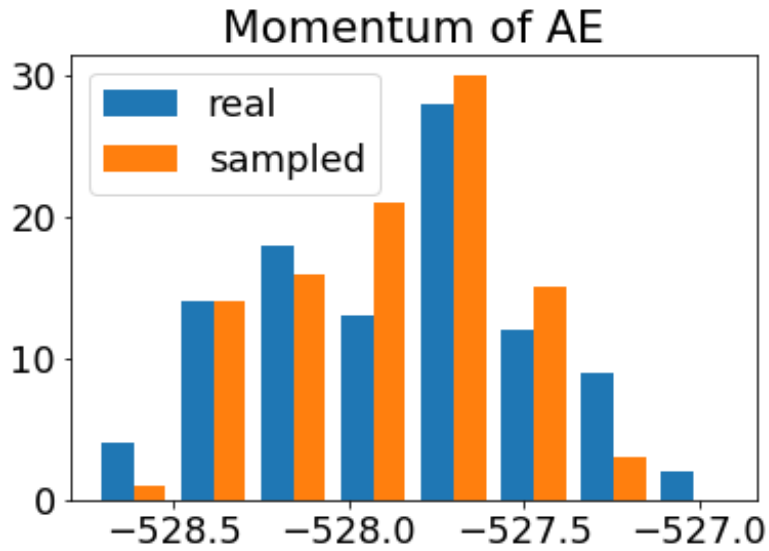
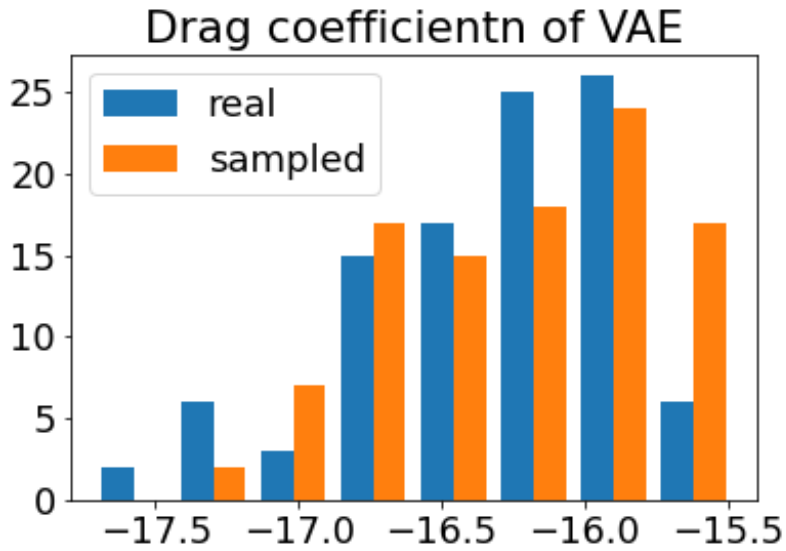
Bonus: measures of simulation

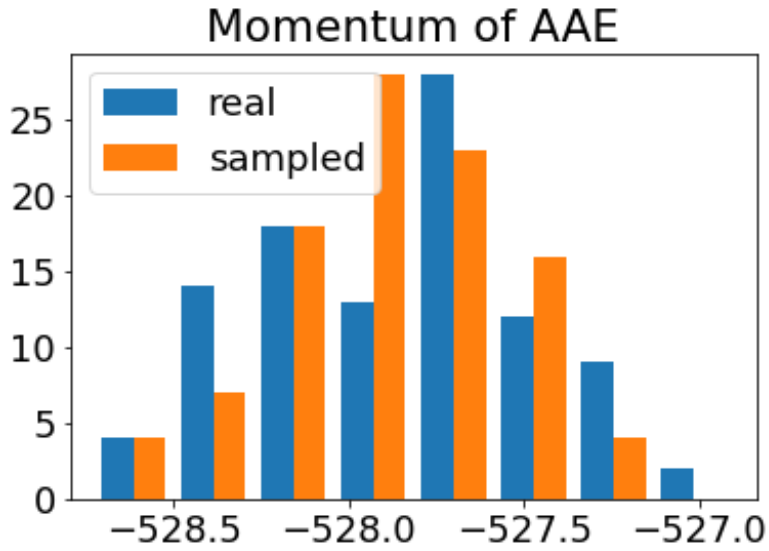
As I said before, we can run simulation on the sample mesh, calculate some measures of interest, and then comparing the distributions.

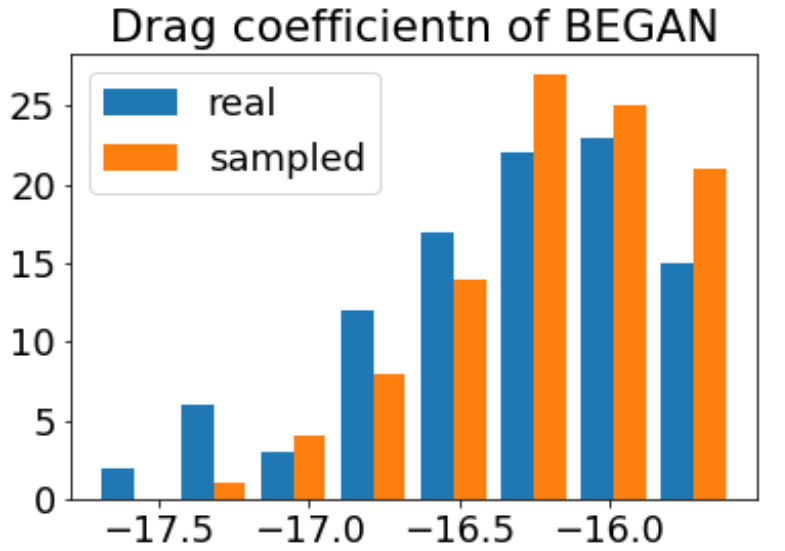
- Drag coefficient C_D
- L2 of Drag force $||F_D||_2^2 = ||\frac{1}{2}\rho v^2 C_D A||_2^2$
- Momentum mv_x

Bonus: Drag Coefficient

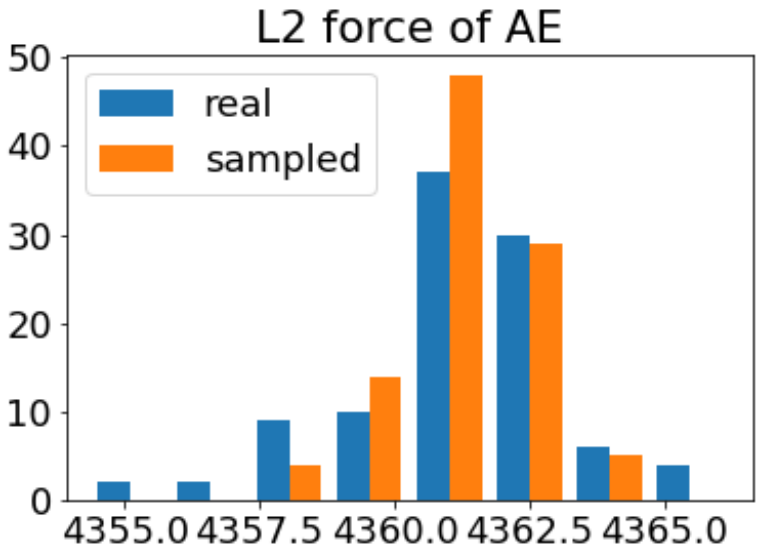


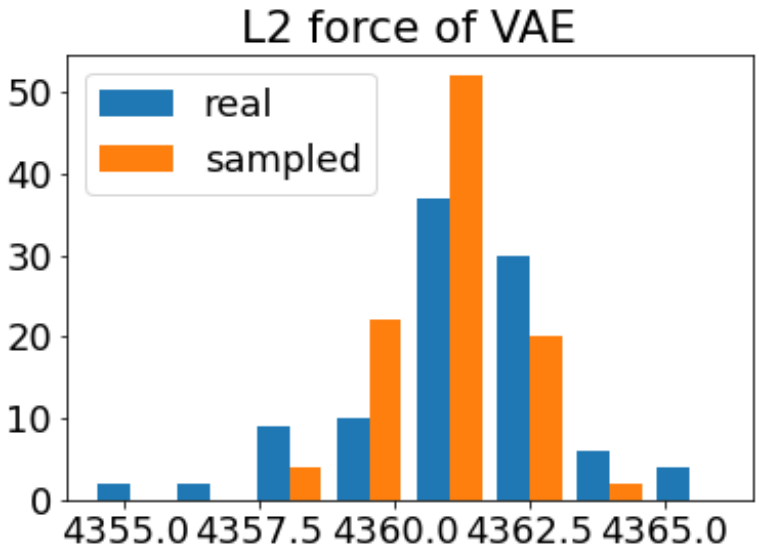


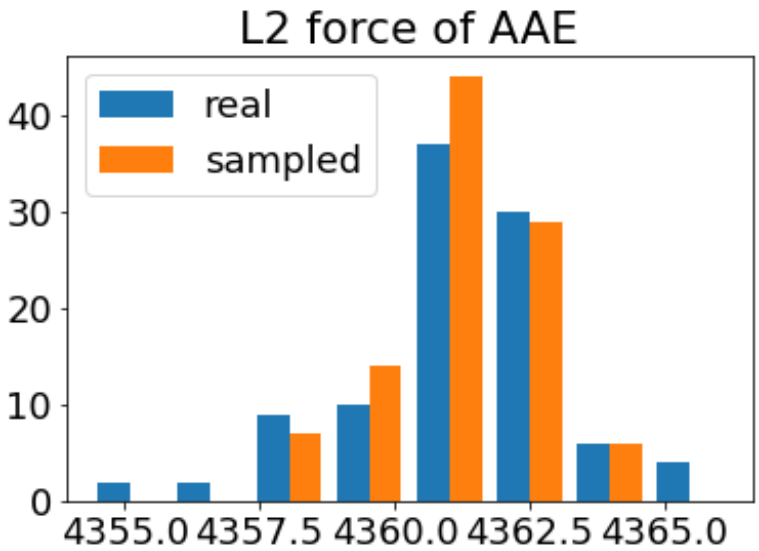


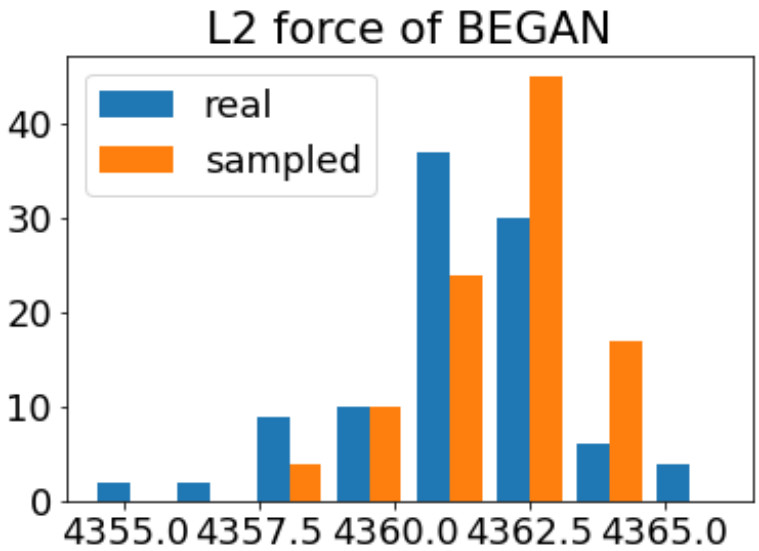


Bonus: L2 Coefficient

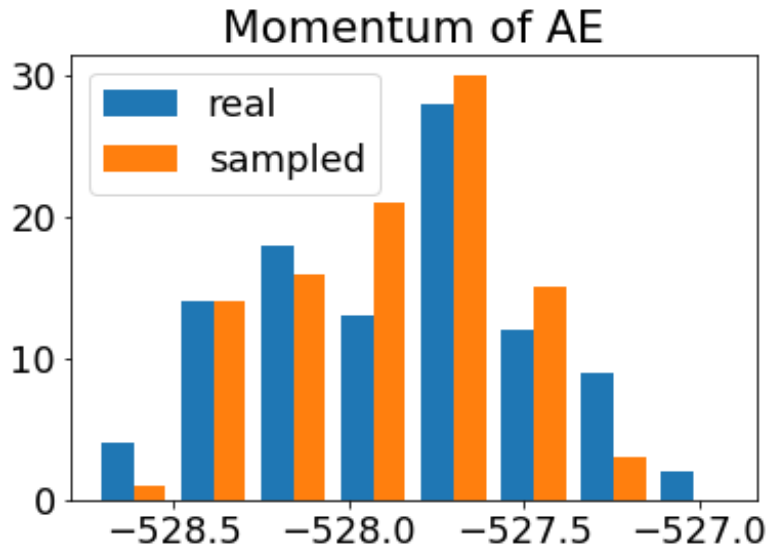


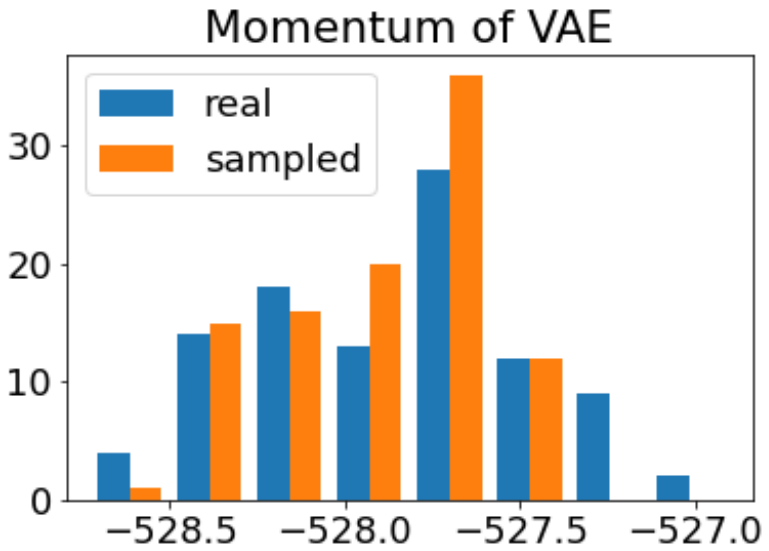


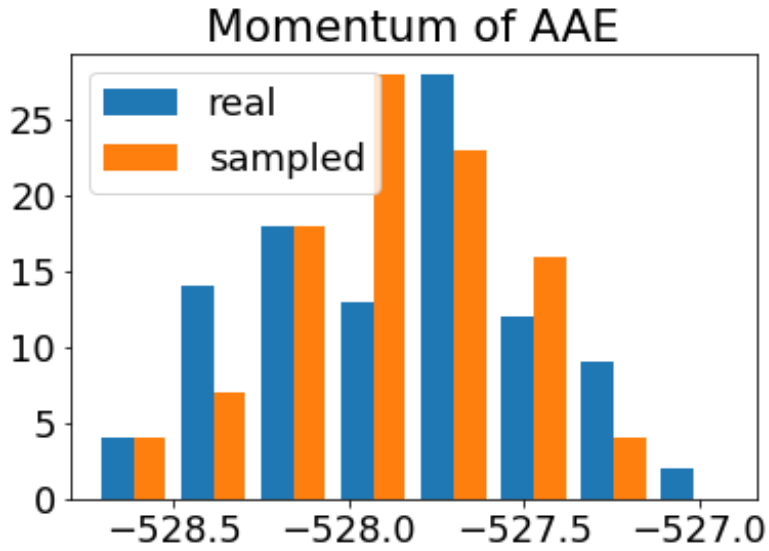


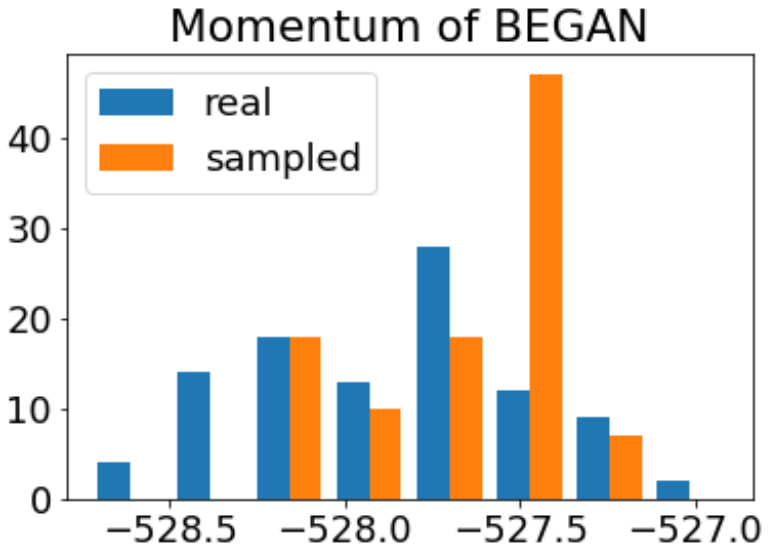


Bonus: Momentum Coefficient









Results

	AE	AAE	VAE	BEGAN
$RelMMD(Drag)$	0.04	0.05	0.05	0.06
$RelMMD(Momentum)$	0.04	0.05	0.06	0.14
$RelMMD(L2)$	0.12	0.13	0.16	0.24