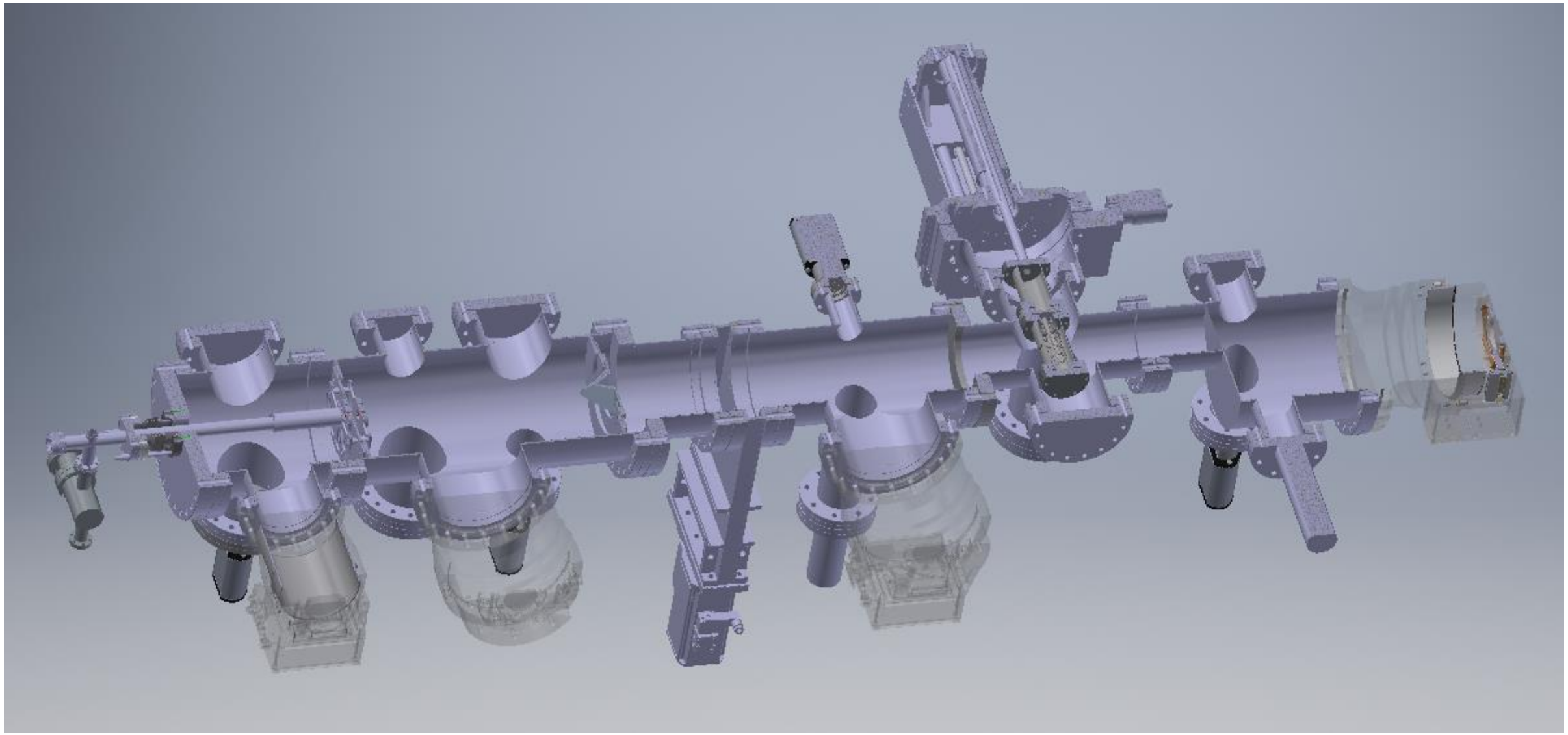
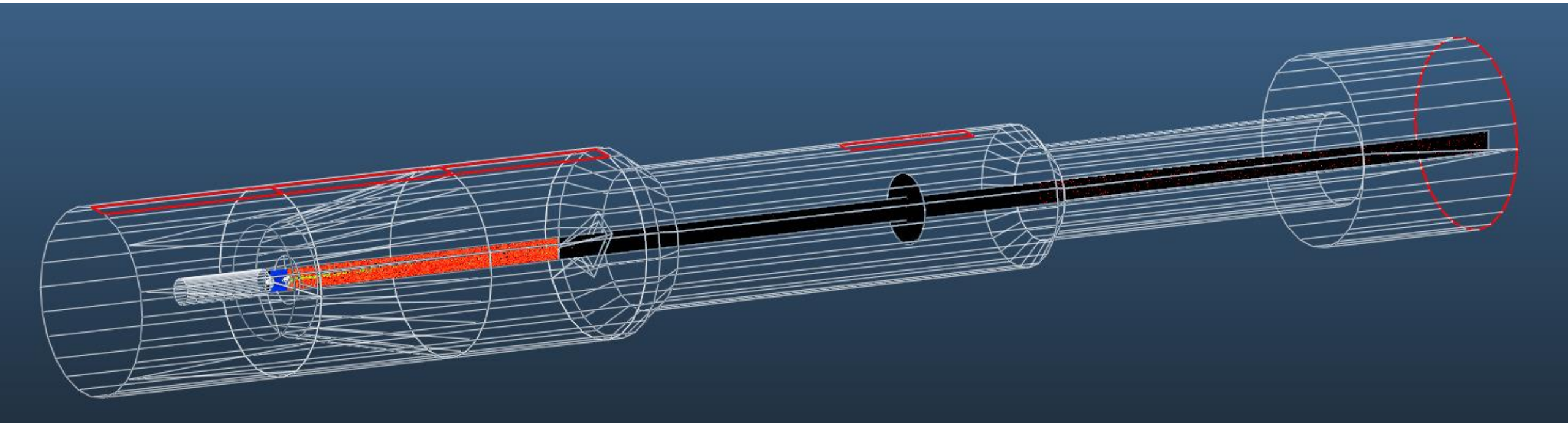
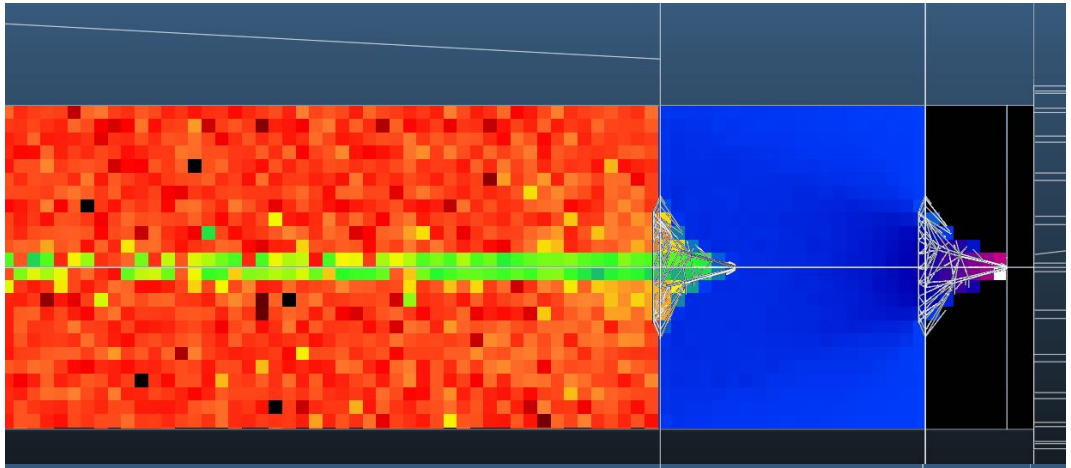
Low-pressure simulation update

Marton Ady

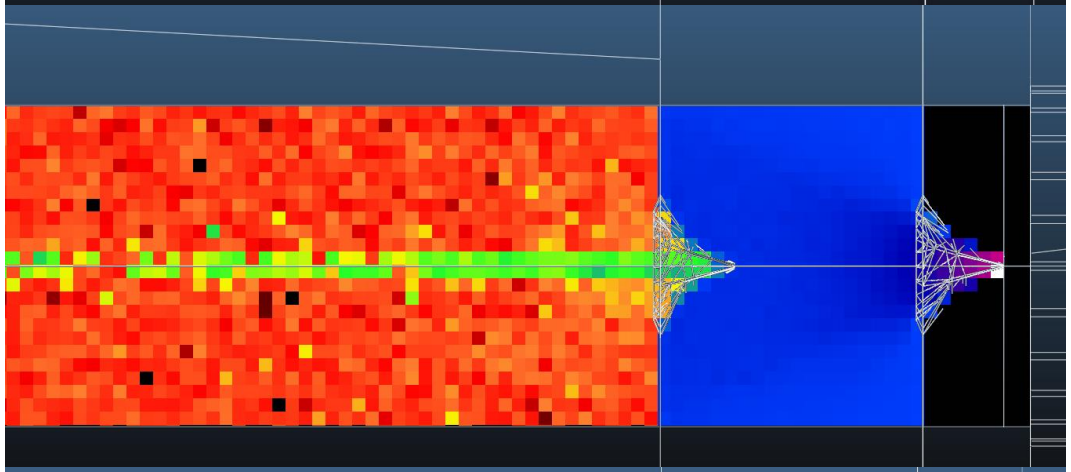
BGC meeting 02/02/2018



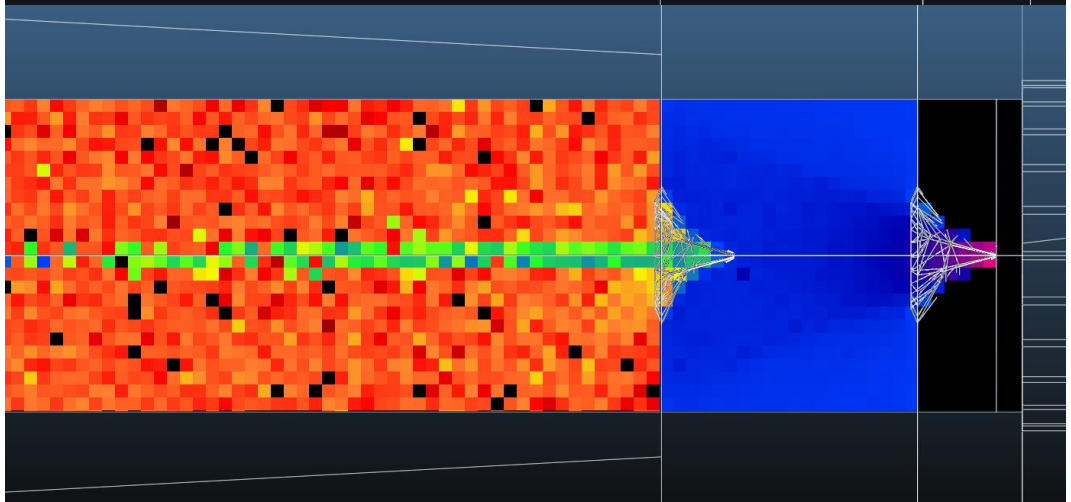




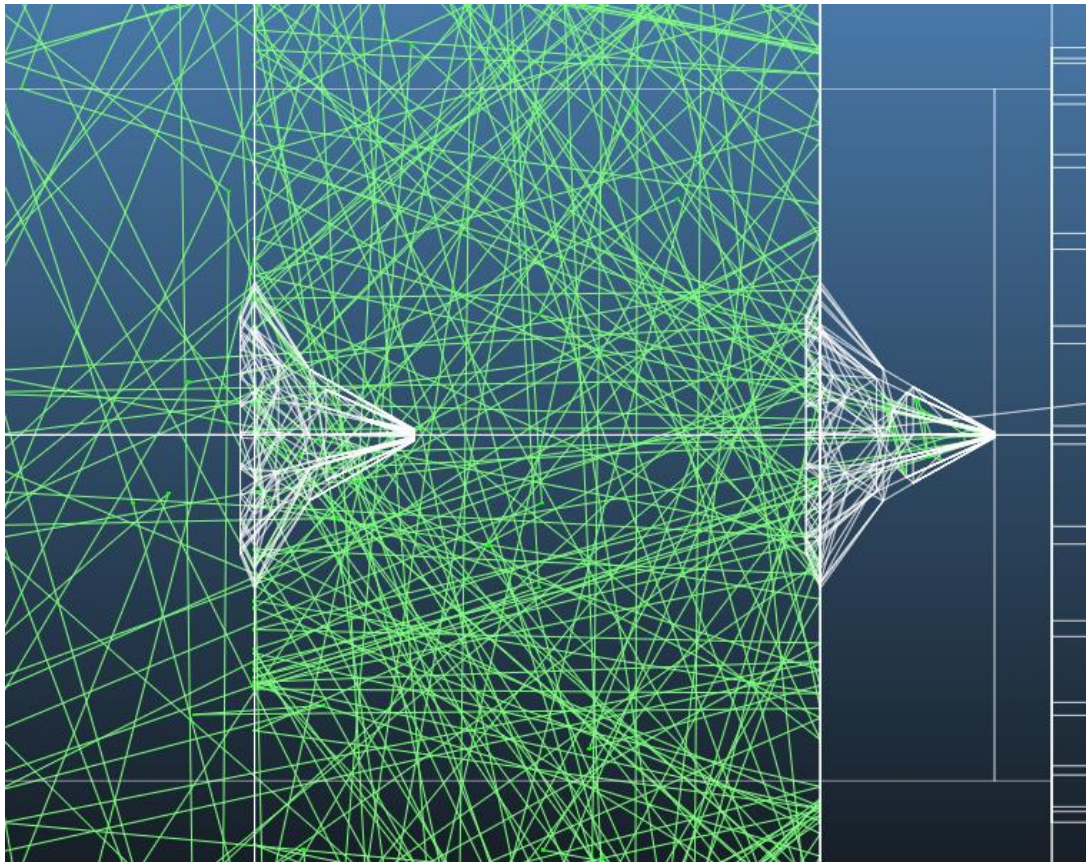
Uniform
(divergent)



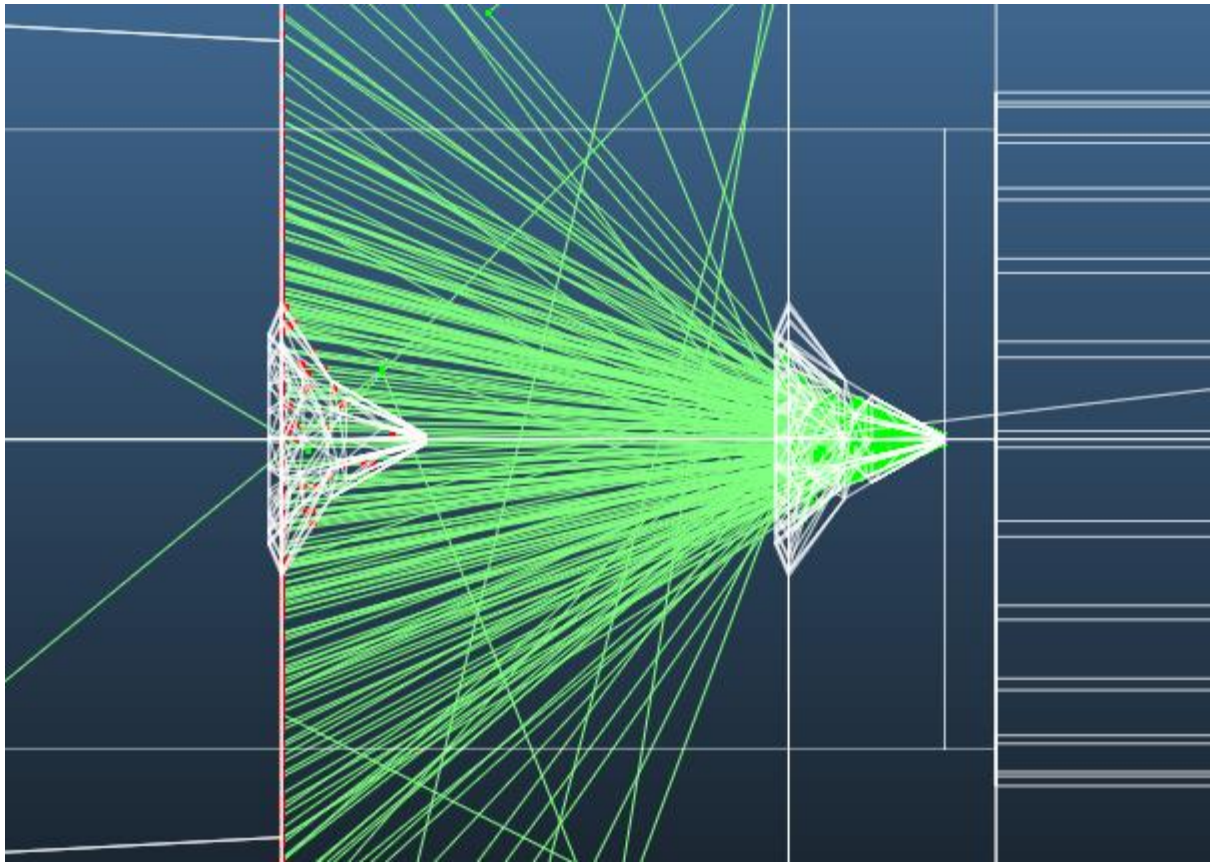
Cosine
(medium)



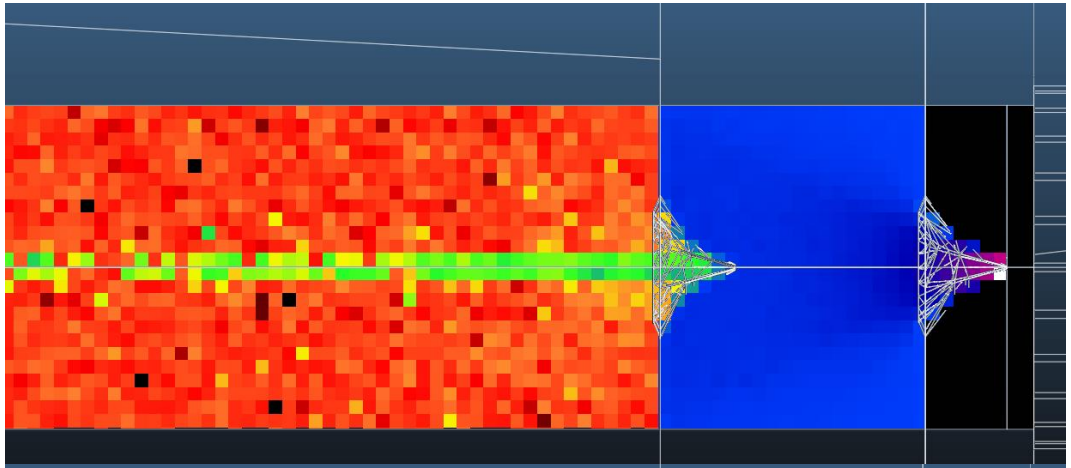
Cosine^5
(collimated)



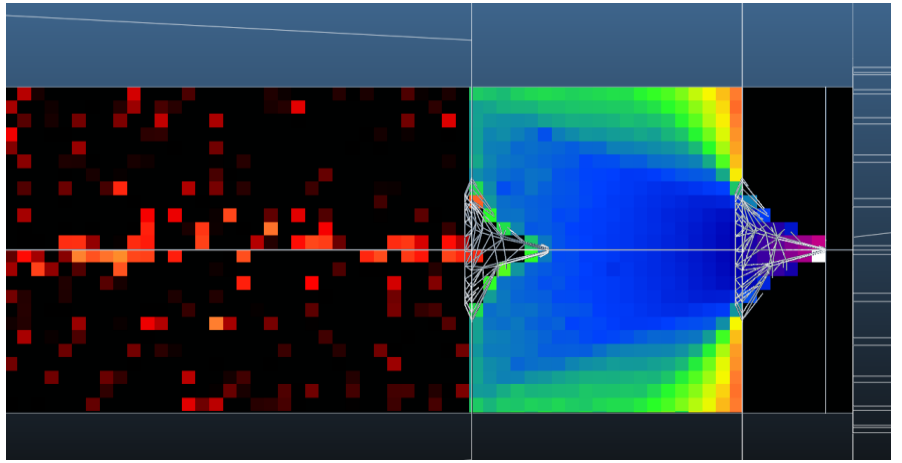
Normal simulation

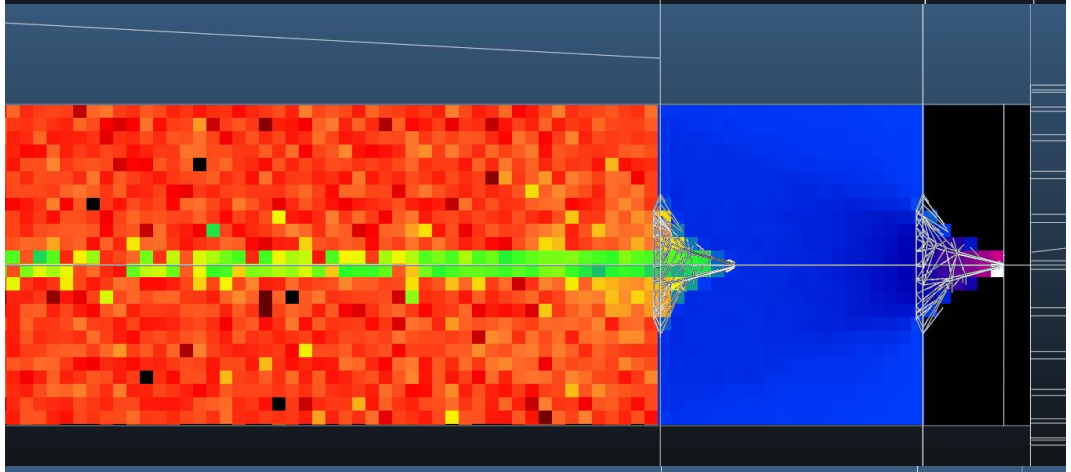


“Sticking” simulation

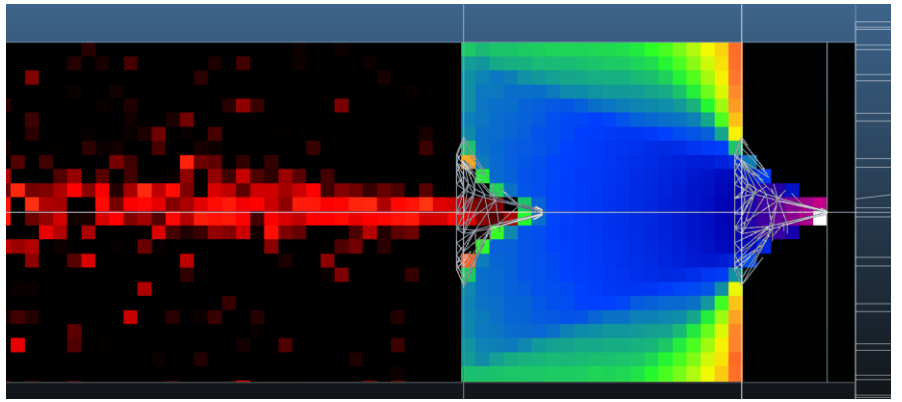


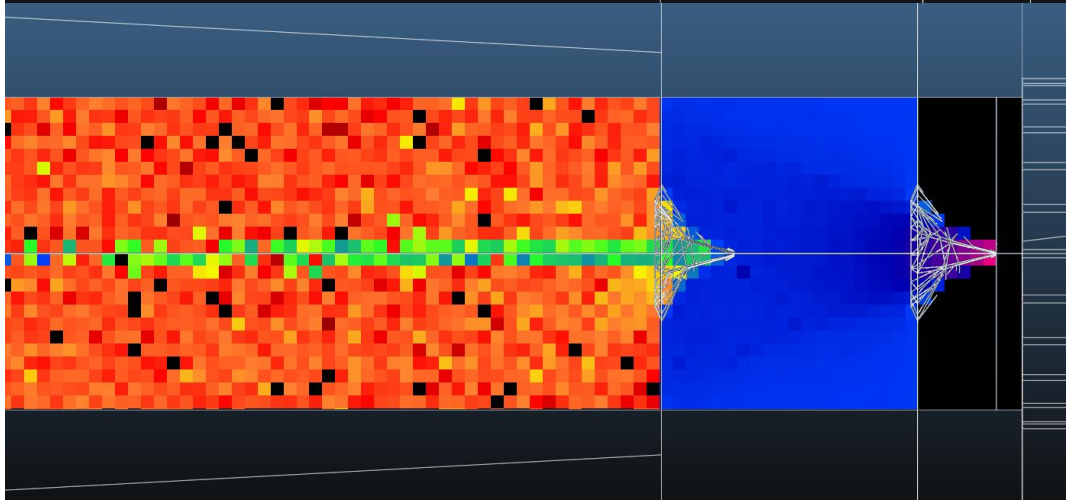
Uniform
(divergent)



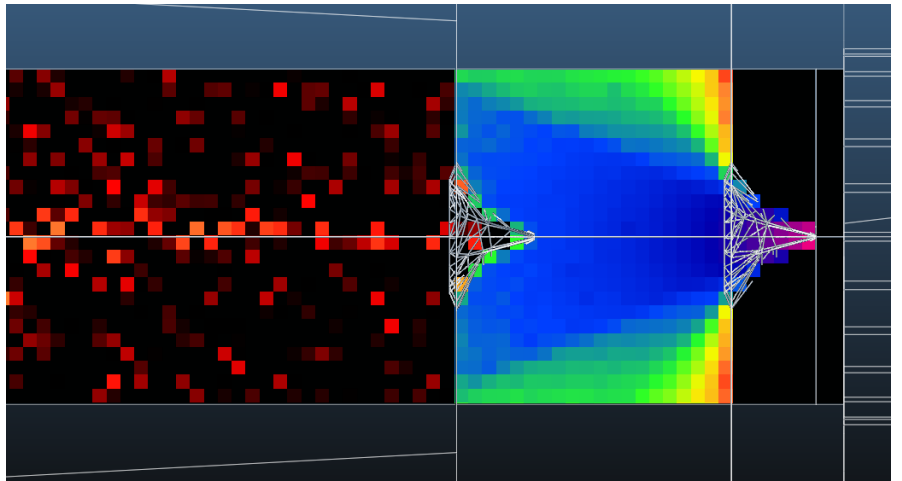


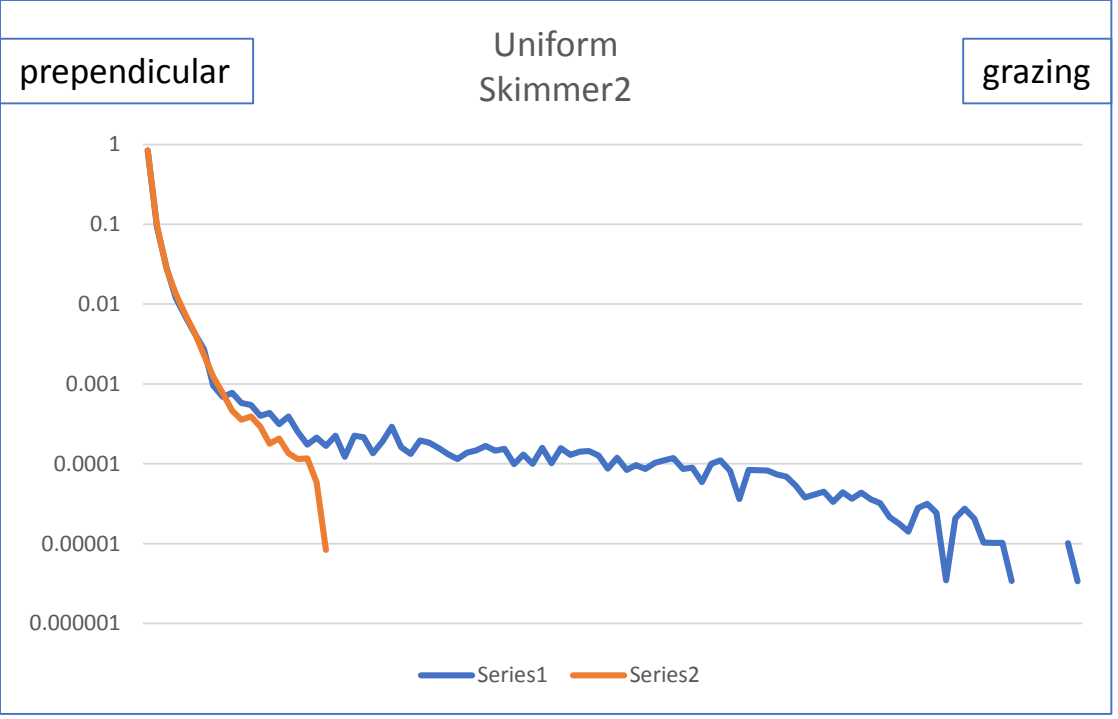
Cosine
(medium)

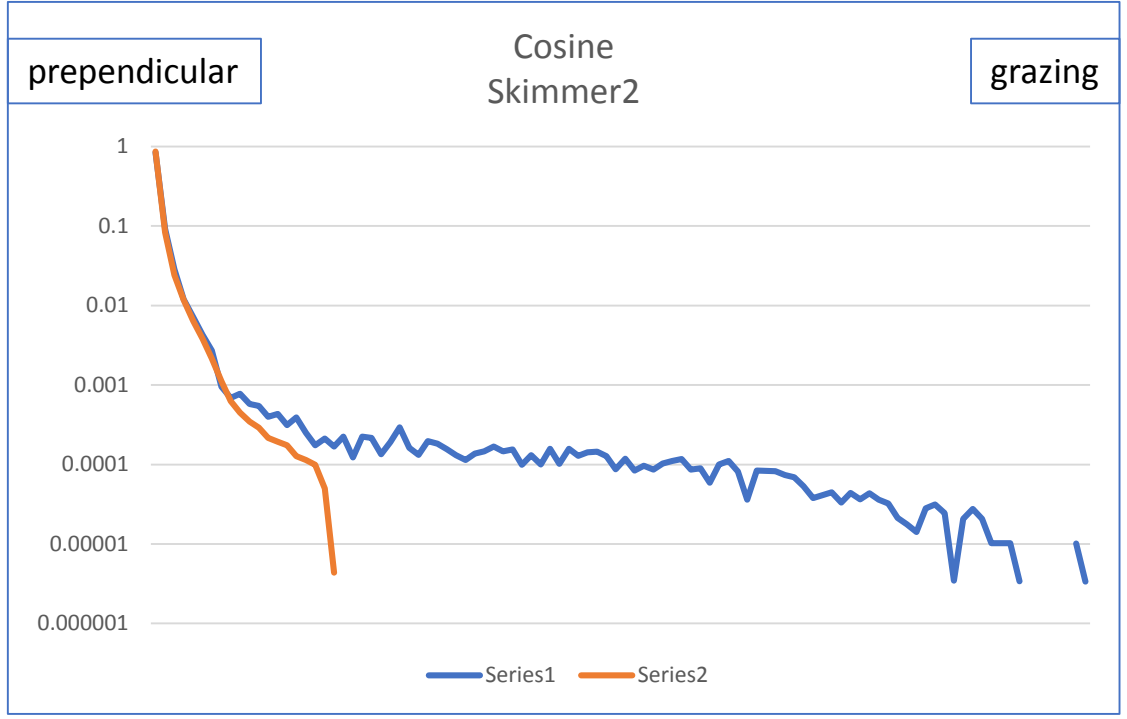


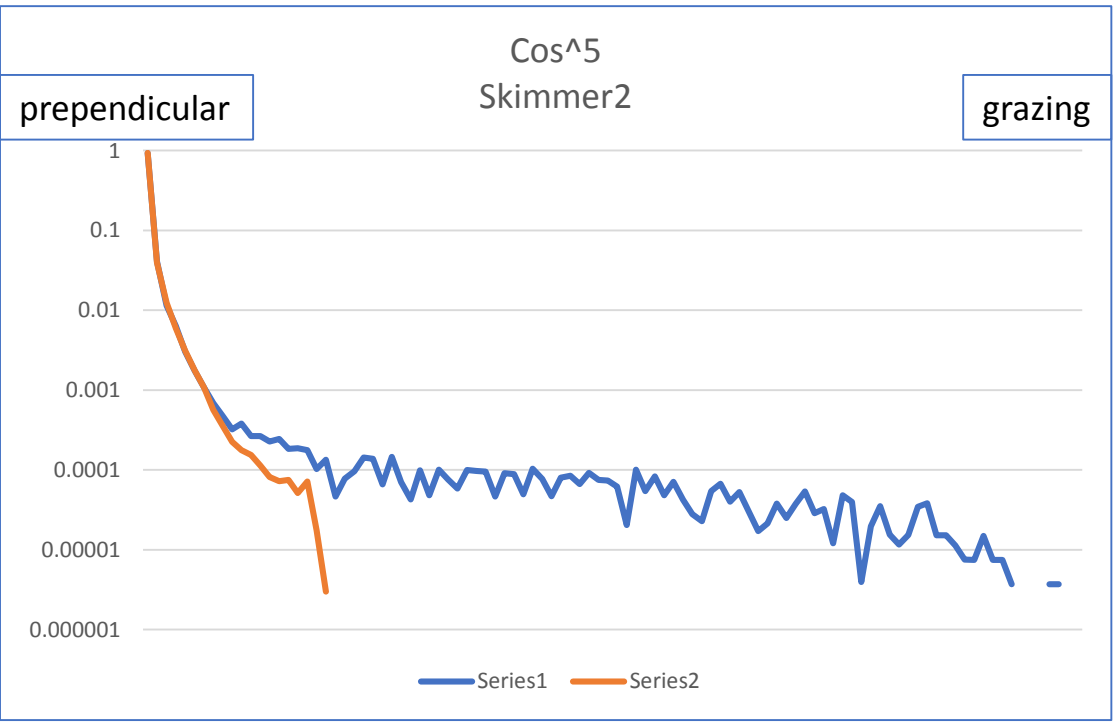


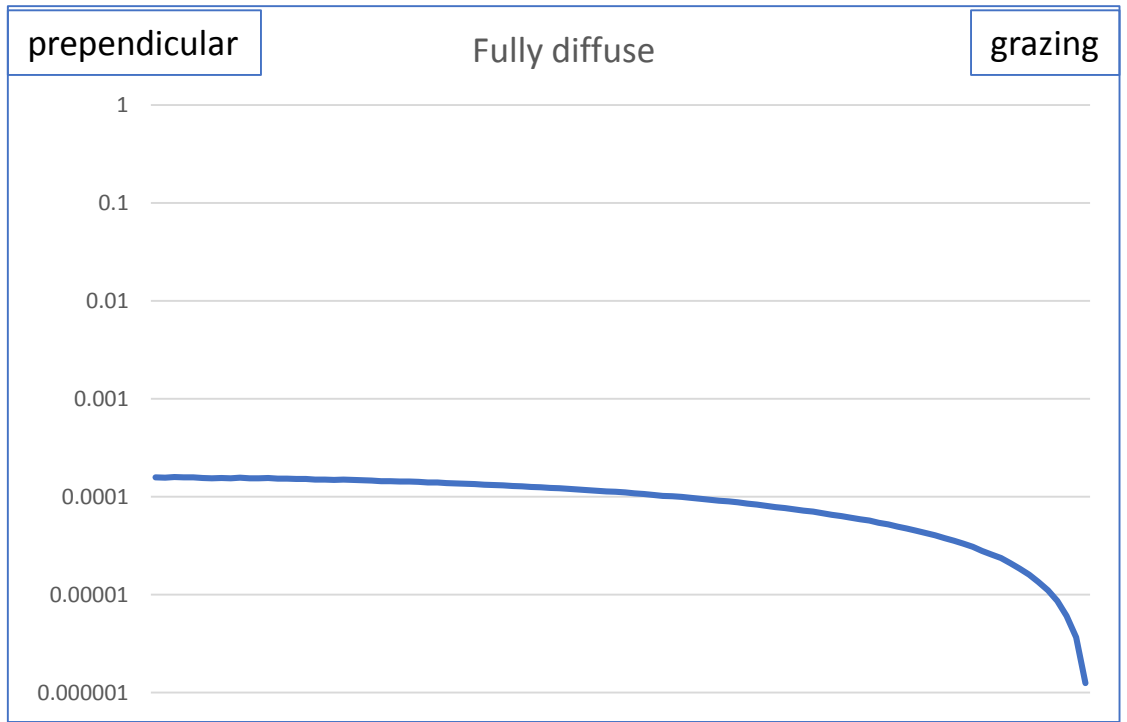
Cosine^5
(collimated)

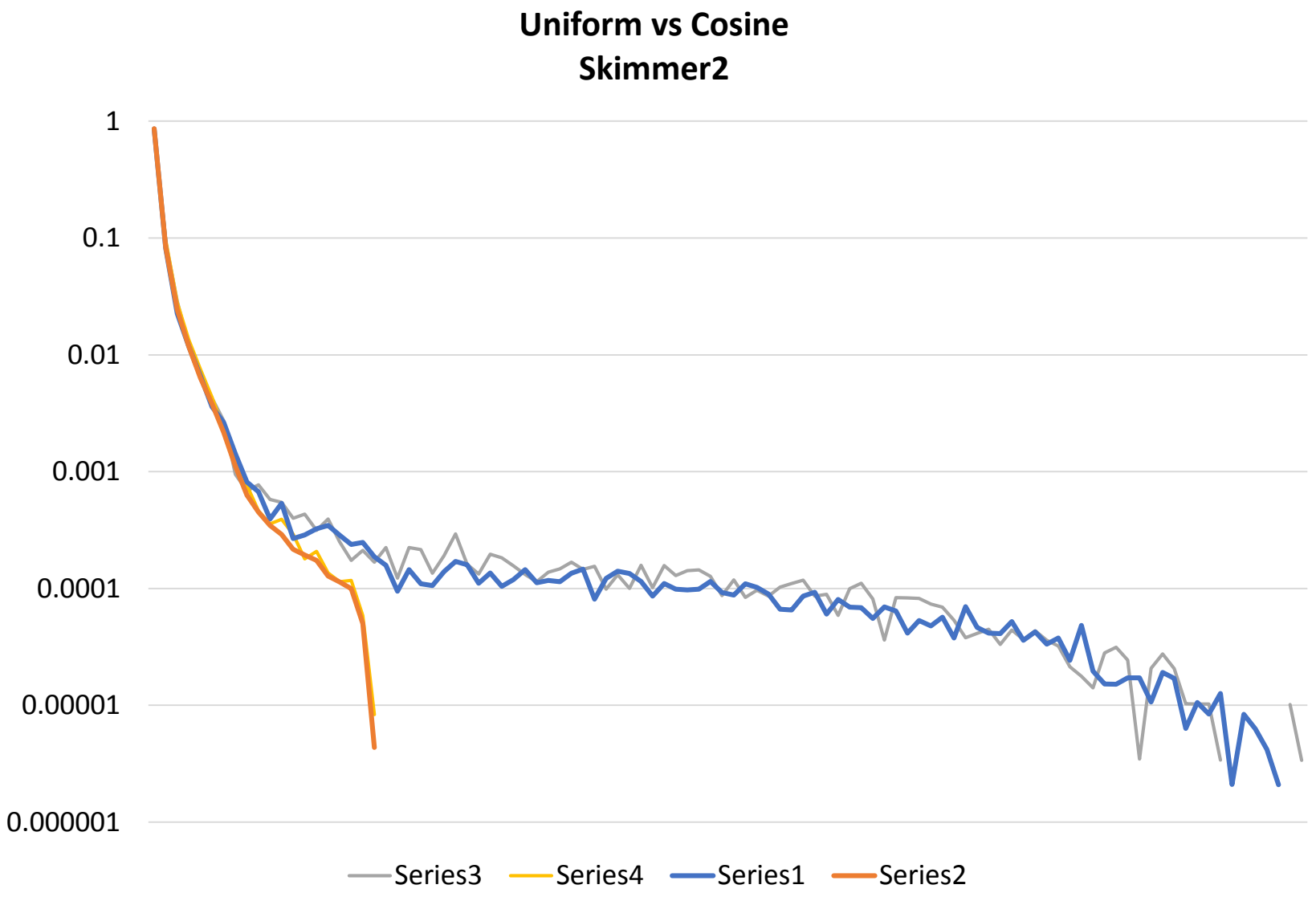


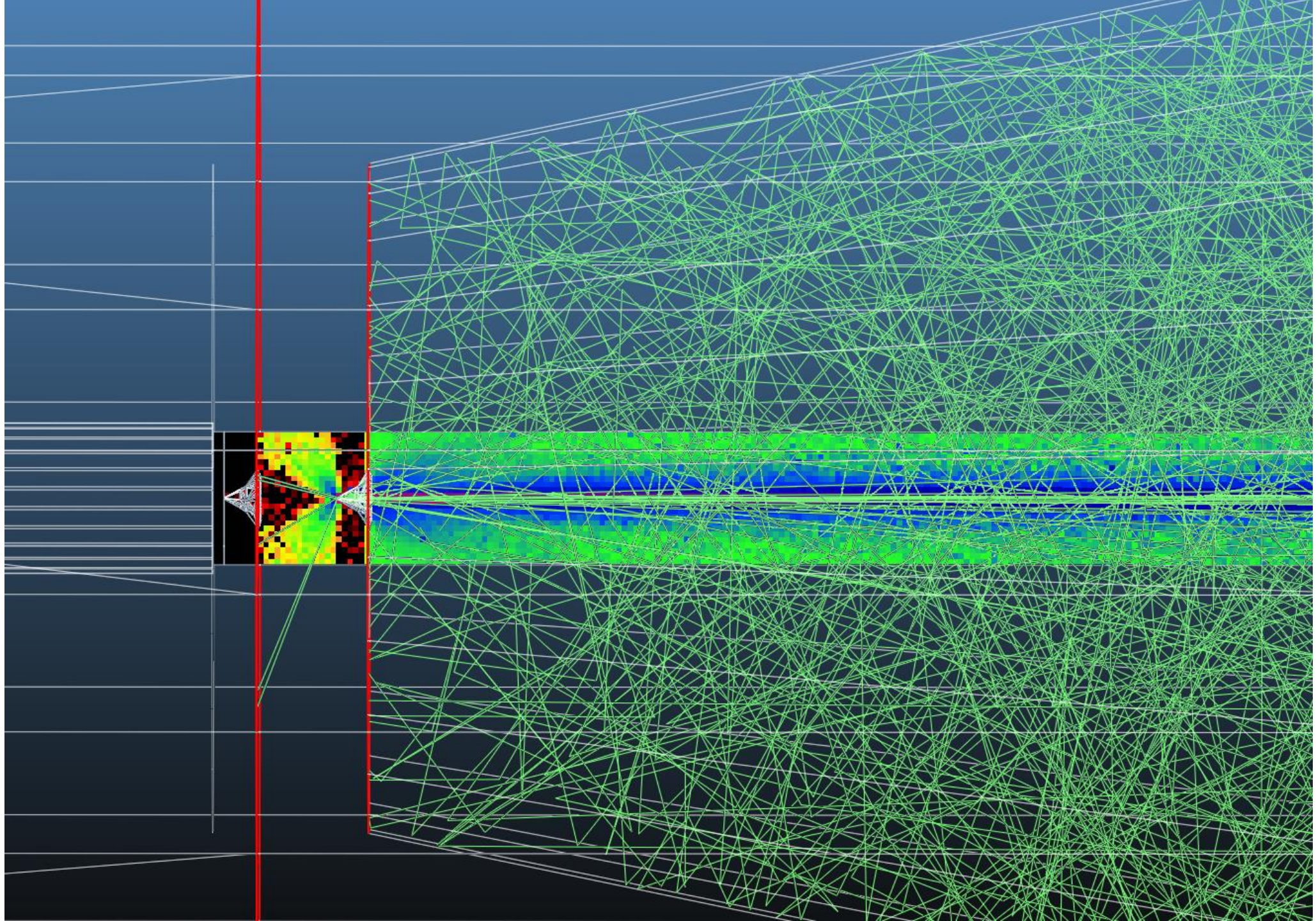

Uniform
Skimmer2
prependicular
grazing
1
0.1
0.01
0.001
0.0001
0.00001
0.000001
Series1
Series2

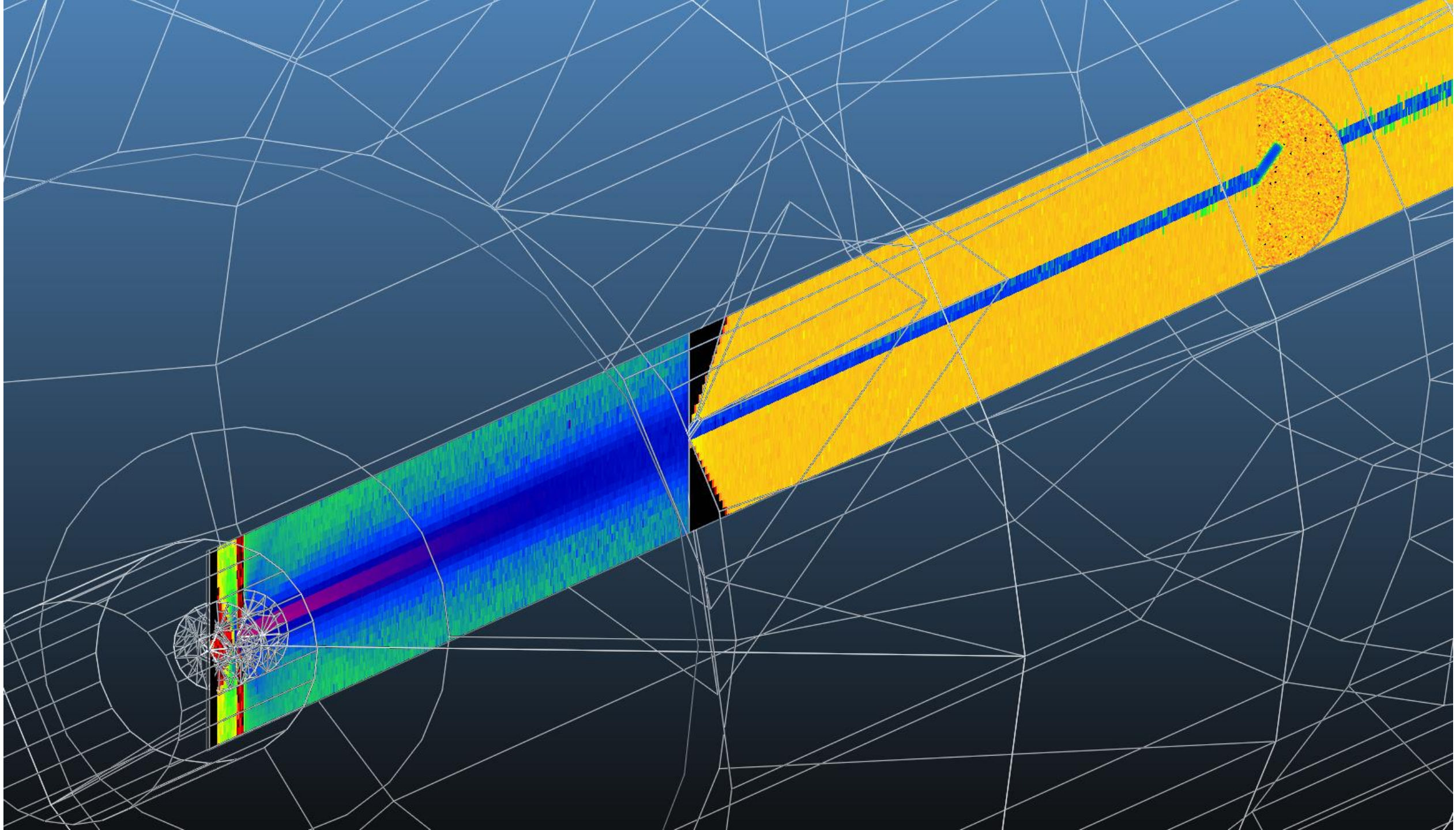

Cosine
Skimmer2
prependicular
grazing
1
0.1
0.01
0.001
0.0001
0.00001
0.000001
Series1
Series2

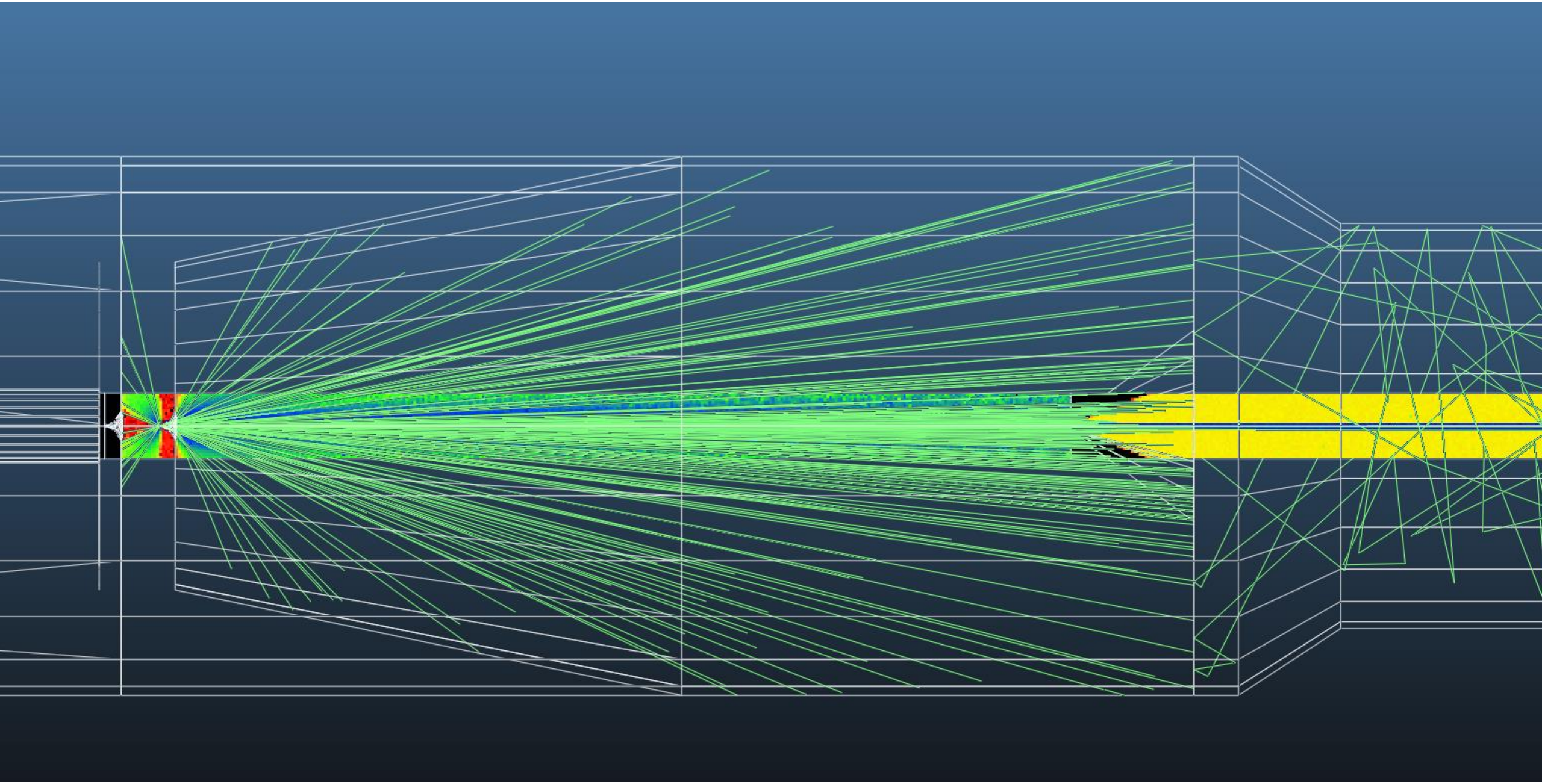

Cos^5
Skimmer2
prependicular
grazing
1
0.1
0.01
0.001
0.0001
0.00001
0.000001
Series1
Series2

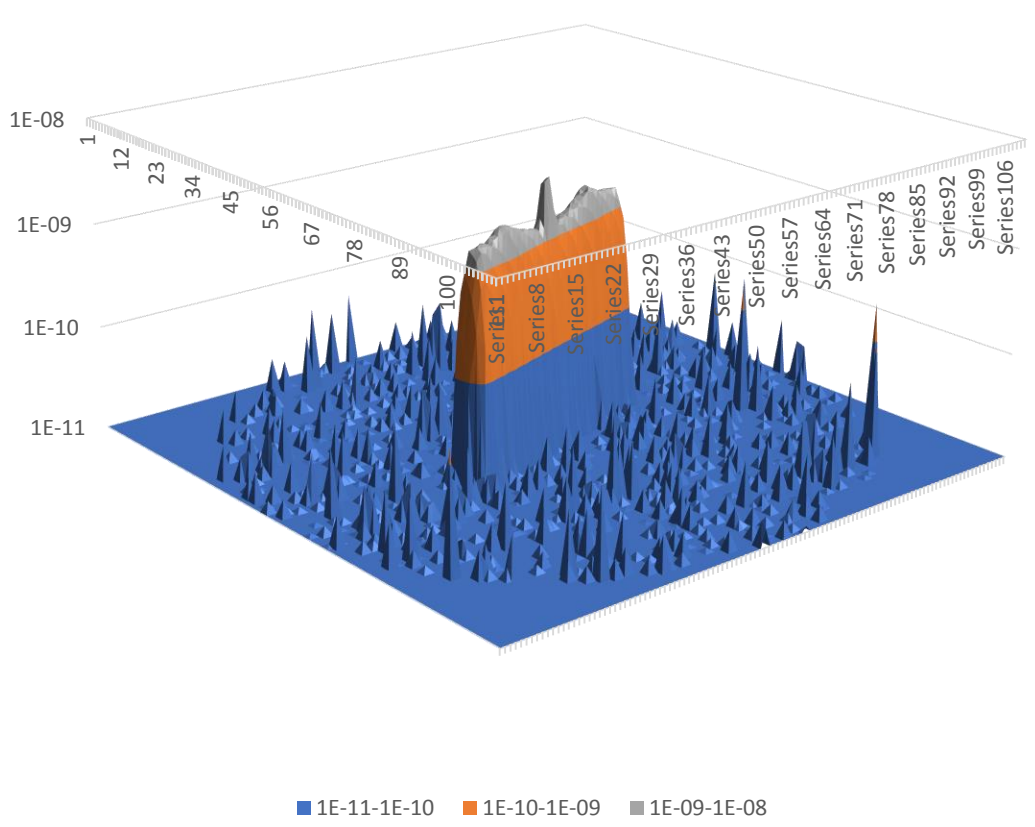

Fully diffuse
prependicular
grazing
1
0.1
0.01
0.001
0.0001
0.00001
0.000001


Uniform vs Cosine
Skimmer2
1
0.1
0.01
0.001
0.0001
0.00001
0.000001
Series3
Series4
Series1
Series2

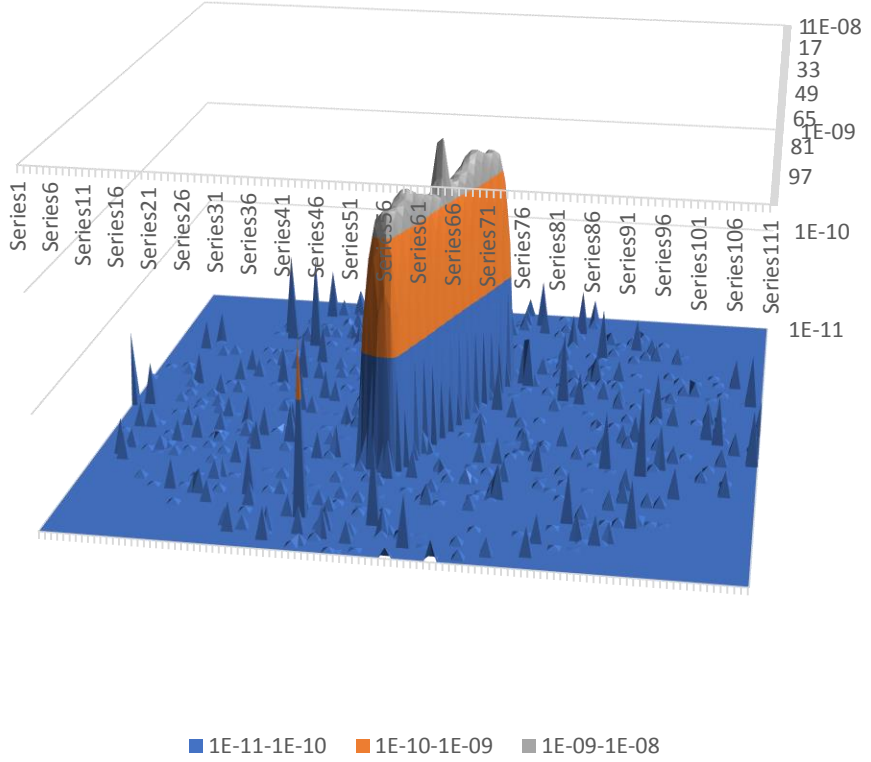






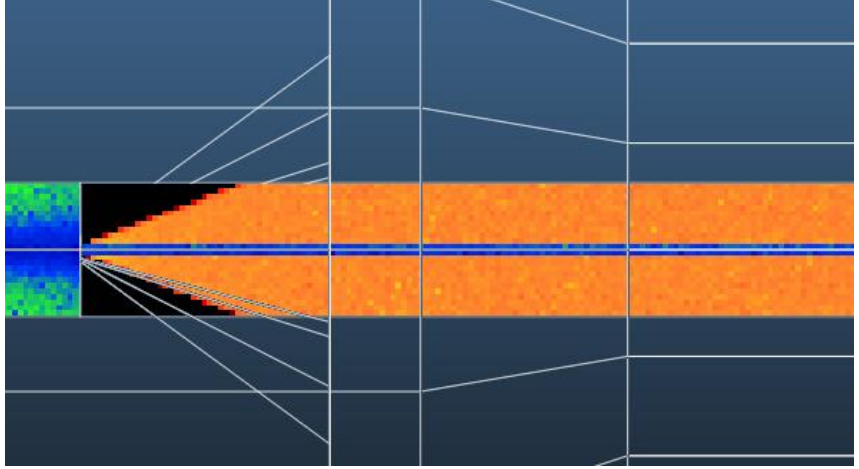


Normal simulation

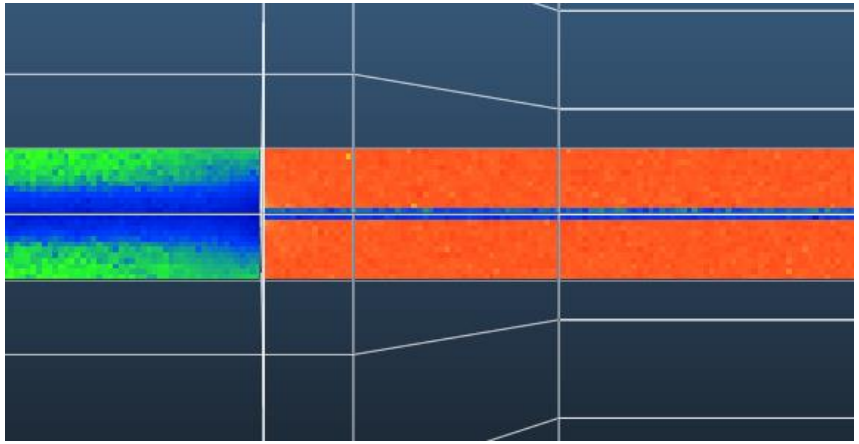


“Sticking” simulation

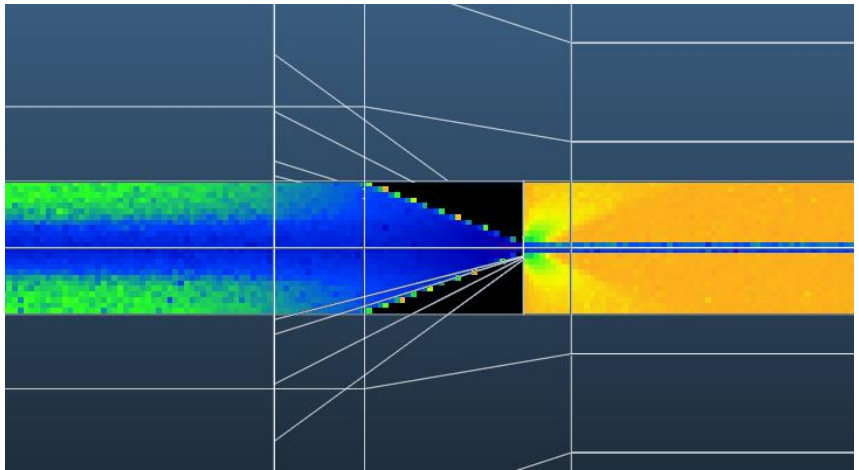
JET

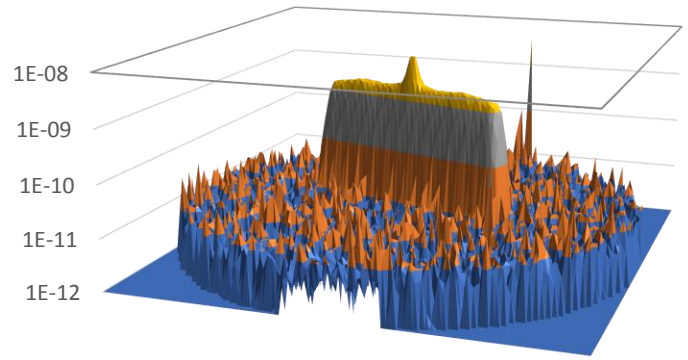


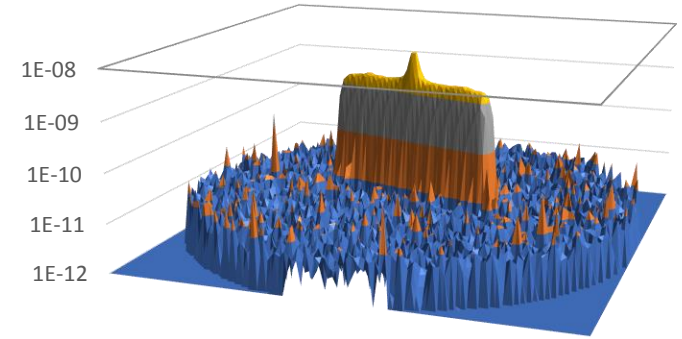
JET

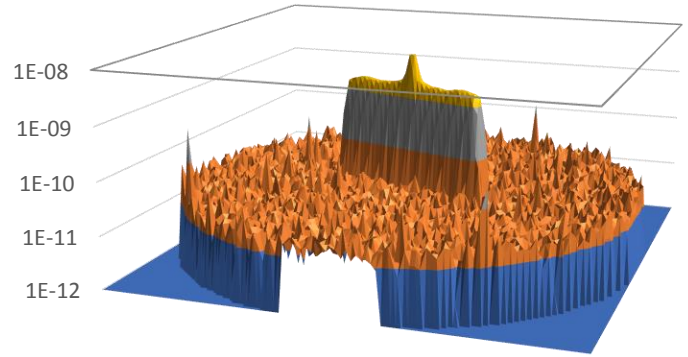


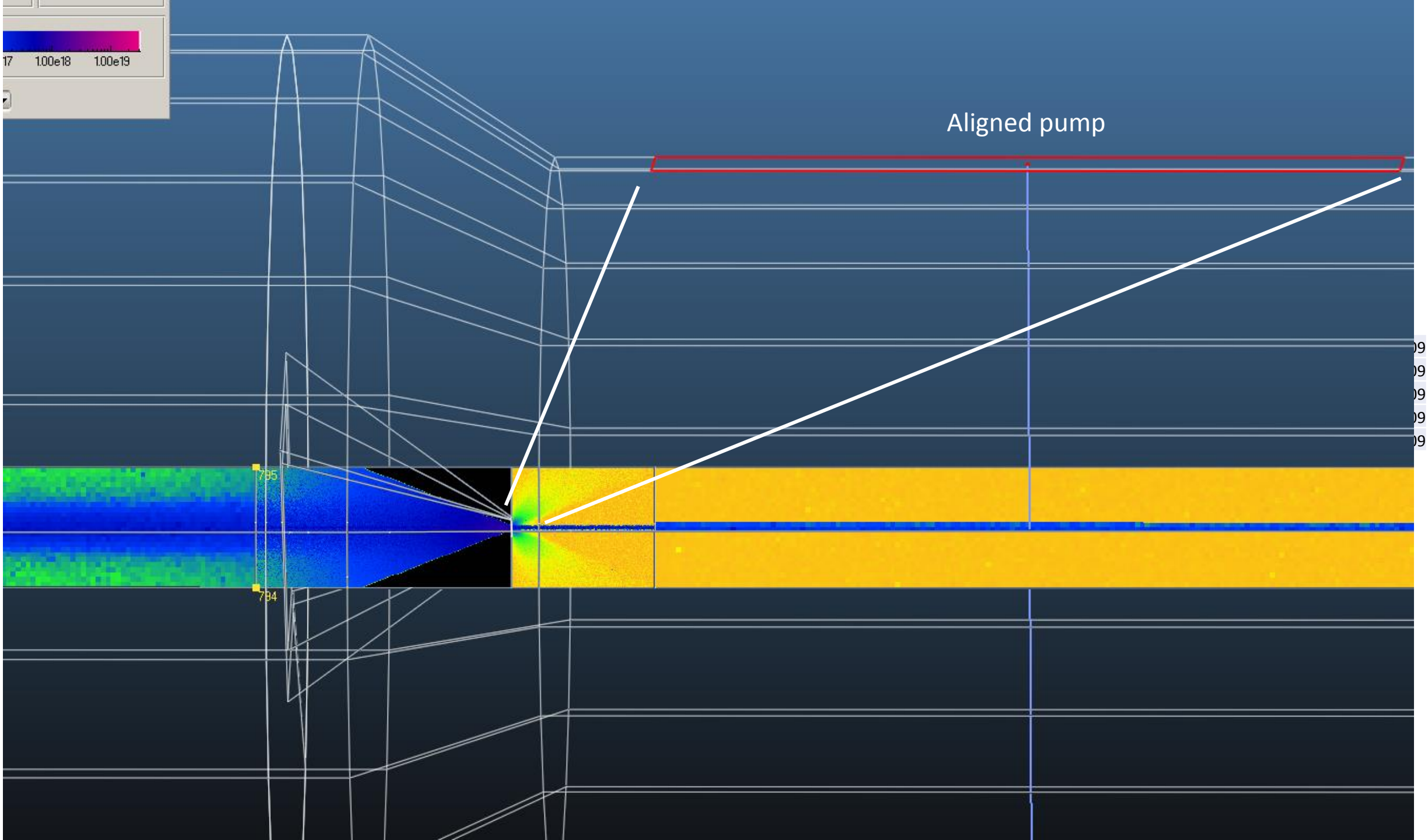
JET




normal skimmer 3
1E-08
1E-09
1E-10
1E-11
1E-12


flat skimmer 3
1E-08
1E-09
1E-10
1E-11
1E-12


inverse skimmer 3
1E-08
1E-09
1E-10
1E-11
1E-12


17
1.00e18
1.00e19
Aligned pump
795
784

	Background	Jet
Normal skimmer 3	6.79E-12	1.71E-09
Normal skimmer 3 + sticking	6.75E-12	1.73E-09
Flat skimmer	5.41E-12	1.72E-09
Inverse skimmer	1.69E-11	1.77E-09
Inverse + pump aligned	1.69E-11	1.78E-09

Conclusion

- (If sufficiently divergent) simulation not very sensitive to skimmer 1 divergence
- Optimal simulation method found (2 iterations)
- Flat skimmer 3 is the simplest -> recommended