

Engaging the public in planetary science missions: the role of competitions in the Rosetta mission

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Abstract

The year 2014 was an historic and challenging year for the Rosetta mission. On 20 January, the spacecraft awoke from a 957-day hibernation; by August, the spacecraft had arrived at Comet 67P/Churyumov-Gerasimenko; and in November, the lander Philae was deployed to the comet's surface. Each of these mission milestones was marked by a competition. We outline how these competitions provided a means for the public to engage with what was to become one of the most exciting space science missions of this decade.

1. Introduction

Rosetta was launched in March 2004, on a 10-year journey through the Solar System to its destination: Comet 67P/Churyumov-Gerasimenko. Along the way there were some newsworthy moments: the swings past Earth (2005 and 2007) and Mars (2007); fleeting flybys of asteroids Steins (2008) and Lutetia (2010) and the science that came from those; and then, on 8 June 2011, the spacecraft was put into hibernation, to remain in that state until 20 January 2014.

As 2014 approached, one of the biggest challenges facing the mission's science communicators was how to awaken interest in the mission and generate a sustained engagement in the broadest possible audience in a relatively short time.

One approach was to encourage public engagement by means of open competitions. These would provide a way for members of the public to share in

the main mission milestones during the year. Three different competitions were run, with different outcomes. The competition entries and associated data have provided us with a means to search for evidence of public engagement in the mission.

2. Rosetta competitions in 2014

2.1 Wake up, Rosetta!

As Rosetta approached the end of the hibernation period the public were invited to help ESA to wake up Rosetta by sending in short video clips showing them "waking up" the spacecraft. The top prize, of a trip to the European Space Operations Centre (ESOC) in Germany to be present on landing day (12 November 2014), was to be decided by public vote. This competition, announced on 10 December 2013, was run using Facebook, Twitter, Vine and Instagram – for submitting competition entries; YouTube – for promoting the competition and individual entries; and Facebook for the public voting, which closed on 24 January 2014. The public voted enthusiastically: more than 75000 votes were cast for the videos. A lower than expected number of entries (just over 200) were received, but the quality of these far exceeded the expectations of the organisers. It was immediately obvious that many participants in this competition were taking part not just because of the unique top prize but also as a way of connecting with the mission. Perhaps surprisingly, a non-negligible percentage (about 7%) of participants could not win the top prize because of residency restrictions associated with it, but they nevertheless took part in the competition.

2.2 Rosetta, are we there yet?

Rosetta would arrive at her destination, Comet 67P/C-G, on 6 August 2014, during Europe's summer time, and this naturally led to the idea of a competition that would play on the theme of journeys ending and destinations being reached. One common expression heard or uttered by anyone who has been on a long journey is: Are we there yet? And so the next competition was born. Announced on 9 July 2014, the competition invited participants to submit photos that capture the "Are we there yet?" feeling. Two props were made available to download, print and include in the photo: a cut-out-and-make Rosetta model, and a banner to fill in a destination. Participants were also encouraged to draw inspiration from Rosetta mission themes, such as photographing comet-like landscapes, or incorporating the themes of water and life. The same channels that had been used for the first competition were used, and the top prize was again a trip to ESOC to be present on landing day. Compared to the 'Wake up, Rosetta!' competition, a similar number of entries were received, and somewhat fewer votes – around 22000 by the time the competition closed on 21 August. Although the number of participants was rather low, the quality of many of the entries was very high, with participants going to extraordinary lengths (and places) to produce imaginative and evocative photographs.

2.3 Name Site J

On 15 October 2014, ESA confirmed the landing site chosen for the Philae lander would be the one referred to up until then as 'Site J'. After careful consideration, the partners involved in Rosetta and Philae agreed to run a competition, inviting the public to propose a name for the landing site. The 'Name Site J' competition was launched on 16 October and ran until 22 October, with a top prize of a trip to ESOC for landing day. The competition attracted proposals from more than 8000 people from 135 countries. A shortlist of 30 names was drawn up by the organisers, and the winning name for the site – Agilkia – was chosen from this shortlist by the Philae Lander Steering Committee. To accompany the proposed name of the landing site, participants were asked to provide a short (maximum 200 words) justification for why they proposed this name. Many used this opportunity to express their delight in having an opportunity to participate in the mission by the competition.

3. Evidence for engagement

What do we mean by engagement in the context of science communication? How do we measure it? Most often, engagement refers to a two-way process, involving interaction and dialogue. Did the Rosetta competitions facilitate this? If we consider the comments that participants made with their entries, in email messages to the organisers, or in posts on social media channels, then the majority of these would seem to indicate that the competitions did fulfil this role. They provided focus points for the public to participate in the main mission milestones of 2014, they provided an opportunity for the public to connect with the mission and vice-versa, and in many cases, participants explicitly stated that the competitions gave them the opportunity to engage with the mission.

4. Summary and Conclusions

Case studies of three competitions run in relation to the Rosetta mission in 2014 have provided an opportunity to search for evidence of public engagement in the mission. The quality of the contributions to each competition and the feedback from participants clearly indicated that, for many people, these competitions provided a way for them to express their excitement, appreciation and admiration for the mission. Moreover, the competitions provided a channel for them to connect with and engage with people directly involved in the mission and with other enthusiastic supporters – in other words, the competitions fulfilled their role as a channel for public engagement in the Rosetta mission.

5. Acknowledgements

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