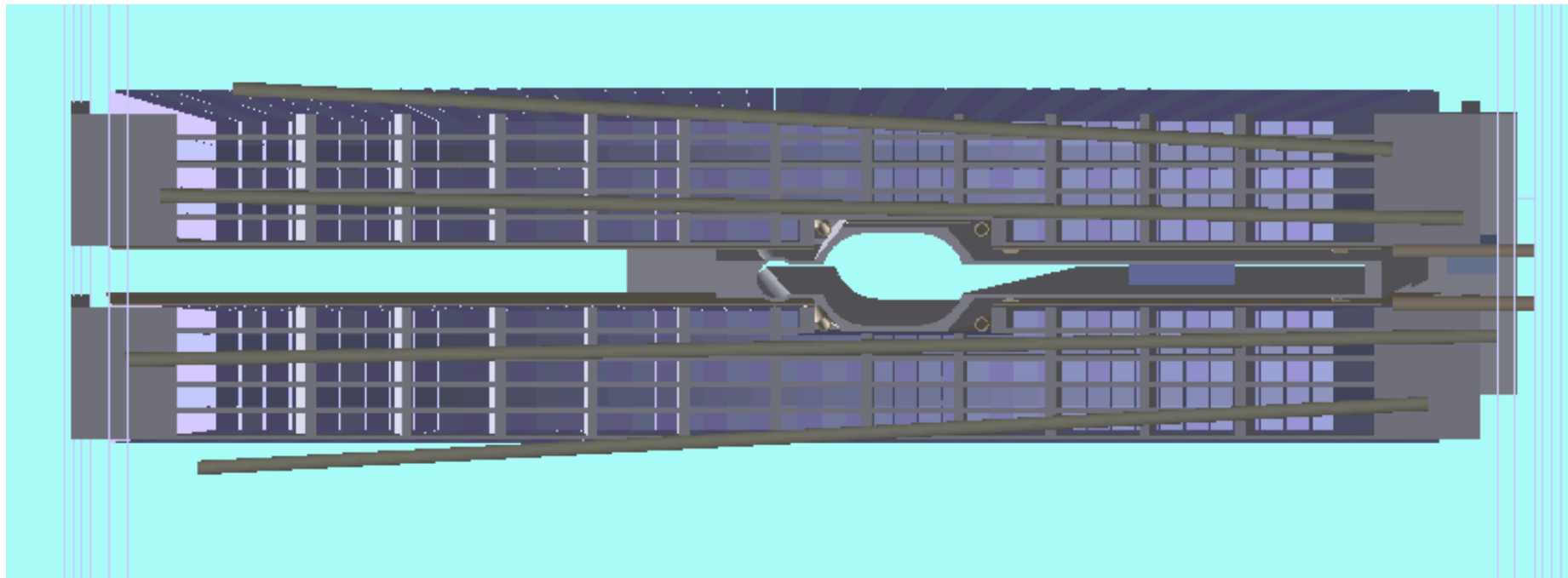


# Ecal GEMC Geometry Updates

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## New features:

- Copper cooling pipes around vacuum chamber
- Al cooling pipes in front of crystal face
- Al honeycomb (already in SLIC, now in GEMC)
- Copper plate between ecal crystals and vacuum chamber
- Al structure along front face of crystals

Note: Front flange not pictured above.

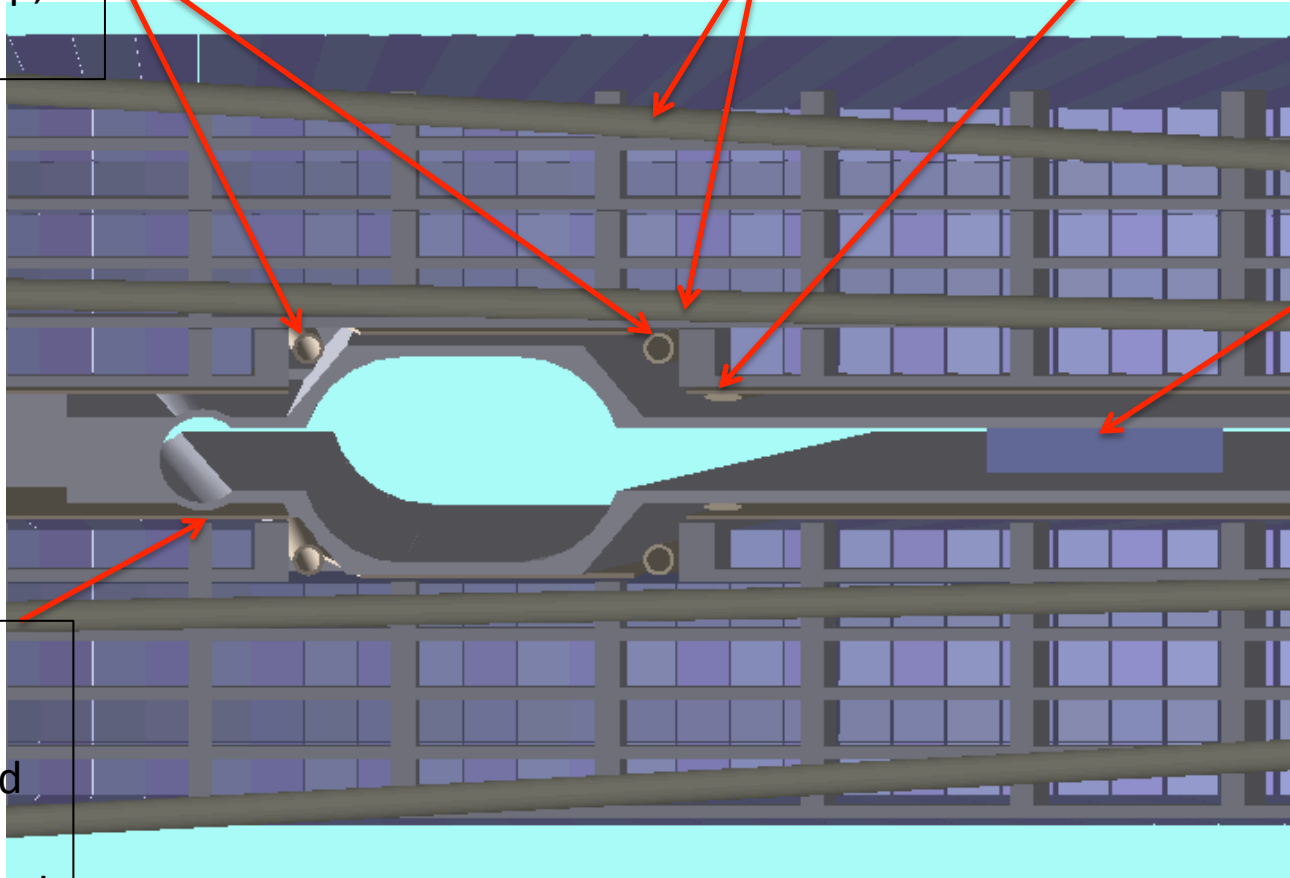
Cu cooling pipes around electron hole, 2 top, 2 bottom

Al cooling pipes, 2 top, 2 bottom

Cu cooling pipes above and below right half of vacuum chamber, 2 top, 2 bottom

Al honeycomb

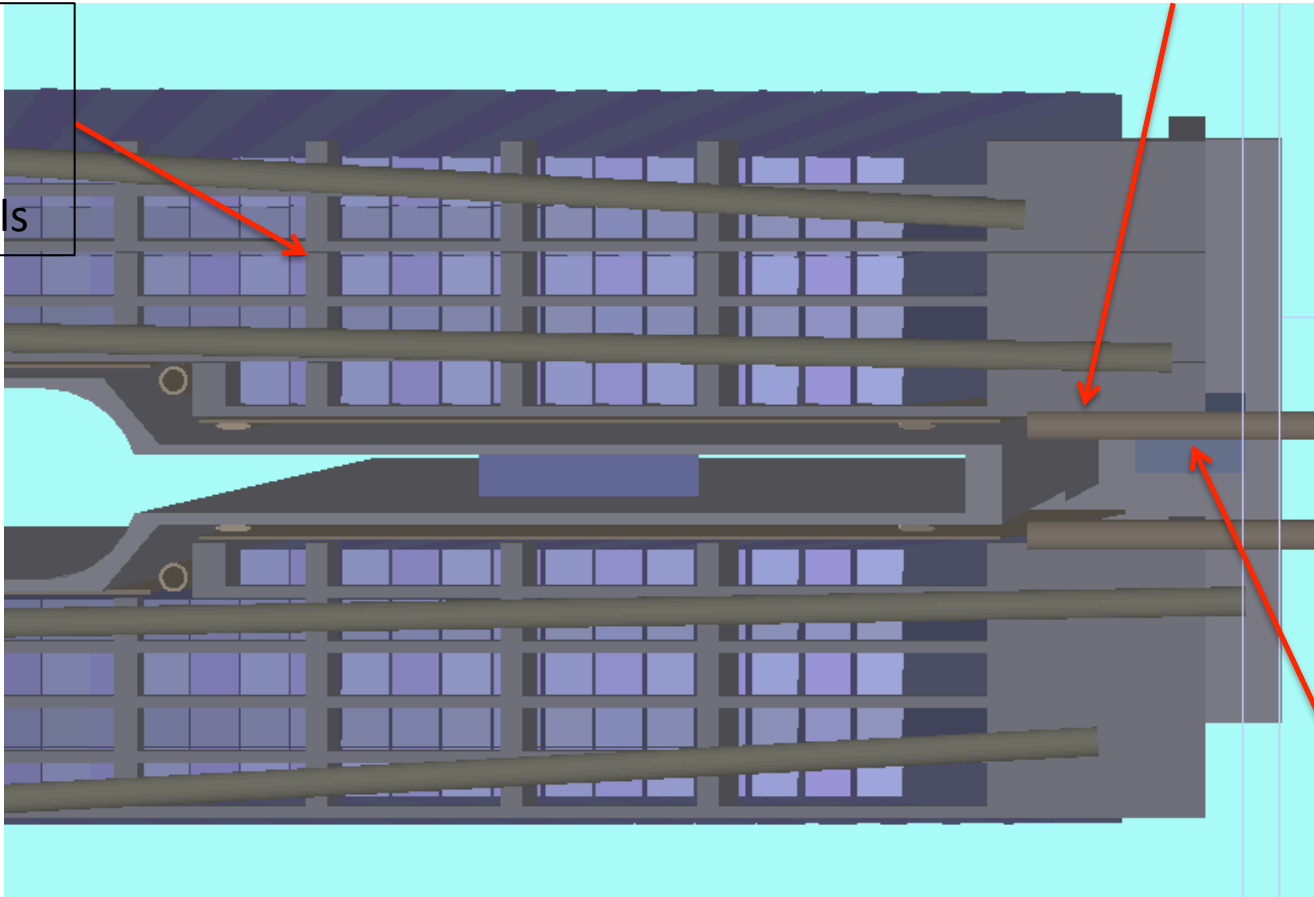
Cu plate between crystals and vacuum chamber and cooling pipes, top and bottom



Zoom in around electron hole, from upstream looking downstream

External Cu cooling pipe, 1 top, 1 bottom

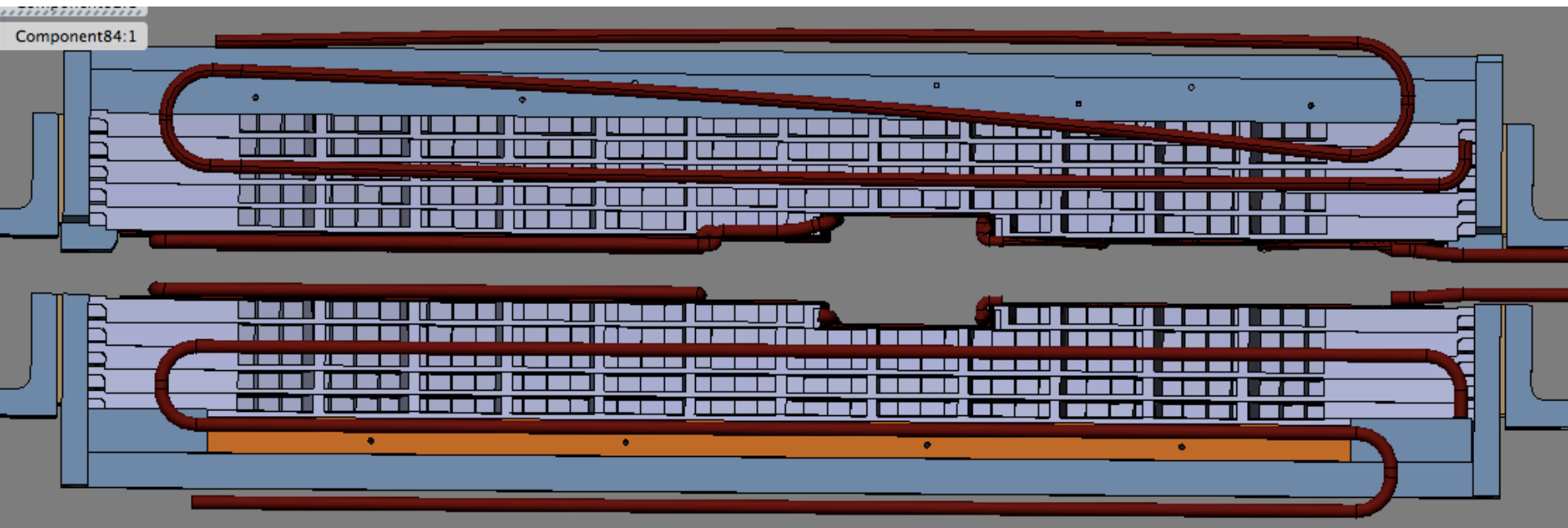
Aluminum structure around front face of crystals



Stainless Steel support bar

Zoom in to the right of electron hole, from upstream looking downstream

# Engineer sketch used for GEMC geometry updates



Note: External Aluminum pipes on front face at bottom should be a reflection of the pipes on top, not horizontal (drawing incorrect)