

## Sermon- The Glory of God in Curved SpaceTime

Scripture: Gen 1:1, Ps 90:1-6

Last Sunday we started exploring what it means to glorify God. We looked at how Jesus Christ raised a young man from the dead to open people's eyes to the power and majesty of God. We also looked at how biologists in discovering complex animal behaviors are really helping us to see and declare the glory of God in a different way. As I was preparing for this Sunday, I was really drawn to another aspect of creation. The incredible container for life that God has made, our physical world. And over the last century physicists have discovered that even our physical world is fascinating beyond imagination, but as we engage and appreciate what scientists have learned about our physical world it should give us new ways to declare the Glory of God. So where then should we begin?

Well, I believe we should begin at the beginning. In the beginning God says, he created the heavens and the earth. Gen 1:1. Now the question is, do we even understand what this means. What does it mean that in the beginning God created the heavens and the earth? Actually if you think about it carefully enough Gen 1:1 raises two boundary problems. A physical boundary problem and a time boundary problem. Let me tackle each of these one at a time. The first is the physical boundary problem. And the problem

is this. When Gen 1:1 says God created the heavens and the earth, our the universe as we know it, we know what the universe looks like from the inside. But does the universe have an edge? What happens if you go to this edge and stick your hand through this edge? Will your hand then be outside of creation itself? You see anything that is created, has a form and a boundary. Even a gas cloud has a shape even if it is a changing one. That is what makes a physical object an object. Right? So when you think about the whole of creation too the question is what is the boundary and shape of creation as a whole? People have been wondering about these questions of millennia but it was only in the 20<sup>th</sup> century that physicists have been able to answer these questions. Before we figure out the shape of the whole universe we need to shrink our thinking and come back to planet earth for some time. Now many years ago, people thought that our earth was flat because when you walk around that is what you see right? People actually thought that there was an edge to the earth and if you reached the edge you could actually fall off. They also thought that there were giant turtles that actually held the earth on its back. But as people began thinking about earth they started making all kinds of observations and slowly began to realize that in reality this world that we live on is actually a sphere and there are people living all over the surface of this sphere. And if you were to travel long enough in any direction you would not fall of the edge but in fact come right back to the place where you started! And wonder of wonders, people don't actually fall off even when they are living on the bottom of this sphere. In fact,

they don't even notice that they are actually walking upside down because for them up and down mean something quite opposite to what it means for people living on the northern hemisphere. If you lived a long time ago when people believed the world was flat and then you were told all these things about the Earth you would hardly believe it, right? But it is as true and real as the sunrise. But it takes Einstein to figure out that just as on our planet has no edge that you can fall off, our whole universe is intrinsically like that. Physical space itself does not have an edge, is actually curved on itself. It is difficult to imagine because space is 3 dimensional. and if you had a rocket with enough fuel and speed, you could take off in one direction and circle all the way around the universe and come back to the starting point. So the universe has no edge or boundary. There is no outside. There is only an inside. In the beginning God created the heavens and the earth. It was also discovered that this universe is expanding which means that the distance between the stars and galaxies are expanding even though there is no outside to this universe. And that a long time ago this whole universe, the distance between all the objects inside it was very close, in fact it was all compressed into one tiny dot that was extremely hot. That dot explodes, and as it explodes the gases cool and form the stars and the planets. But that also means you can calculate backwards to realize that all of the matter in the universe started out from a single point. In the beginning God created the heavens and the earth.

Now when you talk about beginnings you are talking about time and that brings us to the second boundary problem that philosophers have been struggling with for centuries. If there was a point at which God created the world, what was going on before that point in time. And how long was the duration before creation? This is a much more difficult problem to solve than even the space boundary problem. Now I must warn you that it takes the extraordinary imagination of Einstein to solve this problem, but Einstein discovers that time itself is part of the fabric of the universe. The universe that we live in and experience and pass our life in is not just a three dimensional world in which things are happening as time passes. No. What Einstein discovers is that time and space are linked in a very intrinsic way so that there is no time without space and there is no space without time. We live my friends in something called space-time. So when Gen 1:1 declares that in the beginning God created the heavens and the earth what we missed for centuries is that God not only created the heavens and the earth but the beginning as well. Time is very much part of the creation. In fact the reason God lays out the steps of creation in terms of day 1 and day 2 and day 3 and so on is to communicate to us the time was very much part of his creation. Heaven and earth and time were all created together. And because this is the case physicists use the term space time as one word. And this is not simply juggling around words, there are very detailed equations that describe all this and there are very specific predictions that can be made and experiments devised to find out if what these theories

predict is true. Now this can get complicated really quickly but I want to focus on one aspect of space time that has a direct impact on our understanding of Psalm 90. So just bear with me. The concept I want to introduce you to is the spacetime concept of the extended now. What is the extended now? Well, when we think of time we think of past, present and future. Right? We understand what past means, something that has happened as is already done. We understand what future means, something that has not yet happened. Those are simple. But when it comes to the present things are not so simple in spacetime. Because the “present” means the collection of events that are currently in occurrence, it is neither in the past or the future. The “now” moment or what is simultaneous to us. Now the interesting thing about the now moment is that because time and space are so tightly woven into each other the definition of what constitutes the present or the now depends on space as well. Let me explain. So when you look at a short distance, you are seeing a very small section of the physical space in front of you, right? If I were to go up to the silo and look out I would see the metropolitan avenue, New Stanley and not much else. But if I were to go to the World War 1 memorial in downtown, and take the elevator up the tower, I would be able to see the whole of downtown. Why because from the silo, I am able to see about 20 or 30 feet ahead. From the top of the world war 1 Memorial tower I can see almost 50 times further and so I can see a much larger portion of the city. But we all know that even as you are seeing more of the city, all the objects you are seeing look much smaller as well.

That is part of our common experience. But because we are looking now not just at space but space time, what we don't realize is that a similar perspective is happening on the time scale as well. And what it does for time is that, the farther the distance you travel, the slower time goes. To give you a simple illustration of this, have see ever looked up to the sky and seen planes fly. Now it looks like they are really creeping across the sky. Have you ever wondered why? It is because the further the distance you are looking at, a bigger chunk of time. So in that larger span of time, it look like the plane is very slow. Now I have to admit that this example is a bit of an over simplification but it is very helpful because it is part of our common experience even though we may never have given it much thought. So here is the deal. This slowing down of time is related to distance. So the further you travel, the more time slows down. Which means that, if you can powerful enough telescopes and you were looking at a distance deep into space of a distance of a 1000 lightyears, you are not just looking at the events of one photographic moment of a 1000 lightyears away, you are looking at a duration of a 1000 years. So if we decide that our now is one day and we spend one day looking through this telescope of the part of space that is 1000 lightyears away, the now for that part of space is 1000 years. In otherwords we would be looking at one thousand years of history all at once of this place 1000 light years away. Now because we are limited and because there are other laws in place that I can't get into we loose a lot of details of this 1000 years time lapse movie. But here is the amazing this. Because God is omnipresent, God is here and

there at the same time, therefore for God, one day is like a thousand years and a thousand years is like one day. So think about this, all God has to do is look at the earth from the appropriate distance and he can see any section or duration of history in one go. So when the Psalmist declares that for God one day is like a thousand years, and a thousand years is like one day, he is not just using poetic imagination, he is describing something real. That is why when Apostle Peter quotes Psalm 90 in 2 Peter 3;8 he is not quoting it in a poetic sense, he is quoting it in a literal. God can literally say a day is like a thousand years and a thousand years like a day because he is omnipresent in spacetime. Now can you appreciate a little more the splendor of God. In the beginning God created this boundary-less universe of spacetime and it is full of his glory.

This understanding of space time actually helps us understand somethings about Jesus Christ that we could never have understood otherwise. Starting with the name of God. Well, what does it mean that God's name is I Am. When you understand the concept of the extended now or the extended present, and when you imagine the omnipresence of God you begin to understand that when God declares himself to be the I Am, what he is saying is that he is across spacetime, the extended now or the eternal present. This also helps us understand certain time references that Christ makes. When he tells the thief on the cross, today you will be with me in paradise, he was expressing the today of this extended present. When he dies for the sins of the whole world, past, present and future, he is doing it with full awareness of the sins we commit today. He was not dying

on the cross without the awareness of future sins. He was dying on the cross with full awareness of all past and future sins because for He is the I Am, the one for whom all eternity is an extended present.

What does all this mean for you and me. Well, Phil 4:8 tells us **“whatever is true, whatever is noble, whatever is right, whatever is pure, whatever is lovely, whatever is admirable—if anything is excellent or praiseworthy—think about such things.”** As we contemplate the incredible complexity and beauty of God’s creation, we can appreciate so much more the glory of our creator and savior. And as we fill our minds with visions of the glory of God, we will find as Paul observed, that the things of earth will grow strangely dim. And if God who can create this entire universe and be so present in it, then you can be sure that whatever you are going through, he knows how to take care of it. It is just a very tiny blimp in His eternal present. And that should fill us with eternal peace. Let us pray.