

## Re: Does space expand as a sphere?

**Source:** <http://sci.tech-archive.net/Archive/sci.astro.amateur/2004-12/0321.html>

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**Date:** 12/02/04

Date: Thu, 2 Dec 2004 01:51:37 -0500

On 2004-12-01 16:59:16 -0500, [mojo@devilrock.whiteoaks.com](mailto:mojo@devilrock.whiteoaks.com) (Morris Jones) said:

> *BluMax <[alsimcoe@alsimcoe.com](mailto:alsimcoe@alsimcoe.com)> wrote:*

>> *How do you figure that Space is expanding?*

>>

>> *Is their Physics that deals with this?*

>

> *"Space is expanding" is a deduction from this famous observation of*  
> *William Hubble: The spectrum of the light from galaxies is shifted*  
> *lower in frequency, toward red, in an amount inversely proportional*  
> *to their brightness. In other words, the dimmer the galaxy, the more*  
> *red-shifted its spectrum.*

>

> *The only known physical cause for making light waves longer is to have*  
> *the source moving away from you. The greater the red shift, the faster*  
> *the object is moving away. Light is doppler shifted.*

>

> *The reasonable deduction is that space is expanding.*

>

> *Unless a different cause for the cosmological red shift is discovered,*  
> *we're sticking to the hypothesis that "space is expanding."*

>

> *That whole business that "space is expanding" leads to some other*  
> *significant ideas. If space is expanding, that means that in the past*  
> *it had to be smaller.*

>

> *So when the physicists start rewinding the clock, they eventually get to*  
> *the theory that space at one time occupied a single point. The math*  
> *gets really weird long before that, of course.*

>

> *This is now what cosmologists call the "standard model" -- what Sir Fred*  
> *Hoyle derisively called the "big bang."*

>

> *There have been other observations that seem to confirm this hypothesis*  
> *and create others, like the observations of light curves from supernovae*  
> *in extremely distant galaxies. Those observations seem to show that*  
> *the rate of expansion is accelerating -- exactly the opposite of what*  
> *was expected. (It's as if you tossed an apple upward and had it shoot*

sci.astro.amateur: Re: Does space expand as a sphere?

> *away from you instead of slowing and falling back toward your hand.*)

I am still wondering if the space that the objects in the universe are moving into is infinite. I mean, why not?