



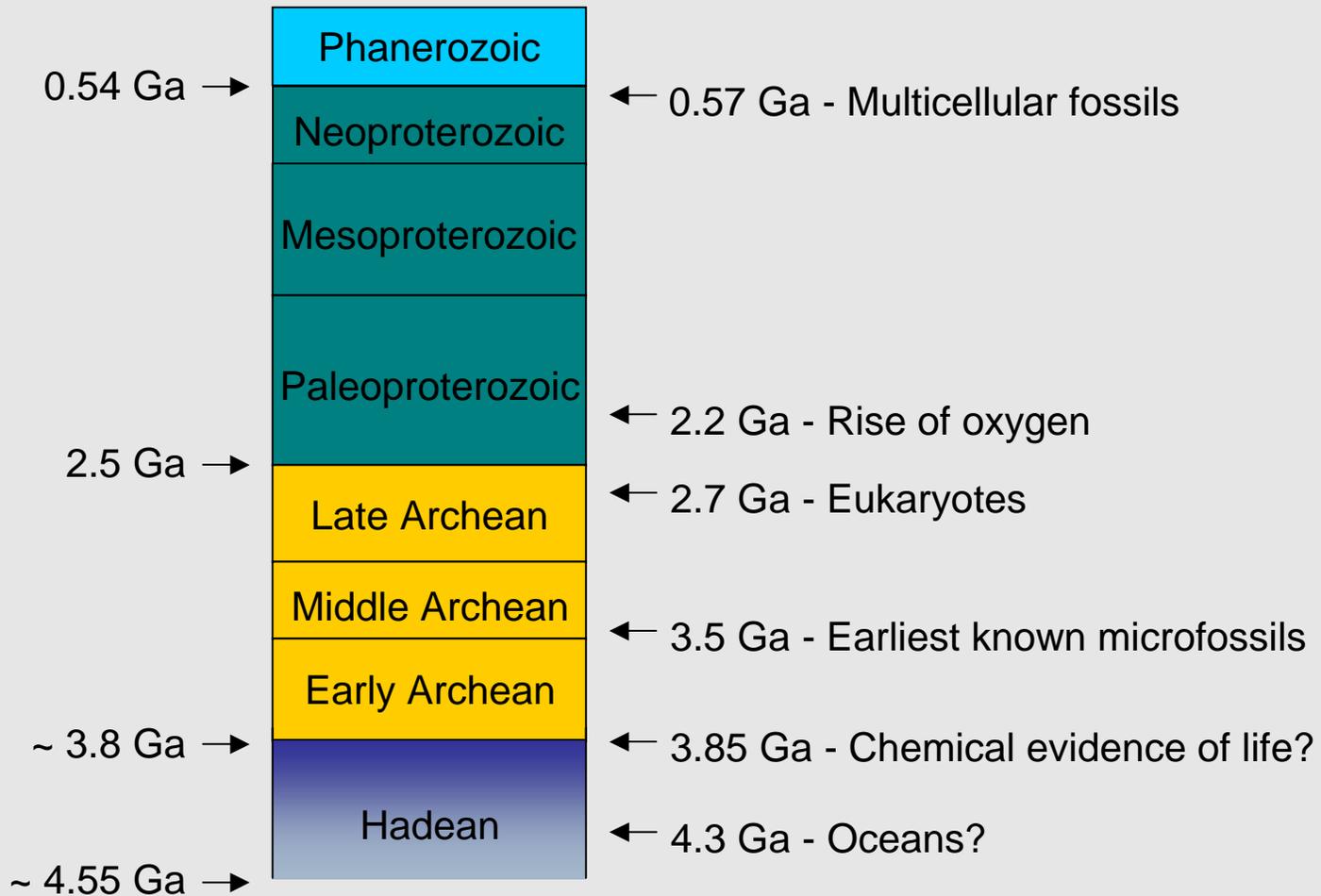
Testimony before the President's Commission on  
Implementation of U.S. Space Exploration Policy

May 3, 2004  
New York, New York

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# Geologic Timeline

Ga = billions of years ago

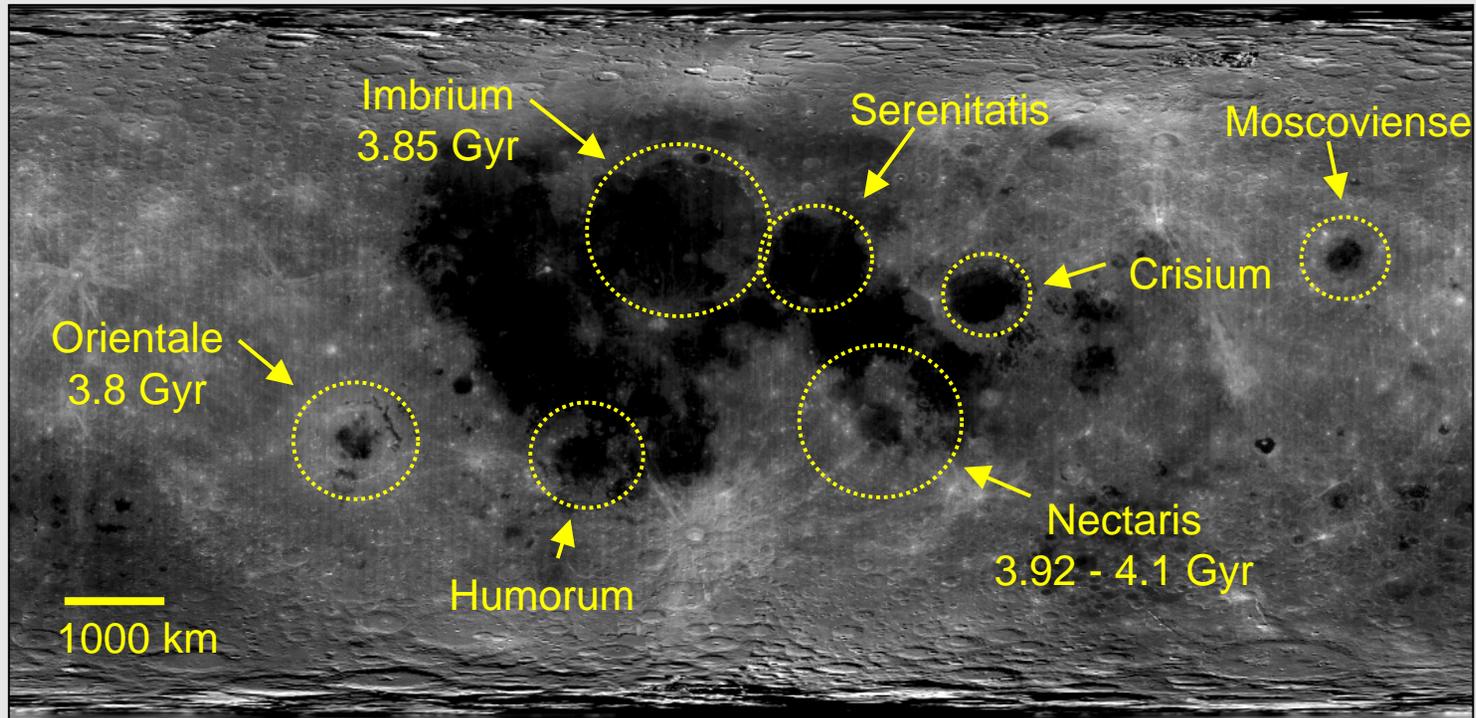


## *Early Bombardment*



Massive impacts on the young Earth  
profoundly affected habitability at the time of  
life's origin and early evolution

## *Lunar Impact Basins*

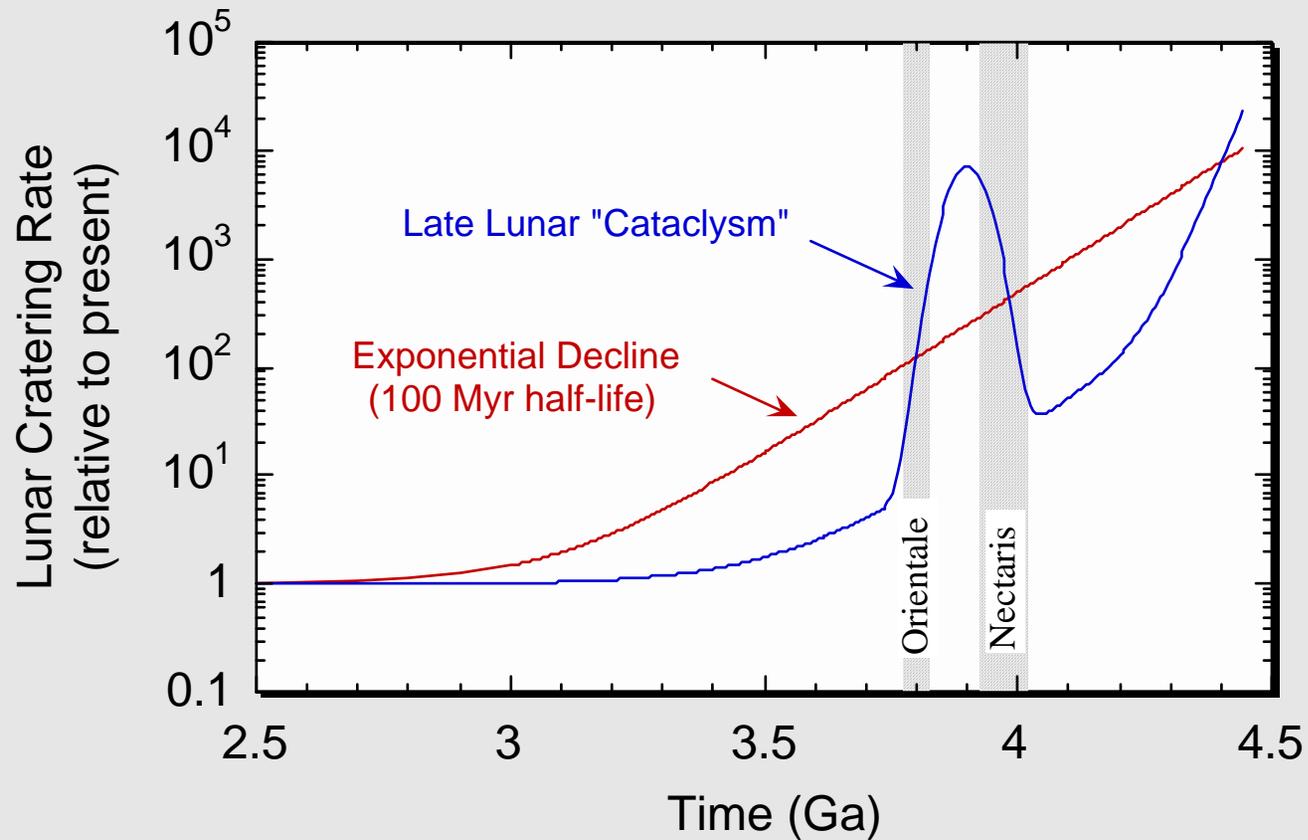


Our knowledge of these events comes largely from the Moon.  
A legacy of the Apollo program.

## *Relevance to Early Mars*



## Late Bombardment "Cataclysm"?



*Unresolved scientific legacy of the Apollo era.  
Renewed lunar exploration could test competing hypotheses...*

The Moon may provide a valuable “proving ground” for protocols and technology destined for Mars exploration...

...but the Moon is also a place where we can answer fundamental questions about the nature of the environment at the time of life’s origin and early evolution.

