

# **INTERNATIONAL SOCIAL COOPERATION IN SPACE AWARENESS**

## **YURI GAGARIN, YURI'S NIGHT AND FIRST ORBIT**

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## **1. Introduction**

Yuri Alekseyevich Gagarin's flight into space in April 1961 turned a hitherto unknown Soviet Air Force officer into a hero around the world.

Upon his death in March 1968 he became an icon, his image forever frozen. Since then, the date of his flight has been celebrated in the Soviet Union and its successors as Cosmonautics Day. April 12, 2001 marked the 40th anniversary, and April 12, 2011 the 50th.

Between 2001 and 2011, under the banner of Yuri's Night, an annual global celebration of the anniversary has been organized. Taking the form of a worldwide grassroots effort mediated via the internet, Yuri's Night and associated activities have celebrated humankind's exploration of space, and provided a mechanism for reaching out to the general public, particularly young people, and raising awareness of space exploration. A recent example of this has been the hit 2011 experiential documentary film *First Orbit*, which celebrates Gagarin's flight in a unique and powerful way. Created with the specific intent to be premiered on the 50th anniversary, *First Orbit* became a significant global phenomenon that has brought additional attention to both Yuri's Night and to the broader commitment, felt by people around the globe, that humanity's movement into space will continue and will engage more people and more nations in a global cooperative effort.

## 2. The Genesis of Yuri's Night

In 2000, Loretta Hidalgo, Trish Garner and George Whitesides realized that the 40th anniversary of Gagarin's flight was approaching, and determined that his achievements should be celebrated globally. They conceived the idea of a world space party to do this, calling it Yuri's Night.<sup>1,2</sup> When they met for the Space Generation Forum 2000 in Vienna, they used the SGF network to initiate the project. The Yuri's Night cofounders gathered email addresses, and in a few days designed a basic web page.

After the summer of 2000, they worked on the website, sought funding, told everyone they knew, wrote letters and sent emails around the world. Enthusiastic replies came back, many more people became involved, local organizers agreed to arrange Yuri's Night events, and the project moved into high gear.

A team of volunteers based in California developed additional resources, including posters, press kits, graphics, a party locator, 'how to' web pages, and a Yuri's Night chat room.

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<sup>1</sup> Space Generation Forum, <http://spacegeneration.org/index.php/about-sgac/history> Retrieved 13-02-2012.

<sup>2</sup> UNISPACE III, <http://www.un.org/events/unispace3/>. Retrieved 13-02-2012.

With the success of an early grant application, the founders were also able to provide local organizers with \$100 seed cash and a ‘party pack’ containing a Yuri's Night T-shirt, publicity material, and a selection of space music.

### 3. Yuri's Night 2001

On April 12, 2001, sixty-four Yuri's Night events took place in twenty-nine countries on seven continents.

About 1200 people attended the Yuri's Night flagship event at The Palace Night Club in Los Angeles. In the main lobby was a mini-convention for space, with stands from The Planetary Society, The Mars Society, the International Space University and others. During the five-hour party, lasers spelled “Yuri's Night” and drew pictures of famous spacecraft. Silver-suited go-go dancers adorned two platforms, and above the whole thing was a screen showing classic space moments, such as Gagarin's launch, STS-1's launch and Neil Armstrong's ‘small step.’ The entire event was webcast and much media attention was generated.



Figure 1: The 2001 Yuri's Night party in Los Angeles

In Vancouver, 150 people attended a space rave that ran from 2200 to 0800 the next day. The event featured a number of DJs together with stunning space visuals.

In Bujumbura, Burundi, 600 young people attended a conference entitled Humans and the Environment that considered topics including, How can we preserve life in the world? How can science and technology

contribute to human life without destroying our planet? And Yuri Gagarin as a Pioneer of Technology and environment development. The day concluded with a social evening and dancing.

The Paris Yuri's Night event took place at the Cafe de Flore, attended by thirty-five artists, writers and scientists. Representatives of the French space agency, CNES, brought to the party a flight-ready duplicate of their Sputnik model, launched from Mir in 1995, and a 17-second video showing the cosmonaut hurling the little satellite into space during an EVA.

The Yuri's Night party in Leiden, the Netherlands was attended by about 110 people, including Dutch space journalists and a future Dutch astronaut. Posters, balloons and spacey frisbees, courtesy of ESA, were used as decoration in an old pub.

The London Yuri's Night Party was held at The Rocket Complex from 2000-0100 GMT, attended by 200 people. It started with a space-oriented short film show and some space performance art, and moved into high gear featuring DJ sets combined with stunning space and Yuri visuals.



Figure 2: Flyer for the London 2001 Yuri's Night party

The Yuri's Night event in Sydney was run as a special event for members of the Powerhouse Museum Members' Association. It was held in

the members' lounge with a backdrop of soaring aircraft and spacecraft suspended from the gallery ceiling. The event attracted over 70 people, including children and senior citizens. A variety of multimedia presentations enhanced the night, including giant video projections of Gagarin's flight beamed onto the Museum's inner walls and ZIA's Yuri's Night music.

About 100 students and professionals attended the Adelaide party, hosted by the Stag Hotel. Entry was free. Educational posters decorated the venue, and the DJ asked quiz questions throughout the party based on the information available on the posters, with free drinks for correct answers. Andy Thomas, the Adelaide-born astronaut who had recently returned from the International Space Station where he had performed a spacewalk attended. (Dr Thomas had trained at the Yuri Gagarin Cosmonaut Training Centre, and lived aboard the Russian space station Mir for 141 days.)

The Yuri's Night celebration in Lahore, Pakistan featured a number of events attended by about 30 lawyers, scientists, engineers and students. The Pakistan space agency Suparco provided the venue and presentation equipment.

The Cape Town Yuri's Night event was a wedding held at a planetarium set to ZIA's music *Back 2 the Moon and To Mars!* The bride and groom exchanged titanium rings, and all 130 guests adjourned to the planetarium foyer for a buffet with a cake in the shape of the US Space Shuttle.

#### 4. Lessons Learned from Yuri's Night 2001

Yuri's Night 2001 was the first event of its kind to happen on such a scale within the space (enthusiast) community. It started with an idea and was transformed through widespread effort and enthusiasm into a truly global event. It was, to borrow a phrase, very definitely a matter of "Think globally, act locally."

Electronic communication was vital, and while social media had not yet emerged, simple email and websites were enough to deliver information and resources.

Yuri's Night 2001 was a proof-of-concept that demonstrated that significant global space outreach events were achievable by the space community, using a decentralised approach and utilising electronic communications for co-ordination. Furthermore, the simultaneous nature

of all the Yuri's Night events lent a sense of excitement and connectedness that generated enthusiasm in organisers and participants, and significant interest from the media.

The informal and celebratory aspects of Yuri's Night attracted and educated many people who may not have been reached by more formal and educational space outreach activities.

Although it was originally conceived as a celebration of the 40th anniversary of Yuri Gagarin's flight, it continues to be celebrated each year, and by the time of the 50th anniversary in 2011, it had become a fixed part of the space calendar. The number of Yuri's Night parties and activities increased steadily, boosted by the emergence of social media communications channels such as Facebook and Twitter, to a total 567 events during the 50th anniversary in 2011, involving an estimated 100,000 people in seventy-five countries on all seven continents.

In addition, one particularly successful project, combining both international cooperation in space, international internet-mediated co-operation, and social media is the film *First Orbit*.

## 5. 2011 - First Orbit

To mark the 50th anniversary of human spaceflight on the April 12, 2011, a feature-length film, *First Orbit*, was produced and directed by Christopher Riley to bring the story of Yuri Gagarin to a new generation. In collaboration with the European Space Agency, NASA, Roscosmos and the Expedition 25, 26, and 27 crews on board the International Space Station (ISS), a new view of Earth was filmed over several weeks as the ISS passed over the same ground track at the same time of day as Vostok-1 had done on its 1961 flight.

The resulting footage was edited together with the original voice recordings from Gagarin's mission and a new musical score from composer Philip Sheppard, and on April 12, 2011 the film was premiered on YouTube, generating the largest audience for a long-form film release in the website's history.

On the same day the film was screened at over 1600 venues in more than 130 countries around the world, making it one of the most widely released independent films of all time.

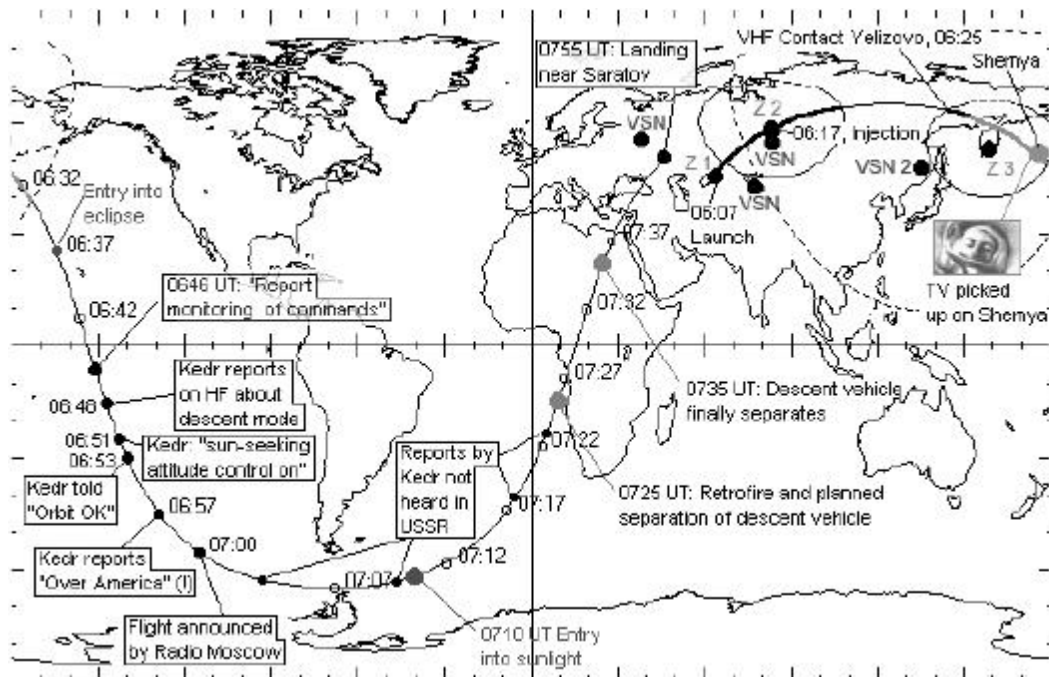
### 5.1 Original Conception

In late 2009, following his previous documentary film projects In the

Shadow of the Moon (2007), Moonwalk One – The Director’s Cut (2009), and the video installation Apollo Raw and Uncut (2009), which projected the entire Apollo flight film archive into public gallery spaces in London and Montreal, Riley looked for another archive-based film project to celebrate the 50th anniversary of human spaceflight. It soon became clear that Yuri Gagarin’s Vostok-1 flight of April 12, 1961 was the right subject.

Gagarin lifted off from the launch site near Baikonur, not far from the Aral Sea, at 06:07 UTC on April 12, 1961. He flew northeast across the eastern part of the Soviet Union and Siberia, and on across the terminator and into night over the Pacific Ocean. At 07:10 UTC he emerged into sunlight again over the Southern Atlantic and passed over Africa, the Mediterranean Sea, Turkey and the Black Sea, before landing just north of the Caspian Sea, 108 minutes after launch.

The flight was not captured in any significant way on film or video, and only a single TV camera on board Vostok-1 was used briefly to transmit an image of the cosmonaut inside his capsule during his flight over Soviet territory.<sup>3</sup> But as Gagarin headed East over the Pacific Ocean, the transmission signal was lost and no attempt was made to continue recording pictures on board the spacecraft.



<sup>3</sup> Grahn, S. TV from Vostok  
<http://www.svengrahn.pp.se/trackind/TVostok/TVostok.htm>. Retrieved 12-03-2010.

Figure 3: The ground track of Vostok-1 (Courtesy of Sven Grahn)

Audio recordings of the flight loop between Vostok-1 and mission control were made throughout the flight, both on board the spacecraft and on the ground, when communications allowed. Translated transcripts have been widely circulated since then, but the complete audio recordings were apparently never released outside Russia.

In 2009 Riley conceived the idea of creating a new Vostok-1 film, which would include as a central element a view of the Earth that Gagarin could have seen. The initial proposal was to piece together existing archive footage shot in Earth orbit over the same ground track and at the same time of day as he flew. Maps of the Vostok-1 trajectory<sup>4</sup> were used to guide the archive research needed for such a production approach (see Figure 3). A review of the Earth-view footage in the NASA archive that was shot over the past fifty years quickly led to the conclusion that it would be too difficult to utilize existing media of consistently high-enough quality to make the film in this way, and the idea was shelved.



Figure 4: NASA astronaut Tracey Caldwell-Dyson in the ISS Cupola, during Expedition-24 (Courtesy of NASA)

However, in early 2010 when the Italian Space Agency's cupola was

<sup>4</sup>

Grahn, S. An analysis of the flight of Vostok  
<http://www.svengrahn.pp.se/histind/Vostok1/Vostok1X.htm>. Retrieved 12-03-2010.

installed on the International Space Station (ISS), much was made in the media about the unparalleled views of the Earth which it offered (see Figure 4), and the idea to create new, high-definition digital video views of the same ground track at the same time of day that Vostok-1 had flown almost fifty years before was born. The resulting footage would then be edited together into a 108-minute film, and combined with the original voice recordings to create a new video installation for gallery spaces around the world.

## 5.2 Producing the Film

With the support of Bob Chesson, Head of the Human Spaceflight and Exploration Operations Department at ESA, an initial feasibility study was undertaken.

	Vostok-1	ISS
Orbit	302 x 170 km	350 x 350 km
Inclination	65.0o	51.6 o

Table 1: Comparison of Vostok-1 and ISS Orbits

However, full orbital elements for Vostok-1 proved impossible to track down, and for parameters that were identified, there were small discrepancies in their values between different sources. The figures adopted for First Orbit were eventually taken from Man's First Space Flight – a TASS Report.<sup>5</sup> Using these values and the map of Vostok-1's orbital ground path (see Figure 3), ESA's Gerald Ziegler performed the initial calculations to see if the Space Station's ground track ever matched that of Vostok-1. Ziegler concluded that a similar ground track would be made by the ISS every 48 hours or so, but when matching the time of day as Vostok-1, the frequency of occurrences dropped to around once every six weeks.

While there was no chance of capturing a complete 'Gagarin view' during a single pass around the Earth, Ziegler recommended breaking up Vostok-1's ground track into a series of five separate segments which would be matched to future ISS ground tracks (see Figure 5). The filming opportunities for each segment could then be identified and the footage captured on different days and then edited together to give the illusion of the single 108-minute flight around the Earth that Gagarin originally took.

<sup>5</sup> Yuri Gagarin, et al, 1961. Man's First Space Flight – A TASS Report, pg 9. Soviet Man in Space, 2001, University Press of the Pacific. Reprinted from the original edition.

ESA started making plans for Italian astronaut Paolo Nespoli to carry out the filming towards the end of 2010, when he arrived on the ISS as part of Expedition 26.

A draft shot list was compiled, noting the preferred camera positions and directions for each orbit segment. The camera, a Canon G1 HDV, is one of the standard video cameras on board the station. It was set up in a fixed position, the recording started, and the camera left to run for the duration of the ground track segment.

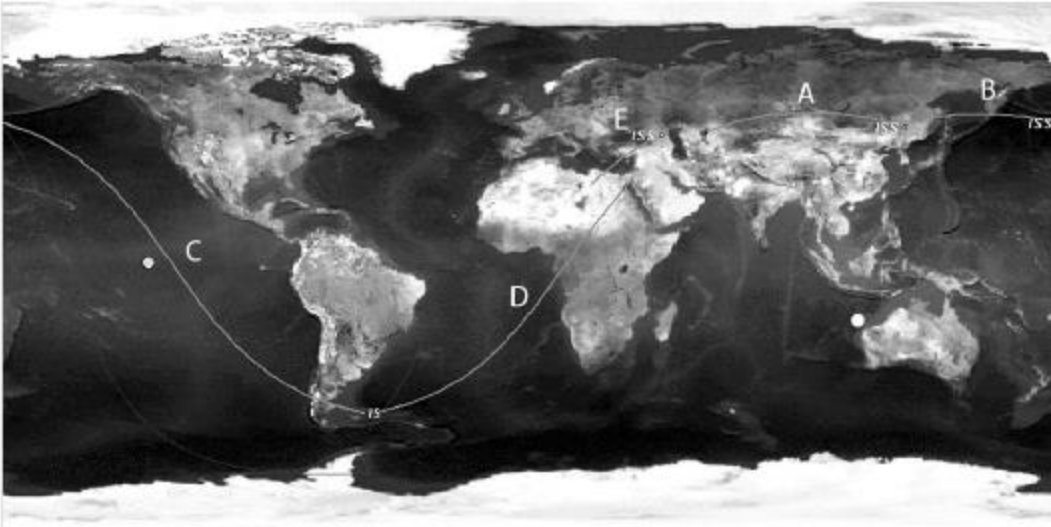


Figure 5: ISS ground track segments A-E chosen for filming purposes to most closely match the ground track and time of day of Vostok-1 (see Figure 3)

### 5.2.1 Filming

In October 2010, NASA astronaut and Expedition 25 Commander Douglas Wheelock performed a test shoot inside the cupola. The footage captured was compressed into a single file and transmitted to Houston through NASA's Tracking and Data Relay Satellite System (TDRSS) network, and then on to ESA-ESTEC in Noordwijk, The Netherlands, where it was shared with Riley through an ESA media centre ftp link, coordinated by Jean Coisne and Melanie Cowan.

Nespoli was launched to the ISS on Soyuz TMA-20 with NASA astronaut Catherine Coleman and Russian Commander Dimitri Kondratyev on December 15, 2010. Because of ISS crew operational constraints, it soon became apparent that not all the filming opportunities could be accomplished.

To supplement the footage Nespoli was attempting to capture, ESA flight directors recorded additional passes over other orbit segments using remote controlled standard definition cameras mounted on the outside of the ISS and downlinked live to recorders on Earth. This procedure did not

require any crew time and was easier to conduct, but the quality of the footage from the external ISS cameras was not as compelling as the crew-captured cupola footage, and in the final film the producers tried to minimise the use of this footage.

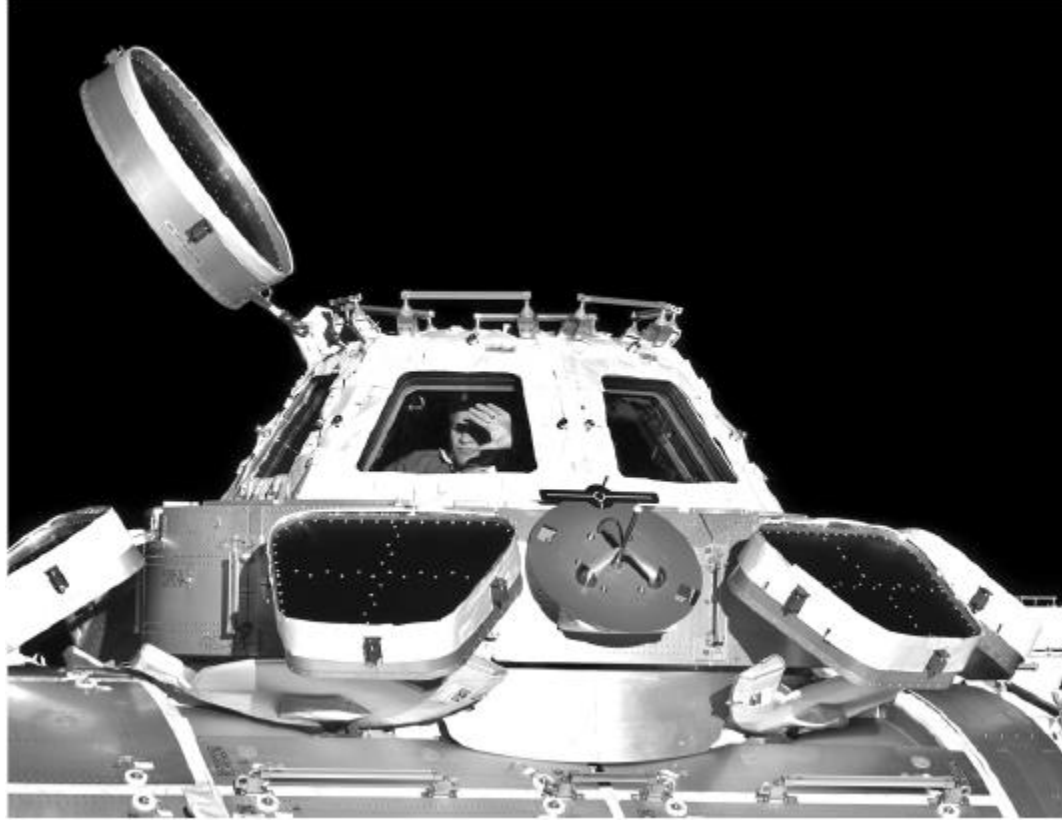


Figure 6: ESA Astronaut Paolo Nespoli inside the Cupola during filming of *First Orbit* in early January 2011 (Courtesy of ESA).

On January 8, 2011 life on the ISS was significantly disrupted by the attempted assassination of US Congresswoman Gabriella Gifford in Tucson, Arizona. Gifford is the sister-in-law of NASA astronaut Scott Kelly, who was serving as Expedition 26 Commander on the ISS at the time. Flight controllers immediately sought to minimise disruption to core ISS activities so as to reduce stress on the crew, and extra activities such as filming for *First Orbit* from the cupola was restricted.

By this time Nespoli had captured four of the five segments, A, B, D, and E, but capturing segment C as a night pass over the Pacific proved impossible, as every opportunity coincided with crew sleep periods which could not be interrupted. To cover segment C, the producers requested NASA archival footage of night passes over the Pacific, which was generously supplied.

The Moon had not been visible to Gagarin during his Vostok-1 flight and he had written in his autobiography, *Road to the Stars*, that he would ‘...try to see it next time.’<sup>6</sup> Sadly for Gagarin, there was no next time in space. So as an extra tribute to the pioneering cosmonaut Riley used shots of the Moon from NASA’s Pacific night footage to give Gagarin the view of the Moon he never got a chance to see from space.

### 5.2.2 Editing

First Orbit was edited so that the view of the Earth from space at any point matched the timings from Gagarin’s flight. Additional archive footage was donated by Footagevault to construct opening and closing titles. Edited by Tabitha Moore, the opening sequence aimed to set the scene for Gagarin’s flight, blending footage of his preparation together with opening credits and a speech Gagarin had made prior to launch. The closing sequence, to simulate Gagarin’s re-entry, was constructed from Apollo 10 onboard footage, and his parachute descent was simulated using Project Excelsior III archive and V2 test flight footage from White Sands.

Further shots contributed from Footagevault and the ESA archives helped to construct missing parts of segment B, including the dramatic view of the setting Sun as Vostok-1 passed through the terminator and into the night side of the Earth. A final archive shot from Footagevault’s collection showing the famous portrait of Yuri Gagarin holding a dove, which had been fixed to a wall inside the Russian section of the ISS as a final tribute to the world’s first space man, still orbiting the Earth in spirit 50 years after his pioneering flight.

### 5.2.4 Music

Although the original concept for the film involved no music, it became apparent during editing that a musical score was needed. Composer Philip Sheppard, who had worked with Riley on *In the Shadow of the Moon*, was approached. Quite by coincidence it turned out that he’d been working on an album called *Cloud Songs*, inspired by spaceflight, which he generously donated to the project, along with some additional tracks.

In a further coincidence, NASA astronaut Catherine Coleman, a friend of Sheppard’s, had carried *Cloud Songs* to the ISS on her Soyuz flight with Nespoli in December 2010. Although it was not known at the time, at one end of the ISS Nespoli had been filming *First Orbit* while at

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<sup>6</sup> Gagarin, Y. 1961. Pg 153. *Road to the Stars*. Notes by Soviet Cosmonaut No. 1. 2002, University Press of the Pacific, Reprinted from the original 2002.

the other end Coleman had been listening to Cloud Songs, the music that would eventually accompany his footage.

### 5.2.5 Gagarin's Voice Recordings

From the start of the project Riley had enlisted the support of human behaviour performance specialist and native Russian speaker Iya Whiteley to help source the original voice recordings from Vostok-1. Whiteley's search took her from the National Archives to contacts at the Russian Federal Space Agency Roscosmos, NATO, the British Embassy and even the Russian military. Only a few weeks before the film was completed, Whiteley finally tracked down the original recordings at the Russian State Archive of Scientific and Technical Documentation, and the full mission audio from the flight was acquired. Whiteley then painstakingly undertook subtitling the audio into English.

Gagarin is most vocal during the first 20 minutes of the mission, but as he passes out of contact with the Soviet ground stations, he becomes quieter. He speaks very little after passing into the night side of Earth over the Pacific, only commenting briefly on the view of stars. After sunrise over the South Atlantic he makes one more brief comment about the direction of travel of the sea below, and then does not speak again.

With the help from the post-production company Unit in London, the film was completed at the end of February 2011, about five weeks before the anniversary. Including opening and closing titles, its duration is 105 minutes; just three minutes short of the 108 minutes of Gagarin's flight.

### 5.3 Related Media

In addition to the main film, supporting media were created around the project, including iPhone and Android apps that compressed the entire orbit into a single 100 second video clip (the equivalent of orbiting the Earth at over a million miles an hour).

A Twitter channel (<http://twitter.com/FirstOrbit>) was also set up to promote the film and to carry live tweets of the mission audio (in English) at exactly the same time as Vostok-1's flight 50 years before, and Facebook film page was also set up to promote the project (<http://www.facebook.com/firstorbitfilm>).

### 5.4 Distributing the Film

The strategy for distributing the film enabled anyone to download it from a website and screen it at their own celebratory event. Applications to download the film went live from the March 23, 2011, when the story about the project broke, and the YouTube channel was also launched with

three trailers for the film.

On April 12 a short ‘making of’ film was also added to the project’s channel, bringing the total number of First Orbit films on the project’s YouTube channel to five (three trailers, a making of and the main feature).



Figure 7: The firstorbit.org home page as it appeared 6 months after the film’s release

### 5.5 How the film was received

The agency Sister (www.sisteris.com) was recruited to promote the project around the world, and their highly effective campaign generated more than 65 major international articles and features on First Orbit.

Press coverage of the project was broad and ranged from tabloids to UK broadsheets such as The Guardian and other high-traffic sites such as Wired, to news and video aggregators. Others linked to the Android platform or the project’s Twitter feed (www.twitter.com/firstorbit) or Riley’s personal website (www.chris-riley.com). Broadcasters including the BBC, and Russia Today recorded reports and interviews for their outlets.

Media coverage was strongest in the United States (66%), followed by the United Kingdom (22%), with significant media coverage in Spain, Russia and New Zealand. The European Space Agency (ESA) website,

Guardian Online, El Pais, the BBC, the MoonAndBack, the Russian site Moscow Nedelia and the British Interplanetary Society all ran more extensive articles of a full page or two in length.

Almost 2000 download requests were received. Internet traffic received on April 12 crashed the project's server, and the volume of registrations also pushed the firstorbit.org GoogleMail account into a spam alert state, which prevented the team from replying to anyone for twenty-four hours. But by this time the film was already available to watch on YouTube.

In the run up to April 12, a total of 1646 requests were approved to download the film in advance for anniversary screening events around the world.

700 of these were for school and university celebrations, 290 requests were for Yuri's Night party premieres, and another 639 were for public premiere events. Notable premieres included the BBC breakfast premieres on their giant screens in 20 city centres around the United Kingdom.



Figure 8: BBC Big Screen breakfast premieres, Swansea

In total, the film premiered 'offline' in more than 130 countries around the world, playing to an estimated 200,000 people.

In Russia, schools were encouraged to hold a special lesson to celebrate the anniversary, and with the help of the British Council and Roscosmos, the film was promoted for use in this anniversary lesson.

### 5.5.6 The YouTube First Orbit Premiere

In the build up to the film's global YouTube release on April 12, the film's trailers had together attracted over 800,000 views. At 00:00 UTC (01:00 BST) on April 12, the file was switched live, and First Orbit became visible to the global Internet population. Within the first six hours YouTube registered only 300 total viewings of the film. Then, at 06:07 UTC, the project's campaign to watch the film at exactly the same time as Yuri's flight 50 years before kicked in, and 24,000 people across the World watched First Orbit on YouTube simultaneously.

Correspondence about First Orbit on YouTube rose steadily throughout the day, quickly making it one of the most talked about subjects on the website. More than fifteen thousand people subscribed to the channel and left almost 5000 comments, the vast majority of which were positive. As the day passed, the main feature film attracted 24,752 likes, 609 dislikes, and 4445 friends. Google/YouTube helped to drive substantial traffic to the channel by linking to it from their 'doodle' of the day, which depicted Yuri's achievement.



Figure 9: Google/YouTube's Gagarin Doodle which replaced their logo on the April 12th world wide, linking directly to the *First Orbit* YouTube channel.

By 18:00 UTC the viewing count for First Orbit reached 600,000 people, and by 23:59 UTC it was over 1.2 million. Within 48 hours of release, First Orbit had received just over 2 million viewings, making it the most watched long-form film release in YouTube history. At the time of this writing, over twelve months later, the count online has reached over 3.6 million viewings, with the First Orbit YouTube channel as a whole receiving over 4.7 million upload views for the trailers, making of video and the main film combined.

According to the statistics on the YouTube channel, the film was

most popular with men aged 45-54, but interest from both sexes in the age range 13-17 was also noted. Globally it was most popular in Russia, with Taiwan, India, North America, the UK, Canada, Brazil and Australia ranking next. According to YouTube it was watched in every country on Earth except five on the African continent and one in Eastern Europe

## 5.6 Social and orchestrated media

A number of supporting social and orchestrated media campaigns were carried out as part of the First Orbit project, including the establishment of a Twitter channel, a Facebook page and the creation of both Android and Apple Apps designed to interact with Gagarin's orbital path whilst watching the film. An analysis of these extra elements is presented below.

### 5.6.1 Twitter and Blog interest

Browser window captures for Twitter searches for the hashtag 'firstorbit' were carried out between April 12 and 14, for later analysis. Subsequently, in preparing this paper, a retrospective analysis of the Twitter data relating to First Orbit was also carried out using 10 different applications, including topsy.com and peoplebrowsr.com, the latter which claims to access all tweets from the last 1000 days.

Analysis of these results shows three peaks relating to First Orbit. The first peak occurred on March 24, the day after the First Orbit web site went live and the day Jonathan Amos broke the story on BBC News Online. This single story resulted in 627 tweets and 194 blog posts. The second social media peak occurred on April 12, resulting in almost 15,000 tweets and 1175 blog posts in a single day.

To compliment a campaign encouraging people to watch the film at exactly the same time as Gagarin's flight – starting at 07:07 BST, an orchestrated media live tweet was planned, broadcasting the entire mission audio translation into short 'tweet-length' English phrases. These micro-blog friendly transcripts were prepared by Vix Southgate of YuriGagarin50 and Scott Andrews at the British Council. Tweetdeck was employed to queue their transmission, with plans to start the live tweet with the hashtag 'orbit1' a couple of hours before 07:07 BST. This ran well until just after 'lift-off', when Twitter's automated systems mistook the First Orbit feed as a spam attack and locked the account, bringing the stream to a halt.

### 5.6.2 Facebook

Facebook proved to be the least useful channel of communication for this project. A basic page ([www.facebook.com/firstorbitfilm](http://www.facebook.com/firstorbitfilm)), was created which attracted 420 likes without any promotion. However, Riley failed to interest Facebook in the project despite repeated calls to their UK and Ireland HQs. Problems with the Facebook user interface and a lack of support from the company meant that the team had to abandon further plans for promotion of First Orbit through this route.

The Wikipedia entry on the film, which was auto-listed on Facebook, attracted a further 246 likes. <http://www.facebook.com/pages/First-Orbit/215819291767403>

### 5.6.3 Android and Apple Apps

Sales of the Apps were low, with only around 680 on the Apple market and fewer on the Android platform. The poor take-up on these, compared to the reception for the main film, is attributed to a shift in the apps market place away from paid apps to free or freemium ones supported by embedded adverts.

## 5.7 First Orbit 2012

Requests from fans of the film to translate Yuri's story into other languages started to come in soon after April 12, 2011 and Riley decided to crowdsource translations.

An English transcript of the film was published as a spreadsheet on the [firstorbit.org](http://firstorbit.org) web site in October 2011, and a call to action was launched at the 2011 International Astronautical Congress in South Africa, during the presentation by Dr. Christopher Welch of a paper on the project by Riley and himself.

Translations into more than 30 languages were received within a couple of months from more than 70 volunteers, and all have been published at [www.firstorbit.org/translations](http://www.firstorbit.org/translations). The First Orbit translation challenge remains open, with the goal of eventually translating Yuri's story, in his own words, into every language on Earth. Anyone interested in contributing a new language to the project should visit [www.firstorbit.org/add-a-language](http://www.firstorbit.org/add-a-language)

To make the most of this effort, Riley decided to publish a multi-language version of First Orbit on DVD and BluRay in time for the 2012 anniversary, encoding the first 30 languages. Funding for the manufacture of these discs was raised on the crowdfunding platform IndieGoGo, ([www.indiegogo.com/firstorbit](http://www.indiegogo.com/firstorbit)) by pre-selling hard copies of the film and offering fans the chance to add their names to the end credits.

A new 2012 campaign trailer was added to the YouTube channel and attracted over 7000 viewings during the eight week marketing drive through December and January. About 100 of them donated funds to the project and although only 20% of the requested funds were raised, plans for releasing the film in this way went ahead.

In the Spring of 2012 the film was lightly re-edited and re-mastered in preparation for manufacturing onto disc. The most significant change to the film was the production of new subtitles in 30 languages. To help promote these new multi-language hard copies of the film a new 2012 campaign was run, again by creative agency Sister. The campaign revolved around creating public screenings of the film around the world in all 30 new languages.

In London the British Interplanetary Society hosted a First Orbit season, screening the film in all 30 languages, starting with Russian and English on the April 12, 2012. And further campaigns in collaboration with the Yuri's Night community, and other special interest space flight groups saw further foreign language screenings of the film around the world.

To further promote the translations of the film a new Live Tweet of the mission starting at 07:07 UT on the April 12, 2012 was run by Riley. Tracking of re-tweets for #firstorbit and #yurisnight for this event showed a reach of over 400,000 people. On YouTube a further 100,000 people watched the original 2011 version of the film with the English subtitles.

## 6. Conclusion

Fifty years after his Vostok-1 flight, details of Gagarin's story have been reconstructed in a compelling and original way through the creation of First Orbit. ESA's enthusiastic support for the project, and Paolo Nespoli's work on board the International Space Station to bring it to fruition brought significant attention to the ISS during this major anniversary year.

The value of combining the archive mission audio of Gagarin's flight with new high definition color footage of the route he flew has been demonstrated; bringing new life to a previously inaccessible oral record of Vostok-1 and making it more accessible to today's visually driven generation.

The film's release attracted a great deal of interest around the world, and amassed a significant community of fans and followers through a number of channels.

The global reach of YouTube, and Google's willingness to work creatively with content producers in this way makes their platform an unparalleled tool for releasing long-form experimental video content which is unsuitable for broadcast on conventional TV channels. The capacity for human spaceflight to capture interest and to intrigue audiences around the world prevails, and the combination of beautiful views of the Earth from space set to music resonates as deeply with us today as it did when humankind first set eyes upon Earth from above.

The first decade of Yuri's Night celebrations since its inception in 2001 has shown just how strong the story of humanity's first spaceflight still appears to be. Fifty years after Gagarin's pioneering mission, the courage and spirit of adventure which human spaceflight epitomizes still appeal widely to the people who live today on the planet he first orbited.

Yuri's Night 2012 featured 236 events in more than 50 countries involving thousands of people in the celebration of the first human space flight. In the years to come, there will be many opportunities to raise the profile of other memorable spaceflight anniversaries, such as a global Moonlanding Night on the July 20/21 each year to mark the anniversary of Apollo 11. And as more and more people participate in space flight through broader commercialization in the coming years, there will be more occasions to celebrate, and an ever-growing community of those who have been to space, and those who can realistically expect to share this experience at some point in their lives.

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### Pertinent Websites

[www.yurisnight.net](http://www.yurisnight.net)

[www.firstorbit.org](http://www.firstorbit.org)

[www.youtube.com/firstorbit](http://www.youtube.com/firstorbit)

[www.twitter.com/firstorbit](http://www.twitter.com/firstorbit)

[www.facebook.com/firstorbitfilm](http://www.facebook.com/firstorbitfilm)

## Dr. Christopher Riley



Dr. Christopher Riley is a writer, broadcaster and film maker specializing in history and science. He has worked on many of the BBC's iconic science programs from Tomorrow's World and Rough Science to Science in Action and The Sky at Night. In 2004 he won the Sir Arthur Clarke award for his work producing the BBC ONE blockbuster series Space Odyssey: voyage to the planets. His 2007 feature documentary film In the Shadow of the Moon, the story of the Apollo astronauts, was premiered at the Sundance Film Festival, where it won the World

Cinema Audience Award.

Chris is visiting Professor at the Lincoln School of Media, the University of Lincoln. He gained his doctorate at Imperial College, where he worked with Metric Camera data from Spacelab-1, flown on Space Shuttle Columbia's STS-9 mission. He is the author of more than thirty articles and books on astronomy and planetary science and regularly broadcasts and lectures on these topics. His book Apollo 11, an owner's workshop manual, published by Haynes in June 2009, was an Amazon top ten science and nature book of the year. He is the producer and director of the unique Yuri Gagarin 50<sup>th</sup> Anniversary film project First Orbit, the subject of this chapter.

## Dr. Christopher Welch



Dr. Welch is Director of Masters Programs at the International Space University (ISU) in Strasbourg, France. He has a PhD in spacecraft engineering from Cranfield University – where he is also adjunct faculty – and an MSc in space physics from the University of Leicester in the United Kingdom. His research interests include space propulsion, space exploration and microgravity physics. In 1989 Dr Welch was one of the final 20 candidates to fly to the Mir space station on the UK-USSR Juno mission, which continues to fuel his passion for human spaceflight and space education. He is former chair of the UK's Space Education Council and is Vice Chair (formerly Chair) of the International Astronautical Federation Space and Education and Outreach Committee. He is on the board of the British Interplanetary Society, the World Space Week Association, the Spacelink Learning Foundation and the Arts Catalyst. In 2009 he won the Sir Arthur Clarke Award for Achievement in Space Education, and was Scientist in Residence at London's National Museum of Childhood in 2007. He is also a frequent commentator on space and astronautics and has made more than 300 television and radio broadcasts and has also advised on a number of space-related television programs and films.

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