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Season of Creation 1B
Peace Lutheran, Seattle
September 16, 2012

# A Celebration of the Cosmic Story[1]

Erik — Please be seated as we join in singing verse one of our Hymn of the Day, Creating God Your Fingers Trace, #684 in the RED HYMNAL.[2] (Full verse intro, then verse 1)

Marcia — Today we invite you on a journey to the beginning of time, when God's fingers began to trace "the bold designs of farthest space." Get comfortable! Close your eyes if you wish, and turn on your inner telescope! But keep your finger in the hymnal, as we'll return to the other verses of this hymn as we go along.

Erik — Got your telescope turned on? OK, travel back with us now on an incredibly long journey to the origin of it all, nearly 14 billion years ago—deeper in time than our minds can grasp—to the COSMIC MOMENT when, with a flash of energy known as the BIG BANG, the universe as we know it was born.

Marcia — The book of Genesis recalls it as the moment that the Creator said, LET THERE BE LIGHT! And from that moment onward the mystery of the universe has been expressed as a progressive unfolding toward complexity and life, God's grand design.

Erik — Everything that now exists was there at that moment. Those first fractions of a fraction of a second determined much of what the universe would eventually become, and whether that universe would support life or be hostile to it.

Marcia — Fast forward millions of years now, as the intense heat unleashed in the BIG BANG begins to cool, tiny particles of matter unite and form atoms, the building blocks of life. Elements begin to emerge. First hydrogen, then helium.

Erik — After 400 million years hydrogen atoms begin to fuse, and the first stars are born. Eventually great clusters of stars called galaxies come into existence. Among these our own galaxy – the Milky Way, home to over two hundred billion stars.

Marcia — The nearest star to our own is *Proxima Centauri*. Light from our Sun must travel for 4 years at a rate of 186,000 miles per second before it reaches that nearest neighbor.[3]

Erik — On the same scale, it takes 26,000 light years for the light of our Sun to reach the central core of the Milky Way. And the nearest spiral galaxy in this far-flung neighborhood, ***Andromeda***, is 2½ million light years away and hosts an estimated 1 trillion – count them—TRILLION STARS.

Marcia — It boggles the imagination to think there are many, many more stars in this grand universe than all the grains of sand on all the seashores of our planet home.[4]

Erik — *"When I behold your heavens, the work of your fingers, the moon and the stars which you set in place—what is humanity that you should be mindful of us?*
*Who are we that you should care for us?"* So asks the Psalmist. (Psalm 8:3-4)

Marcia — **Please join us in singing verse two of our hymn.**

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[1] Excerpted and edited from an adaptation by Anne Rowthorn found in Feast of the Universe, © 2009. Leader Resources, Leeds, MA.
[2] Text: Jeffery Rowthorn, Tune: Prospect
[3] 4.2 years x 186,282 mps.
[4] Source is *Astrobiology Magazine*. In 2003 a group of Anglo-Australian astronomers put forward a new calculation for the number of stars in the visible universe. There answer: 70 sextillion [seven followed by twenty-two zeros]. Read the article here: http://www.astrobio.net/exclusive/534/inevitability-beyond-billions

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Erik OK put on your inner Hubble again and picture this: some five billion years ago a supernova in our part of the galaxy exploded, pushing its heavy-element wreckage into a cloud of hydrogen gas and interstellar dust. The mixture grew hot and compressed under its own gravity, and at its center a new star began to form.

Marcia That new star became our Sun, a huge fireball of hydrogen and helium burning fuel at the rate of 600 million tons per second. Over vast eons, bits of matter combined within the Sun's orbit, clumping together to form larger and larger bodies until eventually the planets of our solar system came into being.

Erik Located in the center of the "habitable zone," the 3rd rock from the Sun, is EARTH—our planet home. At first the Earth was a molten mass much too hot to support life or even the early conditions of life. But God's creative energy was setting the stage for a new and glorious moment when life would emerge.

Marcia This small planet, 93 million miles from the Sun, evolved and cooled and all the elements eventually needed for life emerged. The great mass of the Sun held Earth, Moon, and planets in their orbits, in a great dance of attraction and love.

Erik Over the course of 4½ billion years, by virtue of its location within the galaxy and its perfect orbiting proximity to the Sun, through the acquisition of its atmosphere and its oceans, its ever present volcanic activity, and other occurrences too numerous to mention, the Earth—our Earth—became a hospitable place for first simple, and then more complex life to emerge.

Marcia **Please join in singing verse three of our hymn.**

Erik Twenty two years ago, while on its epic voyage to the outer reaches of the solar system, the Voyager 1 spacecraft turned its camera toward Earth for one final look. **At first, the photograph it took seemed to show nothing at all.** But when you look closely at the dark canvass, you can just make out a tiny speck of light.[5]

Marcia That pale, blue speck is Earth, as seen from nearly 4 billion miles away—a view of our planet home as no human eye had ever seen it before. The reflection off the Voyager 1 as it took the photo makes it look as though the pale blue dot is suspended in a beam of light.

Erik The Apollo astronauts had taken photos that showed the Earth as a big blue marble, swirling with clouds and continents, like the globe before us today.[6] But this picture from Voyager 1 showed the smallness of Earth in the vastness of space.

Marcia Astronomer Carl Sagan tried to express how he felt about this photo in his book *Pale Blue Dot:*[7]

"Look again at that dot," he writes. "That's here. That's home. On it everyone you love, everyone you know, everyone you ever heard of, every human being who ever was, lived out their lives…every king and peasant, every young couple in love, every mother and father, every hopeful child…every saint and sinner in the history of our species lived there — on a mote of dust suspended in a sunbeam."

Erik When measured against the deep time of a 13.7 billion year old universe, the human story on this planet we call home is very late to the stage. We are, like that PALE BLUE DOT, a tiny speck in time. Yet, our faith in the God who "created all that exists" affirms that within this vast cosmos, and within the human story of countless generations, at a particular moment in time, the God who said: LET THERE BE LIGHT! entered this unfolding drama in a new way in Jesus.

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[5] The story of the "Pale Blue Dot" photo taken by the Voyager spacecraft is taken from an NPR story by Nell Greenfieldboyce entitled *An Alien View Of Earth.* Go to: http://www.npr.org/templates/story/story.php?storyId=123614938&ps=cprs

[6] Check out some of the Apollo photos, along with outers, at: http://www.spaceimages.com/earth.html

[7] *Pale Blue Dot.* Random House: New York, © 1994 Carl Sagan.

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Marcia From the moment when our human ancestors first began to inhabit the grassy savannah of southern Africa, we have sought to find our place and our purpose within this great circle of life. The Word who "became flesh and lived among us" has shown us a beautiful way, a redemptive way, to live in the world.

Erik His incarnation affirms the sacredness of all the Earth, and beckons us to discover once more the vocation which has been God's gift and calling to us from the beginning: to tend and keep the Earth as our home, and to care for and companion one another along the way.

Marcia Please rise as we join in singing the final verse of our hymn.