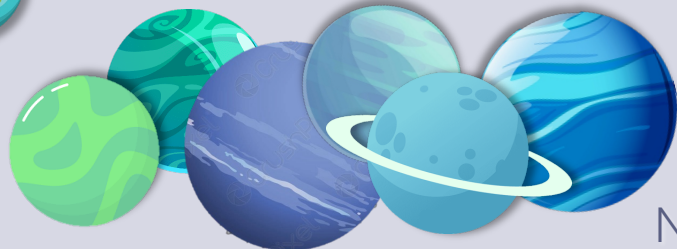


# Rock and Ice Miscibility Deep Within the Interiors of Water Worlds

1

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Earth ( $1 R_E$ )

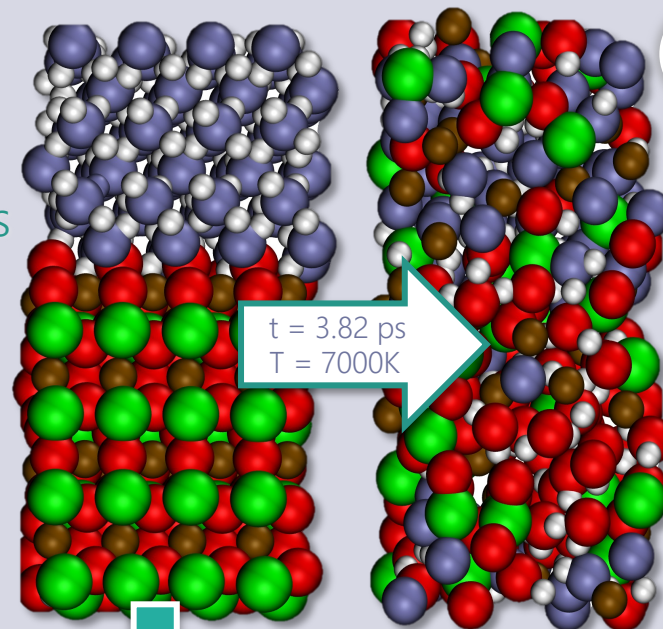


Neptune ( $4 R_E$ )

What do the interior structures of water-rich exoplanets look like?

Perform density functional theory molecular dynamics (DFT-MD)

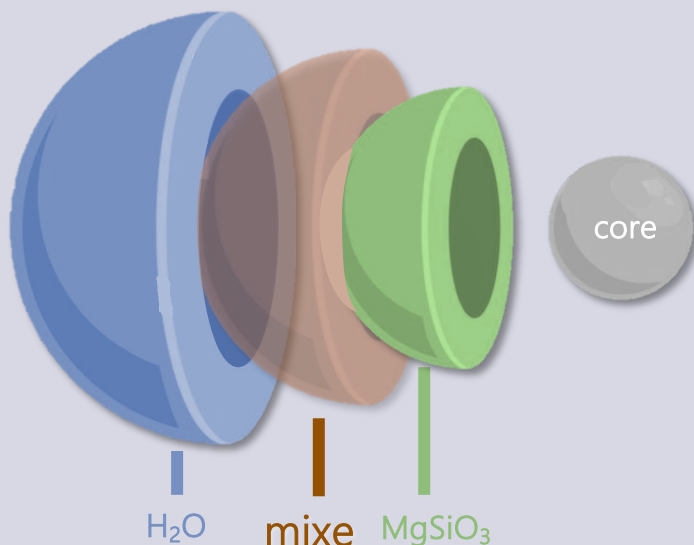
Mg  
Si  
 $O_{\text{rock}}$   
 $O_{\text{ice}}$   
H



2

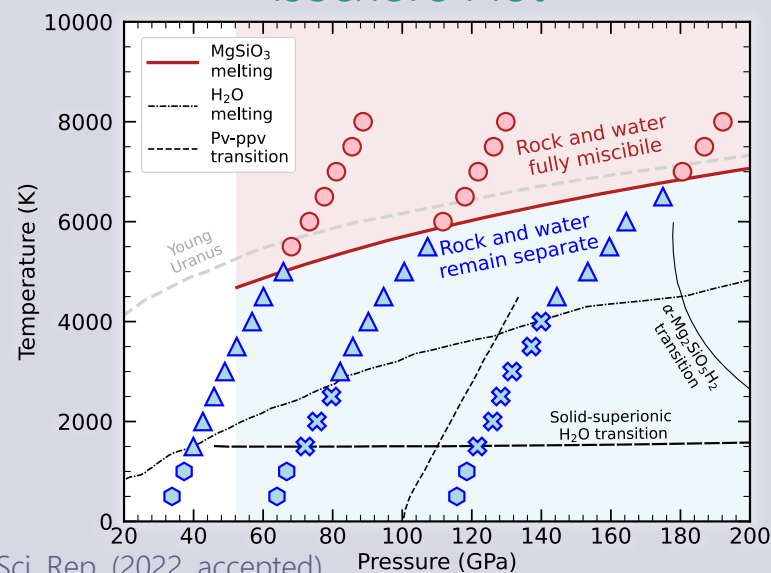
Poster #37

4



The mantles of many water worlds are mixed

Isochore Plot



Kovacevic+, Sci. Rep. (2022, accepted)

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