

## The Universe Cantos

*The extraordinary vastness of our imagination is matched by the infinite vistas of the universe.  
The Universe Cantos are the epic poetic voices that call to us:  
come and seek, come and find, discover and explore, we are waiting...*

LSO Music Director David Cho and President & CEO Galen Wixson commissioned a new work for orchestra that would utilize the large orchestra for *The Planets* and mirror the themes explored a hundred years prior in Holst's essential work. The work, titled *The Universe Cantos*, would take the musical imagination beyond the solar system to the images of the Hubble Telescope and the imaginations of writers and film makers. I also began exploring titles and narratives from some of the literature that might lend themselves to this musical imagery. Several alternative universes came quickly to mind—the Dune universe of Frank Herbert and the Hyperion universe of Dan Simmons were the influential novels. I began rereading parts of these series to get a sense of putting descriptions of the imagery into music. Our film literature was also highly influential with many of the acclaimed sci-fi series from which to draw imagination. I hope I can fill the audience with wonder as I take them on a musical journey through the imaginings of majesty, beauty, violence, and wonder.

The work is a series of five cantos, meaning “song” or “to sing,” these are literally songs of the universe. They are made up of interwoven motivic fragments, themes, a unique harmonic language, lyric melodies, and angular disjointed melodies—all imbued with rhythmic drive and energy—a tapestry of the traditional and the modern. The section titles, each with its own unique theme, energy, and texture are designed to reflect a different aspect of the universe.

Canto I, *Coriolis Storm of Stars*, takes its title from the Dune desert planet of Frank Herbert where a Coriolis Storm is described as “any major sandstorm on Arrakis where winds across the open flatlands are amplified by the planet’s own revolutionary motion to reach speeds of 700 kilometers per hour.” This image is extrapolated into the storms of star creation at the center of galaxies, often revolving around the violence of a black hole. The image is specifically one of a spiral galaxy that has rotation like the largest of storms on Earth (satellite pictures of hurricanes and typhoons).

Canto II, *A Rose of Galaxies*, is based on the same titled image from Hubble of two galaxies that have interacted and the smaller one’s gravitational tidal pull has distorted the larger spiral galaxy into the outlines of a rose. The movement is in a basic three-part form. The outer parts are slow and melodic, representing the true universal beauty of the rose, while the middle section—a rhythmic, energetic, even violent orchestral foray—is likened to vast forces arrayed in battles of light. The idea is that the beauty observed now is the direct result of violent gravitational forces interacting over vast timeframes in history.

Canto III, *The Three Pillars of Creation*, is a rondo form with the repeated refrain A sections, “...the Birthing of Stars...” presented three times. The title is from the Hubble image of three giant pillars of star-forming clouds within the Eagle nebula. The pillars are fantastically large with the pillar on the left being a little over four light-years long, or almost 25 trillion miles. The basic melodic material of the A sections becomes slow background accompaniment featuring solos from the principal strings and bassoon.

Canto IV, *Star-rise on the Galactic Cathedral*, is formally the most complex. The idea for this movement comes from one of the first images that first drew my attention and imagination. A tiny speck of the night sky, the small pinhole of a window that Hubble opens to reveal 10,000 galaxies, some as far away as 10 billion light years. Conservative estimates are that there may be 100 billion stars in each average galaxy. This is what I imagine we see from the galactic cathedral—a closeness to this incomprehensible image that is both beautiful and frightening, and yet always spiritual.

Canto V, *Coriolis Storms Reawaken*, concludes the work. Beginning with an introduction—a melody repeated three times with variations with woodwinds in strange harmonies handing off to strings, orchestrally colored with harps, vibraphone, and hints of brass, the music moves into a reprise of the opening Coriolis material and an

energetic tutti conclusion that wraps up so many imaginings of how we see ourselves in the universe—the composer's own imagining of setting our cosmic sails in exploration to glimpse the soul of God.