

Preface

I wrote this book because I wanted to read it. I am a reader and collector of the Outward Odyssey series of books published by the University of Nebraska Press and edited by Colin Burgess. In April 2012 Colin posted on the collectSPACE website that UNP had asked him to explore the possibility of going beyond the 12 books in the series. He was asking the readers for suggestions. My suggestions were a book on the Soyuz/Salyut/Mir missions and a book on the ESA missions to Mir, ISS and on Shuttles. Colin's reply was that the UNP didn't see a market for non-US stories. Demonstrating the depth of the forum users, David J. Shayler posted a reply mentioning Clive Horwood of Praxis. I contacted Clive proposing a book covering the European missions to the ISS... and the rest, as they say, is history.

The history of European human spaceflight is not as straightforward as its American or Russian counterparts. Europe wasn't a competitor in the 'space race'. As a collection of nations with different languages, cultures and goals, the vision for space has been complex. For the first three decades of the space age, Europe was divided by the Iron Curtain. Even today, the European Space Agency does not build or fly a human-rated spacecraft. But despite all these factors there is a rich history of Europeans travelling to space on a variety of spacecraft and performing a variety of missions.¹

As Europe isn't a single country with a manned space programme, European citizens must 'hitch a ride' to get into space. This has resulted in many different routes to orbit. Before the period covered by this book, astronauts from communist countries and from France had flown on Soviet Soyuz spacecraft to the Salyut and Mir space stations. Later, astronauts from other Western European space agencies and ESA flew to Mir. Western Europeans represented their national space agencies and ESA by flying on NASA Space Shuttle missions. Naturalised US citizens from around the world, including quite a few Europeans, succeeded in joining NASA's astronaut corps by applying to the Johnson

¹ In December 2013, NASA and ESA agreed that the European Service Module (ESM), based on the Automated Transfer Vehicle (ATV), would provide power and propulsion for the first Orion mission, Exploration Mission 1. EM-2 is planned to be a crewed mission.

Space Center in Houston, Texas. And finally, almost as a footnote, there have been several European-born American astronauts.

Within the scope of this book are the European ESA astronauts who have flown to the International Space Station (ISS). Even this story isn't straight forward, because while most flew as members of the ESA astronaut corps, one flew as a French CNES astronaut prior to joining ESA, and others flew as representatives of their national space agencies and not as ESA astronauts.

As a prelude to the 2001–2011 decade of European missions to the ISS, I have written a brief history of European human spaceflight up to 2000. It is written in chronological order and contains flights of the following types:

- Intercosmos missions: Eastern Europeans on Soviet missions to Salyut 6. For simplicity, including Bulgarian Alexandrov's mission to Mir.
- ESA Shuttle missions: ESA astronauts on Space Shuttle missions, including missions that carried the Spacelab module.
- Non-ESA Shuttle missions: CNES/DLR/ASI astronauts on Space Shuttle missions. Some may or may not have flown as ESA astronauts on other missions. They include Payload Specialists not assigned by a space agency; e.g. Dirk Frimout.
- ESA Soyuz missions: ESA astronauts on Soyuz missions.
- Non-ESA Soyuz missions: CNES/ASA/DLR astronauts on Soyuz missions.
- Miscellaneous: Helen Sharman was selected to fly to Mir on a mission funded by private UK companies without the assistance of either the UK government or ESA.

However, I have considered the following technically European human spaceflights to lie *outside* the scope of this book:

- Cosmonauts: For reasons of practicality, I have excluded all cosmonauts from European Russia (west of the Urals), Ukraine, Belorussia, and the Baltic countries. Even though these territories lie in Europe, this would only complicate matters.
- Naturalised and dual citizens: Europeans who gained citizenship of USA/Canada and joined NASA/CSA, or who flew as Payload Specialists on the Shuttle. For example:
 - Lodewijk van den Berg (Netherlands born, US citizen) who flew as Payload Specialist on STS-51B.
 - Michael Foale (UK born, dual UK/US citizen) who has flown to space six times on both Soyuz and Shuttle spacecraft and has lived on Mir and commanded the ISS.
 - Michael Lopez-Alegria (Spanish born, US citizen) who has flown in space four times on both Soyuz and Shuttle spacecraft and has commanded the ISS.
 - Bjarni Trygvasson (Iceland born, Canadian citizen) who flew as a Payload Specialist on STS-85 representing CSA.
 - Piers Sellers (UK born, US citizen) who has flown on three Shuttle missions as Mission Specialist and visited the ISS.

- Nicholas Patrick (UK born, US citizen) who has flown on two Shuttle missions as Mission Specialist and visited the ISS.
- Charles Simonyi (Hungarian born, US citizen) who has flown twice on Soyuz missions to the ISS as a ‘space tourist’.
- US citizens born abroad: US citizens by birth, born abroad to US citizen parents:
 - Michael Collins (born in Italy) who flew on Gemini 10 and Apollo 11. He is undeniably the first European born astronaut, but for consistency has to be excluded on the grounds of his American parentage and citizenship.²
 - Gregory Johnson (born in the UK) who flew on two Shuttle missions as pilot and visited the ISS.
 - Richard Garriott (born in the UK) who flew on Soyuz TMA-31 to the ISS as a ‘space tourist’ and second generation spacefarer.

I have used a variety of sources for the material in this book including NASA and ESA mission reports, astronaut biographies and blogs, contemporaneous magazines and reference websites such as the encyclopaedic www.spacefacts.de. As a result, the content of each mission chapter may differ in tone or focus. I have endeavoured to keep a common ‘look and feel’ to each chapter but, for example, the DELTA mission chapter covers Soyuz training and preparation to good effect, while the Celsius mission chapter covers Shuttle training. Similarly the Cervantes mission chapter describes the very personal experience of Pedro Duque, whereas other chapters may describe the crew space activities more clinically. I hope this variety adds to the enjoyment of the book.

There is a rich story of human spaceflight happening between and around the European missions detailed in this book. Although I have endeavoured to inform the reader of key missions and events in American and Soviet/Russian spaceflight during this time period, these missions lie outside the scope of this book; they are, however, well covered in other Springer-Praxis publications.

When selecting terminology, I’ve used the term astronaut when describing flights on American spacecraft and cosmonaut for flights on Soviet or Russian spacecraft. The same spacefarer could be described as both over the course of the book, as many Europeans have flown on both American and Russian craft. As yet there have been no European Taikonauts...

There are several reasons why I chose to conclude the coverage of this book with the Promise mission of André Kuipers:

- A round 10 years elapsed between STS-100 in 2001 and the launch of the Promise mission on Soyuz TMA-03M in 2011, and a decade is a good period to cover.
- There were ESA launches every year from 2001 to 2011 but none in 2012, making that the first break in 10 years.

²A good tip when setting quiz questions!

- The next mission after Promise by André Kuipers was the Volare mission of Luca Parmitano of the ESA astronaut class of 2009. Thus began a series of missions with the new astronaut school. The last mission for the earlier class was therefore a natural cut off point for this account.
- While I was writing, ESA were launching astronauts to the ISS at such a rate that I had to draw the line *somewhere*, as otherwise I'd never have been able to finish the book!

For mission names, I decided not to use the upper case 'ISS' which ESA insisted on shoehorning into their titles. So, for example, I refer to Odissea rather than OdISSea, because I find the latter to be distracting to the reader.

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