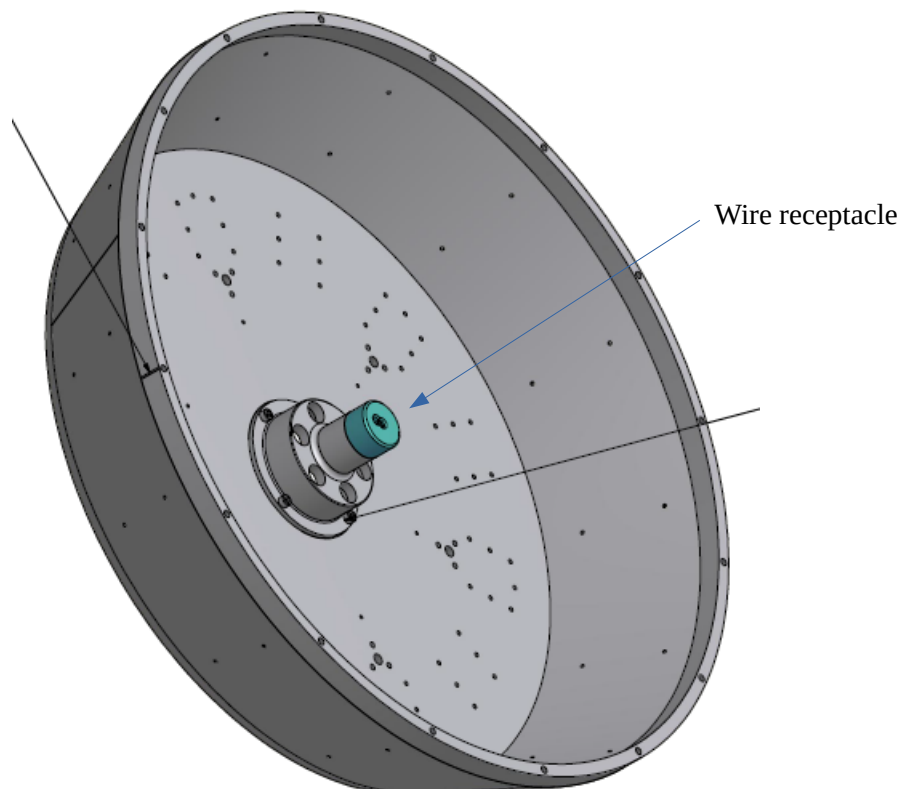
(Standard Filter)

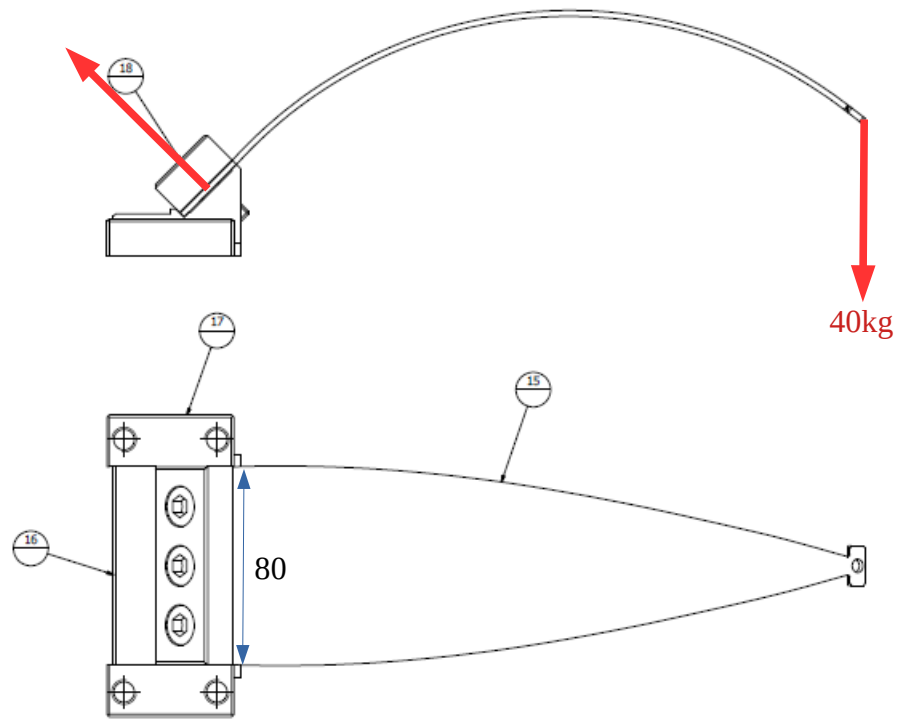


(Bottom Filter)

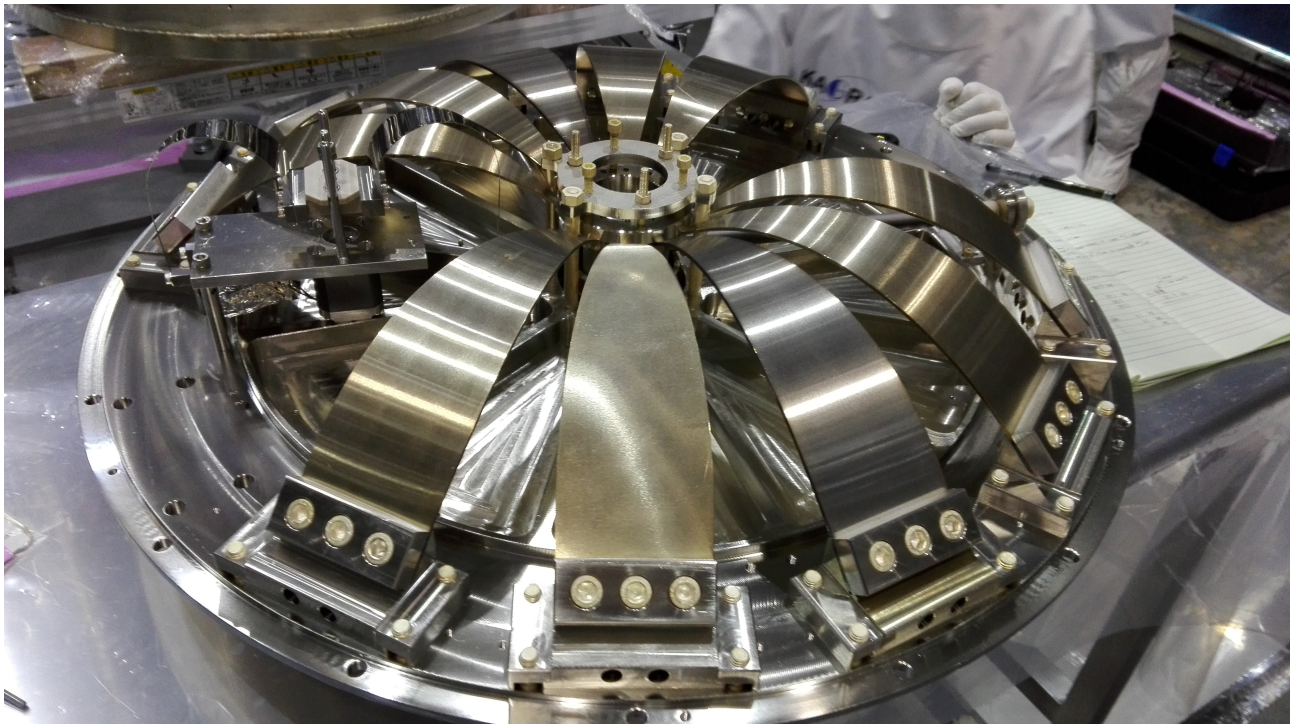


(Cup)

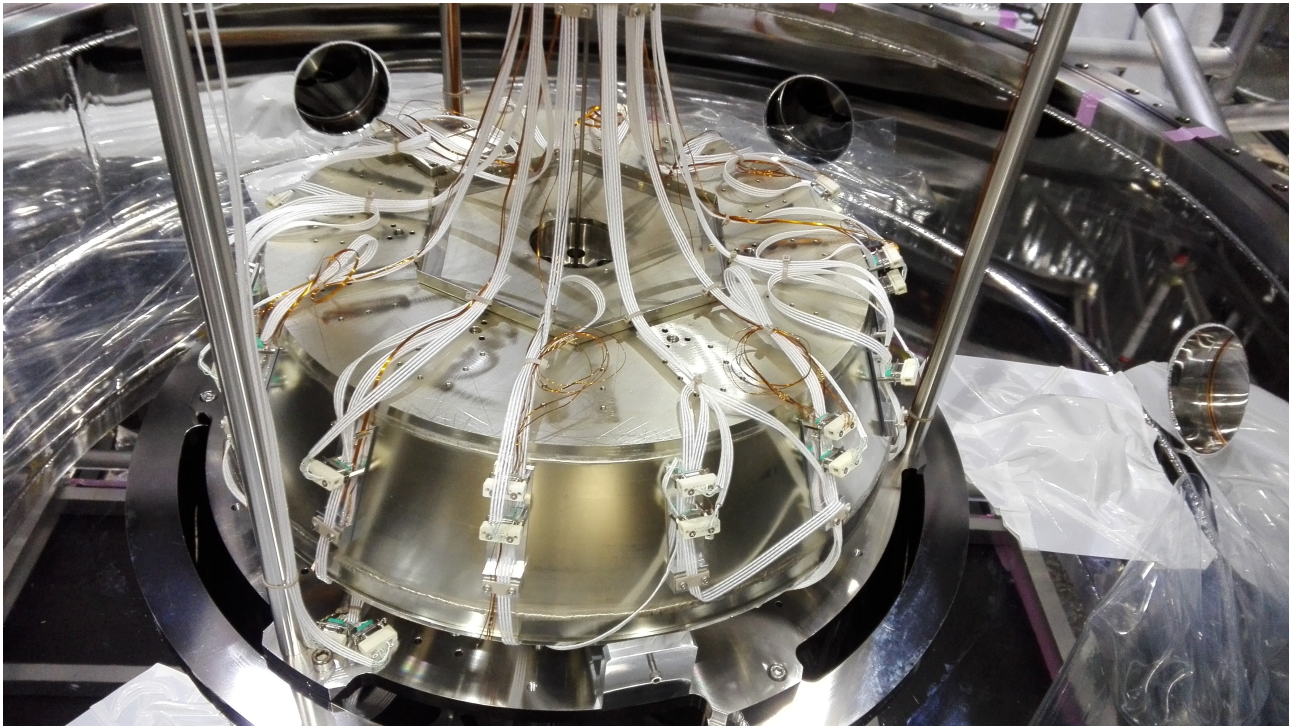




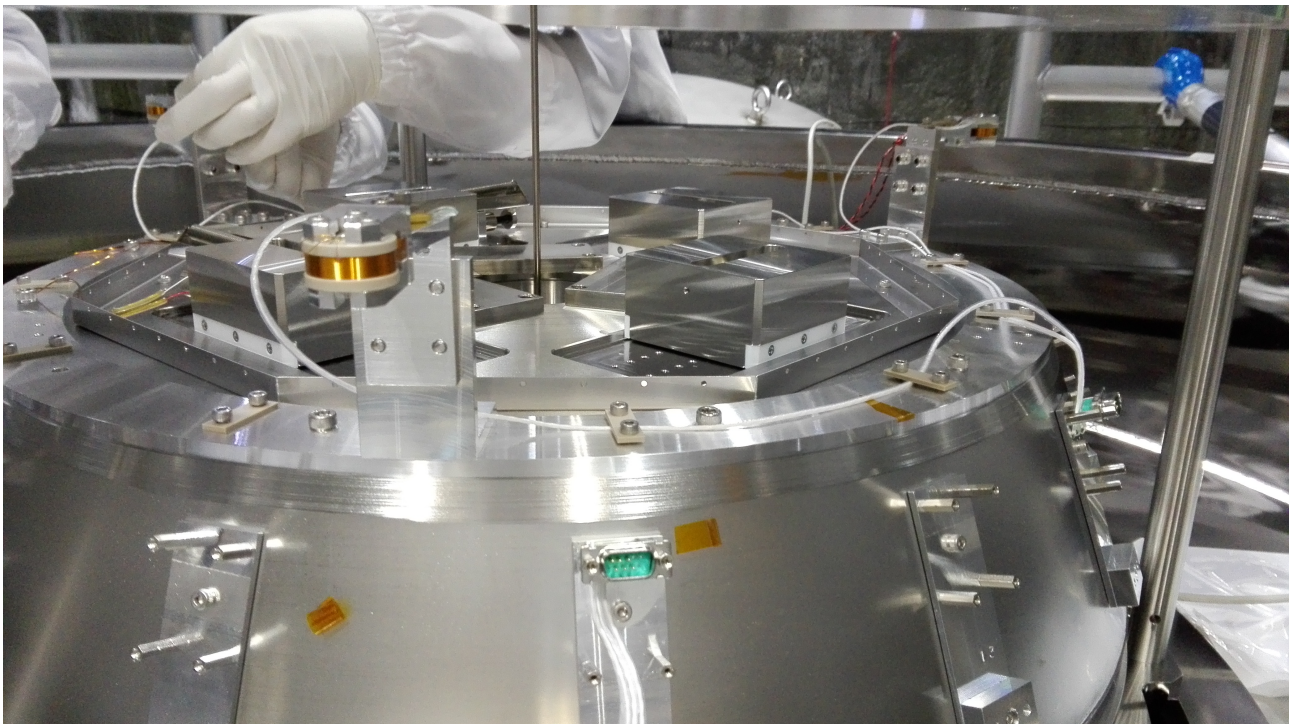
Blade block (1.5kg)



Filter 2



Connector anchor



Moving mass and primary coil