

**Project title**

90 minutes around the world: a documentary

**Project description**

Video and film footage of the Earth from space has been around since the early days of spaceflight. Footage of this sort, available in the public domain today, is however mostly made up of short clips, showing only certain regions of the Earth in daylight conditions. And although these clips provide a beautiful impression of the Earth as seen from space, they generally fail to communicate an important aspect of life up there, in Low Earth Orbit (LEO) and beyond. At a typical altitude of 300-400 km above the Earth, astronauts and cosmonauts onboard their space habitats circle the Earth every 90 minutes. Every 90 minutes, they experience some 30 minutes in darkness as the spacecraft moves through the Earth shadow. Every Earth day of 24 hours, they experience 16 sunsets and sunrises.

This cultural proposal aims to capture and communicate this Low Earth Orbit fact of life by filming an unedited view of the *Earth in space* during a complete 90-minute orbit around the Earth. The objective is to let the general public experience for themselves what it is like to be up there, what it is like to circle our planet in 90 minutes, what it is like to be in space anno 2006. Looking out through a window onboard the ISS, the camera will film the curvature of the Earth. Filling up only part of the screen, it will vividly show the Earth in its natural outer space environment. Un-edited and realtime, it will give people watching it back on Earth a real-life experience of what it is like to be up in space, to experience planet Earth as you circle around it in 90 minutes.

The resulting footage will be unique. Ideas on how to present it are numerous. A video on display, a DVD for sale, large screen projections are just a few examples. At the same time, the film and the cultural nature of the project offer an interesting PR opportunity, both for the Dice-K mission (*Dice-K's orbit around the Earth*) and for the ISS program in general.

**Facility and equipment necessary for experiments.**

For Dice-K's mission to the ISS, the author aims to investigate the use of high-end video equipment, preferably High Definition digital video, for filming. One HDTV camera is already onboard the ISS under supervision of a Japanese company. Further information needs to be acquired about the availability and suitability of this camera. Other options would be the use of a similar camera (HDV, HDTV?) to be brought up to the ISS for this purpose or in combination with other foreseen uses of it (e.g. sponsored by SONY).

An initial feasibility & implementation assessment for the project has been done back in December 2003 for the ISS mission of ESA's Dutch astronaut André Kuipers in April 2004. This assessment is attached to this 'proposal email' to provide a clear indication of the simplicity and straight forward implementation of this project onboard the ISS. It describes an initial script for the documentary and provides further background information on the project concept and potential use<sup>1</sup>.

**Breakdown of budget**

Assuming the video camera to already be onboard the ISS, the required production budget is limited to: R&D/management of the project, qualification & upload/download of tapes, writing required documentation and post-production of the film/DVD/installation. A request for a research & development grant is currently being written to the Dutch FilmFund for submission end February. If awarded, this will cover most of the preparatory phase. Inquiry for further funding opportunities will be part of this initial R&D phase, including sponsorship by space agencies and companies in Europe and Japan.

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<sup>1</sup> These documents are available online at <http://www.tobedetermined.org/90minutesaroundtheworld>  
André Kuipers eventually performed a test run of the documentary but did not manage to capture the complete 90 minute orbit. The test footage has been brought down and is in the possession of the author.