Gravity – film review

Lost in space? TIM ROBINSON reviews the new visually stunning science fiction film centred on astronauts adrift in orbit that raises the growing menace of space debris.

Gravity puts you into a spacewalker’s worst nightmare – completely adrift in orbit (Warner Bros).

From director Alfonso Cuarón (‘Children of Men’) Warner Bros ‘Gravity’ is a two-handed science fiction film centred around two astronauts, laid back veteran George Clooney and Sandra Bullock on her first mission to space and wrestling with her personal demons.

Working in low-Earth orbit repairing the Hubble Space Telescope, It is no big spoiler to say that their spacecraft (a still-in service Space Shuttle) is destroyed early on in the film, leaving Clooney and Bullock lost in space and fighting for survival.

‘Gravity’ opened this years’ Venice Film Festival and scooped its Future Film Festival Digital Award.

Visual effects
Despite the unrelenting peril, space has never looked so beautiful on screen. (Warner Bros)

With external shots filmed using CGI the movie makes space look simultaneously majestic and terrifying – evoking the best awe-inspiring space scenes since perhaps ‘2001 – A Space Odyssey’. The introduction, with a close-up of the Earth in LEO is particularly breathtaking in 3D – especially with the subtle depth perception of the clouds scudding below. Meanwhile a shot of Sandra Bullock’s character as a tiny figure tumbling further into the void as she loses contact with George Clooney’s character emphasises the vast loneliness of space, while a later view gives us the green curtain of Aurora Borealis poking out of Earth’s thin atmosphere. The 3D in ‘Gravity’ is used to good effect throughout the film and the rotating, spinning camera puts the audience in orbit. It’s a truly immersive experience – those who get airsick or seasick easily may want to skip a meal beforehand.

**The plot**

Storywise this is fairly basic set-up – being entirely set in orbit with no flashbacks or cutaways to mission control or family on the Earth. However as noted before, Sandra Bullock’s character in particular, is nursing a personal tragedy. ‘Gravity’ in her sense is not just letting go of the Earth, but her emotional baggage too. She gives a great performance as does, of course, Clooney, who provides a fantastic contrast as the veteran astronaut, cool and unruffled in a seemingly impossible situation.

Secondly, for this reviewer, ‘Gravity’ also reminds one of classic ‘50s short story scifi – the precarious situation, hopelessness, the rapidly dwindling oxygen supply is a throwback to the great written science fiction of yesterday – and will have you sweating in your cinema seat.

**How realistic is it?**

The film bears the hallmarks of extensive research and attention to detail – in portraying accurate and realistic orbital mechanics and operations. The initial plot (and danger) for example is set running by a Russian satellite being destroyed in orbit (similar to China’s 2007 anti-satellite test) – which causes a cascading ‘Kessler Syndrome’ chain reaction in orbit. Much attention too has been given to the physics of how bodies move in space, giving a realistic sense of being in orbit yourself. Sir Isaac Newton would approve. Even detail and
minutiae like a character following checklists or the way a flame burns in zero-G has also been incorporated into the film.

However there are some parts which may make the dedicated space fan raise an eyebrow or two. In this alternate reality, the Space Shuttle for example is still in service, along with the Manned Manoeuvring Unit (MMU) – a critical plot device for this film. The movements of the actors in their space suits (or rather the CGI) also seems far more flexible than the real thing, where the pressurized stiffness means that astronauts can return from orbit having lost fingernails due to stiff gloves.

The Chinese Space Station depicted also seems a bit bigger than the Tiangong currently in orbit. One also might question Sandra Bullock’s choice in spacesuit undergarments, which dispenses with the unsexy normal liquid-cooled longjohns for a skimpy vest and tight shorts. Maybe she was too hot?

**Summary**

_Essentially the divers lost-at-sea ‘Open Water’ flick transposed to LEO, this film is definitely a must watch for both science fiction fans and those interested in real-life space issues. Some liberties are taken, but not that many in crafting an extremely suspenseful movie that will have you on the edge of your ‘Soyuz G- couch’ right until the final reel.

More interestingly, every so often, films introduce to the wider public new villains or hazards that previously might have been the domain of a niche community. ‘Jaws’ for example, made people afraid to go swimming. Meanwhile blockbusters ‘Armageddon’ and ‘Deep Impact’ in the 1990s highlighted the risk from cosmic extinction from rogue asteroids.

In ‘Gravity’, the villain is space debris, circling endlessly to try and pick our heroes off, remorselessly and relentlessly and like Arnie’s Terminator – IT WILL NOT STOP, EVER. ‘Gravity’ then, is definitely not a film for in-flight viewing on your first Virgin Galactic spaceflight._
Raising an important issue

And while you might think that this film might only be of serious interest to actual astronauts and would-be space tourists, this gripping movie does raise important issues and highlights the growing threat of space debris or orbital junk. Space debris can not only knock out satellites and potentially disrupt life on Earth (communications, weather, TV satellites) but also threaten the life of future astronauts, cosmonauts and taikonauts. If space junk is left unchecked, the horrific events of ‘Gravity’ are likely to become science fact, rather than fiction.

Fortunately even before ‘Space Debris – the horror movie’ has come out, scientists engineers and academics have all been attempting to raise the issue, find solutions and give it a higher priority. Long neglected by previous space exploration pioneers, this issue is now being debated at events like the RAeS Space Traffic Control Conference earlier this year, or written about in the RAeS (and other) publications, such as ‘Space debris’ Aerospace International, May 2012. More recently, in June 2013, a technical paper was published in the RAeS Aeronautical Journal on ‘Creating a space debris catalogue for an orbital band with suitable candidates for orbital removal’.

The way forward yet is unclear (should all future satellites be equipped to deorbit safely? can a viable orbital ‘clean-up’ business be a fix), but this scifi film will help give gravitas to a growing threat. Go see it.

- Official website: http://gravitymovie.warnerbros.com/#/home
- In UK cinemas from Friday 8 November 2013.
- In US cinemas from Friday 4 October 2013.