

= Gravity (film) =

Gravity is a 2013 British @-@ American science fiction film co @-@ written , co @-@ edited , produced and directed by Alfonso Cuarón . It stars Sandra Bullock and George Clooney as astronauts who are stranded in space after the mid @-@ orbit destruction of their space shuttle , and their subsequent attempt to return to Earth .

Cuarón wrote the screenplay with his son Jonás and attempted to develop the film at Universal Pictures . The rights were sold to Warner Bros. Pictures , where the project eventually found traction . David Heyman , who previously worked with Cuarón on Harry Potter and the Prisoner of Azkaban (2004) , produced the film with him . Gravity was produced entirely in the United Kingdom , where the British visual effects company Framestore spent more than three years creating most of the film 's visual effects , which make up over 80 of its 91 minutes .

Gravity opened the 70th Venice International Film Festival on August 28 , 2013 and had its North American premiere three days later at the Telluride Film Festival . Upon its release in both the Telluride Film Festival in August , and its October 4 , 2013 release in the United States and Canada , Gravity was met with near @-@ universal critical acclaim , and has been regarded as one of the best films of 2013 . Emmanuel Lubezki 's cinematography , Steven Price 's musical score , Cuarón 's direction , Bullock 's performance , Framestore 's visual effects , and its use of 3D were all particularly praised by numerous critics . The film became the eighth @-@ highest @-@ grossing film of 2013 with a worldwide gross of over US \$ 723 million .

At the 86th Academy Awards , Gravity received a leading ten Academy Award nominations (tied with American Hustle) and won seven (the most for the ceremony) , including the following : Best Director (for Cuarón) , Best Cinematography (for Lubezki) , Best Visual Effects , Best Film Editing , Best Sound Mixing , Best Sound Editing , and Best Original Score (for Price) . The film was also awarded six BAFTA Awards , including Outstanding British Film and Best Director , the Golden Globe Award for Best Director , seven Critics ' Choice Movie Awards and a Bradbury Award .

= = Plot = =

Dr. Ryan Stone (Sandra Bullock) is a biomedical engineer aboard the NASA space shuttle Explorer for her first space mission , STS @-@ 157 . Veteran astronaut Matt Kowalski (George Clooney) is commanding his final mission . During a spacewalk to service the Hubble Space Telescope , Mission Control in Houston warns the team about a Russian missile strike on a defunct satellite , which has inadvertently caused a chain reaction forming a cloud of debris in space . Mission Control orders that the mission be aborted and the crew begin re @-@ entry immediately because the debris is speeding towards the shuttle . Communication with Mission Control is lost shortly thereafter .

High @-@ speed debris from the Russian satellite strikes the Explorer and Hubble , detaching Stone from the shuttle and leaving her tumbling through space . Kowalski , using a Manned Maneuvering Unit (MMU) , recovers Stone and they return to the Explorer . They discover that it has suffered catastrophic damage and the rest of the crew is dead . They decide to use the MMU to reach the International Space Station (ISS) , which is in orbit about 1 @,@ 450 km (900 mi) away . Kowalski estimates they have 90 minutes before the debris field completes an orbit and threatens them again .

En route to the ISS , the two discuss Stone 's home life and her daughter , who died young in an accident . As they approach the substantially damaged but still operational ISS , they see that its crew has evacuated in one of its two Soyuz modules . The parachute of the remaining Soyuz has deployed , rendering the capsule useless for returning to Earth . Kowalski suggests using it to travel to the nearby Chinese space station Tiangong , 100 km (60 mi) away , in order to board a Chinese module to return safely to Earth . Out of air and maneuvering power , the two try to grab onto the ISS as they fly by . Stone 's leg gets entangled in the Soyuz 's parachute cords and she grabs a strap on Kowalski 's suit , but it soon becomes clear that the cords will not support them both . Despite Stone 's protests , Kowalski detaches himself from the tether to save her from drifting away

with him , and she is pulled back towards the ISS while Kowalski floats away to certain death . He continues to support her until he is out of communications range .

Stone enters the ISS via an airlock . She cannot re @-@ establish communication with Kowalski and concludes that she is the sole survivor . A fire breaks out , forcing her to rush to the Soyuz . As she maneuvers the capsule away from the ISS , the tangled parachute tethers prevent it from separating from the station . She spacewalks to release the cables , succeeding just as the debris field completes its orbit and destroys the station . Stone aligns the Soyuz with Tiangong but discovers that its engine has no fuel .

After a poignant attempt at radio communication with an Eskimo ? Aleut @-@ speaking fisherman on Earth , Stone resigns herself to being stranded and shuts down the cabin 's oxygen supply to commit suicide . As she begins to lose consciousness , Kowalski enters the capsule . Scolding her for giving up , he tells her to rig the Soyuz 's soft landing jets to propel the capsule toward Tiangong . Stone then realizes that Kowalski 's reappearance was not real , but has nonetheless given her the strength of will to continue . She restores the flow of oxygen and uses the landing jets to navigate toward Tiangong on momentum .

Unable to maneuver the Soyuz to dock with the station , Stone ejects herself via explosive decompression and uses a fire extinguisher as a makeshift thruster to travel the final metres to Tiangong , which is rapidly deorbiting . Stone enters the Shenzhou capsule just as Tiangong starts to break up on the upper edge of the atmosphere . Stone radios that she is ready to head back to Earth . After re @-@ entering the atmosphere , Stone hears Mission Control , which is tracking the capsule . But due to a harsh reentry and the premature jettison of the heat shield , a fire is starting inside the capsule .

After speeding through the atmosphere , the capsule lands in a lake , but dense smoke forces Stone to evacuate immediately after splashdown . She opens the capsule hatch , allowing water to enter and sink it , forcing Stone to shed her spacesuit and swim ashore . Ryan then watches the remains of the Tiangong re @-@ enter the atmosphere and takes her first shaky steps on land . Meanwhile , NASA tracks down the crash site of Ryan 's landing capsule , and proceeds to send a rescue team in hopes of finding her .

= = Cast = =

Sandra Bullock as Dr. Ryan Stone , a medical engineer and mission specialist who is on her first space mission .

George Clooney as Lieutenant Matt Kowalski , the commander of the team . Kowalski is a veteran astronaut planning to retire after the Explorer expedition . He enjoys telling stories about himself and joking with his team , and is determined to protect the lives of his fellow astronauts .

Ed Harris (voice) as Mission Control in Houston , Texas .

Orto Ignatiussen (voice) as Aningaaq , a Greenlandic Inuit fisherman who intercepts one of Stone 's transmissions . Aningaaq also appears in a self @-@ titled short , written and directed by Gravity co @-@ writer Jonás Cuarón , which depicts the conversation between him and Stone from his perspective .

Phaldut Sharma (voice) as Shariff Dasari , the flight engineer on board the Explorer .

Amy Warren (voice) as the captain of Explorer .

Basher Savage (voice) as the captain of the International Space Station .

= = Production = =

= = = Development = = =

Alfonso Cuarón wrote the screenplay with his son Jonás . Cuarón told Wired magazine , " I watched the Gregory Peck movie Marooned (1969) over and over as a kid . " That film is about the first crew of an experimental space station returning to Earth in an Apollo capsule that suffers a thruster

malfunction . Cuarón attempted to develop his project at Universal Pictures , where it stayed in development for several years . After the rights to the project were sold , it began development at Warner Bros. In 2010 , Angelina Jolie , who had rejected a sequel to *Wanted* (2008) , was in contact with Warner Bros. to star in the film . Scheduling conflicts involving Jolie 's Bosnian war film *In the Land of Blood and Honey* (2011) and a possible *Salt* (2009) sequel led Jolie to exit her involvement with *Gravity* , leaving Warner Bros. with doubts that the film would get made .

In March , Robert Downey , Jr. entered discussions to be cast in the male lead role . In mid 2010 , Marion Cotillard attended a screen test for the female lead role . By August 2010 , Scarlett Johansson and Blake Lively were potential candidates for the role . In September , Cuarón received approval from Warner Bros. to offer the role without a screen test to Natalie Portman , who was praised for her performance in *Black Swan* (2010) at that time . Portman rejected the project because of scheduling conflicts , and Warner Bros. then approached Sandra Bullock for the role . In November 2010 , Downey left the project to star in *How to Talk to Girls ?* a project in development with Shawn Levy attached to direct . The following December , with Bullock signed for the co -lead role , George Clooney replaced Downey .

Shooting long scenes in a zero g environment was a challenge . Eventually , the team decided to use computer generated imagery for the spacewalk scenes and automotive robots to move Bullock 's character for interior space station scenes . This meant that shots and blocking had to be planned well in advance for the robots to be programmed . It also made the production period much longer than expected . When the script was finalized , Cuarón assumed it would take about a year to complete the film , but it took four and a half years .

== = Filming == =

Made on a production budget of \$ 100 million , *Gravity* was filmed digitally on multiple Arri Alexa cameras . Principal photography began in late May 2011 . CG elements were shot at Pinewood and Shepperton Studios in the United Kingdom . The landing scene was filmed at Lake Powell , Arizona ? where the astronauts ' landing scene in *Planet of the Apes* (1968) was also filmed . Visual effects were supervised by Tim Webber at the London based VFX company Framestore , which was responsible for creating most of the film 's visual effects ? except for 17 shots . Framestore was also heavily involved in the art direction and , along with The Third Floor , the previsualization . Tim Webber stated that 80 percent of the movie consisted of CG ? compared to James Cameron 's *Avatar* (2009) , which was 60 percent CG . To simulate the authenticity and reflection of unfiltered light in space , a manually controlled lighting system consisting of 1 @. 8 million individually controlled LED lights was built . The 3D imagery was designed and supervised by Chris Parks . The majority of the 3D was created by stereo rendering the CG at Framestore . The remaining footage was converted into 3D in post production ? principally at Prime Focus , London , with additional conversion work by Framestore . Prime Focus 's supervisor was Richard Baker .

Filming began in London in May 2011 . The film contains 156 shots with an average length of 45 seconds ? fewer and longer shots than in most films of its length . Although the first trailer had audible explosions and other sounds , these scenes are silent in the finished film . Cuarón said , " They put in explosions [in the trailer] . As we know , there is no sound in space . In the film , we don 't do that . " The soundtrack in the film 's space scenes consists of the musical score and sounds astronauts would hear in their suits or in the space vehicles .

For most of Bullock 's shots , she was placed inside a giant , mechanical rig . Getting into the rig took a significant amount of time , so Bullock chose to stay in it for up to 10 hours a day , communicating with others through a headset . Costume Designer Jany Temime said the spacesuits were fictitious ? " no space suit opens up at the front ? but we had to do that in order for her to get out . So I had to redesign it and readapt all the functions of the suit for front opening . "

Cuarón said his biggest challenge was to make the set feel as inviting and non claustrophobic as possible . The team attempted to do this by having a celebration each day when Bullock arrived . They nicknamed the rig " Sandy 's cage " and gave it a lighted sign . Most of the movie was shot digitally using Arri Alexa Classics cameras equipped with wide Arri Master Prime lenses . The final

scene , which takes place on Earth , was shot on an Arri 765 camera using 65mm film to provide the sequence with a visual contrast to the rest of the film .

= = Themes = =

Although Gravity is often referred to in the media as a science fiction film , Cuarón told BBC that he sees the film rather as " a drama of a woman in space " .

Despite being set in space , the film uses motifs from shipwreck and wilderness survival stories about psychological change and resilience in the aftermath of a catastrophe . Cuarón uses the character , Stone , to illustrate clarity of mind , persistence , training , and improvisation in the face of isolation and the consequences of a relentless Murphy 's law . The film incorporates spiritual or existential themes , in the facts of Stone 's daughter 's accidental and meaningless death , and in the necessity of summoning the will to survive in the face of overwhelming odds , without future certainties , and with the impossibility of rescue from personal dissolution without finding this willpower . Calamities occur but only the surviving astronauts see them .

The impact of scenes is heightened by alternating between objective and subjective perspectives , the warm face of the Earth and the depths of dark space , the chaos and unpredictability of the debris field , and silence in the vacuum of space with the background score giving the desired effect . The film uses very long , uninterrupted shots throughout to draw the audience into the action , but contrasts these with claustrophobic shots within space suits and capsules .

Some commentators have noted religious themes in the film . For instance , Fr . Robert Barron in The Catholic Register summarizes the tension between Gravity 's technology and religious symbolism . He said , " The technology which this film legitimately celebrates ... can 't save us , and it can 't provide the means by which we establish real contact with each other . The Ganges in the sun , the St. Christopher icon , the statue of Budai , and above all , a visit from a denizen of heaven , signal that there is a dimension of reality that lies beyond what technology can master or access ... the reality of God " .

The film also suggests themes of humanity 's ubiquitous strategy of existential resilience ; that , across cultures , individuals must postulate meaning , beyond material existence , wherever none can be perceived . Human evolution and the resilience of life may also be seen as key themes of Gravity . The film opens with the exploration of space ? the climax of human civilization ? and ends with an allegory of the dawn of mankind when Dr. Ryan Stone fights her way out of the water after the crash @-@ landing , passing a frog , grabs the soil , and slowly regains her capacity to stand upright and walk . Director Cuarón said , " She ? s in these murky waters almost like an amniotic fluid or a primordial soup . In which you see amphibians swimming . She crawls out of the water , not unlike early creatures in evolution . And then she goes on all fours . And after going on all fours she ? s a bit curved until she is completely erect . It was the evolution of life in one , quick shot " . Other imagery depicting the formation of life includes a scene in which Stone rests in an embryonic position , surrounded by a rope strongly resembling an umbilical cord . Stone 's return from space , accompanied by meteorite @-@ like debris , may be seen as a hint that elements essential to the development of life on Earth may have come from outer space in the form of meteorites .

= = Music = =

Steven Price composed the incidental music for Gravity . In early September 2013 , a 23 @-@ minute preview of the soundtrack was released online . A soundtrack album was released digitally on September 17 , 2013 , and in physical formats on October 1 , 2013 , by WaterTower Music . Songs featured in the film include :

" Angels Are Hard to Find " by Hank Williams , Jr .

" Mera Joota Hai Japani " by Shailendra and Shankar Jaikishan

" Sinigit Meerannguaq " by Juaaka Lyberth

" Destination Anywhere " by Chris Benstead and Robin Baynton

" Ready " by Charles Scott (featuring Chelsea Williams)

In most of the film 's official trailers , Spiegel im Spiegel , written by Estonian composer Arvo Pärt in 1978 , was used .

= = Release = =

Gravity had its world premiere at the 70th Venice International Film Festival on August 28 , 2013 , and had its North American premiere three days later at the Telluride Film Festival . It was released in the USA in 3D and IMAX 3D on October 4 , 2013 and in the UK on November 8 , 2013 . The film 's United States release coincided with the beginning of World Space Week , which was observed from October 4 to 10 . The film was originally scheduled to be released in the USA on November 21 , 2012 , before being rescheduled for a 2013 release to allow the completion of extensive post @-@ production work .

= = = Box office = = =

Preliminary reports predicted the film would open with takings of over \$ 40 million in North America . The film earned \$ 1 @.@ 4 million from its Thursday night showings , and reached \$ 17 @.@ 5 million on Friday . Gravity topped the box office and broke the record held by Paranormal Activity 3 (2011) as the highest @-@ earning October and autumn openings , grossing \$ 55 @.@ 8 million from 3 @,@ 575 theaters . 80 percent of the film 's opening weekend gross came from its 3D showings , which grossed \$ 44 @.@ 2 million from 3 @,@ 150 theaters . \$ 11 @.@ 2 million ? 20 percent of the receipts ? came from IMAX 3D showings , the highest percentage for a film opening of more than \$ 50 million . The film stayed at number one at the box office during its second and third weekends . IMAX alone generated \$ 34 @.@ 7 million from 323 theaters , a record for IMAX opening in October .

Gravity earned \$ 27 @.@ 4 million in its opening weekend overseas from 27 countries with \$ 2 @.@ 8 million from roughly 4 @,@ 763 screens . Warner Bros. said the 3D showing " exceeded all expectations " and generated 70 % of the opening grosses . In China , its second largest market , the film opened on November 19 , 2013 and faced competition with The Hunger Games : Catching Fire which opened on November 21 , 2013 . At the end of the weekend Gravity emerged victorious , generating \$ 35 @.@ 76 million in six days . It opened at number one in the United Kingdom , taking GB £ 6 @.@ 23 million over the first weekend of release , and remained there for the second week . The film 's high notable openings were in Russia and the CIS (\$ 8 @.@ 1 million) , Germany (\$ 3 @.@ 8 million) , Australia (\$ 3 @.@ 2 million) , Italy (\$ 2 @.@ 6 million) and Spain (\$ 2 @.@ 3 million) . The film 's largest markets outside North America were China (\$ 71 @.@ 2 million) , the United Kingdom (\$ 47 million) and France (\$ 38 @.@ 2 million) . By February 17 , 2014 , the film had grossed \$ 700 million worldwide . Gravity grossed \$ 274 @,@ 092 @,@ 705 in North America and \$ 449 @,@ 100 @,@ 000 in other countries , making a worldwide gross of \$ 723 @,@ 192 @,@ 705 ? making it the eighth @-@ highest grossing film of 2013 . Calculating in all expenses , Deadline.com estimated that the film made a profit of \$ 209 @.@ 2 million .

= = = Critical reception = = =

Gravity received critical acclaim . Critics praised the acting , direction , cinematography , visual effects , and use of 3D . Review aggregator Rotten Tomatoes records 96 % positive reviews based on 306 critics , and an average score of 9 / 10 . The site 's consensus states : " Alfonso Cuarón 's Gravity is an eerie , tense sci @-@ fi thriller that 's masterfully directed and visually stunning . " On Metacritic , which assigns a normalized rating out of 100 based on reviews from critics , the film has a score of 96 based on 49 reviews , indicating " universal acclaim " , making it the second @-@ highest scoring widely released film of its year . In CinemaScore polls conducted during the opening weekend , cinema audiences gave Gravity an average grade of A- on an A + to F scale .

Matt Zoller Seitz , writing on RogerEbert.com , gave the film four out of four stars , calling it " a huge and technically dazzling film and that the film 's panoramas of astronauts tumbling against starfields

and floating through space station interiors are at once informative and lovely " . Justin Chang , writing for Variety , said that the film " restores a sense of wonder , terror and possibility to the big screen that should inspire awe among critics and audiences worldwide " . Richard Corliss of Time praised Cuarón for playing " daringly and dexterously with point @-@ of @-@ view : at one moment you 're inside Ryan 's helmet as she surveys the bleak silence , then in a subtle shift you 're outside to gauge her reaction . The 3 @-@ D effects , added in post @-@ production , provide their own extraterrestrial startle : a hailstorm of debris hurtles at you , as do a space traveler 's thoughts at the realization of being truly alone in the universe . "

Peter Bradshaw of The Guardian gave the film five out of five stars , writing " a brilliant and inspired movie @-@ cyclorama ... a glorious imaginary creation that engulfs you utterly . " Robbie Collin of The Daily Telegraph also awarded the film five out of five stars .

Peter Travers of Rolling Stone gave the film four out of four stars , stating that the film was " more than a movie . It 's some kind of miracle . " A. O. Scott , writing for The New York Times , highlighted the use of 3 @-@ D which he said , " surpasses even what James Cameron accomplished in the flight sequences of Avatar " . Scott also said that the film " in a little more than 90 minutes rewrites the rules of cinema as we have known them " . Quentin Tarantino said it was one of his top ten movies of 2013 . Empire , Time , and Total Film ranked the film as the best of 2013 .

Some critics have compared Gravity with other notable films set in space . Lindsey Weber of Vulture.com said the choice of Ed Harris for the voice of Mission Control is a reference to Apollo 13 . Todd McCarthy of The Hollywood Reporter suggests the way " a weightless Stone goes floating about in nothing but her underwear " references Alien (1979) . Other critics made connections with 2001 : A Space Odyssey (1968) . James Cameron praised the film and stated , " I think it 's the best space photography ever done , I think it 's the best space film ever done , and it 's the movie I 've been hungry to see for an awful long time " . Empire Online , Ask Men and The Huffington Post also considered Gravity to be one of the best space films ever made , though The Huffington Post later included Gravity on their list of " 8 Movies From The Last 15 Years That Are Super Overrated " .

Gravity was ranked second on Metacritic 's Film Critic Top Ten List scorecard for 2013 .

== = File sharing == =

According to the tracking site Excipto , Gravity was one of the most @-@ infringed films of 2014 with over 29 @.@ 3 million illegal downloads via torrent sites .

== = Accolades == =

Gravity received ten nominations at the 86th Academy Awards ; together with American Hustle it received the greatest number of nominations for the 2014 ceremony , including Best Picture , Best Actress for Bullock , and Best Production Design . The film won the most of the night with seven Academy Awards : for Best Director , Best Cinematography , Best Visual Effects , Best Film Editing , Best Original Score , Best Sound Editing , and Best Sound Mixing . The film is second only to Cabaret (1972) to receive the most Academy Awards in its year without achieving the award for Best Picture .

Alfonso Cuarón won the Golden Globe Award for Best Director , and the film was also nominated for Best Motion Picture ? Drama , Best Actress ? Drama for Bullock and Best Original Score .

Gravity received eleven nominations at the 67th British Academy Film Awards , more than any other film of 2013 . Its nominations included Best Film , Outstanding British Film , Best Director , Best Original Screenplay , and Best Actress in a Leading Role . Cuarón was the most @-@ nominated person at the awards ; he was nominated for five awards , including his nominations as producer for Best Film awards and editor . Despite not winning Best Film , Gravity won six awards , the greatest number of awards in 2013 . It won the awards for Outstanding British Film , Best Direction , Best Original Music , Best Cinematography , Best Sound , and Best Visual Effects .

Gravity also won the 2014 Hugo Award for Best Dramatic Presentation , Long Form .

== Home media ==

Gravity was released on digital download on February 11, 2014, and was released on DVD, Blu-ray and Blu-ray 3D on February 25, 2014, in the United States and on March 3, 2014, in the United Kingdom. As of March 16, 2014, Gravity has sold 908,756 DVDs along with 957,355 Blu-ray discs for \$16,465,600 and \$22,183,843, respectively, for a total of \$38,649,443. Gravity was also offered for free in HD on Google Play and Nexus devices from late October 2014 to early November 2014.

A "special edition" Blu-ray was released on March 31, 2015. The release includes a "Silent Space Version" of the film which omits the score composed by Steven Price.

== Scientific accuracy ==

Cuarón has stated that Gravity is not always scientifically accurate and that some liberties were needed to sustain the story. "This is not a documentary," Cuarón said. "It is a piece of fiction." The film has been praised for the realism of its premises and its overall adherence to physical principles, despite several inaccuracies and exaggerations. According to NASA Astronaut Michael J. Massimino, who took part in Hubble Space Telescope Servicing Missions STS-109 and STS-125, "nothing was out of place, nothing was missing. There was a one-off of a kind wirecutter we used on one of my spacewalks and sure enough they had that wirecutter in the movie."

Astronaut Buzz Aldrin called the visual effects "remarkable", and said, "I was so extravagantly impressed by the portrayal of the reality of zero gravity. Going through the space station was done just the way that I've seen people do it in reality. The spinning is going to happen? maybe not quite that vigorous? but certainly we've been fortunate that people haven't been in those situations yet. I think it reminds us that there really are hazards in the space business, especially in activities outside the spacecraft." Former NASA astronaut Garrett Reisman said, "The pace and story was definitely engaging and I think it was the best use of the 3-D IMAX medium to date. Rather than using the medium as a gimmick, Gravity uses it to depict a real environment that is completely alien to most people. But the question that most people want me to answer is, how realistic was it? The very fact that the question is being asked so earnestly is a testament to the verisimilitude of the movie. When a bad science fiction movie comes out, no one bothers to ask me if it reminded me of the real thing."

Astrophysicist Neil deGrasse Tyson, astronomer and skeptic Phil Plait, and veteran NASA astronaut and spacewalker Scott E. Parazynski have offered comments about some of the most "glaring" inaccuracies. The Dissolve characterized these complaints as "absurd", problems "only an astrophysicist would find".

Examples of differences from reality include:

Several observers (including Plait and Tyson) said that in the scene in which Kowalski unclips his tether and floats away to his death to save Stone from being pulled away from the ISS, Stone would simply need to tug the tether gently to pull Kowalski toward her. According to the film's science adviser Kevin Grazier and NASA engineer Robert Frost, however, the pair are still decelerating with Stone's leg caught in the parachute cords from the Soyuz. The cords stretch as they absorb her kinetic energy. Kowalski thinks that the cords are not strong enough to absorb his kinetic energy as well as hers, and that he must release the tether to give Stone a chance of stopping before the cords fail and doom both of them.

By the time the first module of Tiangong-1, the Chinese space station, was launched in 2011, the US Space Shuttles had been retired from service.

Stone is shown not wearing liquid-cooled ventilation garments or even socks, which are always worn under the EVA suit to protect against extreme temperatures in space. Neither was she shown wearing space diapers.

Stone's tears first roll down her face in micro-gravity, and are later seen floating off her face.

After being pushed from her eye by her eyelid , the surface tension is not sufficient to continue adhering the tears to her jawline . However , the movie correctly portrays the spherical nature of drops of liquid in a micro @-@ gravity environment .

The Hubble Space Telescope , which is being repaired at the beginning of the movie , previously had an altitude of about 559 kilometres (347 mi) and an orbital inclination of 28 @.@ 5 degrees . As of the release of the movie , the ISS had an altitude of around 420 kilometres (260 mi) and an orbital inclination of 51 @.@ 65 degrees . The significant differences between orbital parameters would have made it impossible to travel between the two spacecraft without precise preparation , planning , calculation , the appropriate technology , and a large quantity of fuel at the time .

The unprofessional " banter " among the three spacewalking astronauts in the movie 's opening scene was criticized by Time Magazine 's Jeffery Kluger as being unrealistic , as well as Clooney 's use of the MMU as his personal jet pack zipping around the spacewalking scene . NASA 's spacewalks are strictly choreographed in advance to minimize movement and the use of oxygen , and as much as the " frat house @-@ like " lingo is a part of NASA lore , it is used very rarely on actual missions .

Despite the inaccuracies in Gravity , Tyson , Plait and Parazynski said they enjoyed watching the film . Aldrin said he hoped that the film would stimulate the public to find an interest in space again , after decades of diminishing investments into advancements in the field .