

New RAS 200 show is all-round impressive



Stephen Serjeant

applauds the creativity on show at the premiere of *The Planets 360*, one of the RAS 200 anniversary outreach projects.

Have you been to a planetarium in the last 10 years? If not, then stop reading, put down *A&G* and arrange a trip. Trust me. Do it now. It is glorious. At the planetarium at the National Space Centre in Leicester you feel genuinely immersed in the action – and it beats any cinema hands down.

I was delighted to be invited to the National Space Centre to the premiere of *The Planets 360*, a new planetarium show made by NSC Creative and funded by the RAS200 Sky & Earth anniversary project. The production team has avoided the well-trodden route of making a didactic educational experience, instead concentrating on triggering emotional reactions with engaging visuals. The first half uses captivating and intriguing recent planetary images accompanied by Holst's *The Planets* orchestral suite. The second is a radical – possibly controversial – reimagining of a planetarium show with modern electronic music and more impressionistic visuals. This is genuinely different, and I hope it finds new audiences.

The classical section, performed by the Philharmonic Orchestra, opens with *Mars* with its dramatic 5/4 time signature. The topography of the Red Planet is beautifully rendered and there is a lovely engineering layout of a Mars mission and its launch. The rocket does not launch in the serene, slow-motion way shown in movies, but more like a missile – and the link with warfare is no accident. In science we try to do great things for human understanding, but the wider activity that makes it possible can be part of darker human motivations.

The sections on Venus and Mercury showcase geological mapping of their surfaces, but my favourites were the gas and ice giants. There's a certain incongruity between Holst's rendering of these planets and the mysteries we are uncovering about their clouds and poles, as well as the diversity of their moons. Holst might have written differently if he had seen Jupiter's filigree detail. The rendering of Saturn is particularly impressive, with the rings passing overhead and Saturn looming closer directly behind you, as you fall backwards into the planet.

Creative freedom

In the second half of the show, the production team allowed themselves much more creative freedom and the result is very different. The music is "ambient trance" and, as a classical musician remarked to me afterwards, the show would work well in a dome at Glastonbury Festival. Again, it opens dramatically with *Mars*, this time with an explicit theme of war. Images of spacesuits are interspersed with skulls and crumbling bodies, using bright lights against the



1 An astronaut spirals into Jupiter's Red Spot. (NSC Creative)

devastation of the barren martian desert. These dark human instincts find some antidote in Jupiter, in which a person in a spacesuit falls into the Red Spot, through fluid dynamical swirls and ultimately, 2001-style, into a hidden civilization, reminding us that humans are capable of greater things than war. If you care about the physics of whether this is possible, you are right, but you're also missing the point.

Venus had the most positive reactions from astronomers afterwards. Geometric tessellations are everywhere, partly surrounding Venus (a nod to its powerful greenhouse atmosphere?) and in small clumps emitted from the surface, reminding me of how I imagine small, volatile molecules. The landscape rendering is

simplified, using geometric blocks like an old video game, reminding me of how physicists make mental approximations. The production team also had an imaginative take on Mercury, portraying its eventual destruction by the Sun.

The ice giants are impressionistic. Uranus, Holst's "magician", with its mysterious banded cloud structure, is articulated as mysterious poised human characters made with horizontal striations. Neptune "the mystic" is quite cryptic, with a trio of swimming machines or creatures. The piece ends emotively with Saturn, "bringer of old age", which imagines life on one of the moons. Old life sends out spores to create the new, and the circular imagery reminds me of both Saturn's rings and of the circle of life.

The electronica section is bound to be controversial among academics, but all creative fields need to take risks, and I maintain that these are risks worth taking and that these pieces succeed. We humans are not simply rational beings, and science needs to engage on more than just an intellectual level. ●

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