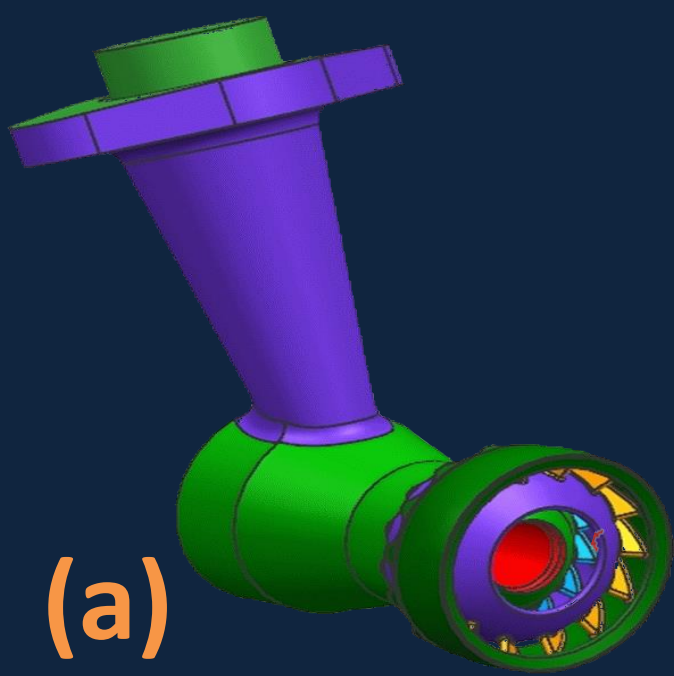


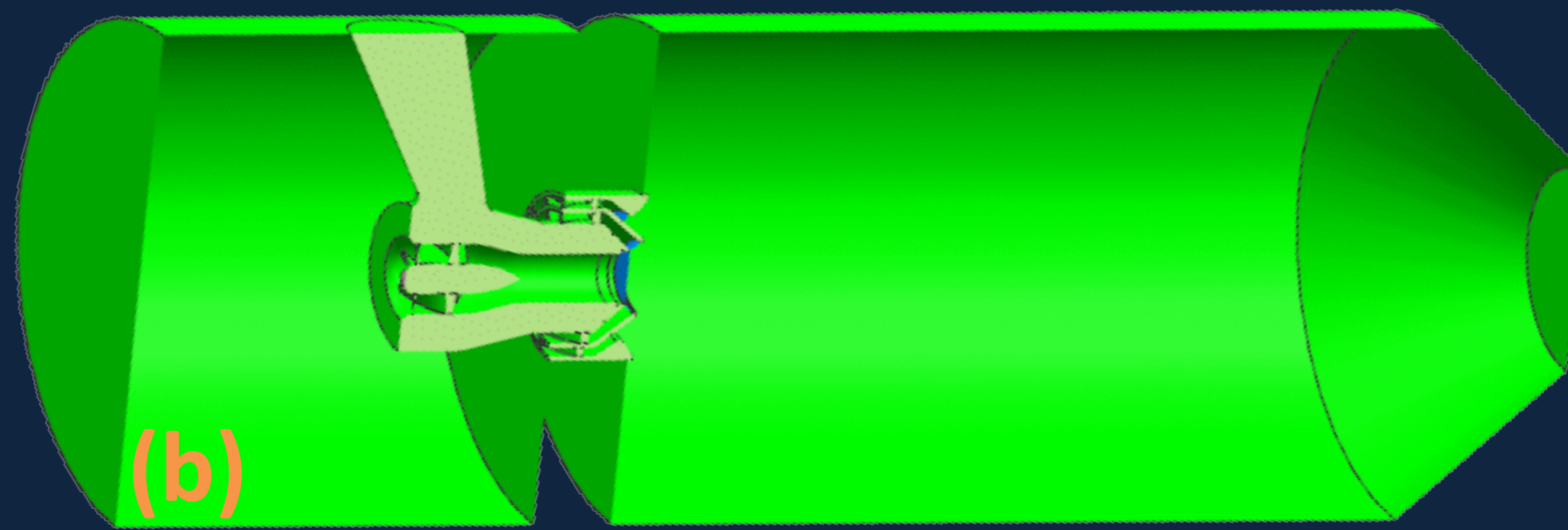


NUSKU CFD Flow Field Deep Learning Study

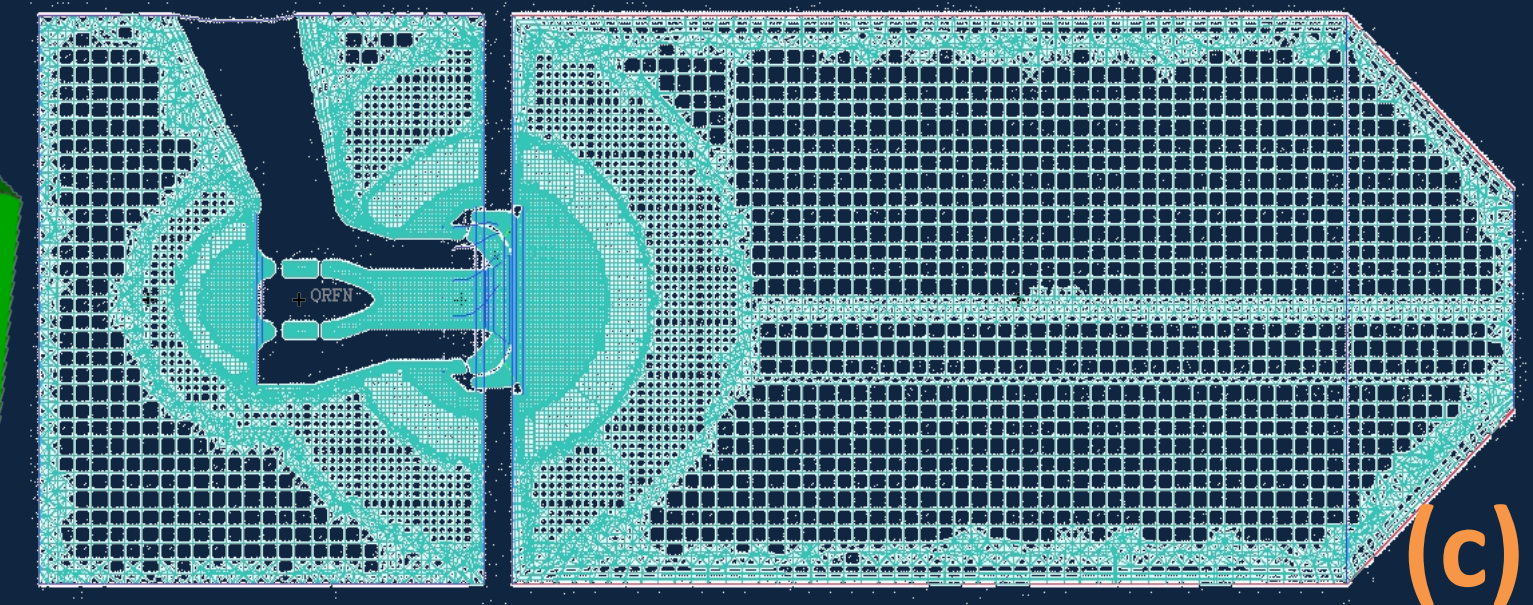
Xu Zhang, Ivan Voutchkov, Andy Keane
UTC for Computational Engineering, University of Southampton
Shiva Babu, Regina Lambert, Marco Nunez
Rolls-Royce PLC



(a)

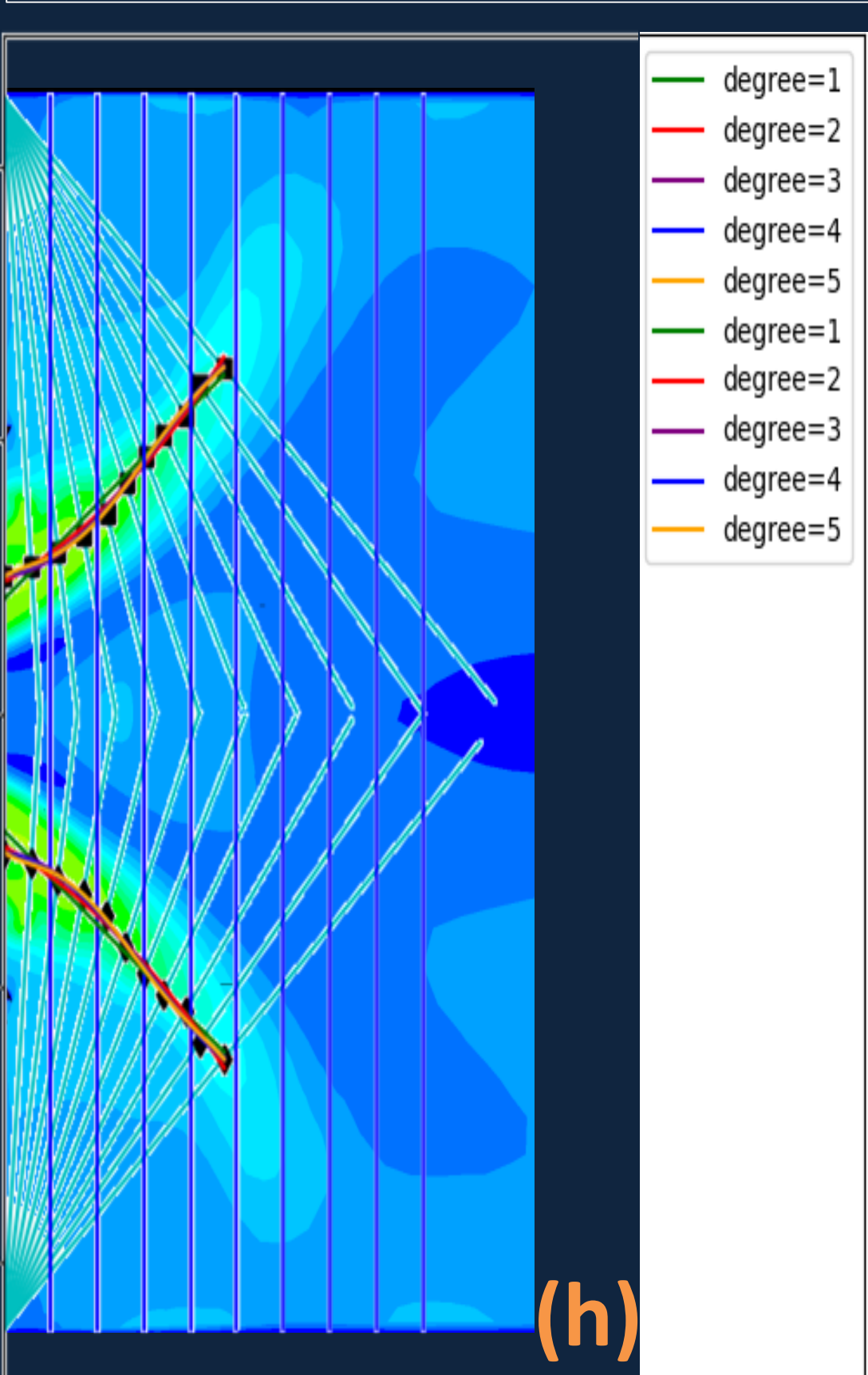
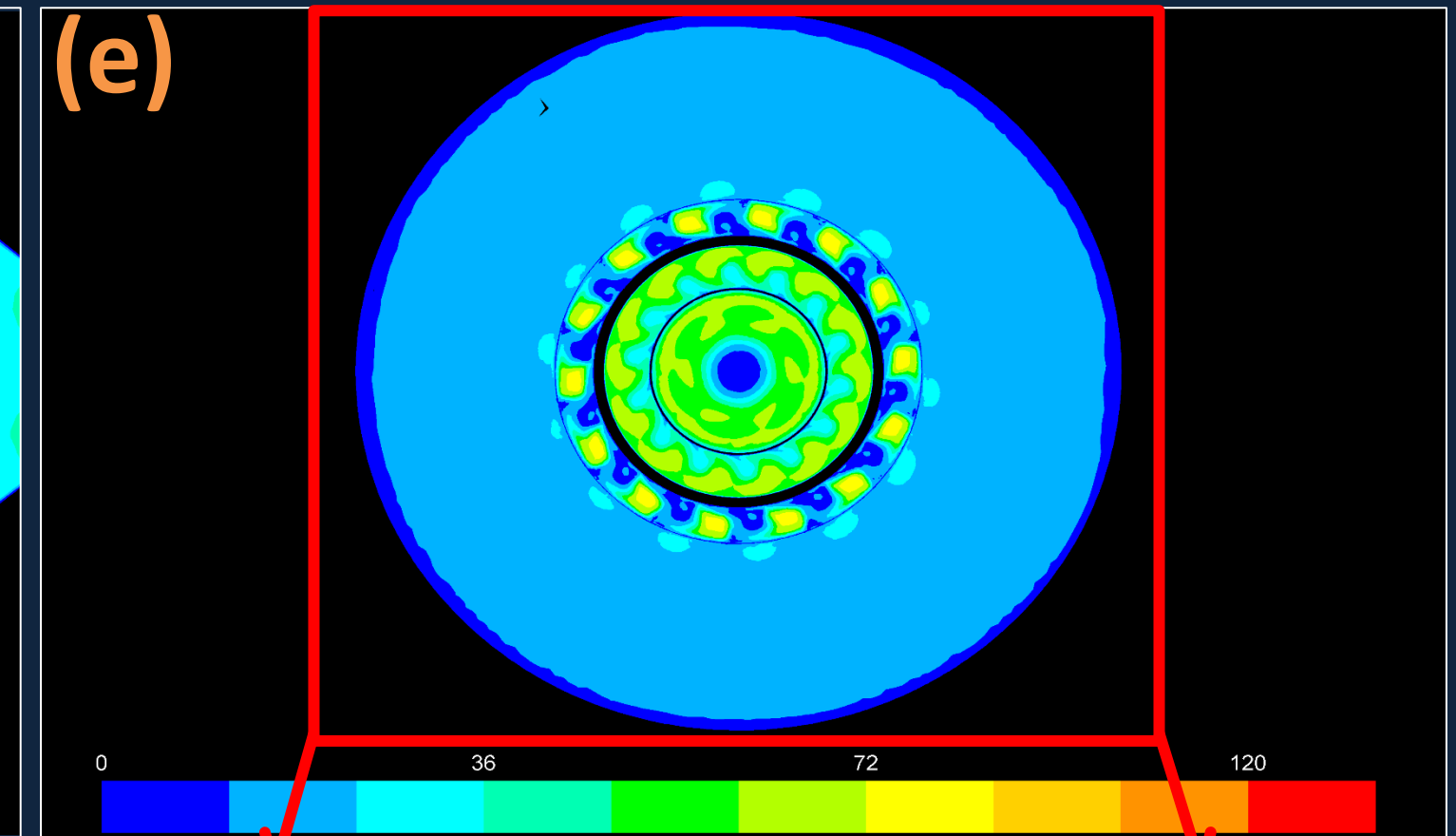
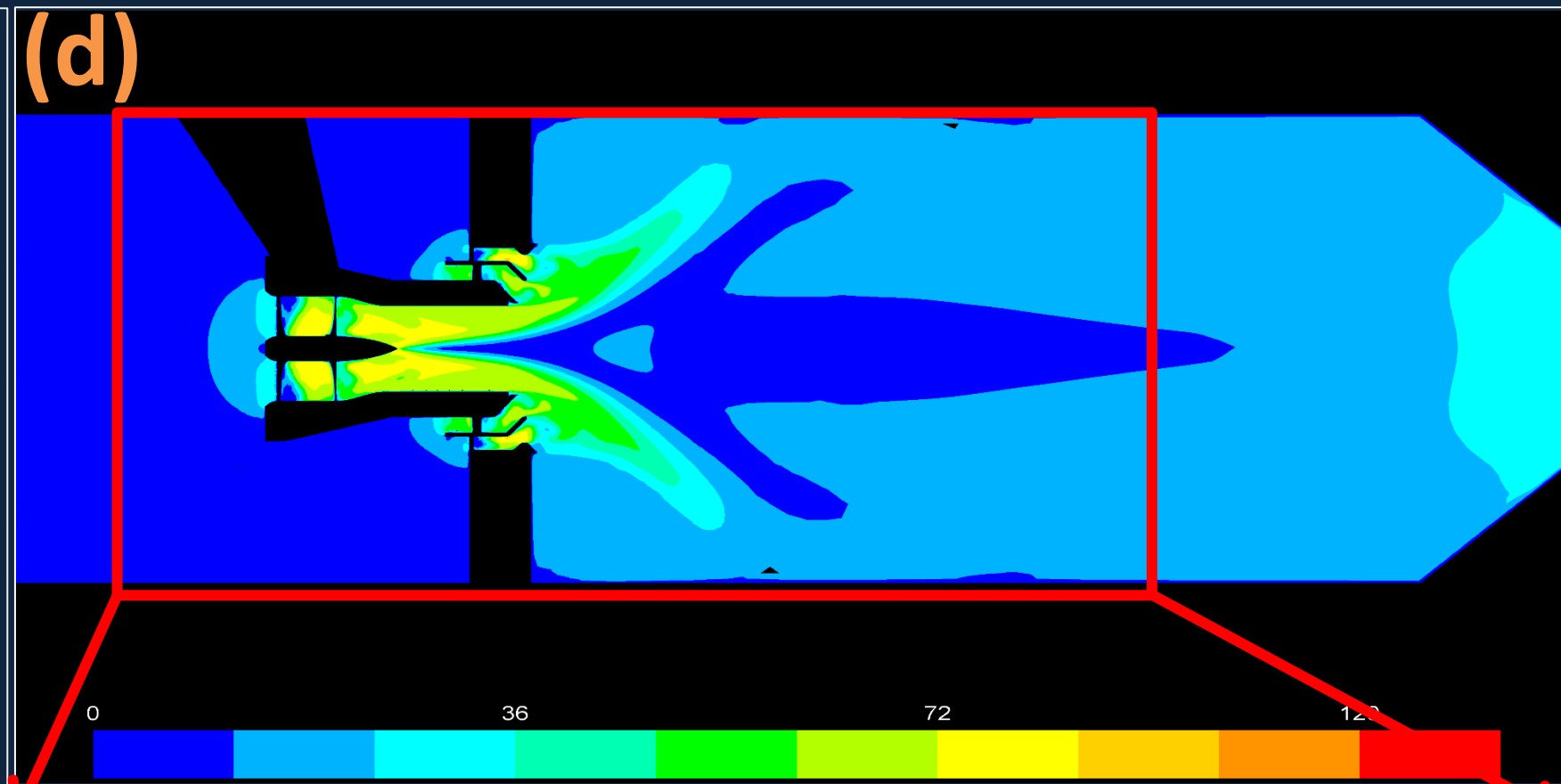


(b)

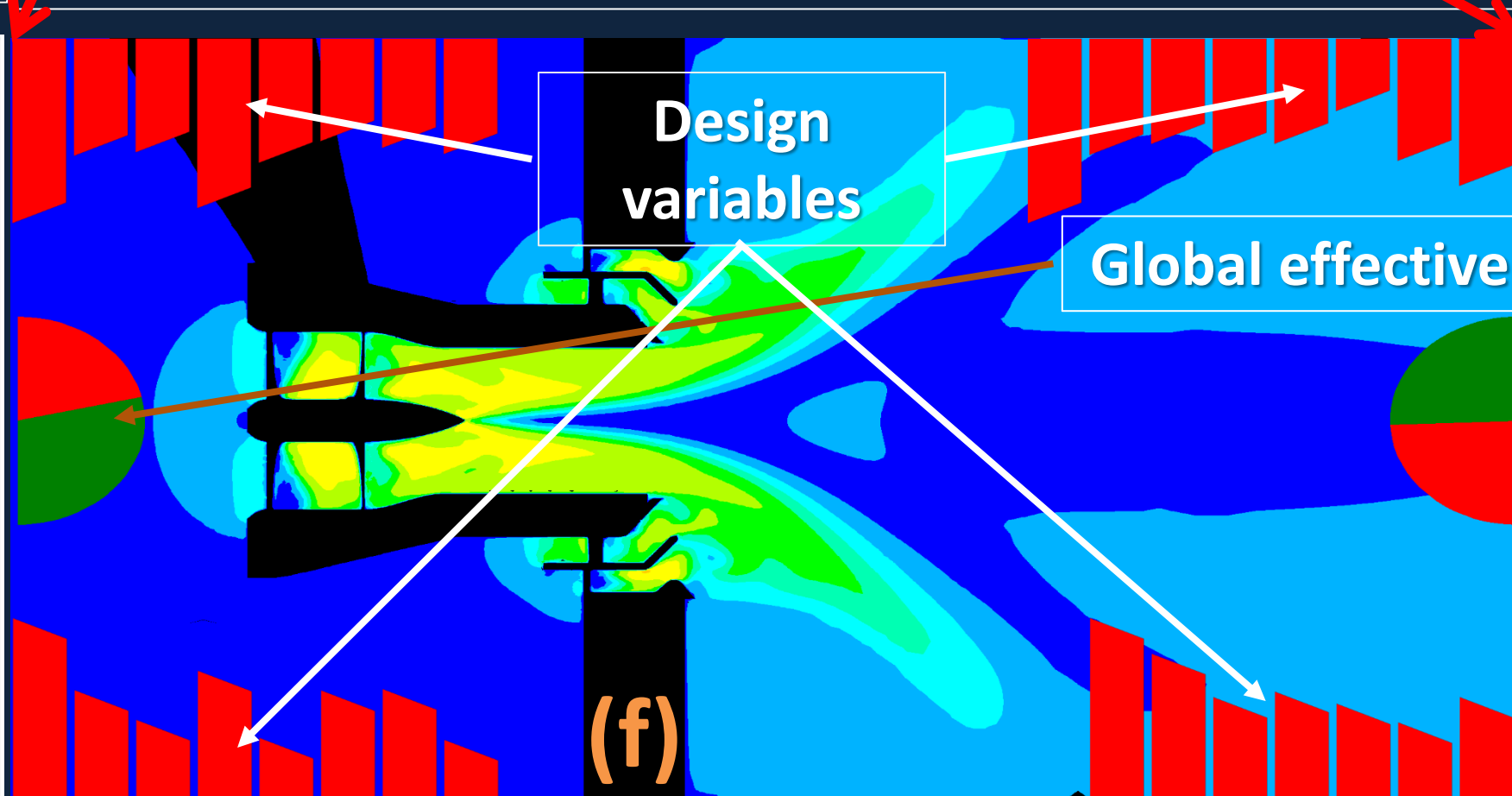


(c)

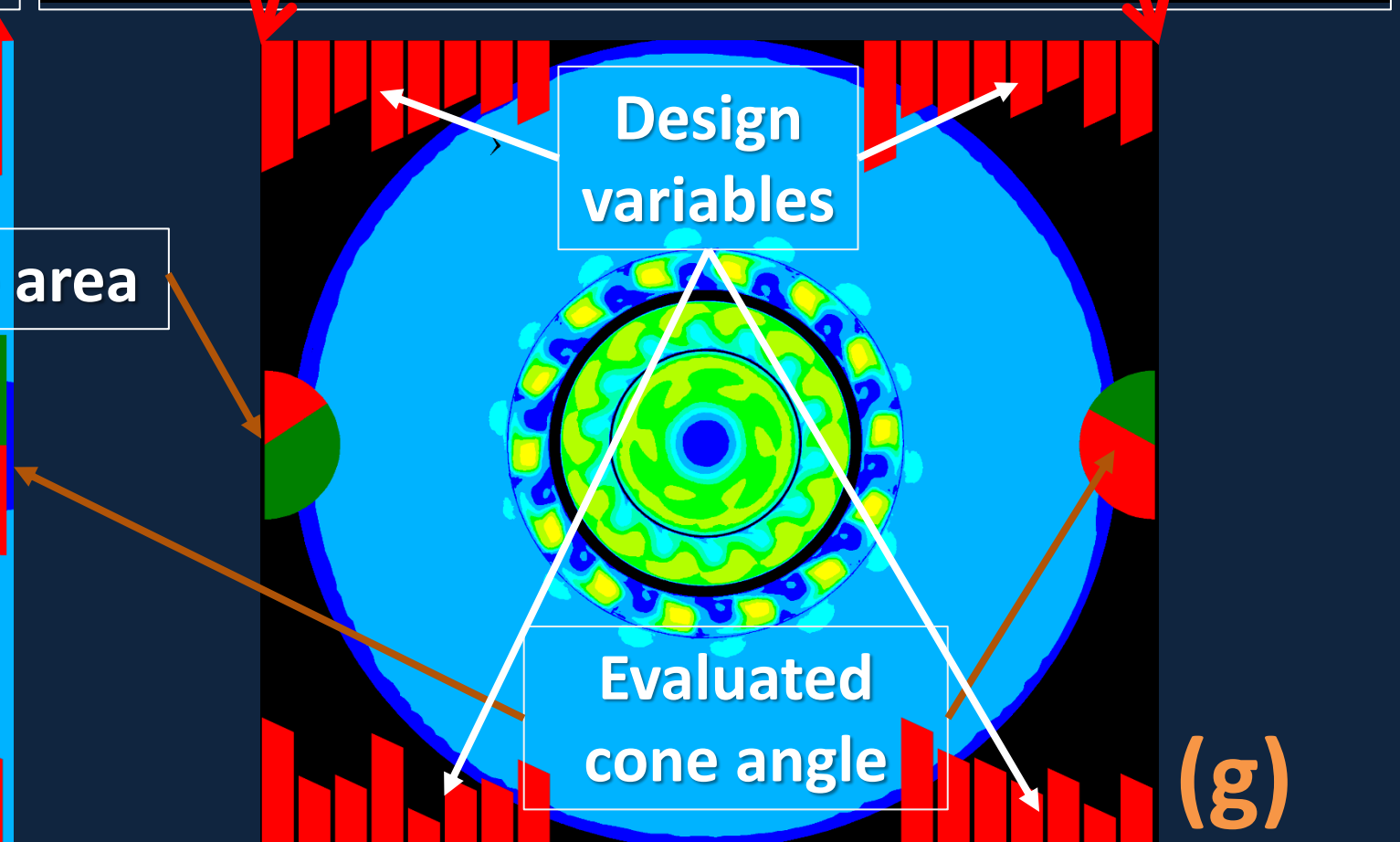
- (a) Parameterised NUSKU FSN CAD model
- (b) Rig model of validation airbox
- (c) Mesh of the airbox rig model
- (d) Cross-section of the FSN airbox rig model CFD result
- (e) Right-view of the FSN airbox rig model CFD result



(h)

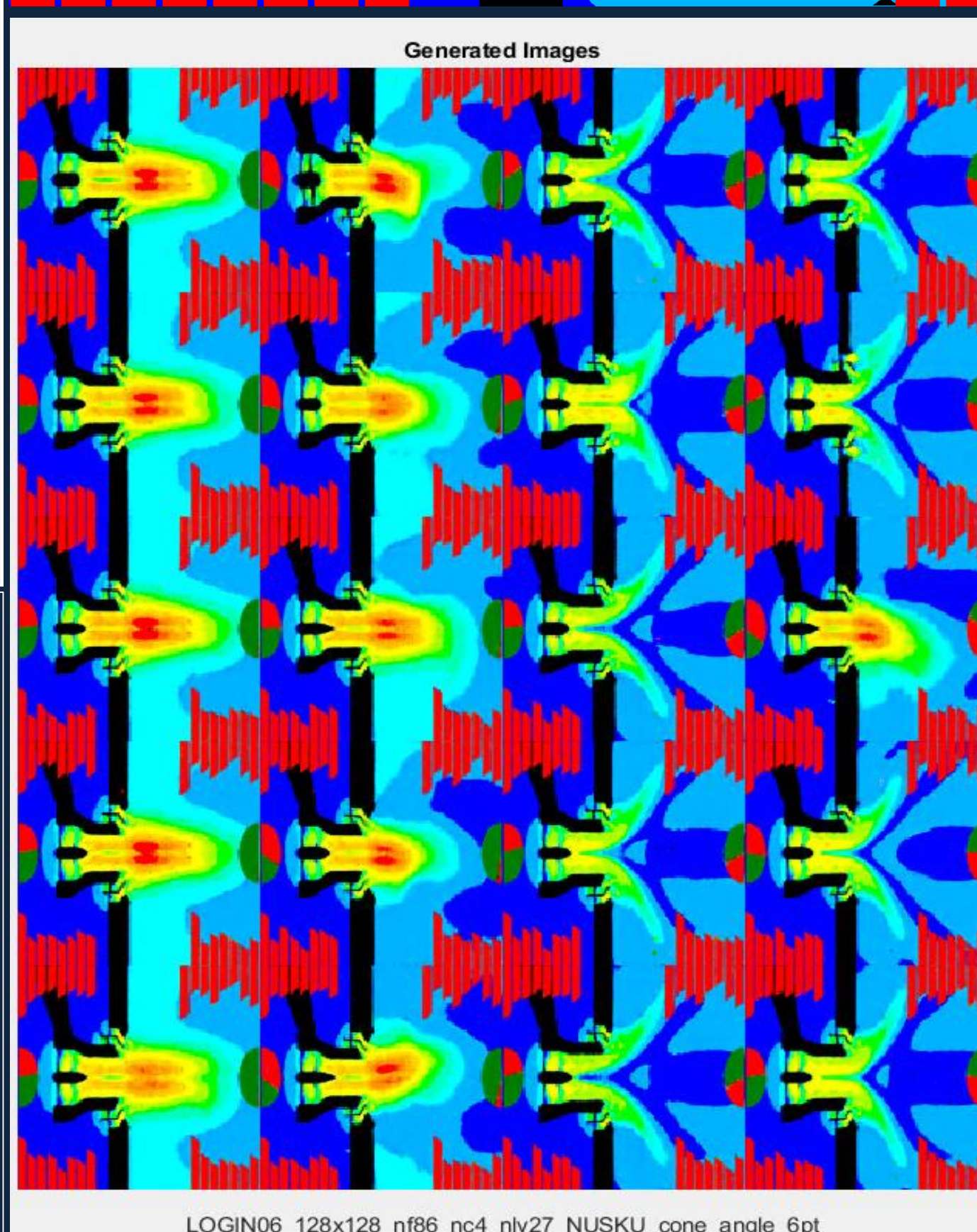


(f)

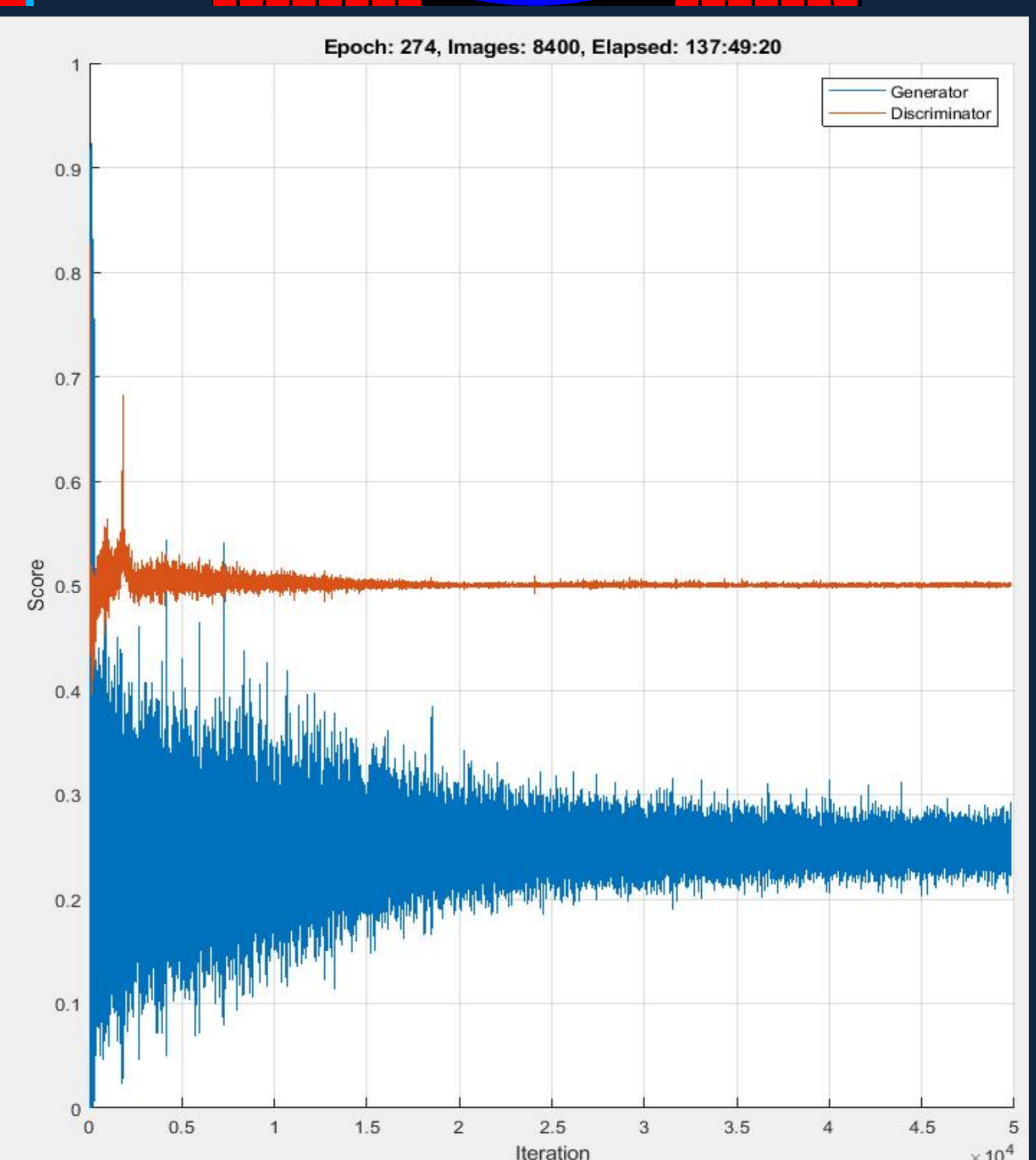


(g)

- (f) Encoded Region of interesting (ROI) of the cross-section images
- (g) Encoded ROI of the right-view images
- (h) Automated cone angle evaluation curve fitting process
- (i) cGAN training process using encoded cross-section images with cone angle as the targets



(i)



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