

# Light and geometry in the starry sky of L. E. Boullée's Cenotaph

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**Abstract** First in the history of planetary science, Boullée's Cenotaph (1784) in honor of Isaac Newton, intends to celebrate the greatness of the scientist, subtracting his burial from the darkness, by placing it in the largest ever built sky, a majestic stone dome, which reverses the natural order of day and night by creating with daylight, in the interior space, the image of the constellations seen in the starry skies. This huge stone architecture was drilled, along the outer surface, to let the sunlight in, directly piercing the darkness inside and simulating in the interior space the intense stellar glow. The geometric study conducted on these holes, made along the stone surface of the sphere, reveals a perfect convergence of solar rays towards the eye of the privileged observer, the only one able to stand on the slender platform above Newton's tomb, thereby creating the sensation of a ganzfeld, which sets Newton's Cenotaph in the field of art installations rather than scientific ones.

**Keywords** planetarium, constellations, light, geometry, starry night, ganzfeld,