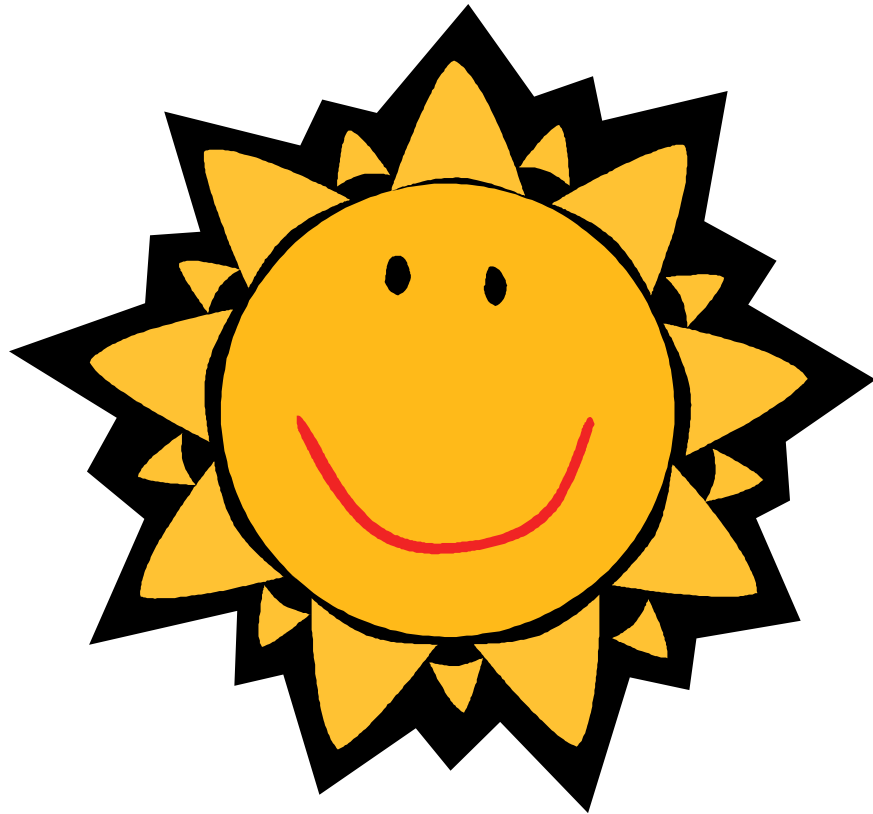
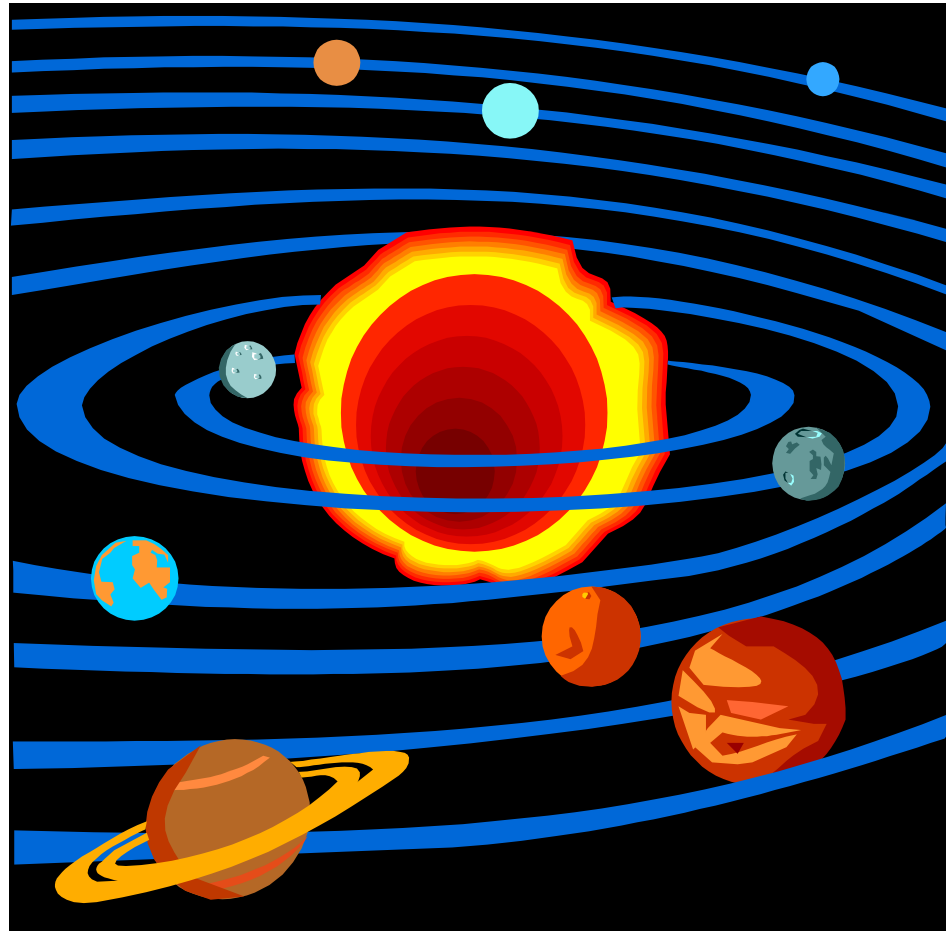


# Our Solar System

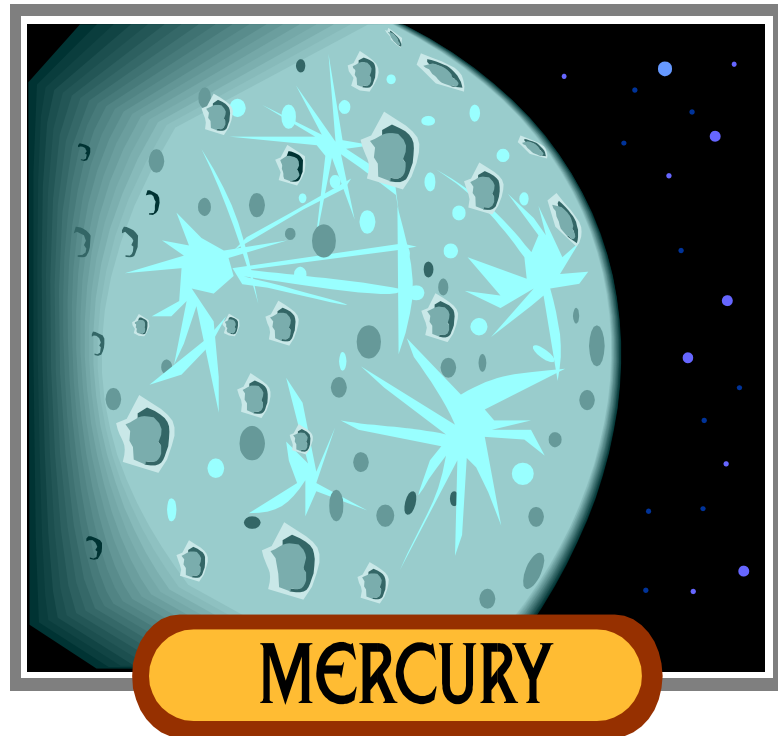
**We live in a Solar System that has 1 star Called the Sun**



# Eight planets go around the Sun in paths we call Orbits



**The closest planet is called Mercury**



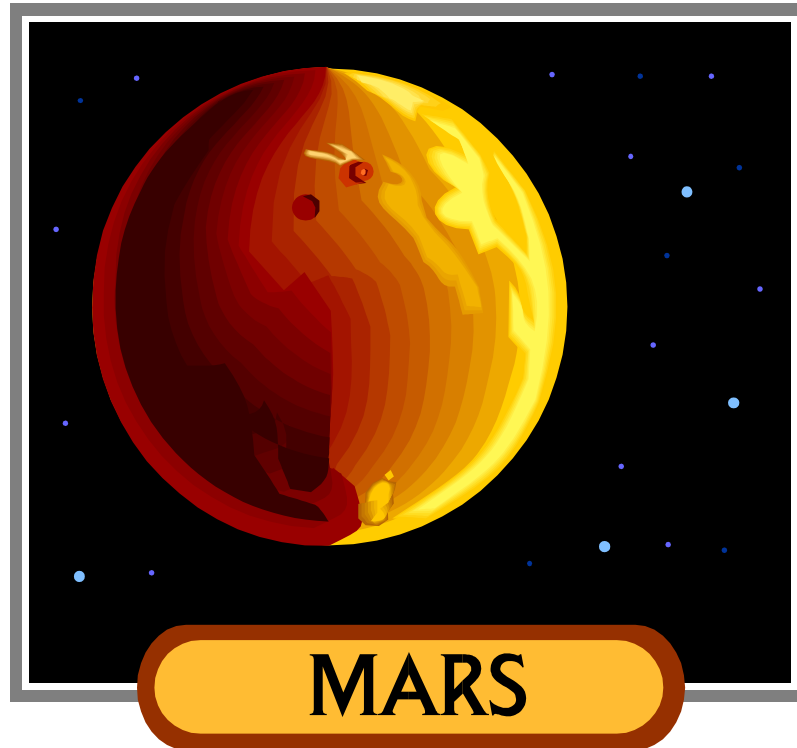
**The next closest planet is Venus**



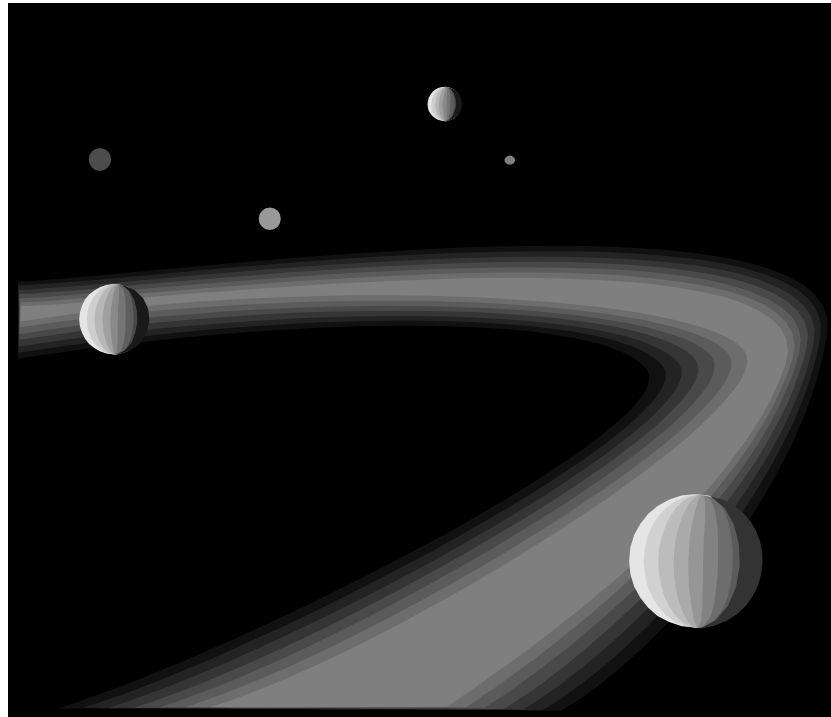
**The third planet from the Sun is the one  
we live on called Earth**



# After Earth comes Mars

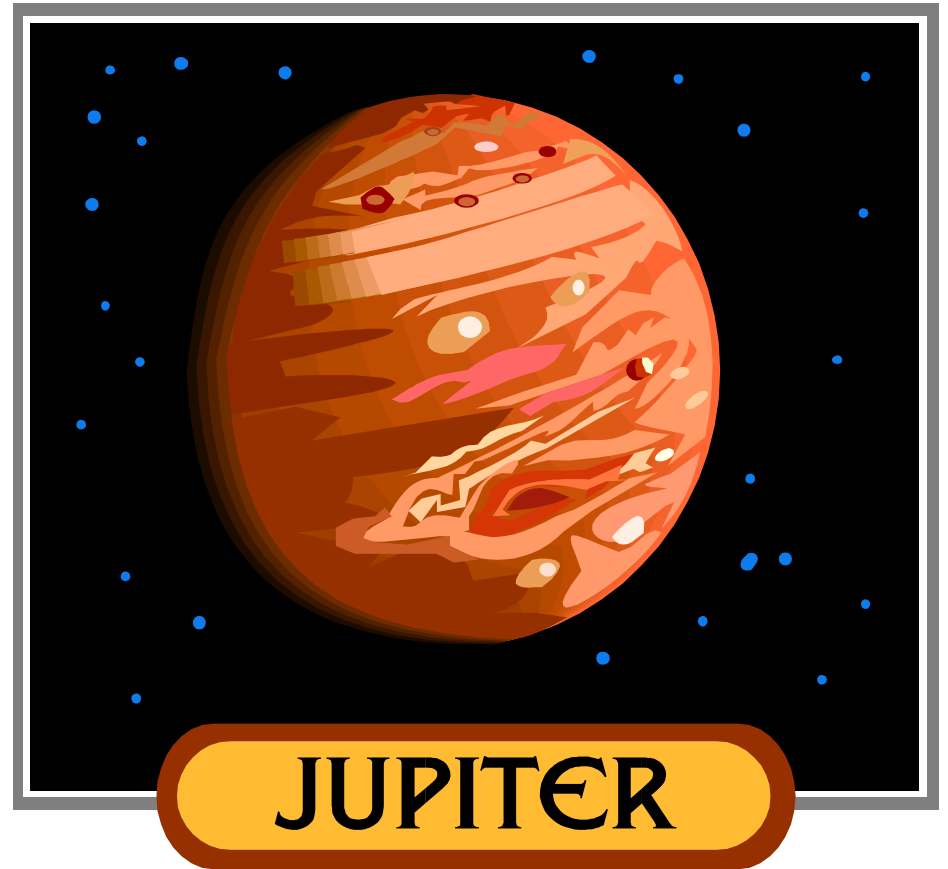


**Between Mars and the next planet is a ring of rocks called the Asteroid Belt**





**Jupiter, the largest planet is next in line**



**Saturn is next in line**



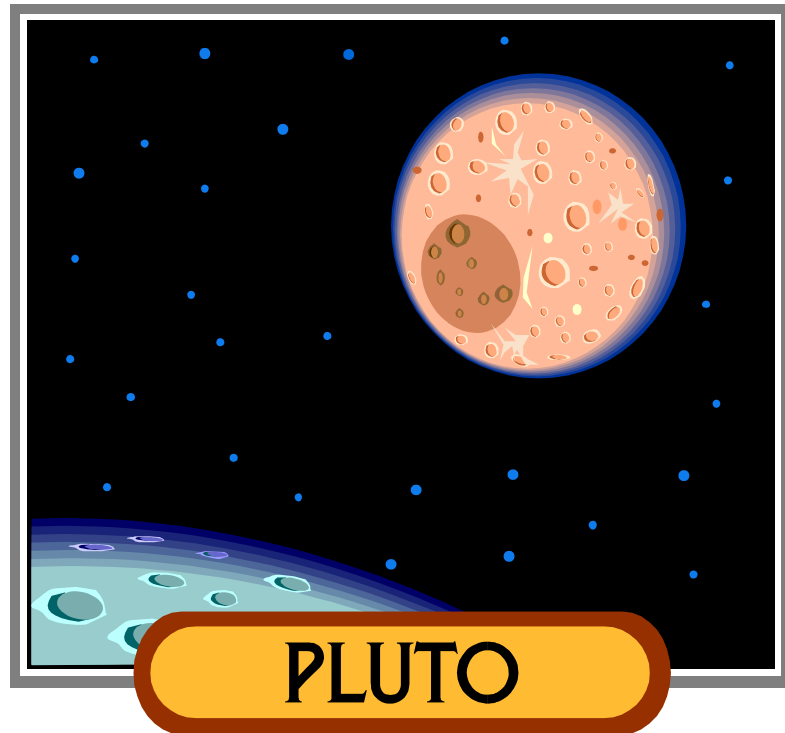
# Then Uranus



# Neptune



**And a small dwarf planet called Pluto**



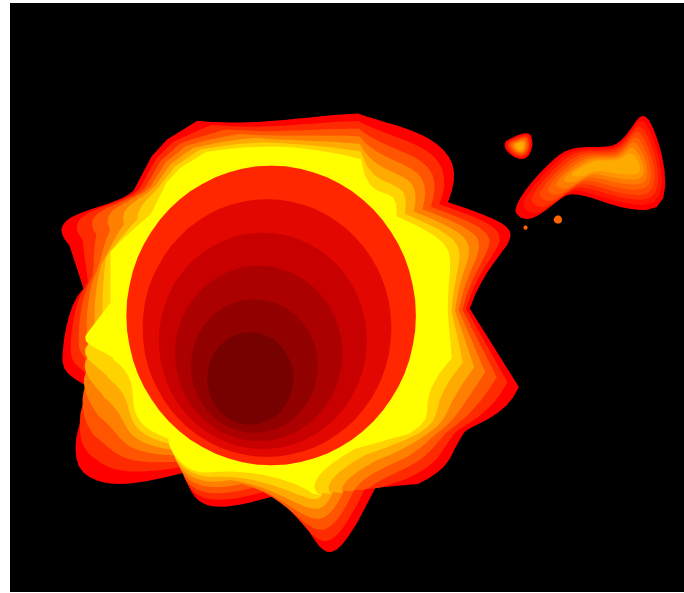
**Scientist wondered how much space the  
Solar System takes up.**



**They didn't have tools to measure with,  
so they tried to guess.**



**They knew where the sun was...**

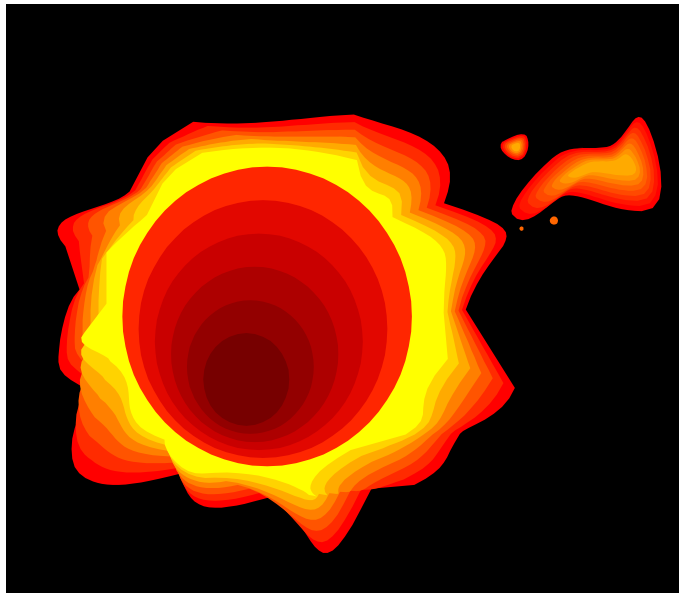




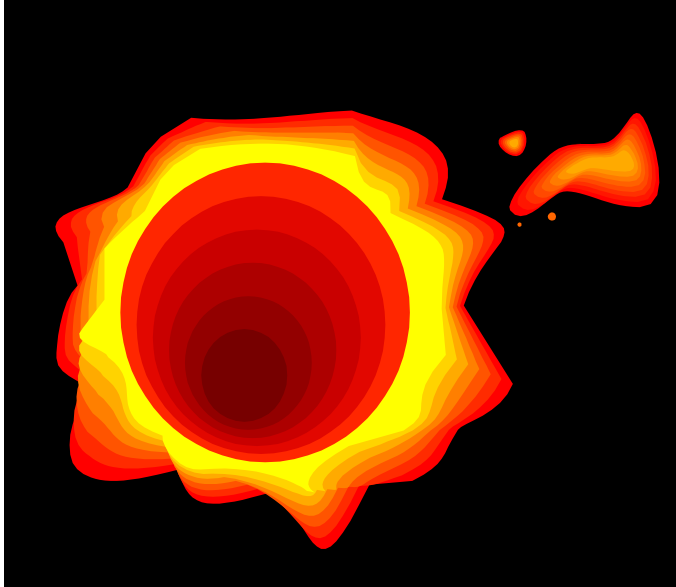
**They knew they were on Earth**



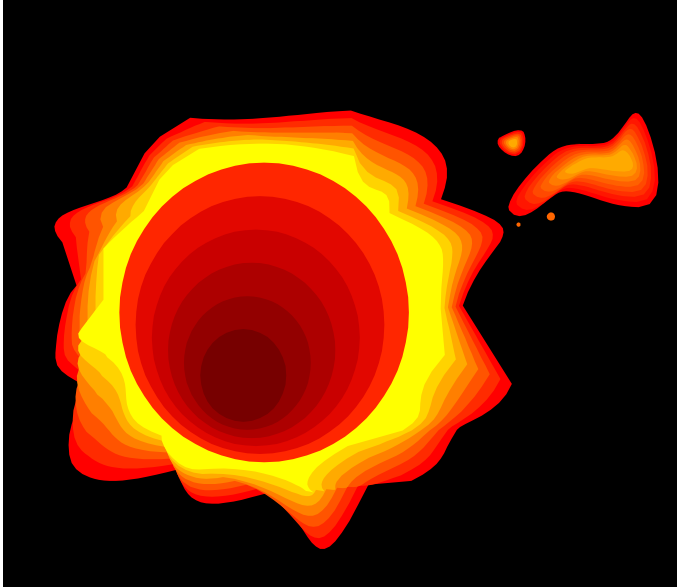
**So they made the distance between the  
two their measuring stick**



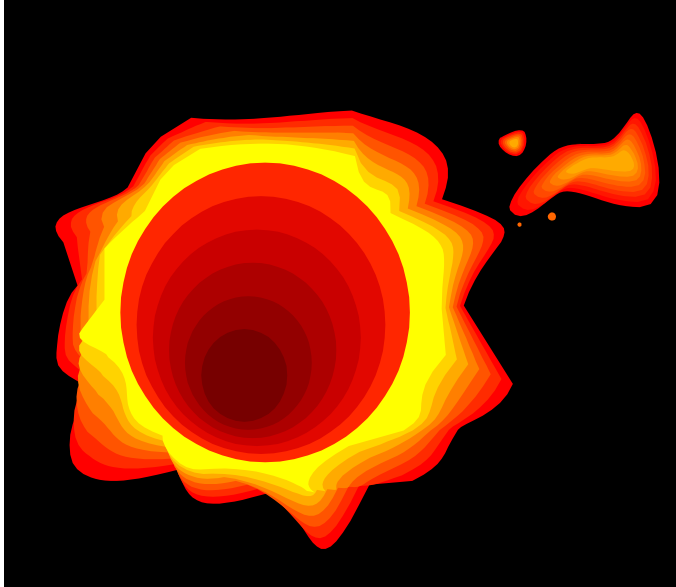
**They decided that the distance from the Earth to the Sun would be called One Astronomical Unit**



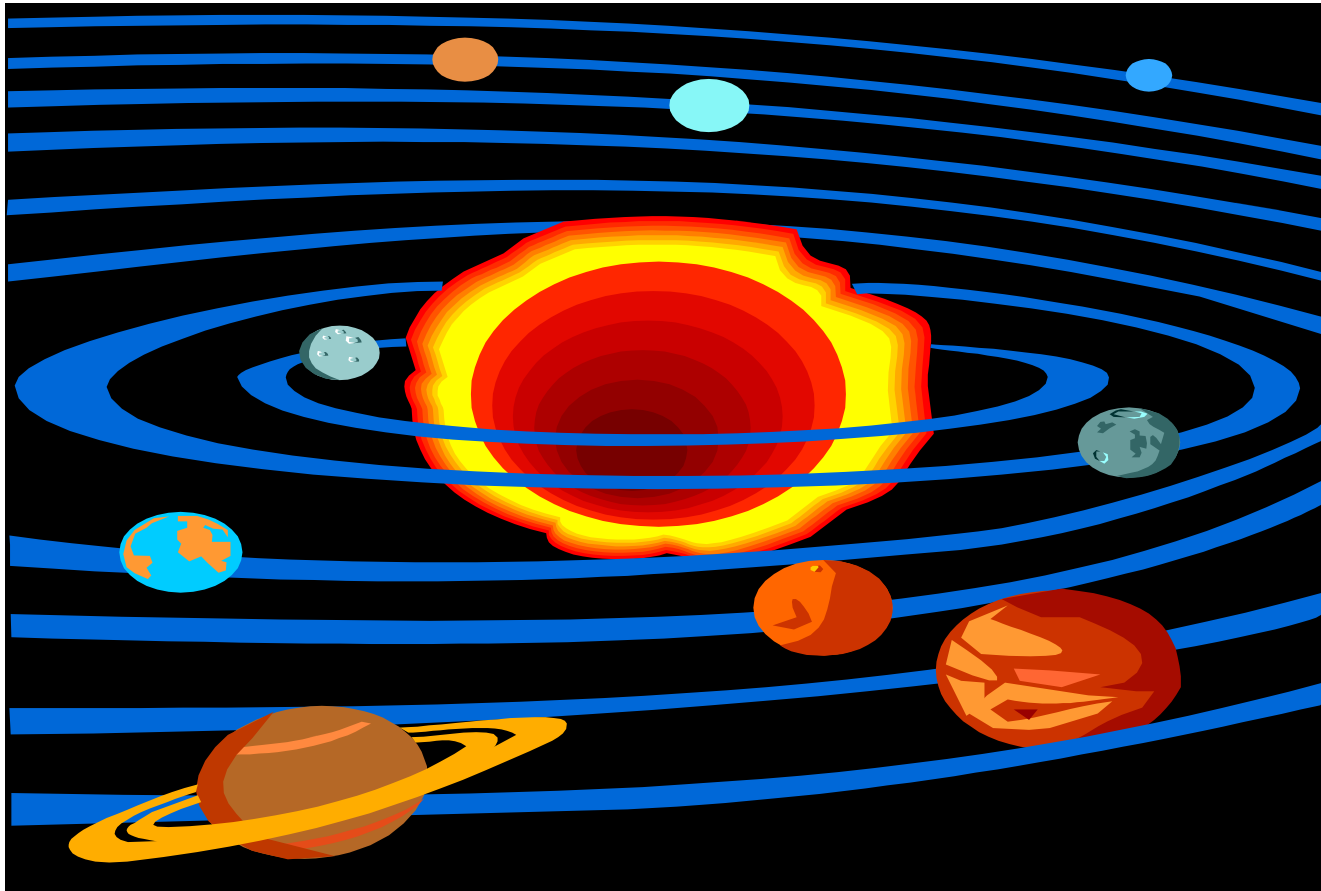
**Or**  
**one AU**  
**for short**



**If we made a model where  
one meter = 1AU**



**How many meter sticks would we need to get from the Sun to Pluto?**



# Let's try it!

<b>Planet</b>	<b>AU's from Sun</b>	<b>How many meter sticks we need</b>
<b>Mercury</b>	<b>0.39</b>	<b>0.39</b>
<b>Venus</b>	<b>.72</b>	<b>.72</b>
<b>Earth</b>	<b>1</b>	<b>1</b>
<b>Mars</b>	<b>1.52</b>	<b>1.52</b>
<b>Jupiter</b>	<b>5.20</b>	<b>5.20</b>
<b>Saturn</b>	<b>9.55</b>	<b>9.55</b>
<b>Uranus</b>	<b>19.2</b>	<b>19.20</b>
<b>Neptune</b>	<b>30.1</b>	<b>30.10</b>
<b>Pluto</b>	<b>39.4</b>	<b>39.40</b>

**But WAIT!!!!!!**





**With these numbers we have to go back  
to the sun to measure for every planet.**

**That will  
take  
forever!!!**



**With these numbers we have to go back  
to the sun to measure.**

**How about  
if we find  
the distance  
between  
each one?**



**With these numbers we have to go back  
to the sun to measure.**

**Then we  
only have to  
walk it  
once!**



# Let's Do the Math!

<b>Planet</b>	<b>AU's from Sun</b>	<b>Meters</b>	<b>Distance to next planet</b>
<b>Mercury</b>	<b>0.387</b>	<b>.38 m</b>	<b>.38 m</b>
<b>Venus</b>	<b>.723</b>	<b>.72 m</b>	<b>.23 m</b>
<b>Earth</b>	<b>1</b>	<b>1 m</b>	<b>.52 m</b>
<b>Mars</b>	<b>1.52</b>	<b>1.52 m</b>	<b>3.68 m</b>
<b>Jupiter</b>	<b>5.2</b>	<b>5.2 m</b>	<b>4.35 m</b>
<b>Saturn</b>	<b>9.55</b>	<b>9.55 m</b>	<b>9.65 m</b>
<b>Uranus</b>	<b>19.2</b>	<b>19.20 m</b>	<b>10.90 m</b>
<b>Neptune</b>	<b>30.1</b>	<b>30.10 m</b>	<b>9.30 m</b>
<b>Pluto</b>	<b>39.4</b>	<b>39.40</b>	

# That's still not the whole Solar System



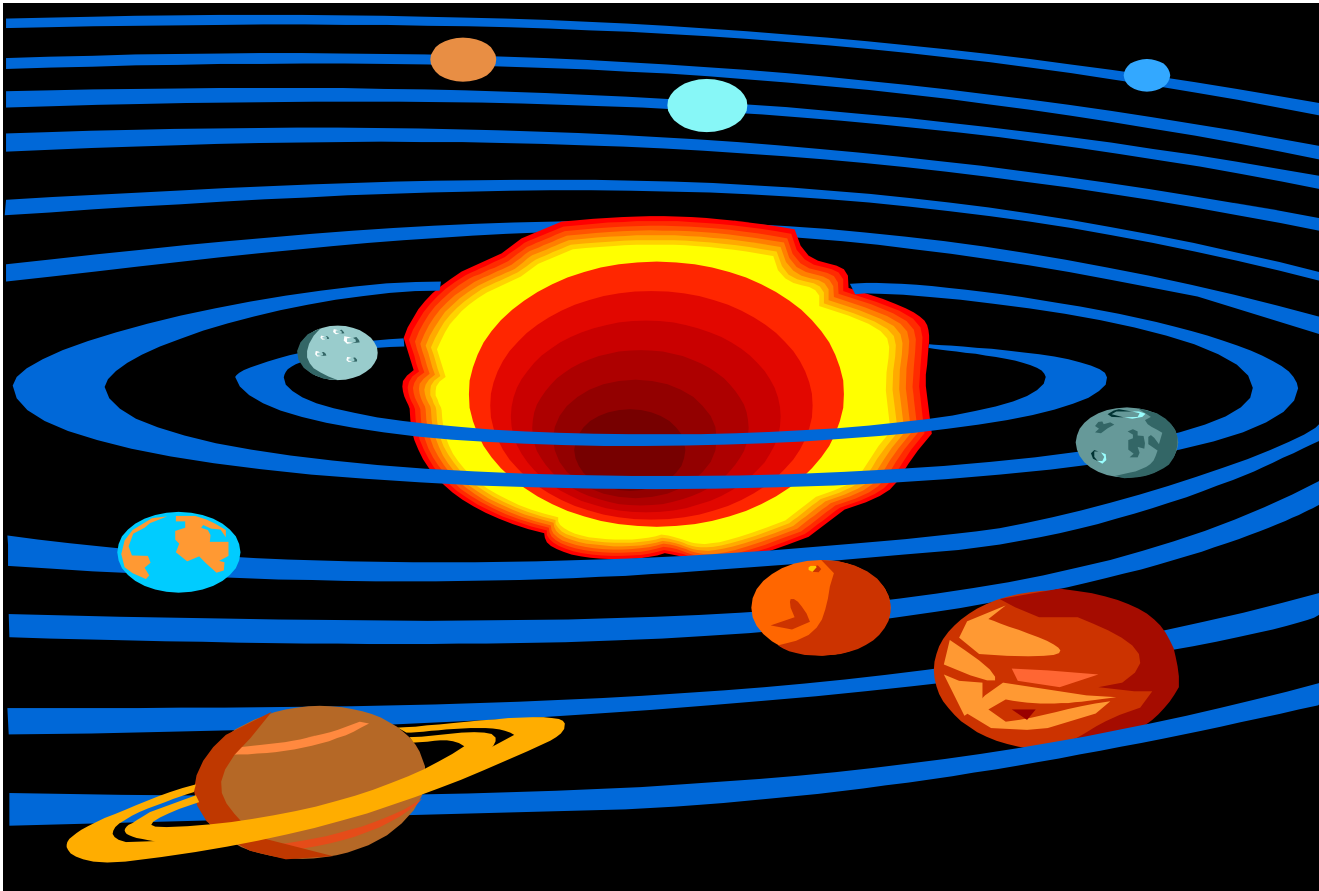
**Planets never line up in a straight line  
like we did!**



**Planets never line up in a straight line  
like we did!**

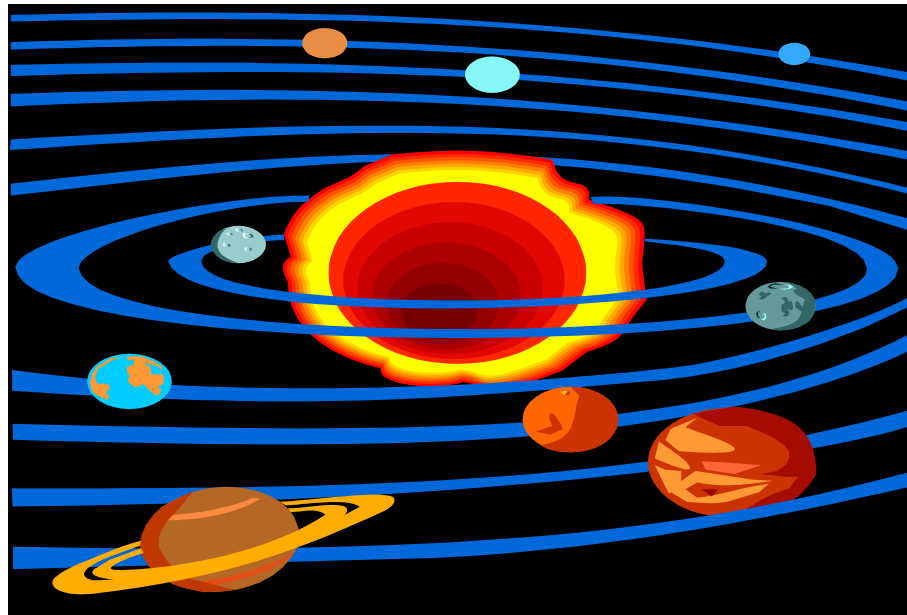


**Some are in the front, some in the back,  
some on the side**

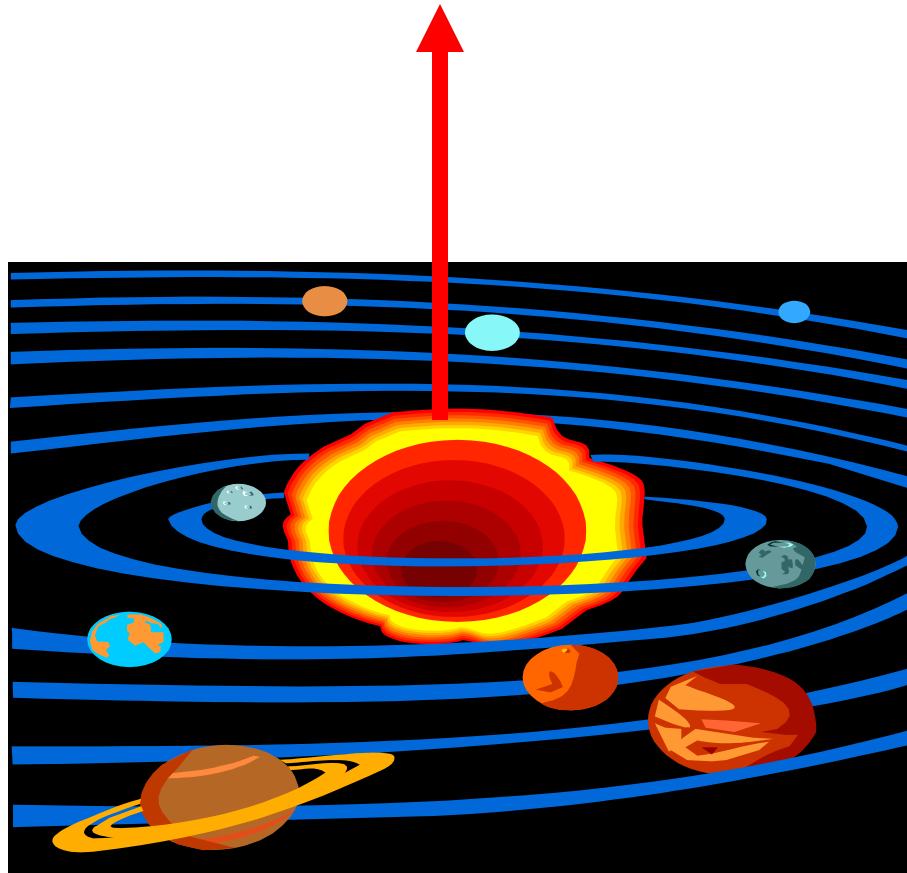


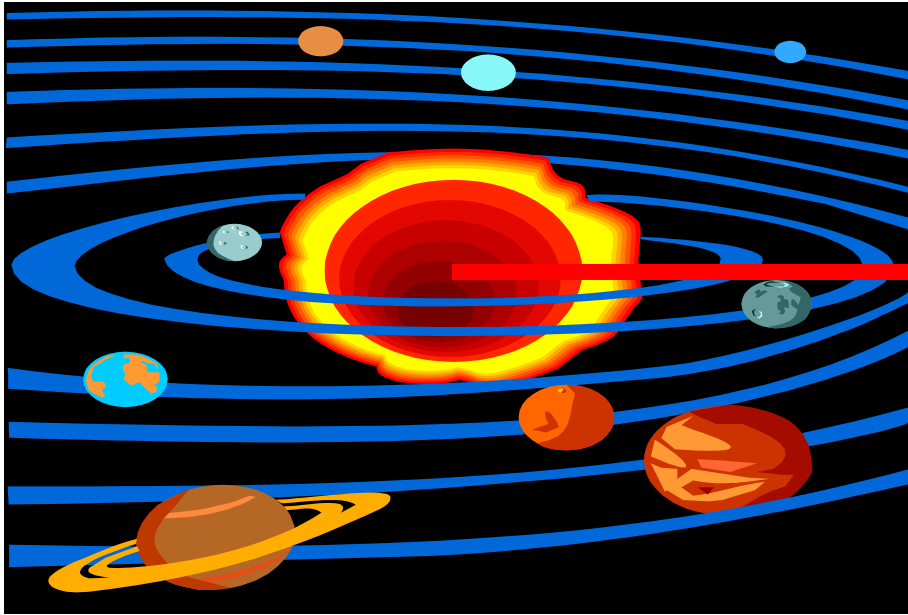


**Our solar system model  
would need go out from the sun**

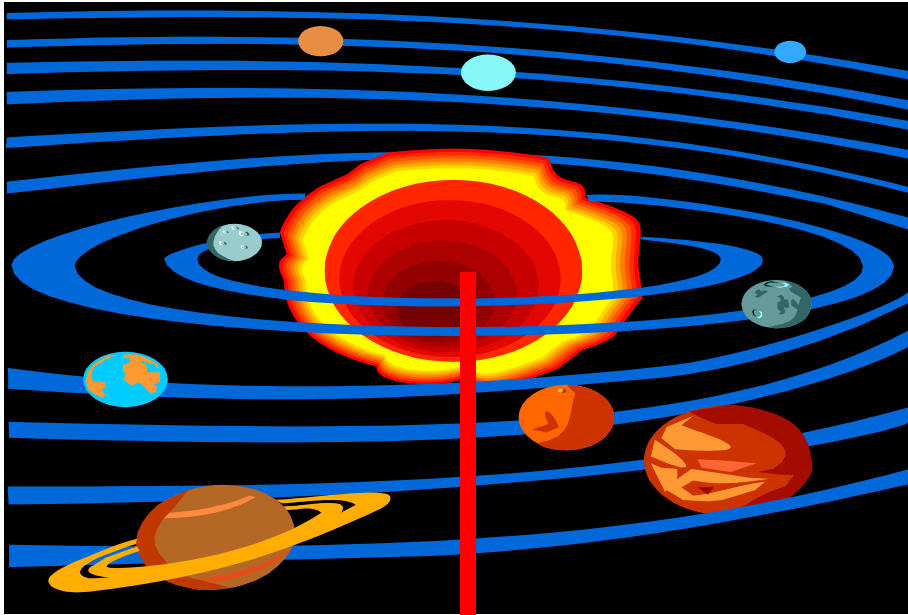


**This way**



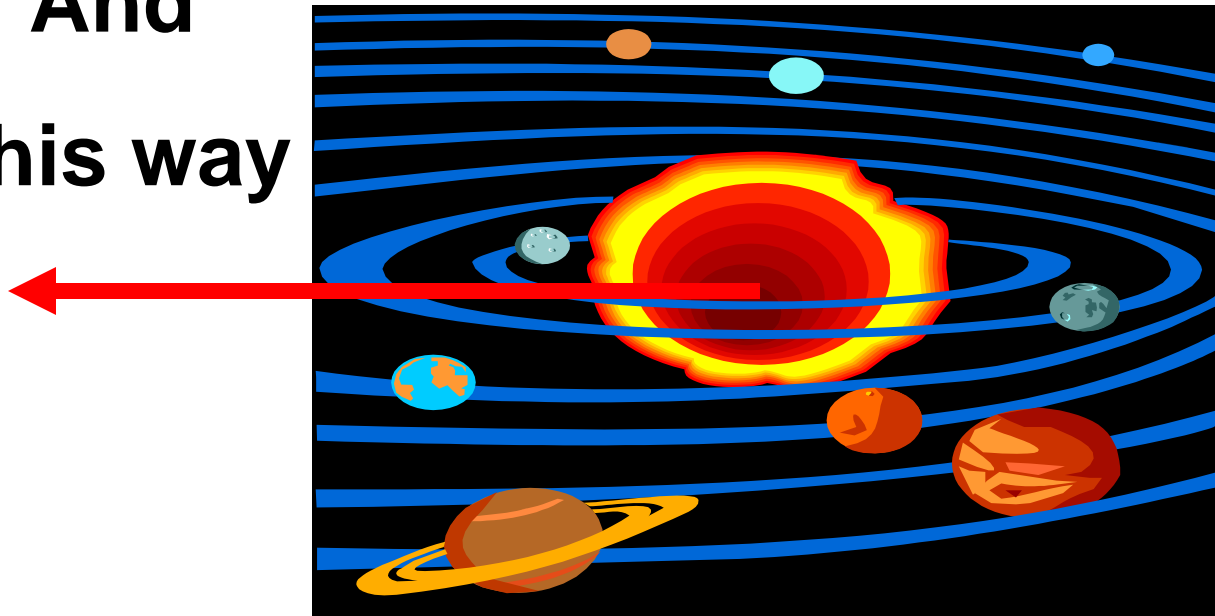


**This way**

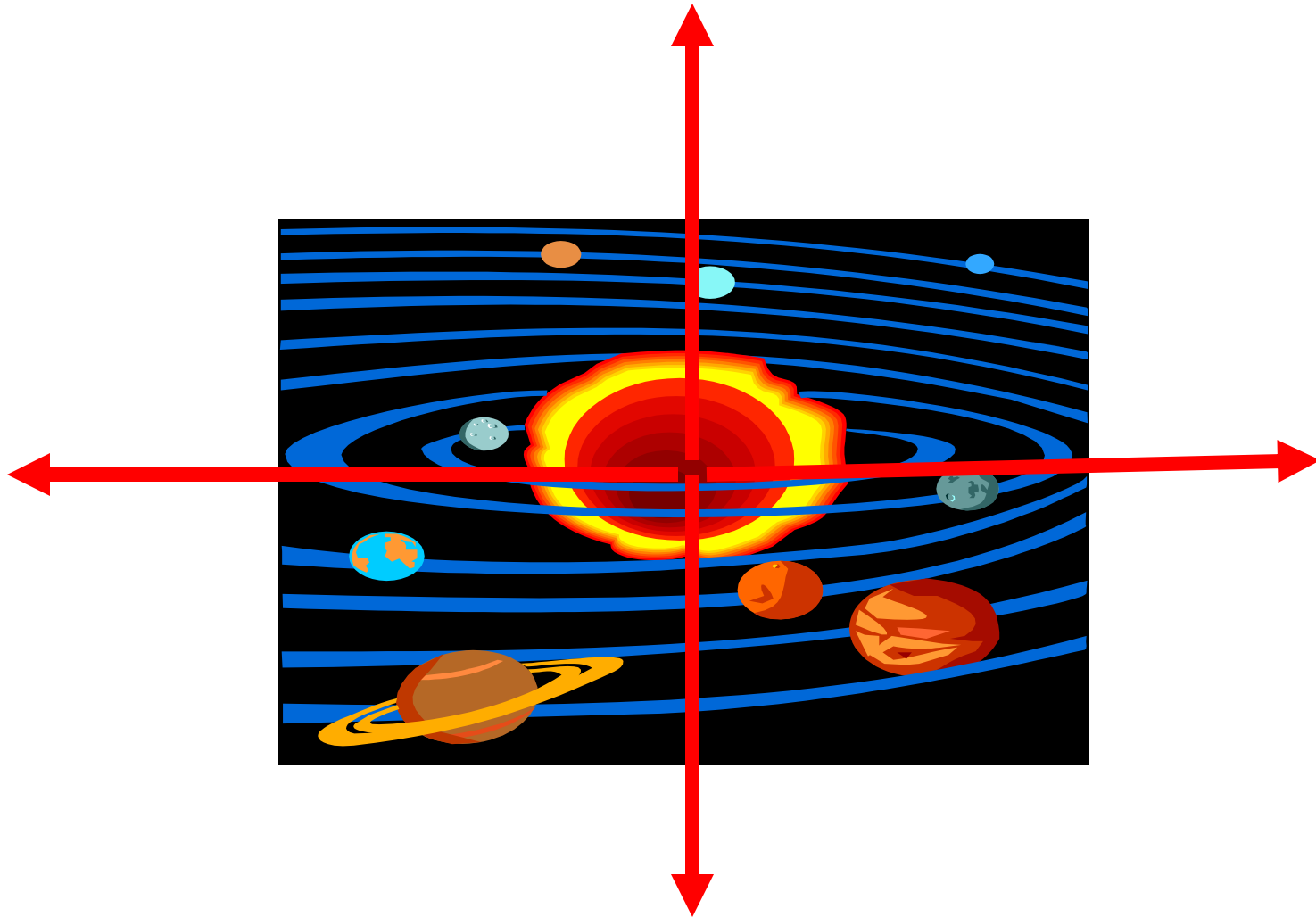


**This way**

**And  
This way**



**All at the same time!**



Can you imagine how big that is?

