

# AD\_Excitation

## 1D ground state

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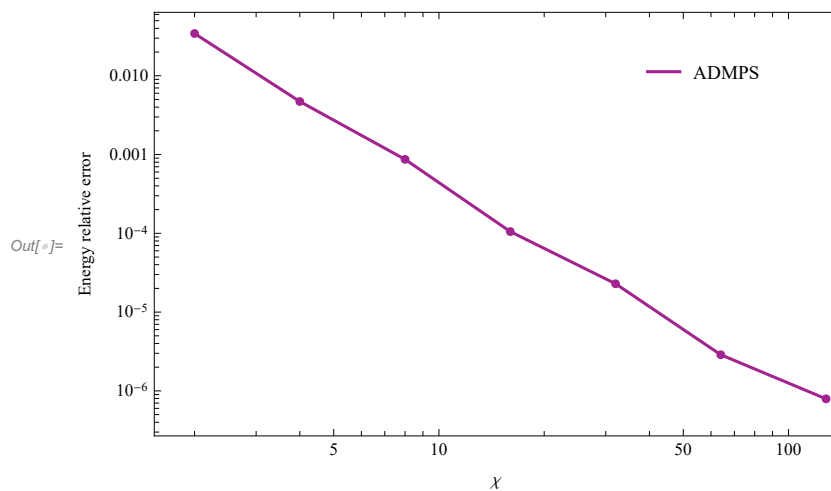
### useful function

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### Heisenberg

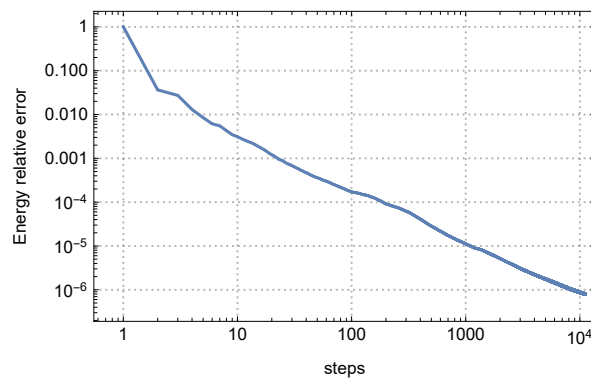
#### relative error- $\chi$

error exponentially-dependent on  $\chi$

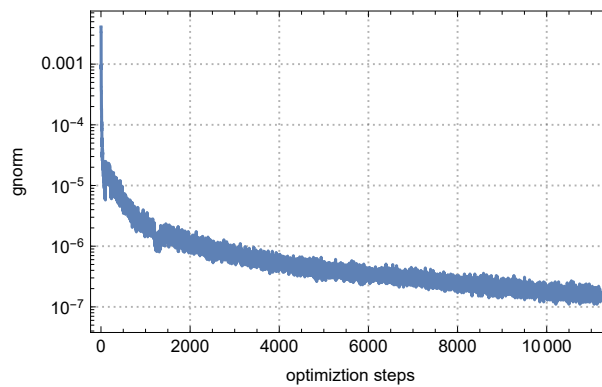


#### relative error-steps

error exponentially-dependent on steps

E-steps  $\chi=128$ 

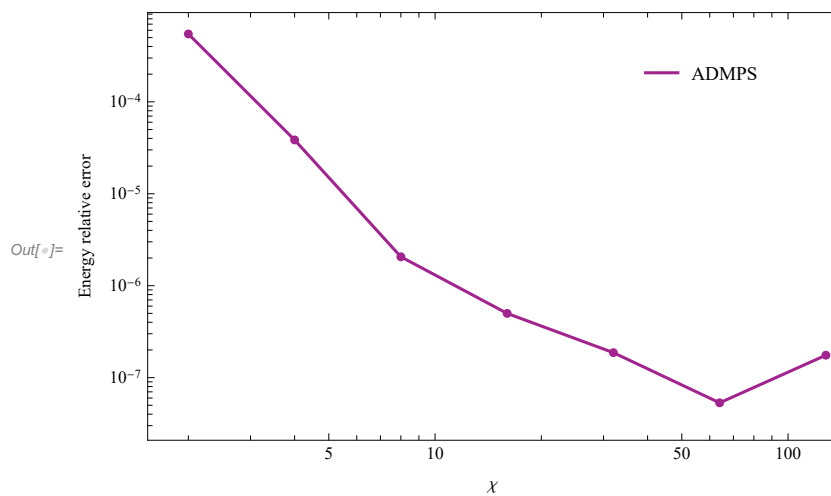
Out[\*]=

gnrom-steps  $\chi=128$ 

## TFIsing at critical point $g=0.5$

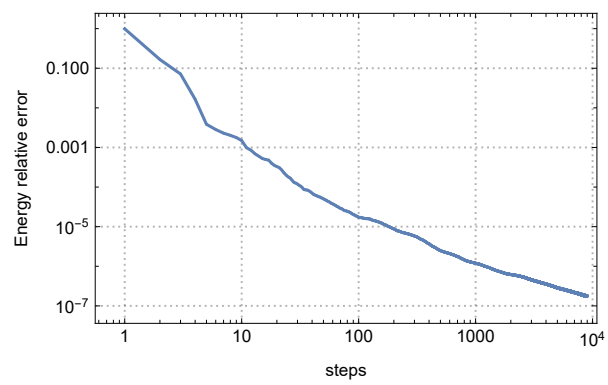
### relative error- $\chi$

error exponentially-dependent on  $\chi$

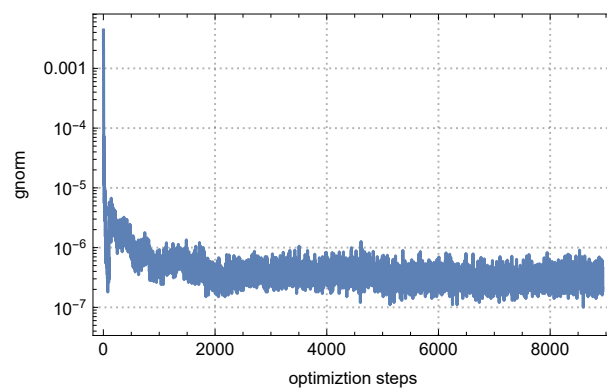


### relative error-steps

error exponentially-dependent on steps

E-steps  $\chi=128$ 

Out[ ]:=

gnrom-steps  $\chi=128$ 

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