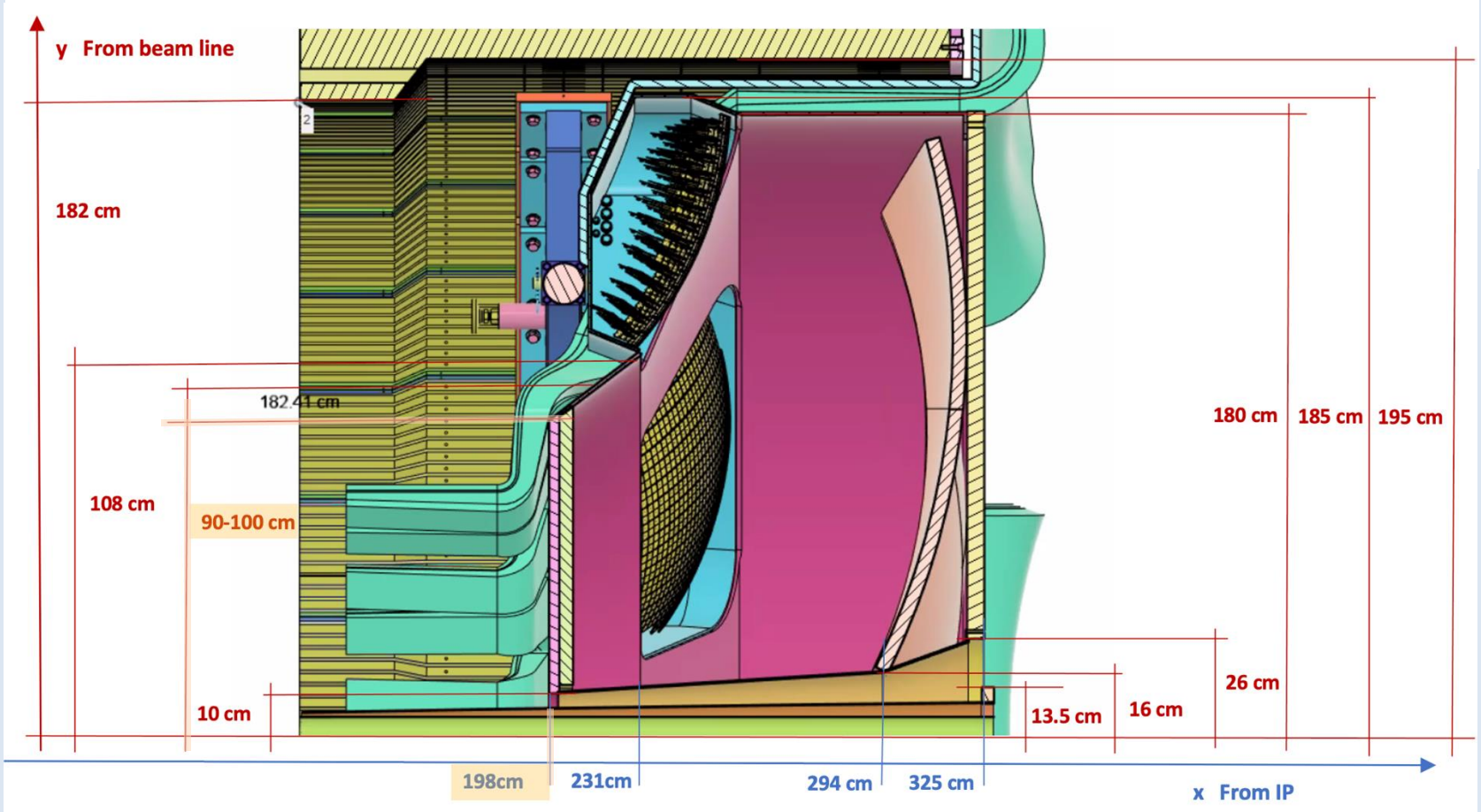
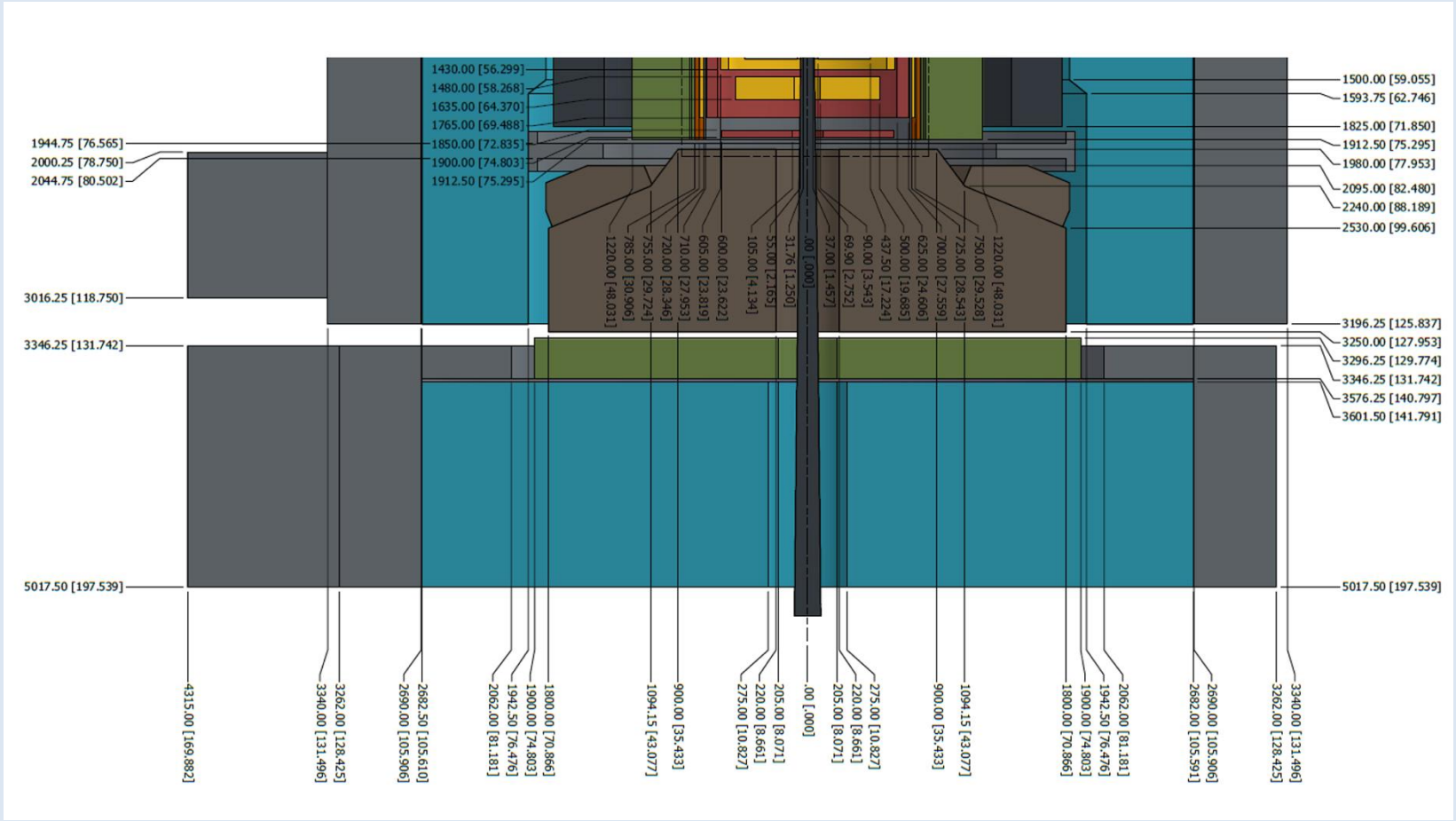
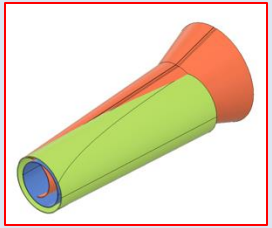
## News: +3 cm downstream shift with respect the IP, O(10 cm) tolerance in aerogel disk radius



# dRICH Envelope

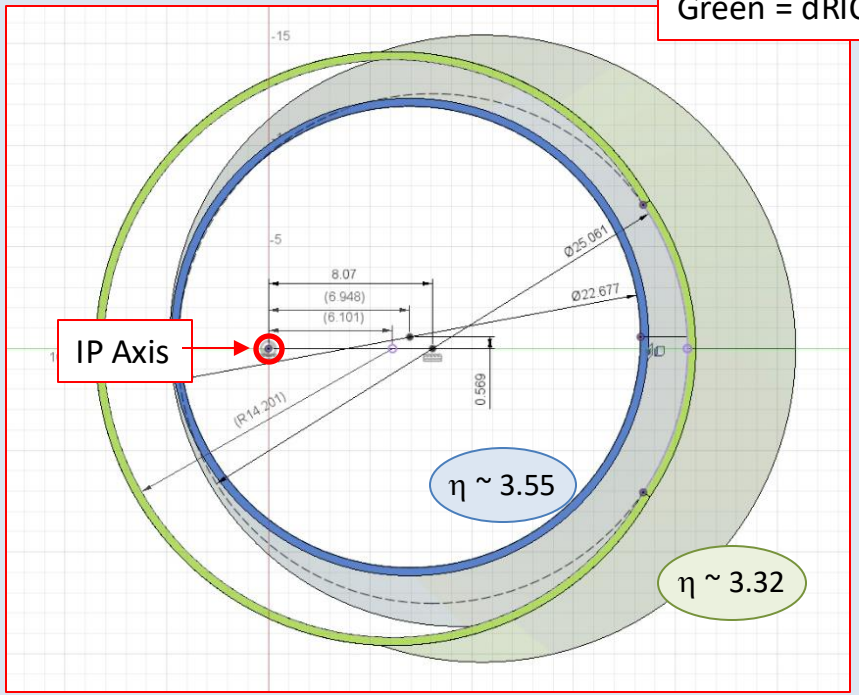


# Clearance to Beampipe: 1cm

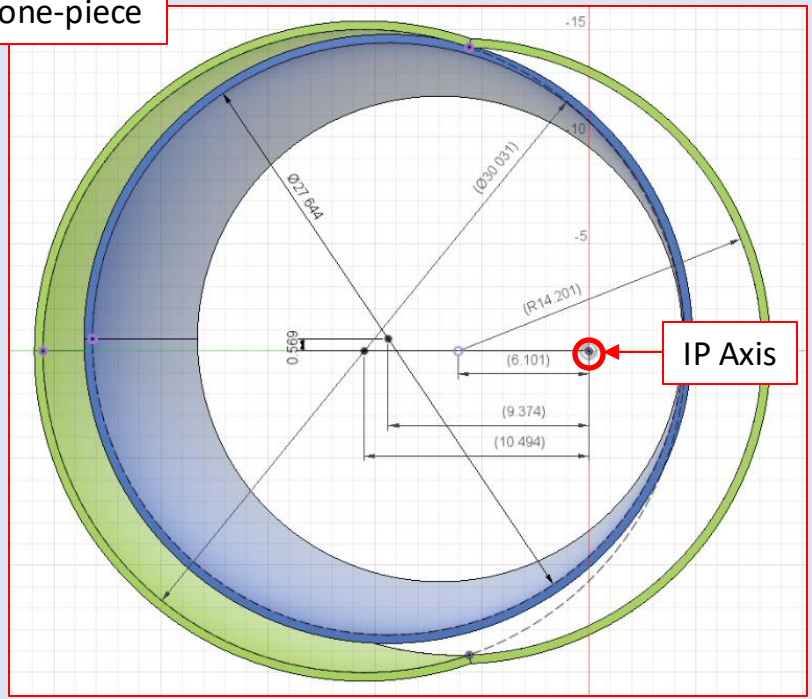


η defined with respect hadron beam

Blue = dRICH split
Green = dRICH one-piece



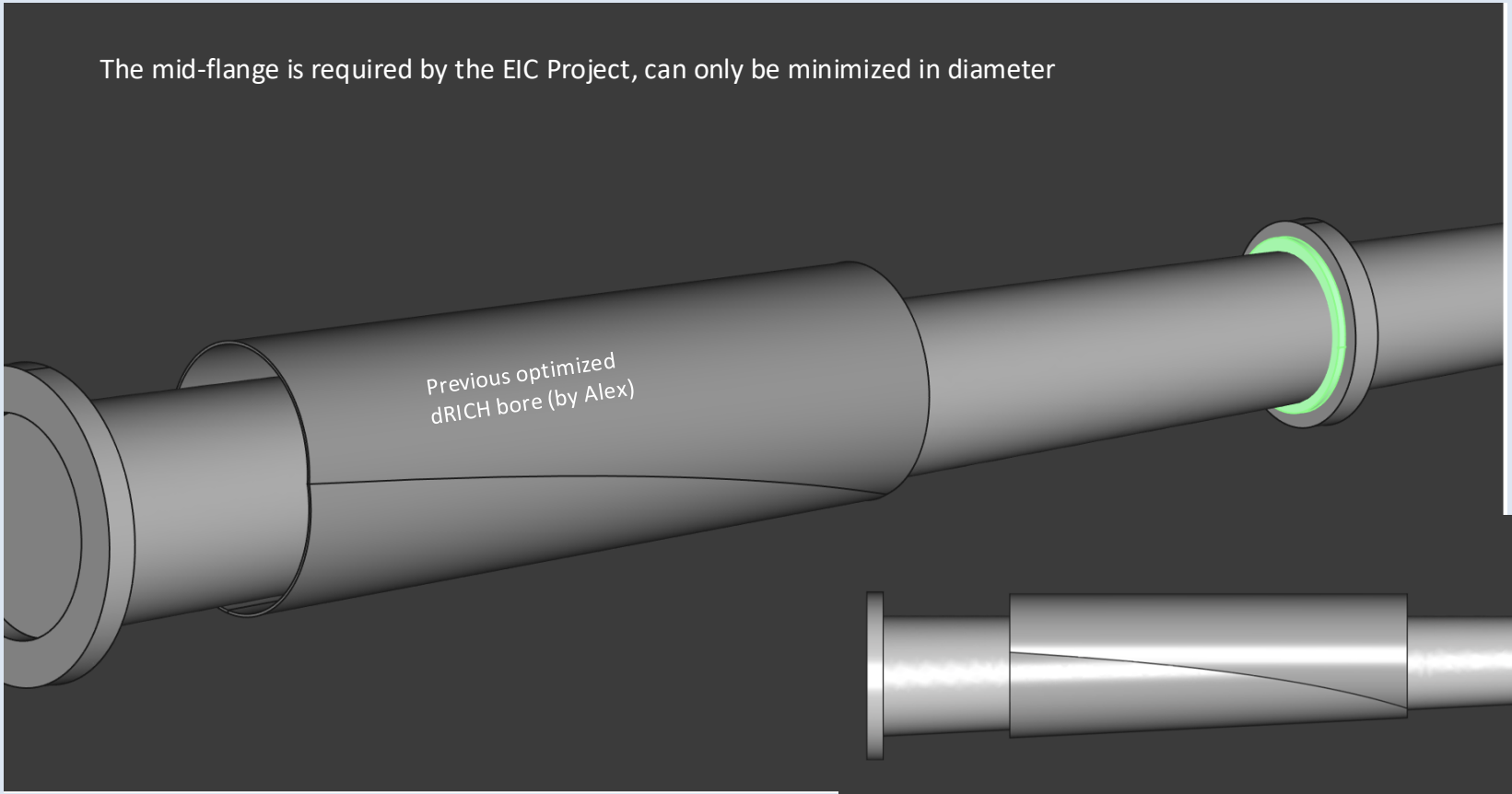

From IP



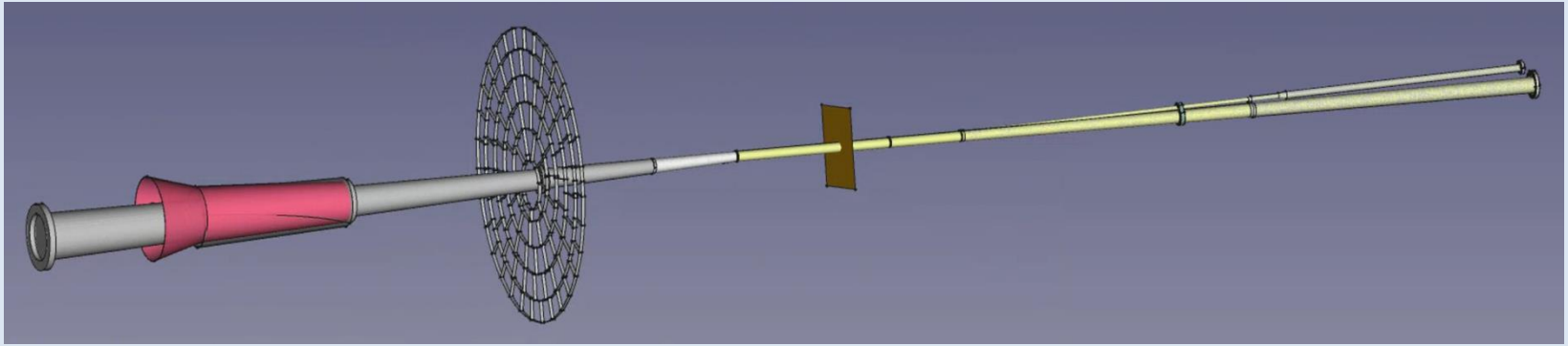

Towards IP (At Conic Section)

# Beam Pipe

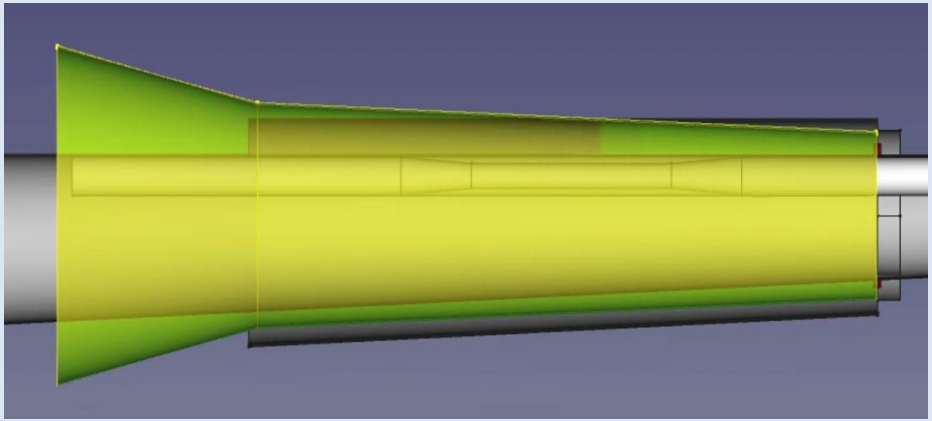
The mid-flange is required by the EIC Project, can only be minimized in diameter

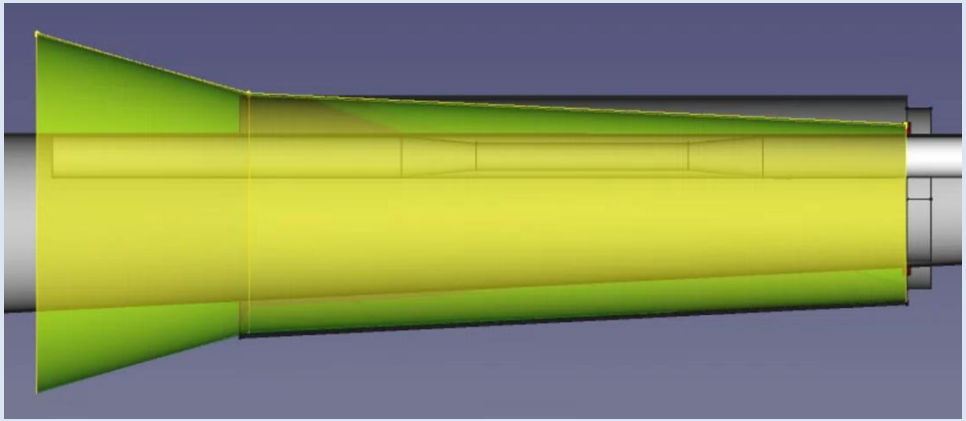


# Just Outside ePIC

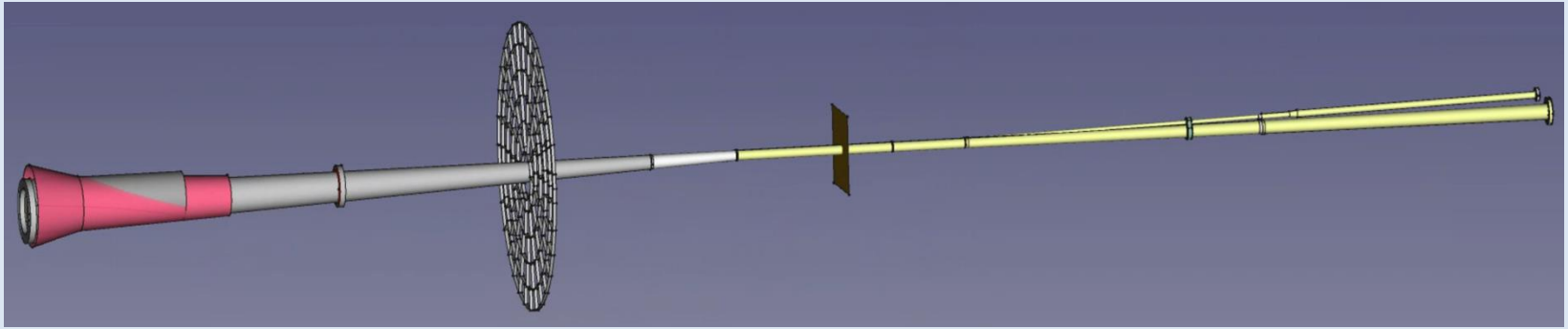


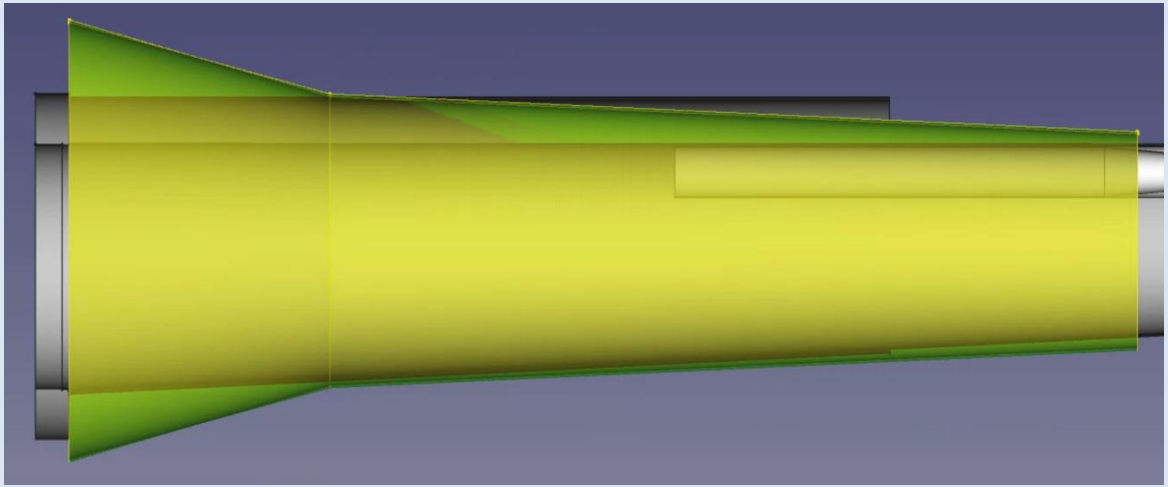
The minimum dRICH bore diameter is dictated by the mid-flange, no difference with or without splitting
Outside ePIC, dRICH gains and needs left-right translation degrees of freedom



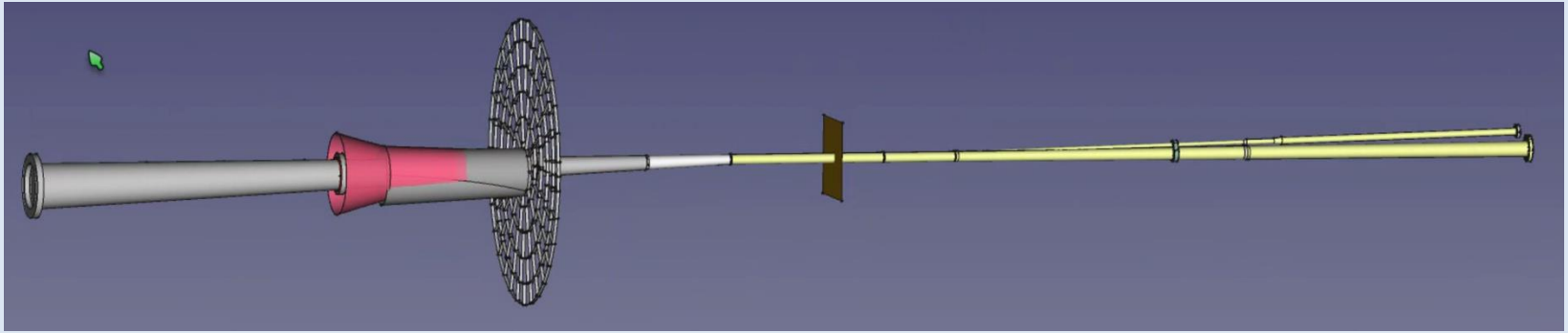


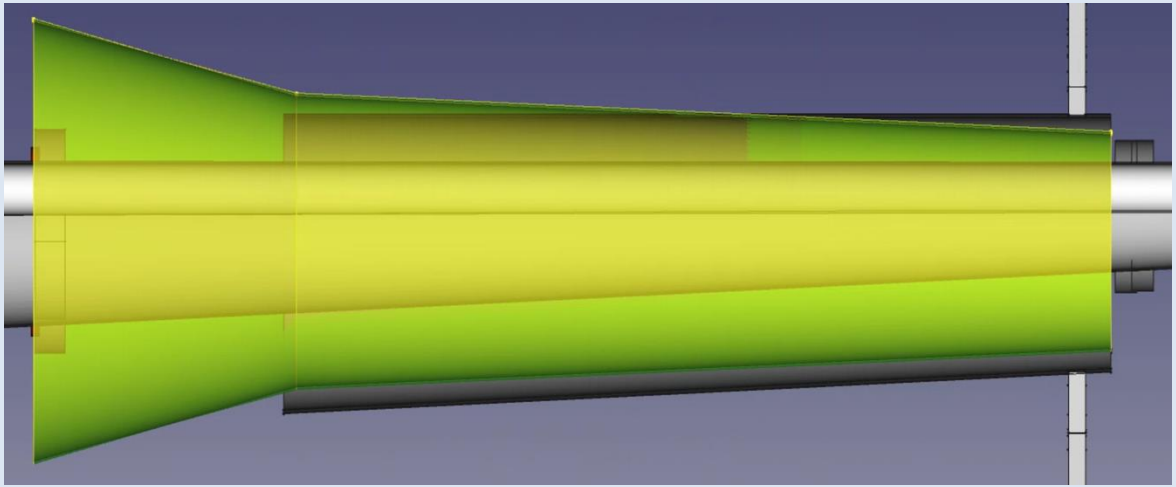
# Maintenance Position



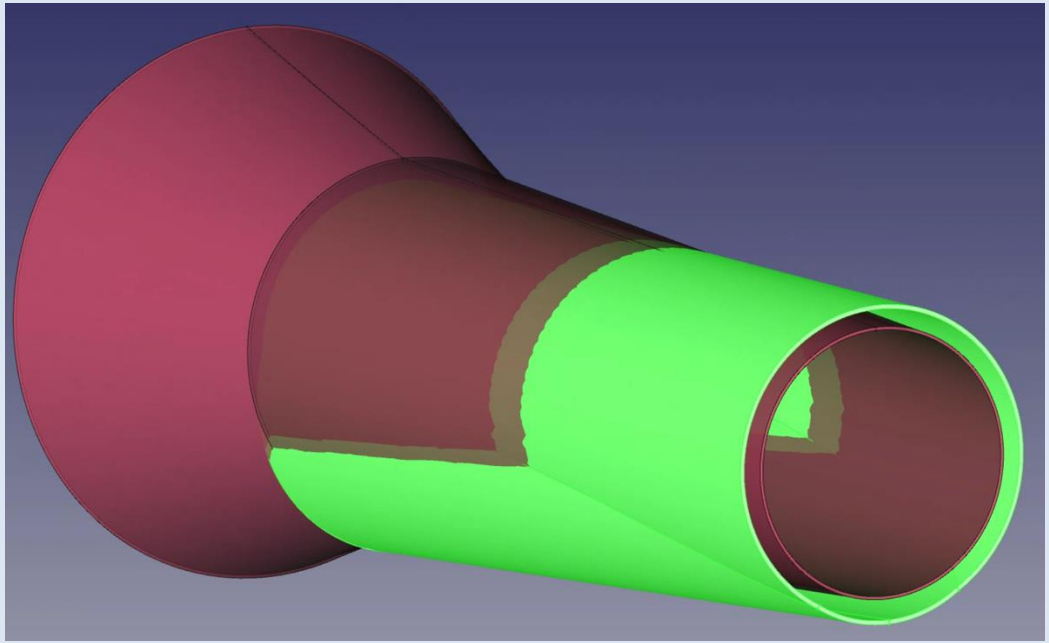


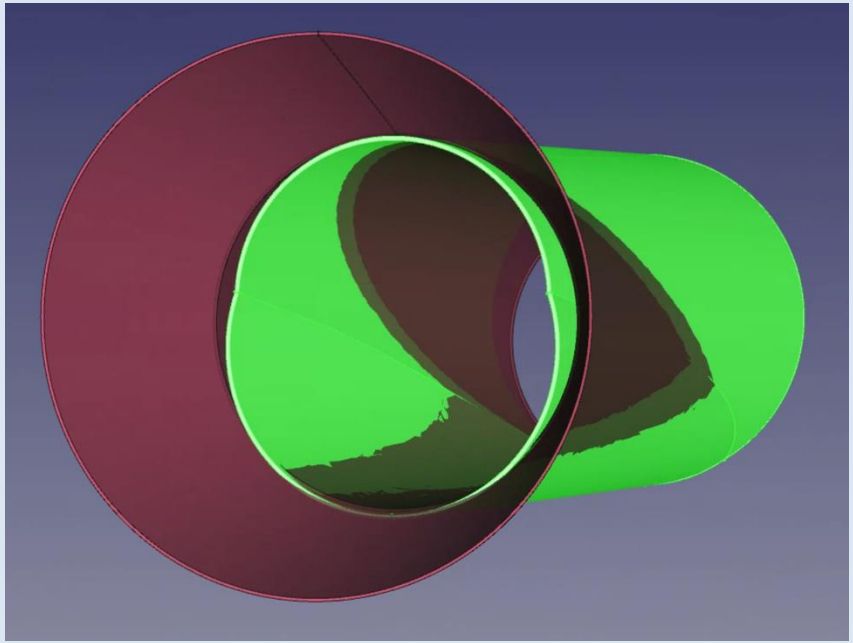
# Working Position



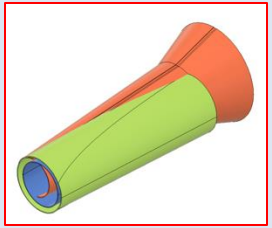


# dRICH Bore





# Clearance to Beampipe: 1cm



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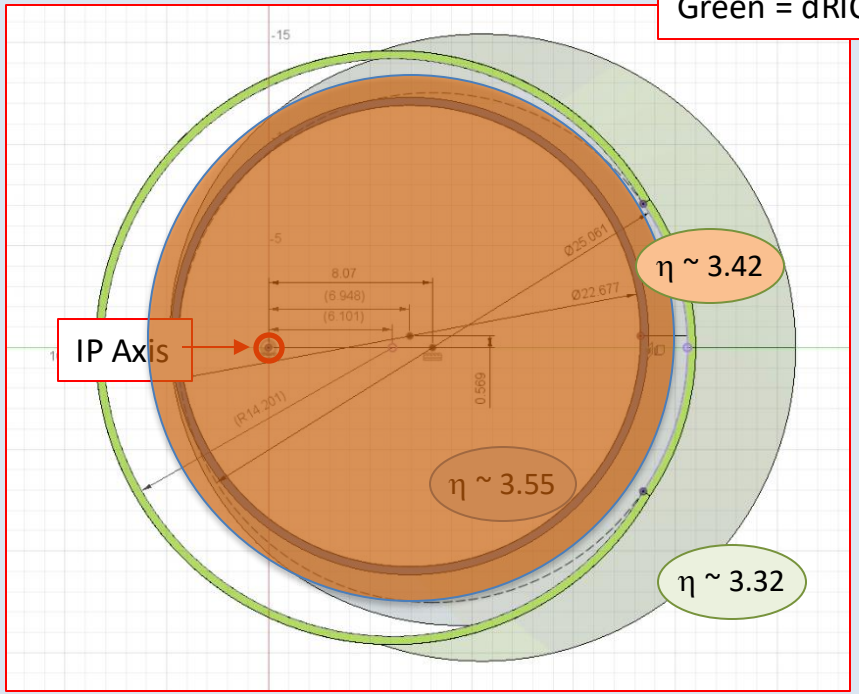
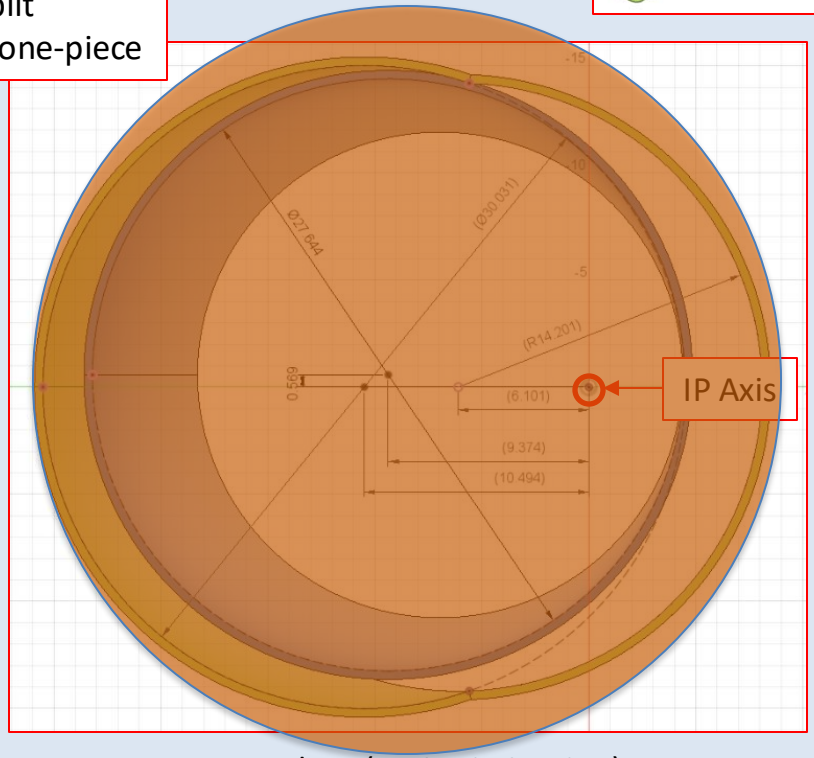
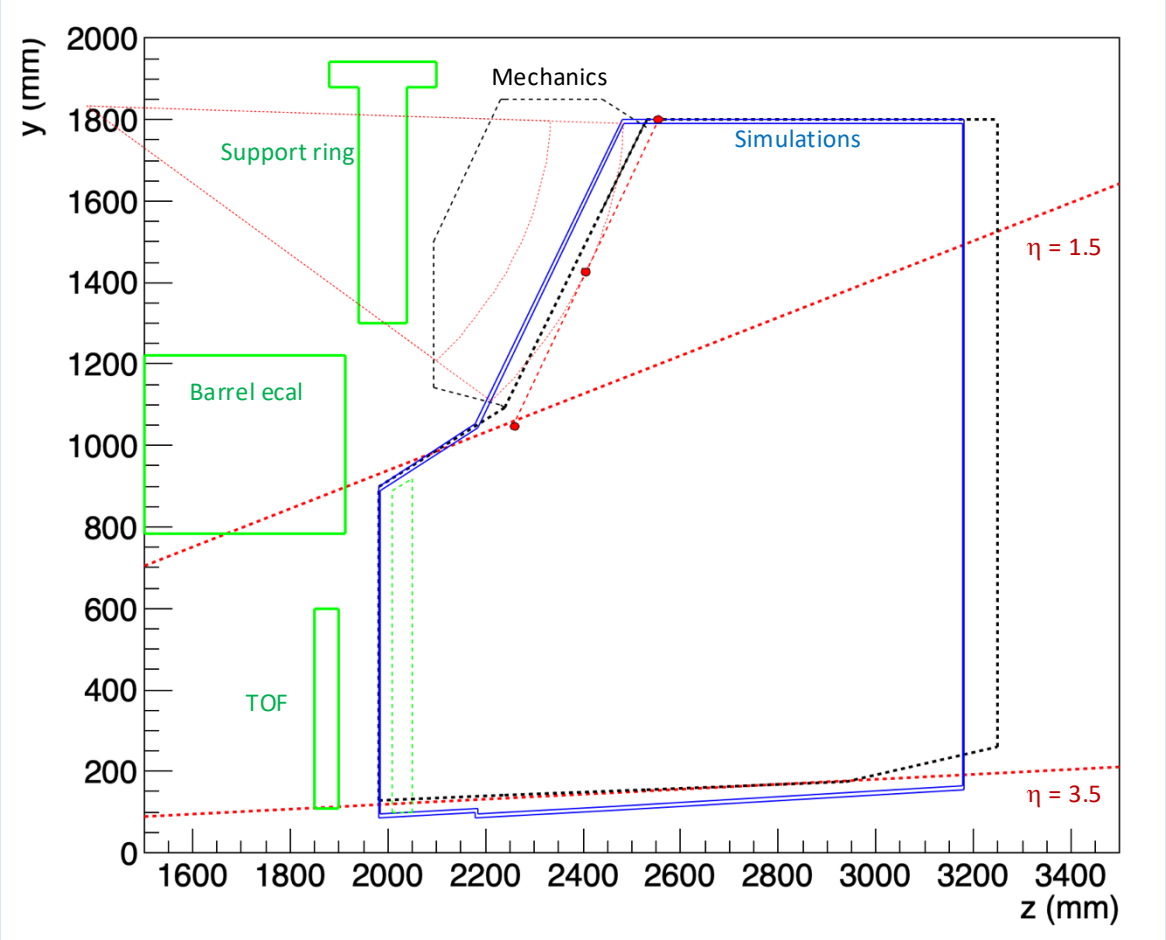



From IP




Towards IP (At Conic Section)

# dRICH Layout



# Conclusions

Work ongoing to finalize the geometry bridging mechanics, simulations & integration

dRICH splitting:

- no benefit in pseudo-rapidity acceptance with the mid-flange in position
- benefits for mechanics stability only with structural septum (and significant loss in acceptance)
- complicate removal operation with all services detachment
- may remain a backup solution in case of unexpected issues

dRICH detecor box:

- requires optimization accounting for mechanical structure
- tight problem because of quartz window, PDUs and services space needs (e.g. VTRX+ pigtail quandary)
- to be revisited with updated ePIC model

Goal: release a new geometry (or a couple of options) for performance validation