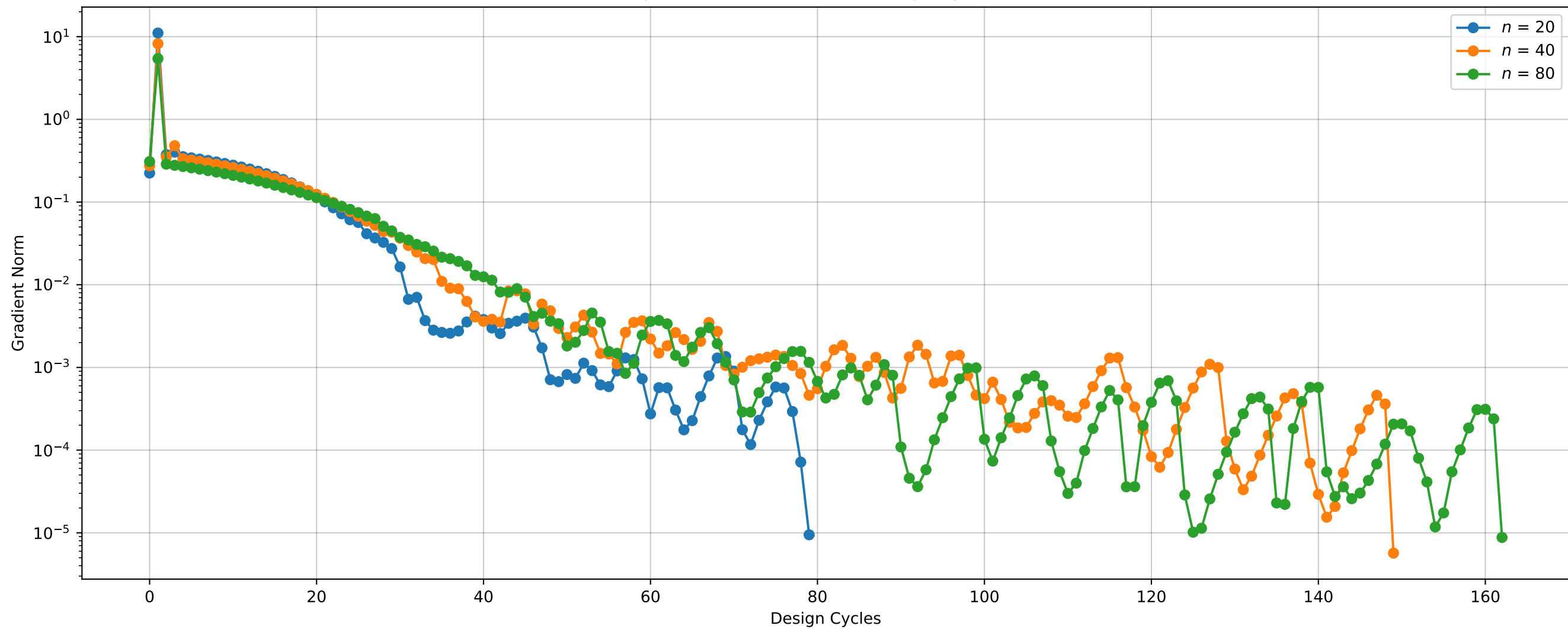
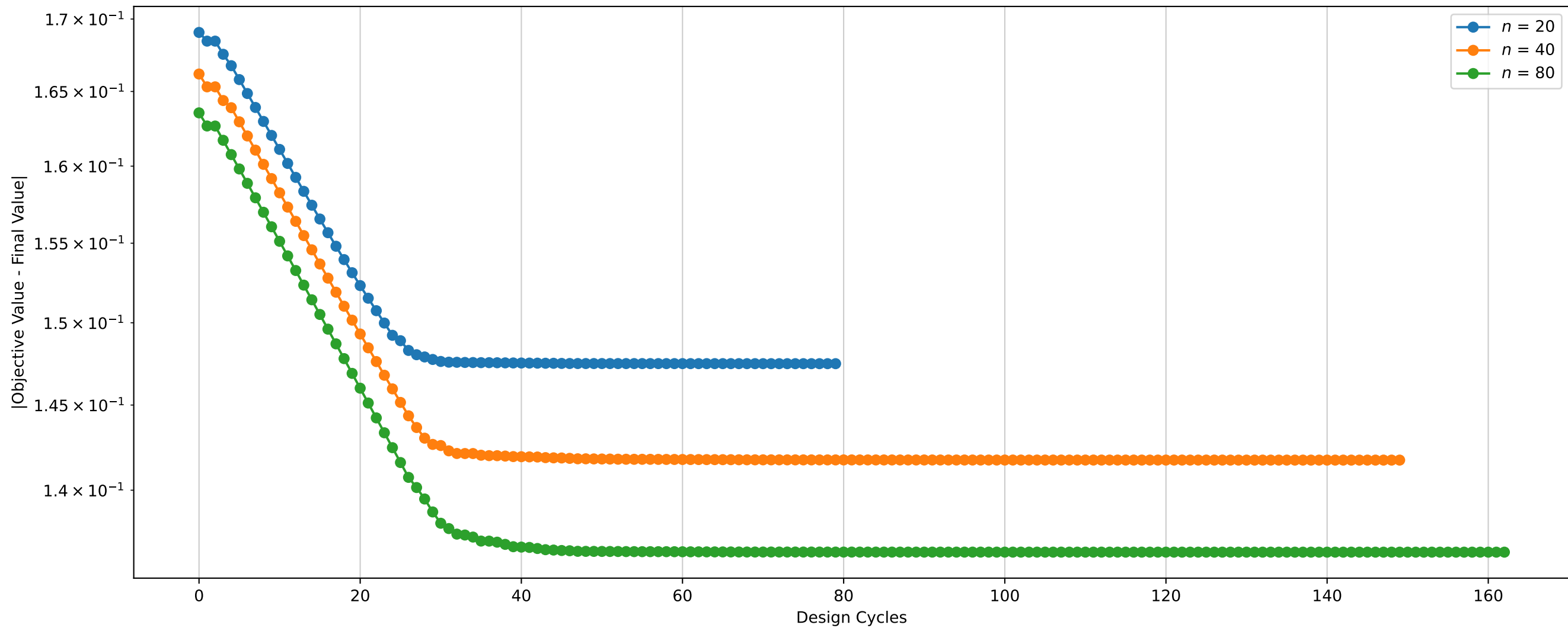
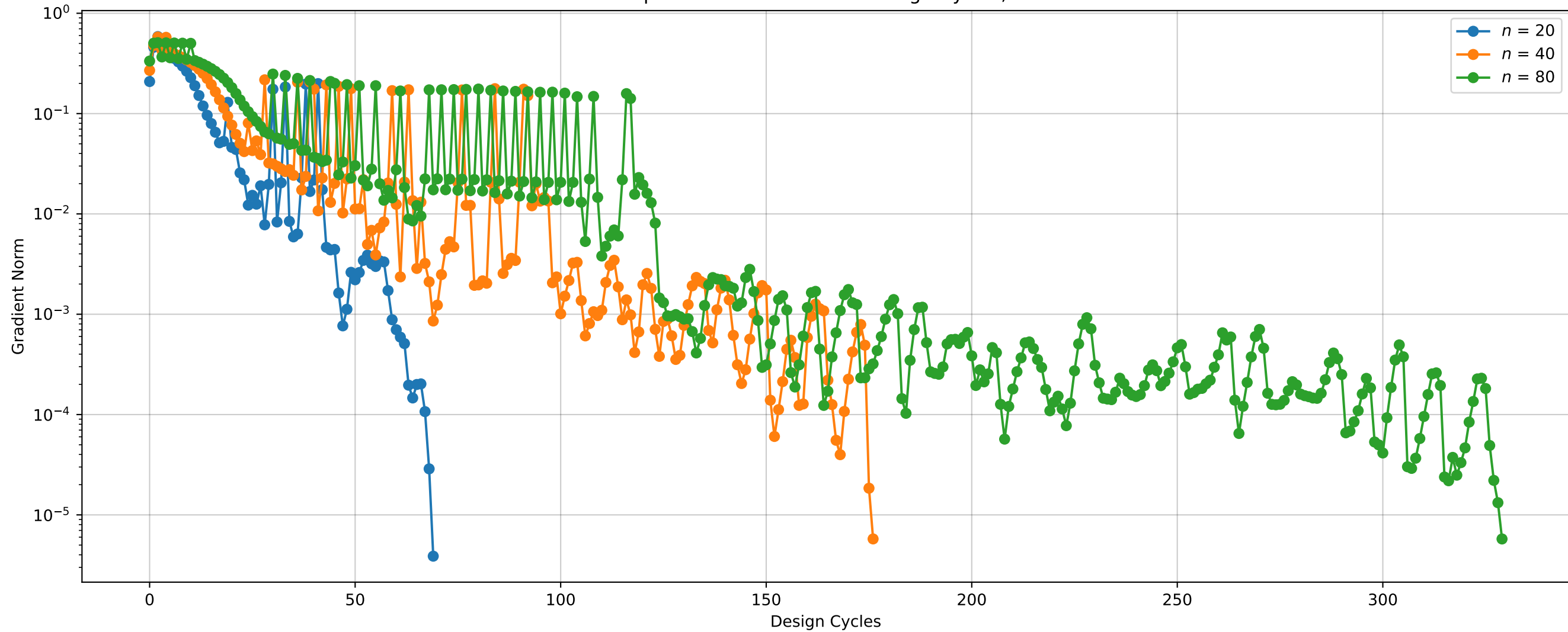
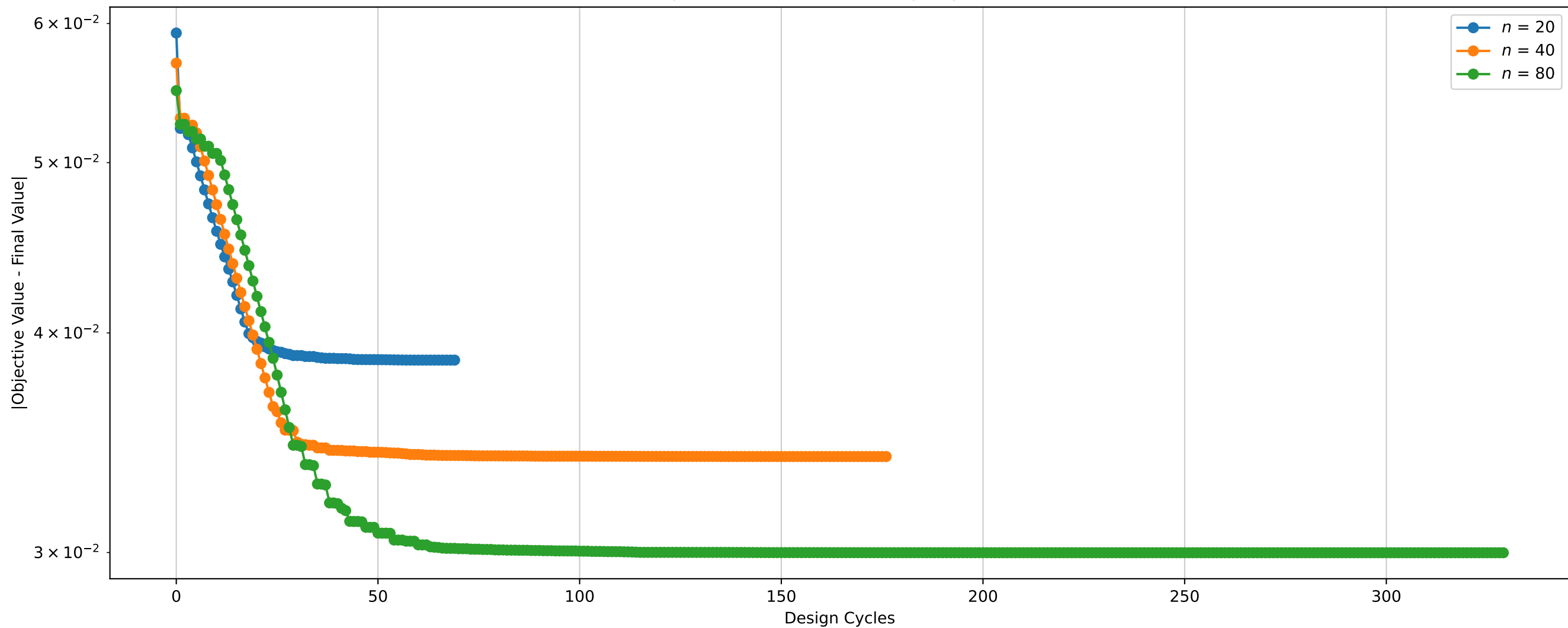


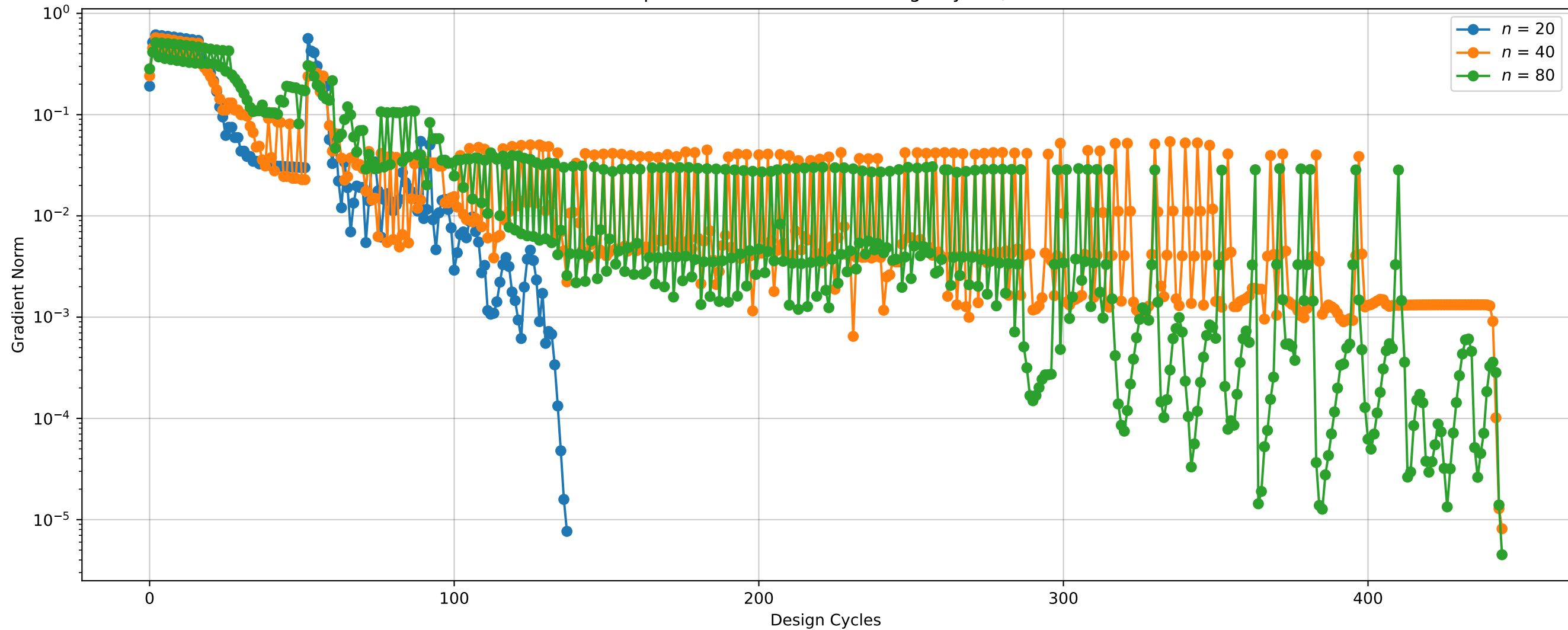
Reduced-space BFGS Gradient vs Design Cycles, $m = 2594$ 

Reduced-space BFGS Value vs Design Cycles, $m = 2594$ 

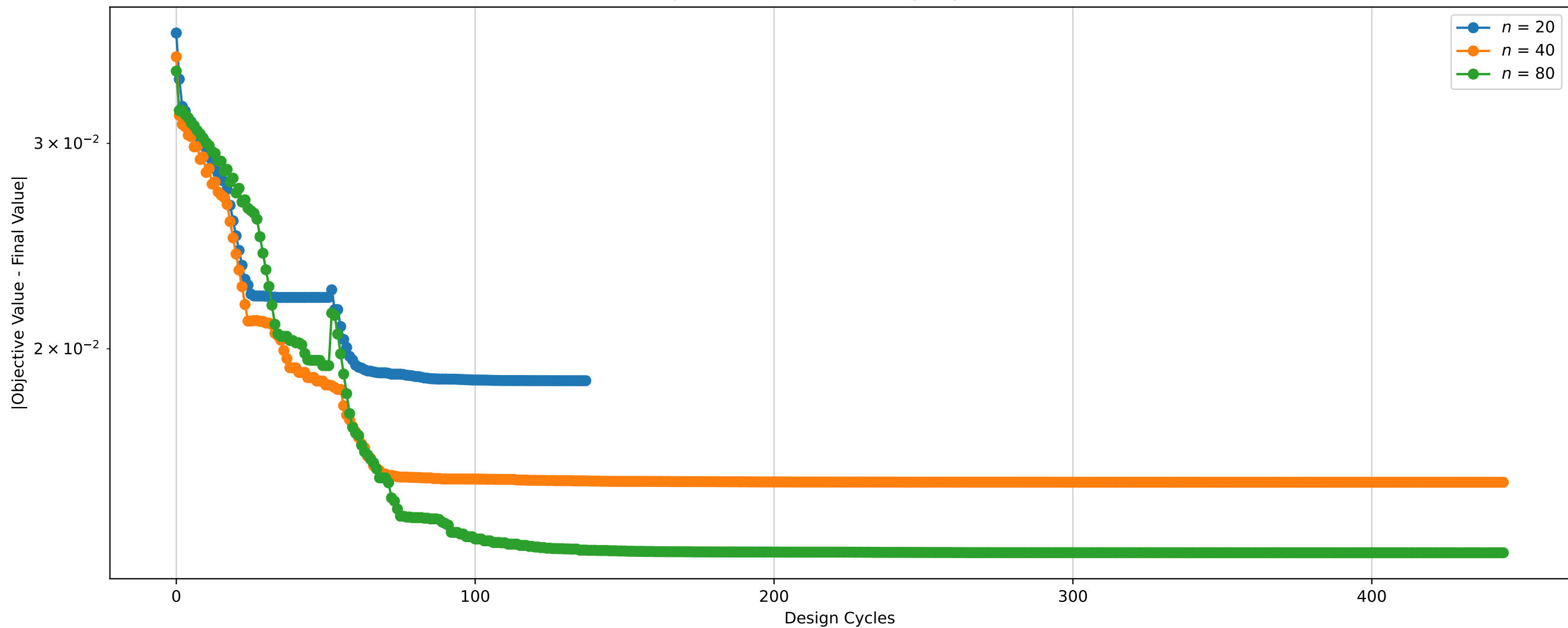
Reduced-space BFGS Gradient vs Design Cycles, $m = 5186$ 

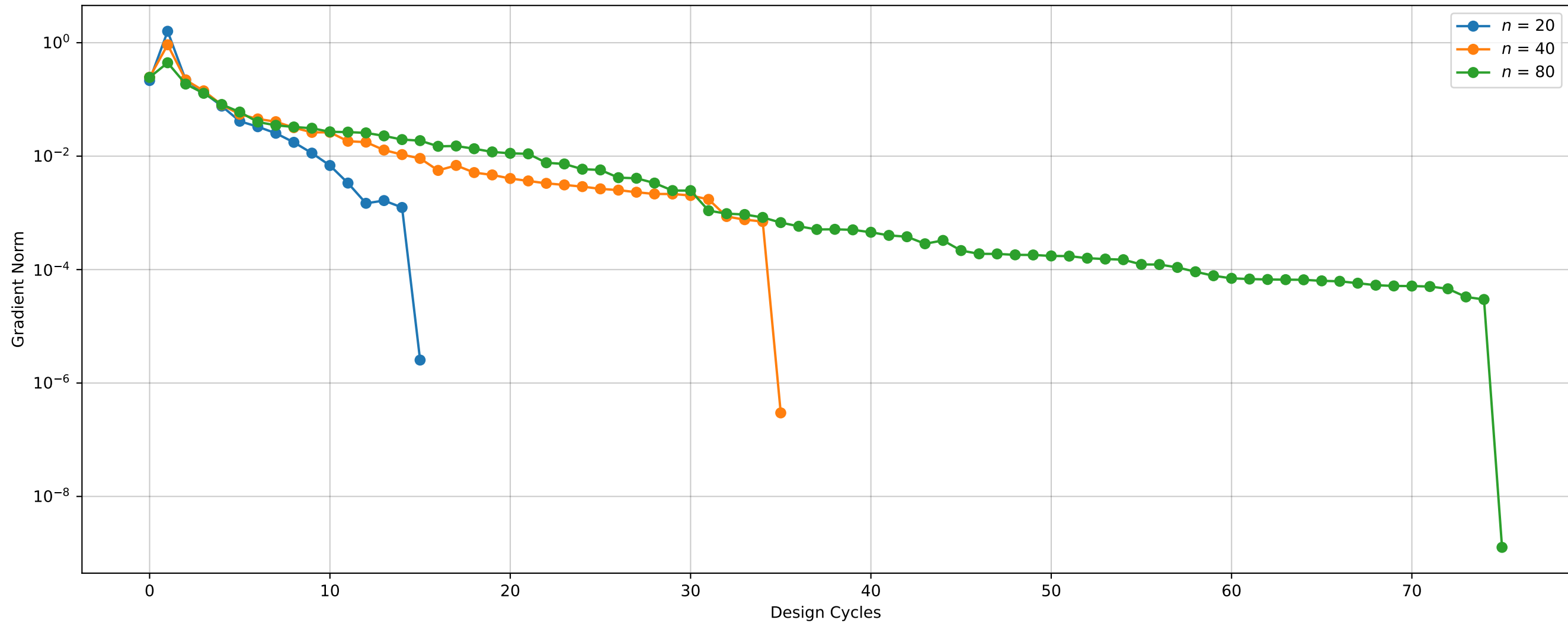
Reduced-space BFGS Value vs Design Cycles, $m = 5186$

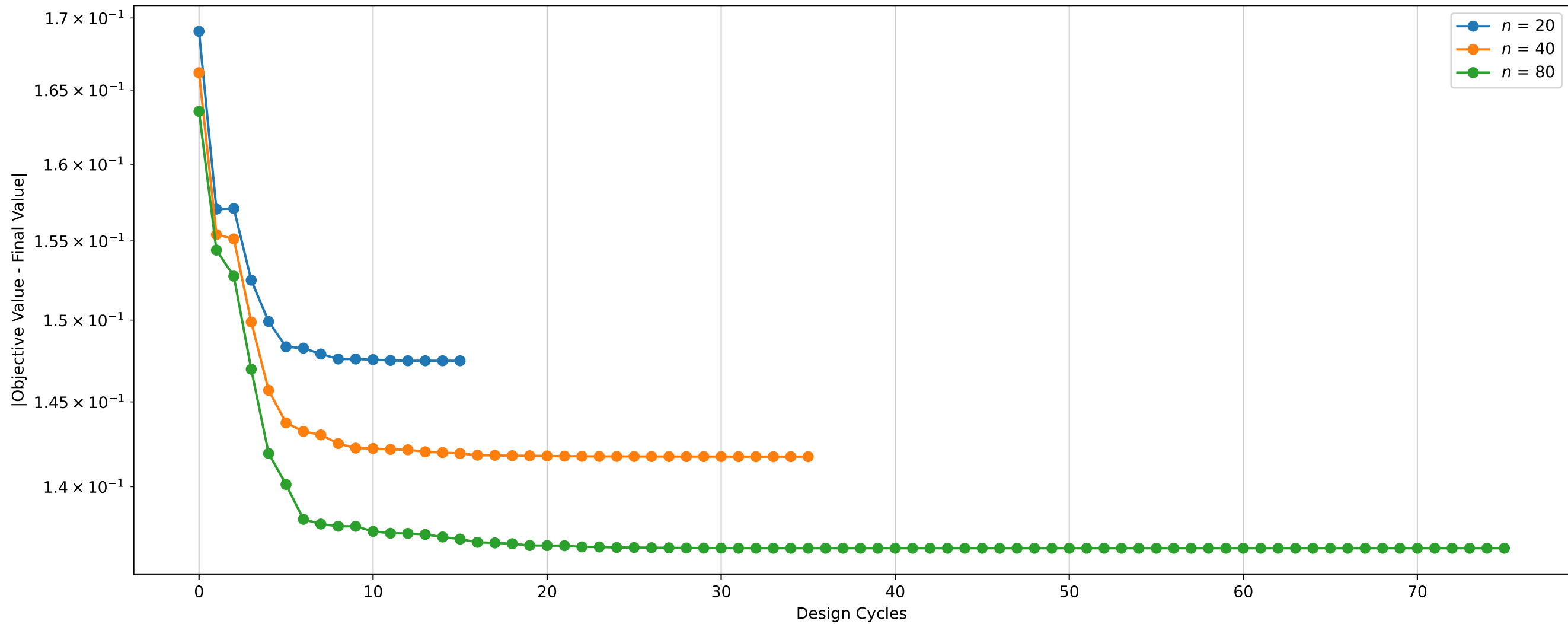


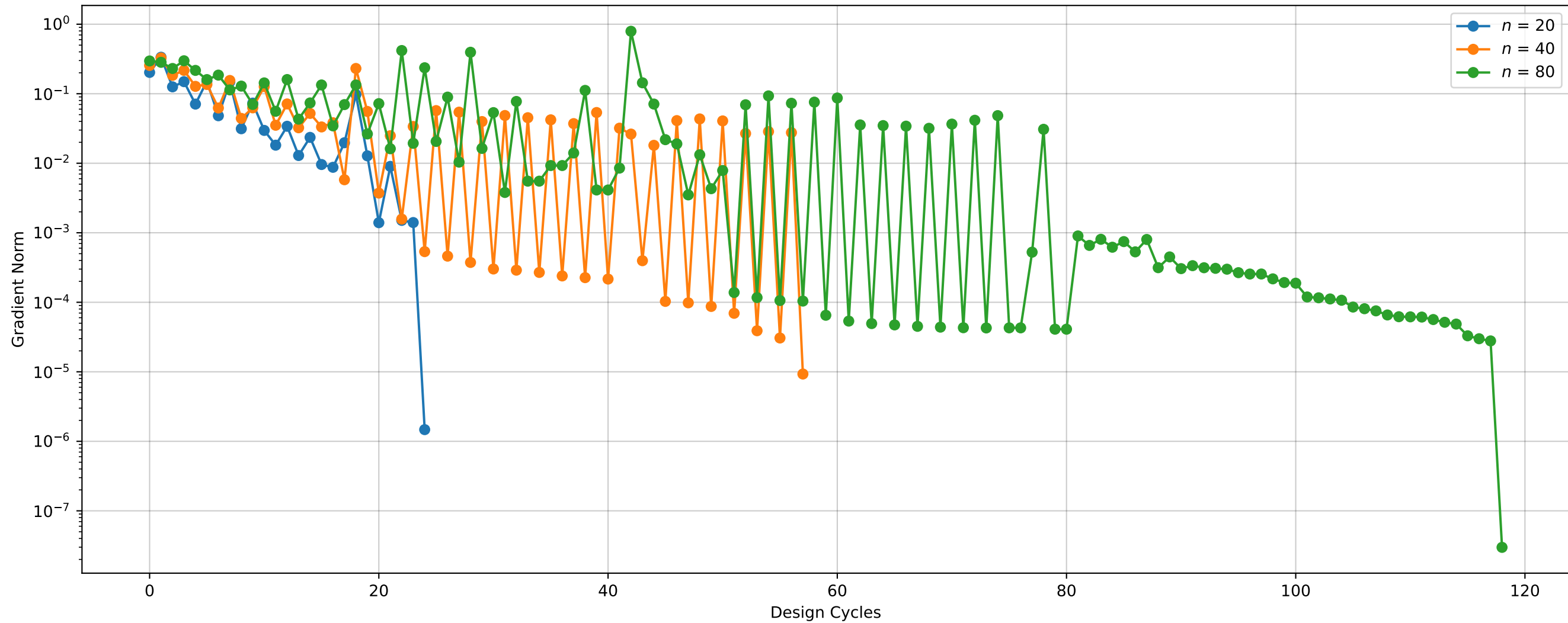
Reduced-space BFGS Gradient vs Design Cycles, $m = 7778$ 

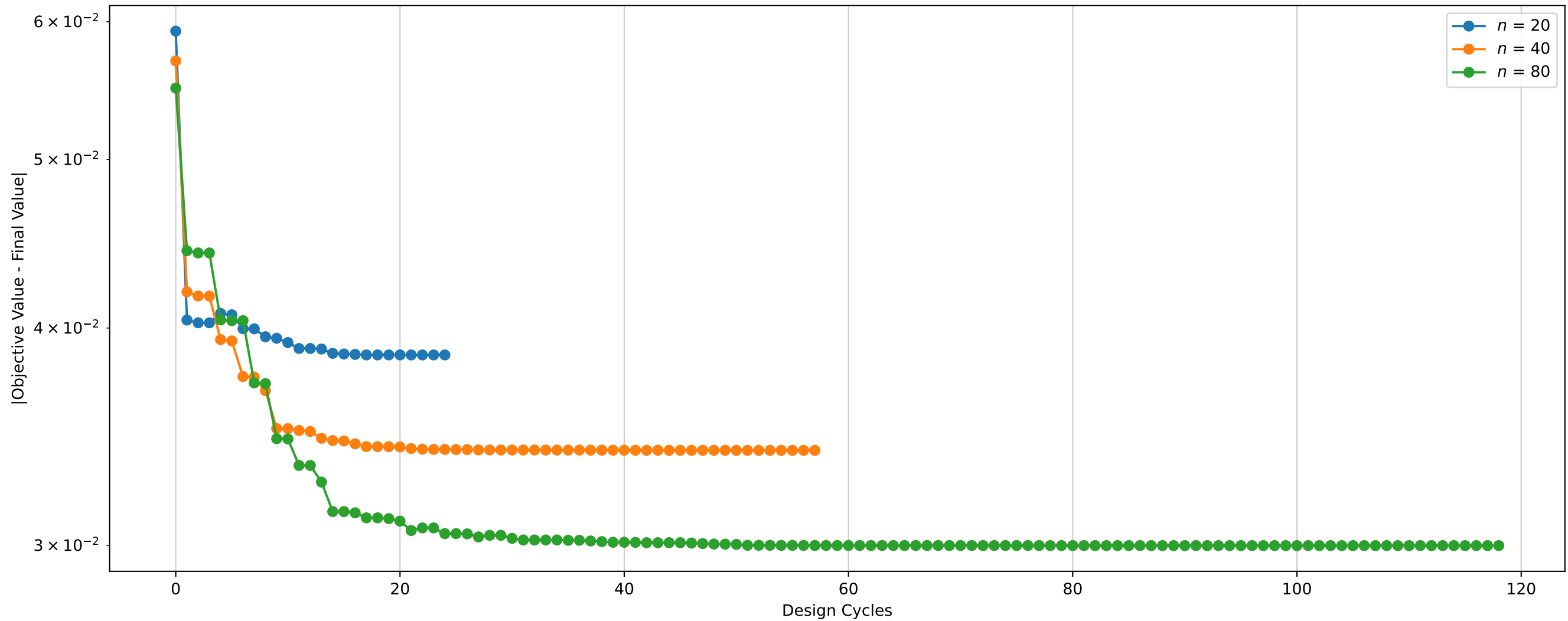
Reduced-space BFGS Value vs Design Cycles, $m = 7778$

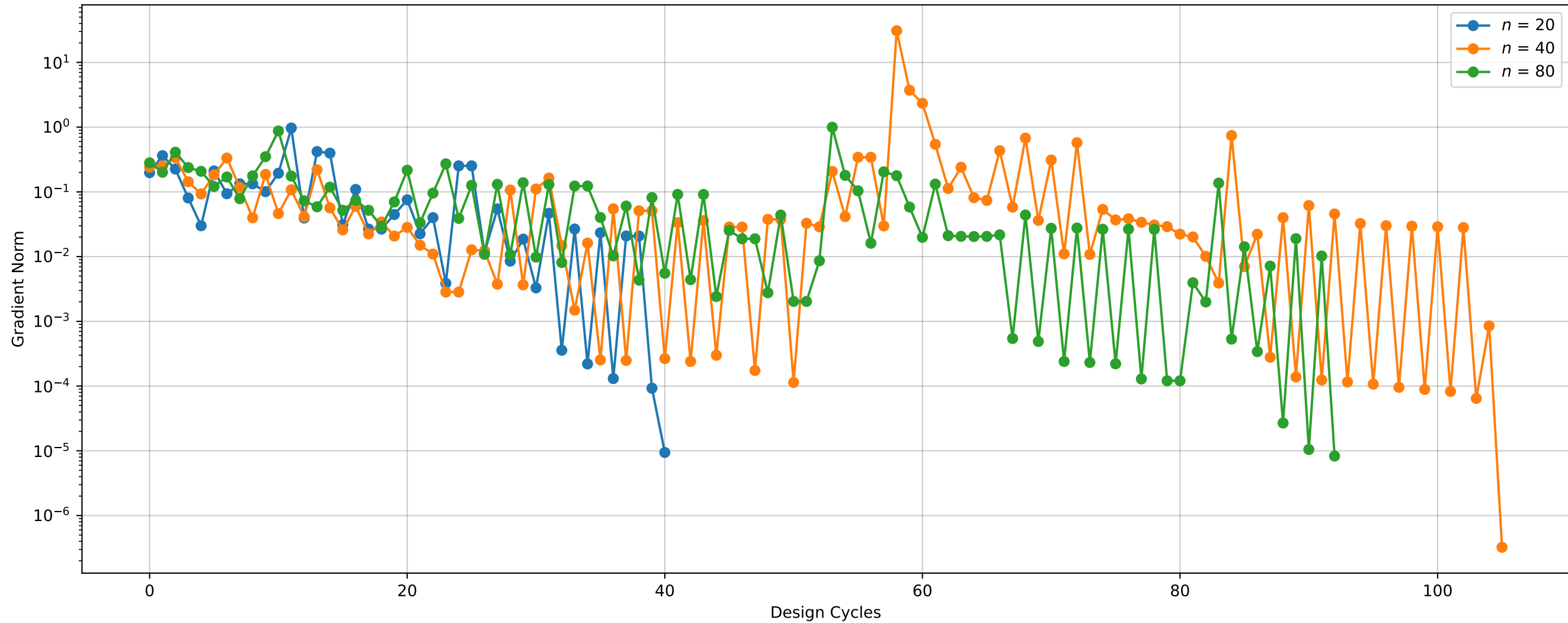


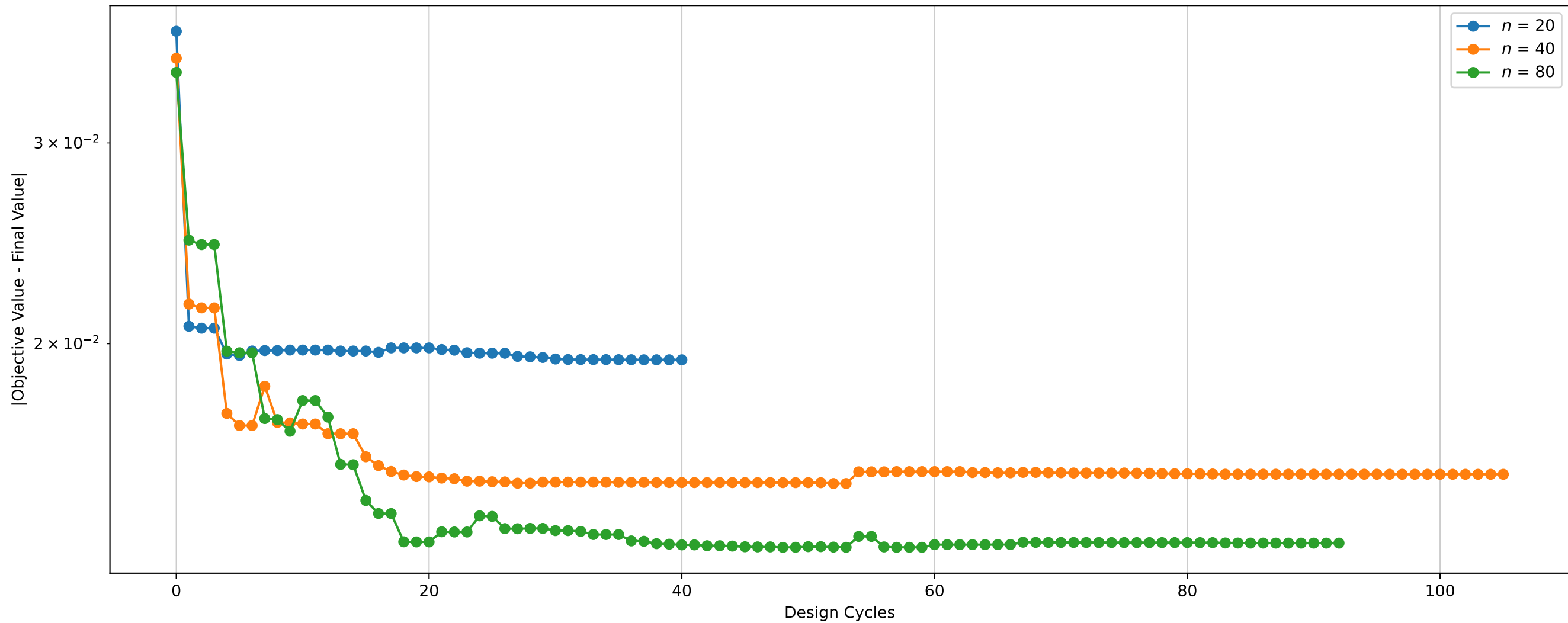
Full-space with $\tilde{\mathbf{P}}_2$ Gradient vs Design Cycles, $m = 2594$ 

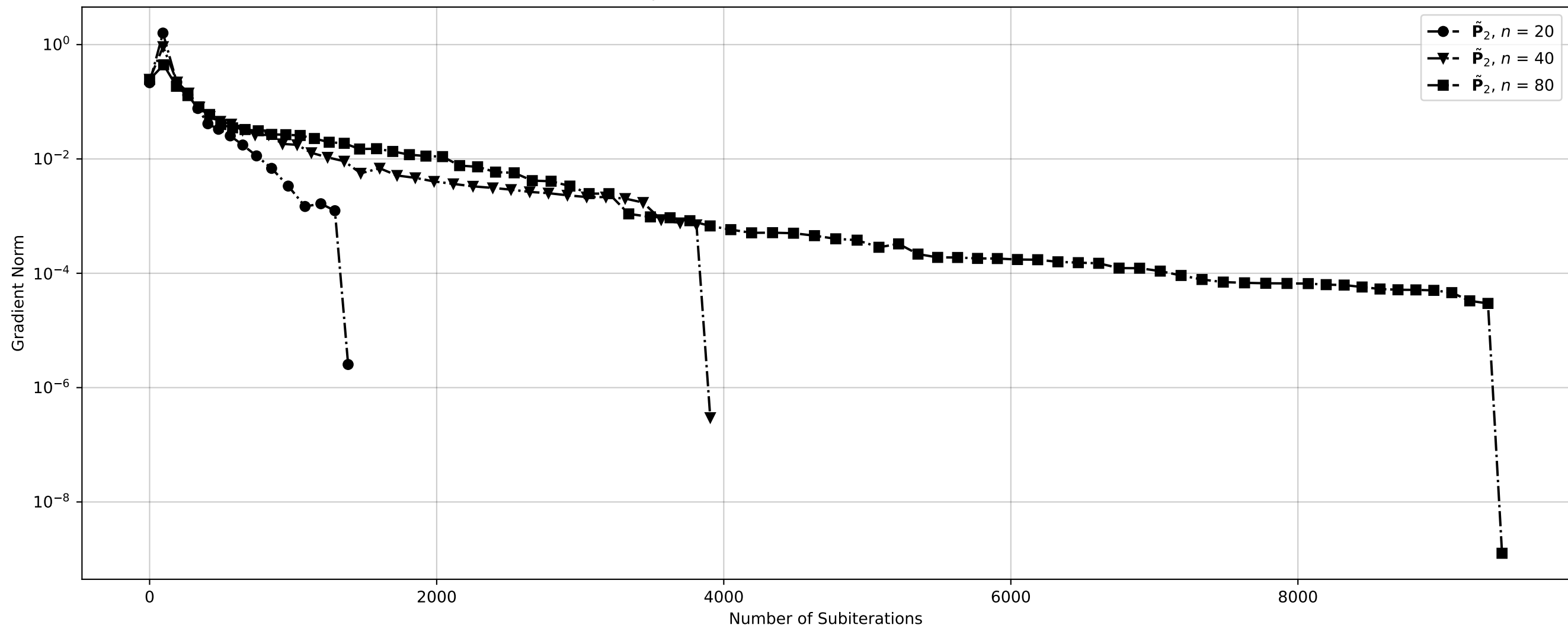
Full-space with $\tilde{\mathbf{P}}_2$ Value vs Design Cycles, $m = 2594$ 

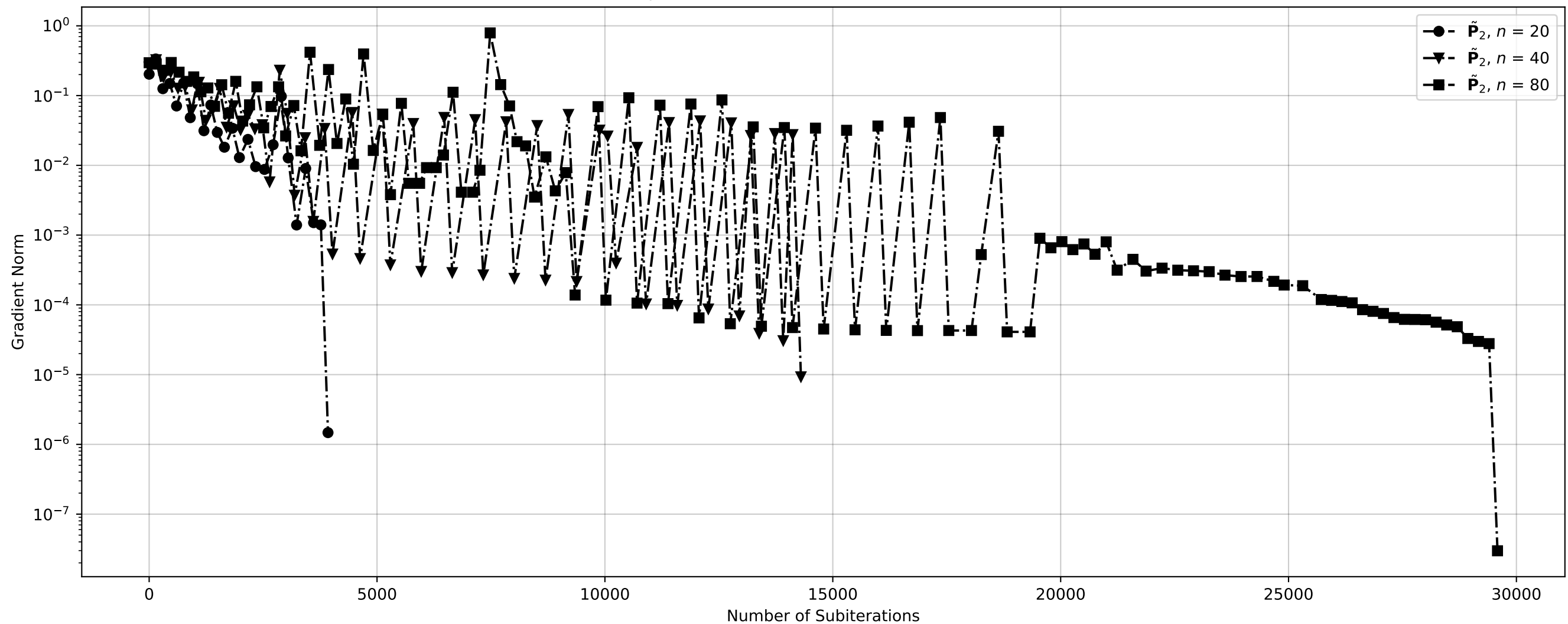
Full-space with $\tilde{\mathbf{P}}_2$ Gradient vs Design Cycles, $m = 5186$ 

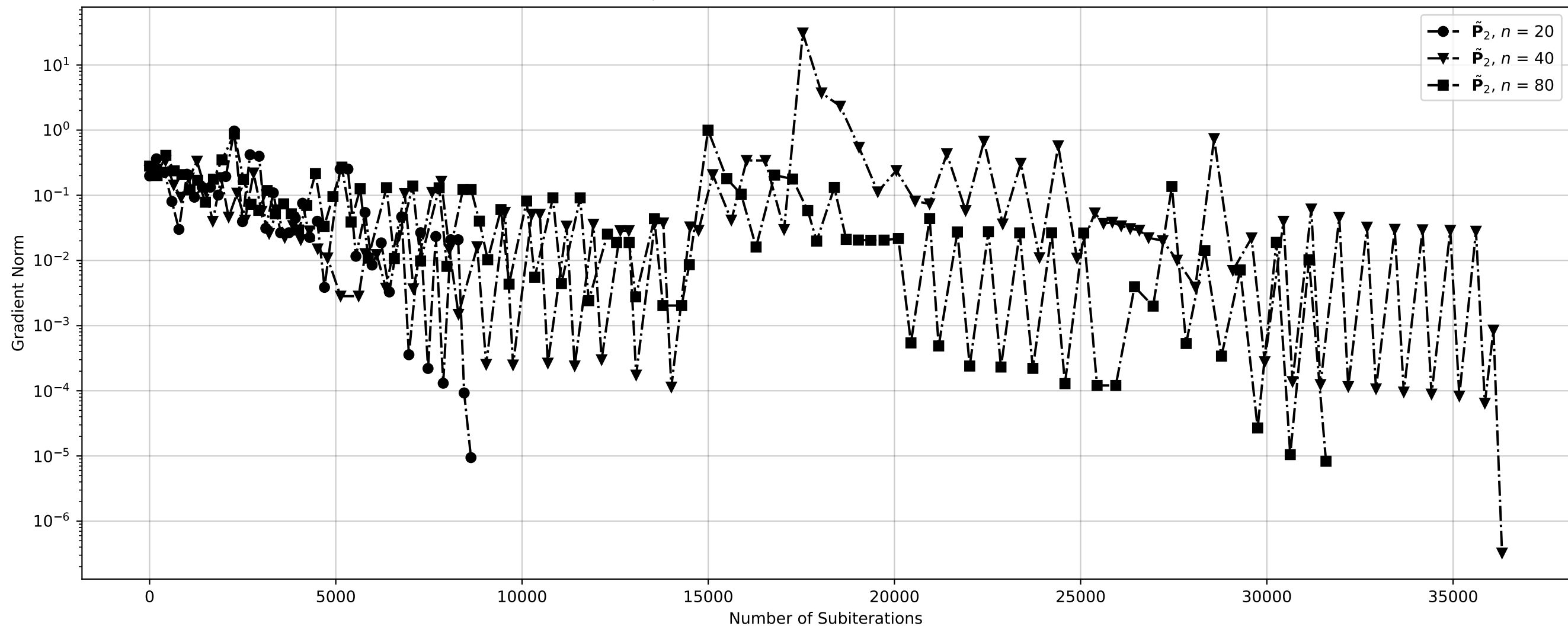
Full-space with $\tilde{\mathbf{P}}_2$ Value vs Design Cycles, $m = 5186$ 

Full-space with $\tilde{\mathbf{P}}_2$ Gradient vs Design Cycles, $m = 7778$ 

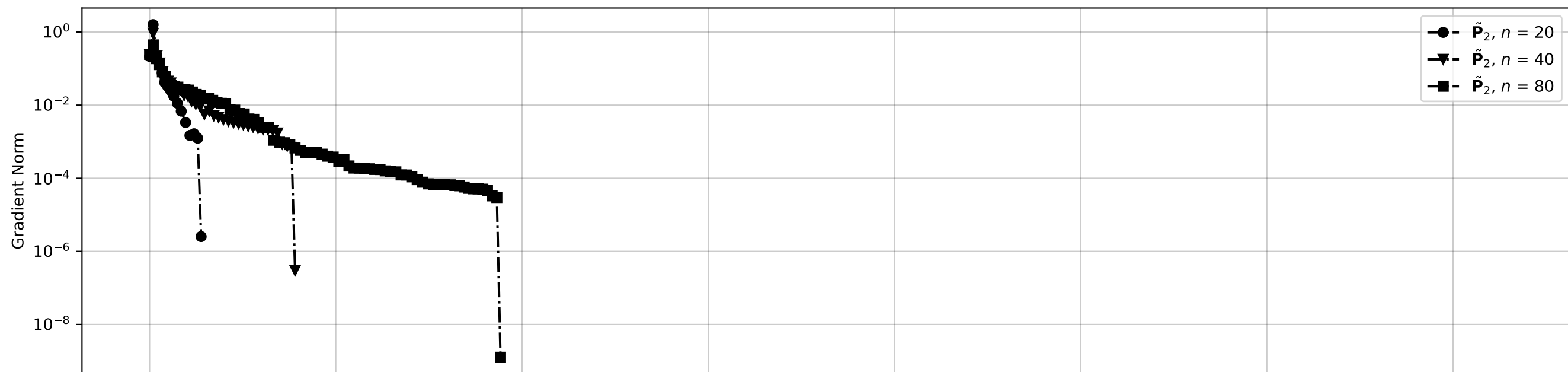
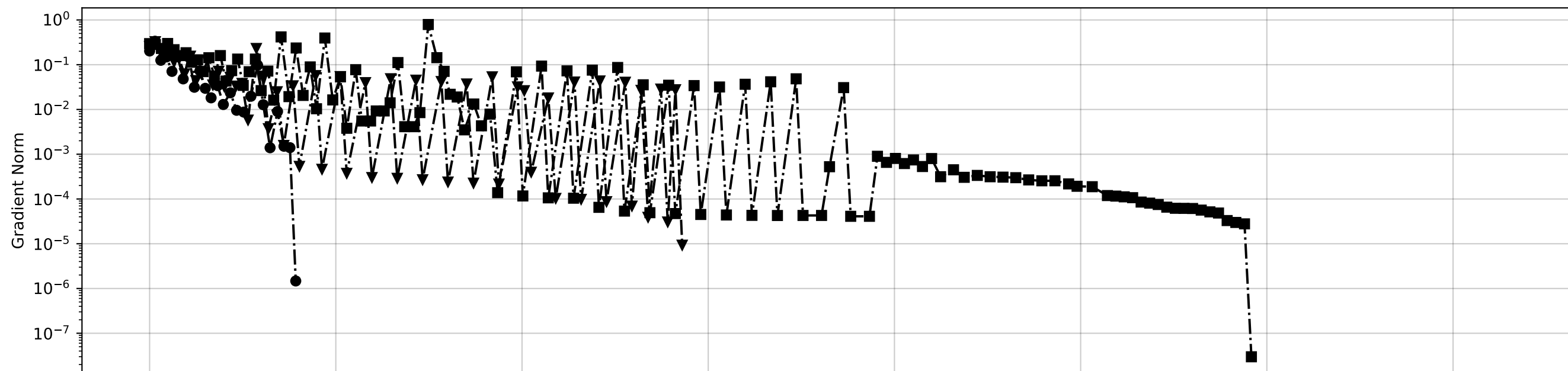
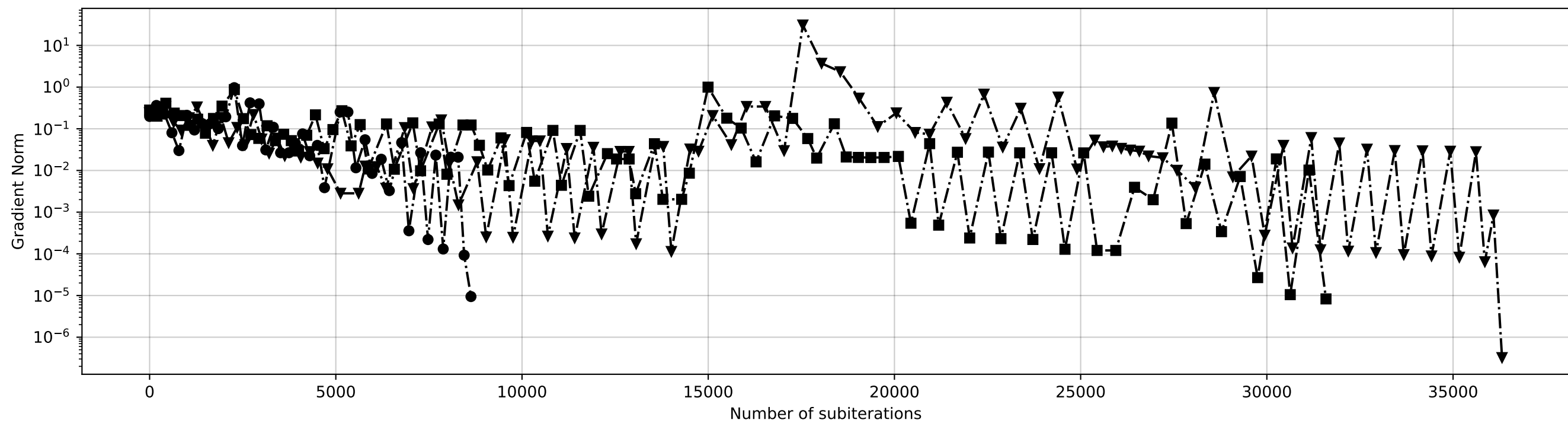
Full-space with $\tilde{\mathbf{P}}_2$ Value vs Design Cycles, $m = 7778$ 

Full-space Gradient vs Subiterations, $m = 2594$ 

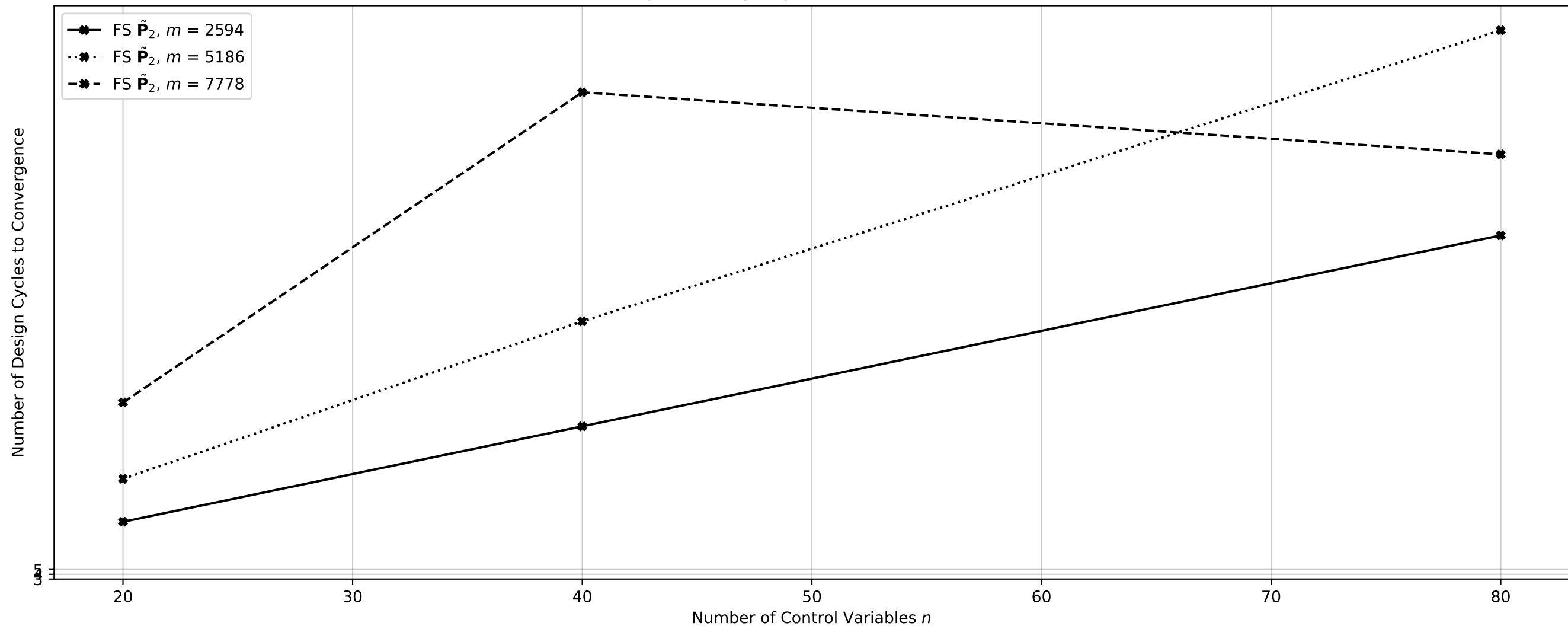
Full-space Gradient vs Subiterations, $m = 5186$ 

Full-space Gradient vs Subiterations, $m = 7778$ 

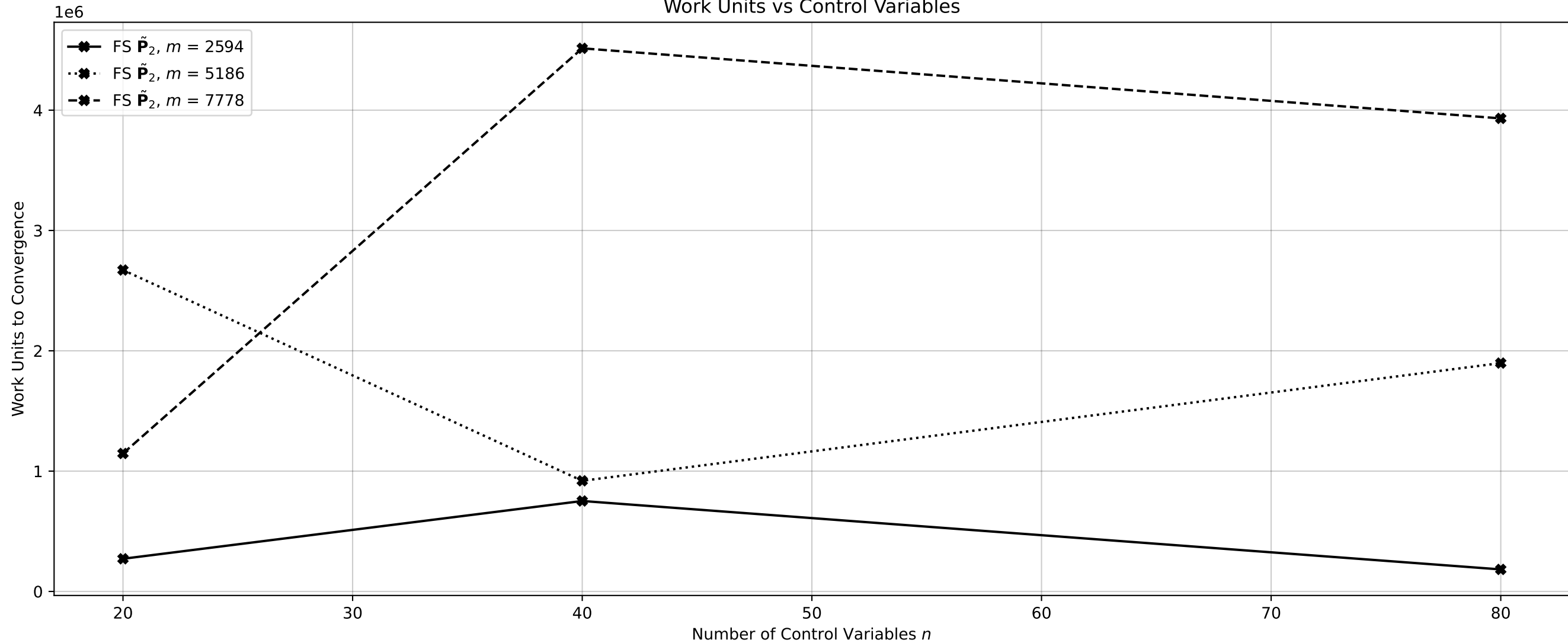
Full-space Gradient vs Subiterations

 $m = 2594$  $m = 5186$  $m = 7778$ 

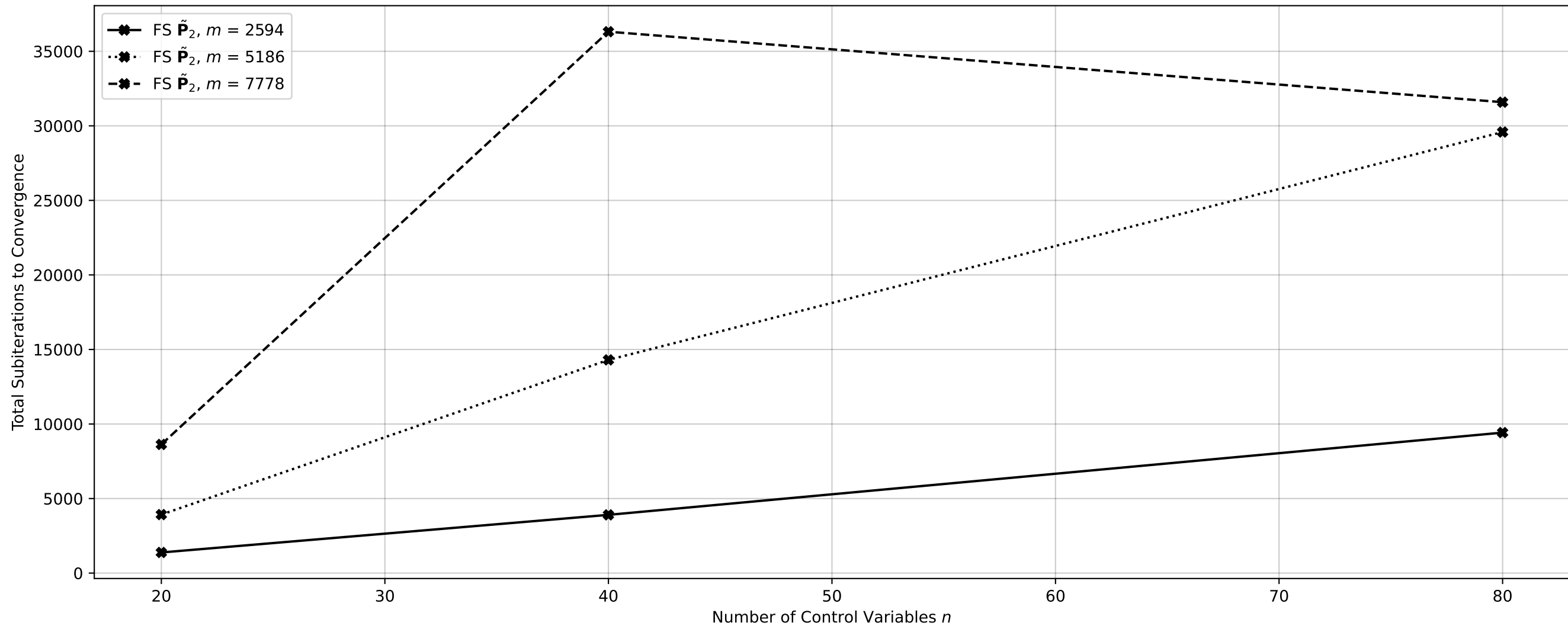
Full-space Design Cycles vs Control Variables



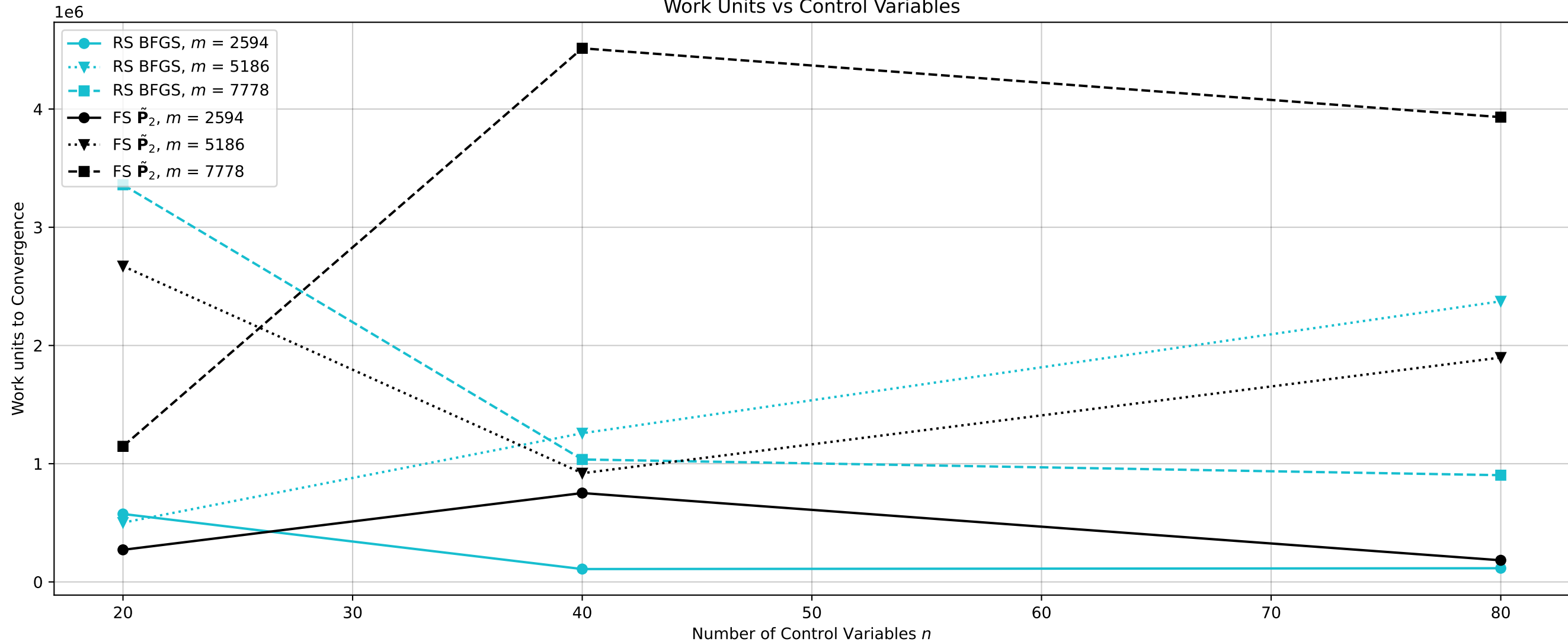
Work Units vs Control Variables



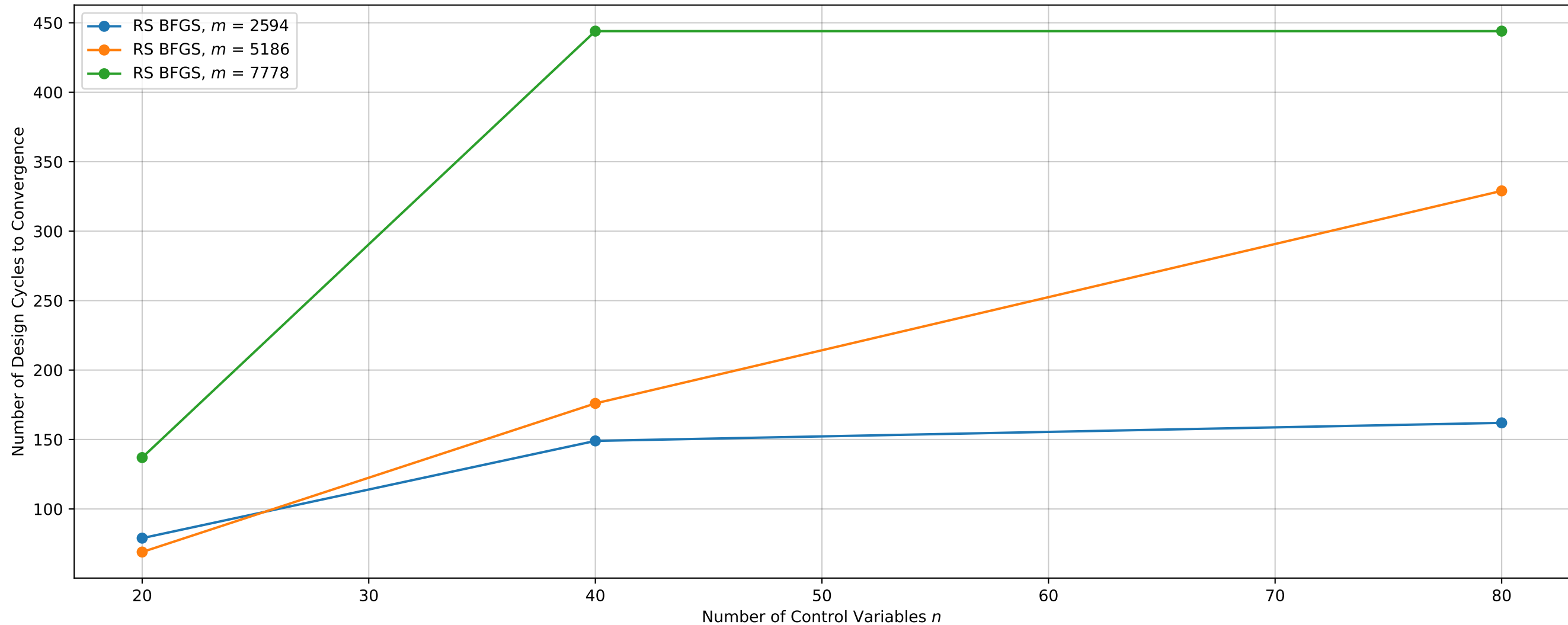
Total Subiterations vs Control Variables



Work Units vs Control Variables

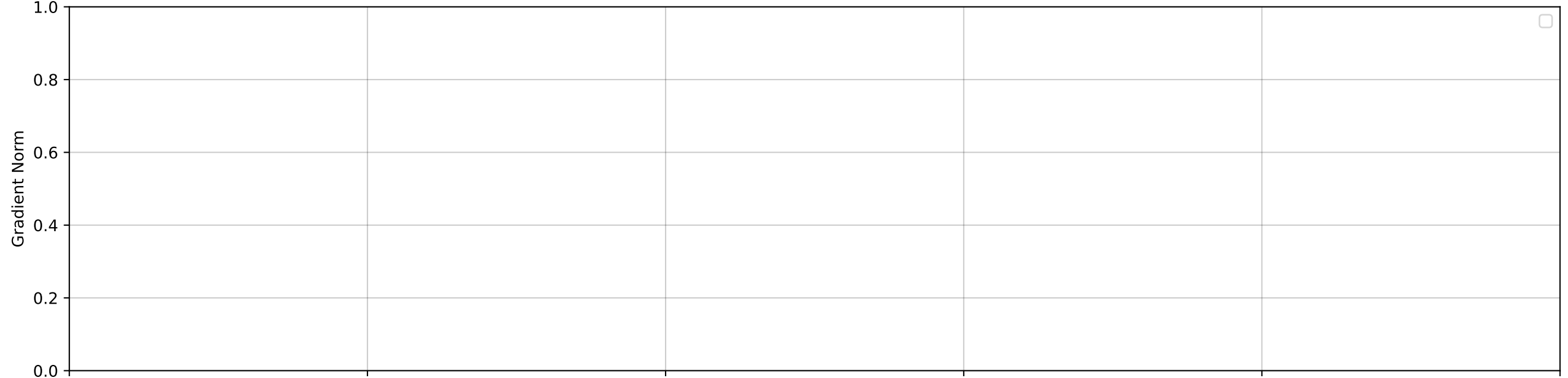


Reduced-space Design Cycles vs Control Variables

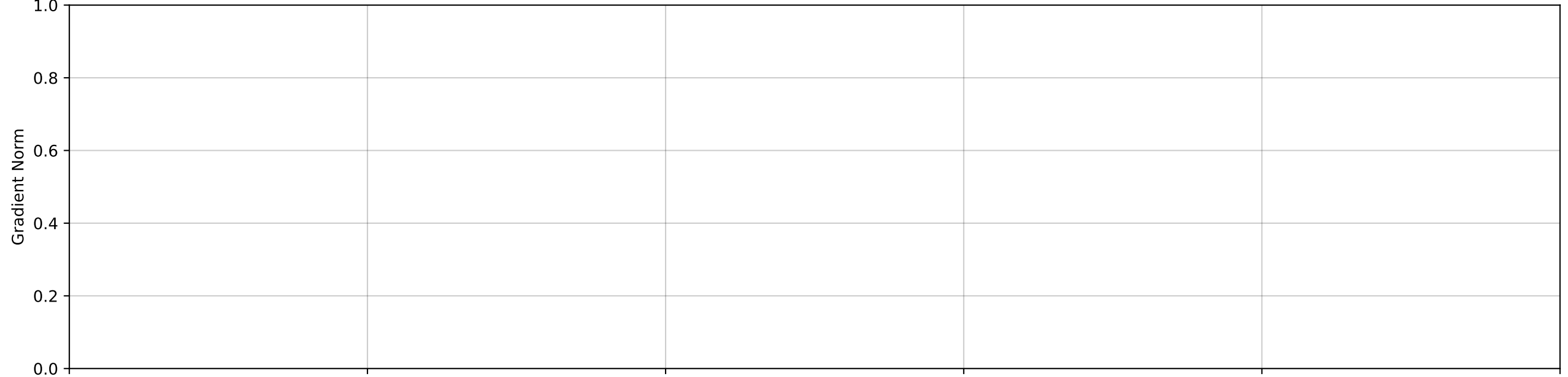


Reduced-space Gradient vs Design Cycles

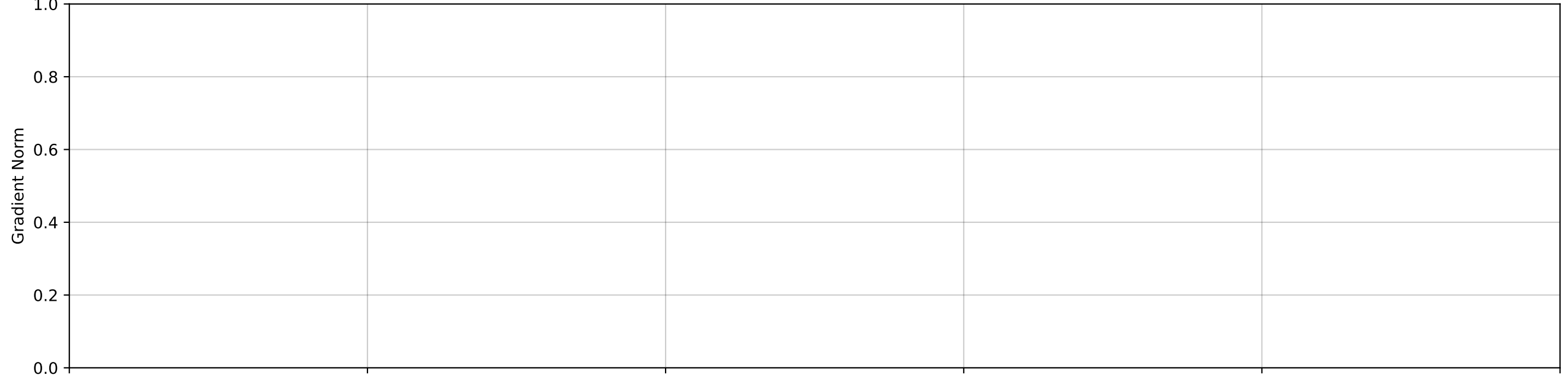
$m = 2594$



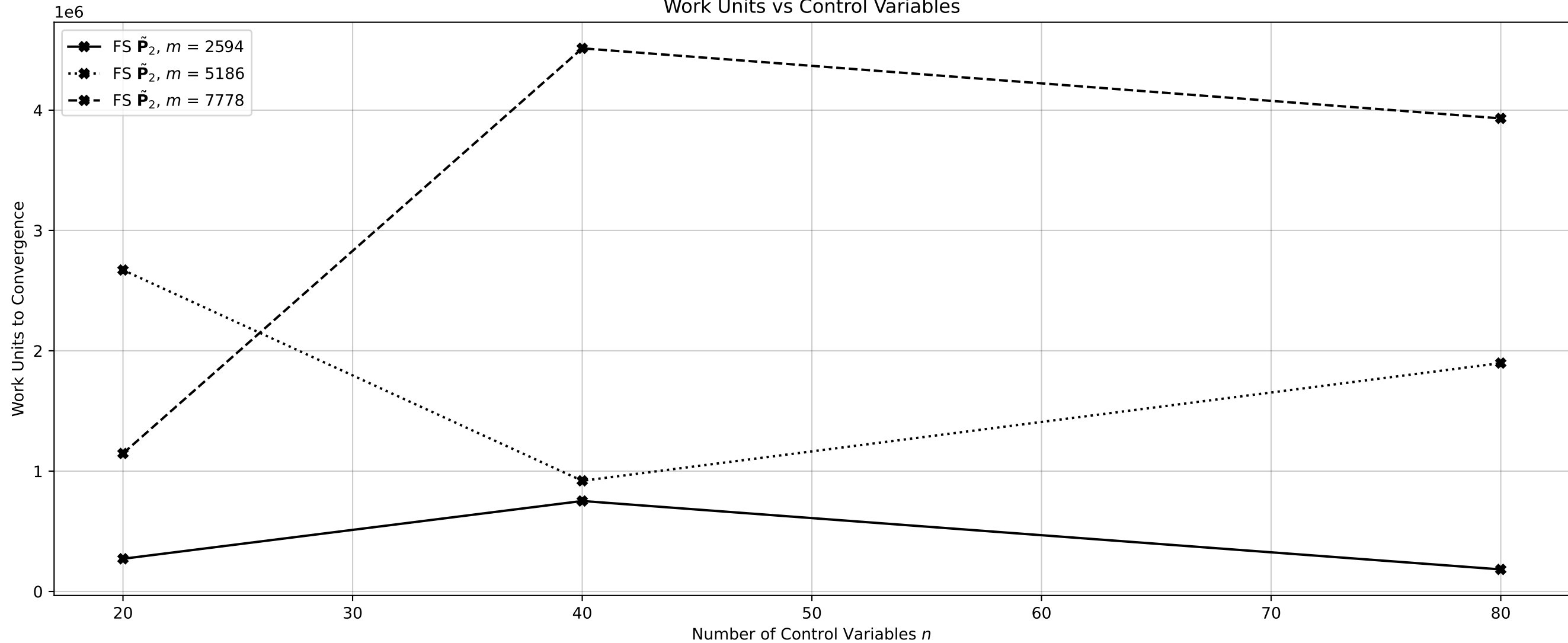
$m = 5186$



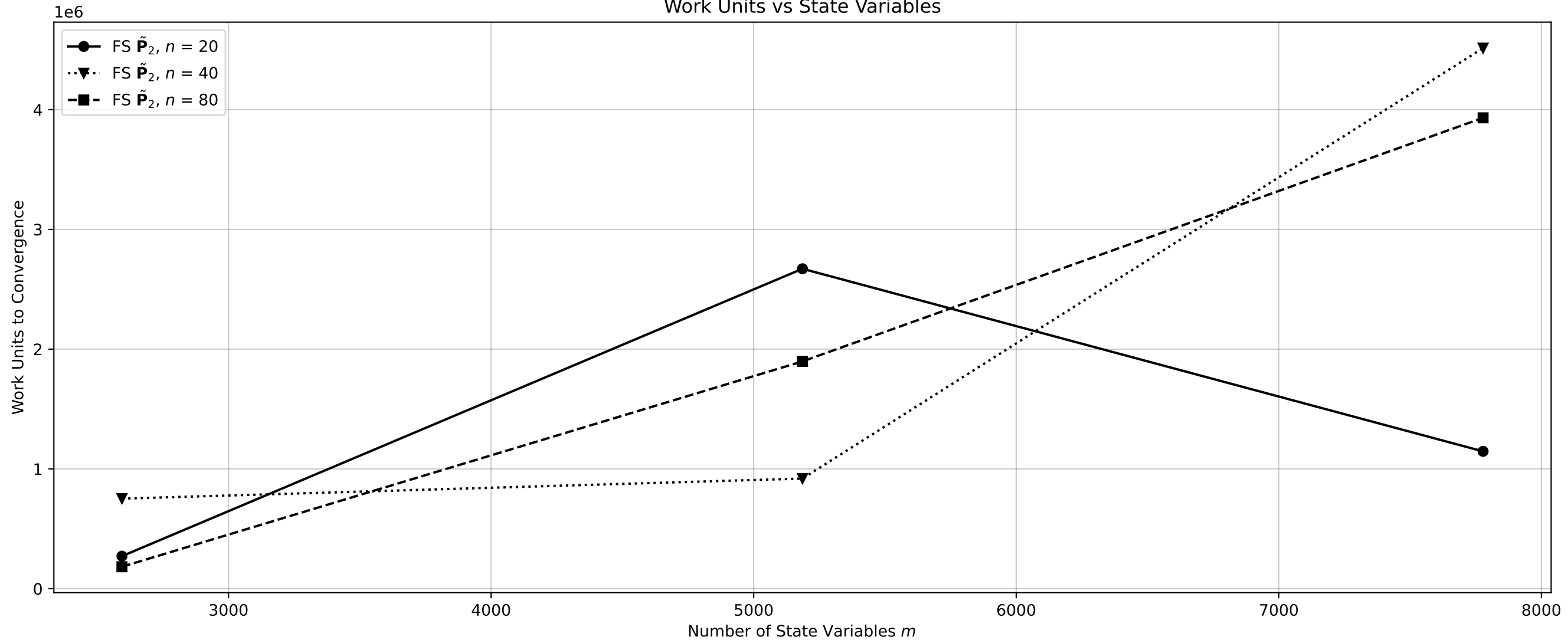
$m = 7778$



Work Units vs Control Variables



Work Units vs State Variables



Gradient Norm vs Design Cycles $m = 5186$ 