# *The exhibit documents the rocket development - showing stamps, documents and covers.*

## *Introduction:*

### *1. Astronomers – promoting the rules*

The first chapter honors those scientists who discovered the rules of the planetary movements in our solar system. With their theories and calculations they paved the way for the modern spaceflight. The astronomers were **Copernicus, Brahe, Kepler, Gallilei, Encke** and others.

### *2. Visionaries and pioneers – the dream is the goal*

In the 19th century **Jules Verne** described the flight of a manned capsule to the Moon. Knowing that this kind of flight would kill the crew members, the fathers of spaceflight, **Zyolkovski** in the Soviet Union, **Goddard** in the USA and **Oberth** in Germany searched for methods of reaching high altitudes which could be survived. The liquid fuel rocket could bring men into space, also calculated by **Wernher von Braun.**

### *3. Stratosphere balloon flights – the soft way into space*

In the early 1930s ballooning was the only way to reach altitudes of more than 15 km. **A. Piccard** was the first human being who succeeded this target, performing physical experiments. Special technologies like pressure chambers were needed to ascent to very high altitudes.

### *4. First rockets trials and mails – promoting the way*

In the 1930s some engineers from all over the world, like **Schmiedl, Tiling, Zucker, Smith, Young, Roberti and Funes** launched their rockets to promote this technology. Their idea: We'll carry mail with rockets over valleys, islands and from ships while entering ports. During these experiments they tested many designs, materials and different solid fuels for their rockets, sold the rocket mail for their new projects.

### *5. Rocket development in Berlin-Kummersdorf and Peenemünde in the 1930/40s – finally the weapon A4/V2-Rockets*

In **Kummersdorf** a team around **H. Oberth** founded a Rocket Club, publishing rocket magazines and got money for their research. **Wernher von Braun** was an engaged student and grew with this group. Only ten years later **von Braun** became head of the **military A4-weapon** development, which led the first liquid fuel rocket into space by reaching more than 100 km altitude on **October 3rd, 1942 (Rocket No.3).**

### *6. The International Geophysical year 1957/58 – the space age begins*

This chapter shows the beginning of the space race between the USSR and the USA – the **Sputnik shock.** After the first satellite shot of **Sputnik 1** with the **military R -7 rocket** by the Soviet spacecraft designer **S. Korolev** on **October 4th, 1957**, the USA hurried to get their satellite into orbit – the Navy launch failed, **Wernher von Braun`s US Army Redstone** made it. **Explorer 1** reached its Earth orbit and a **J. van Allen** experiment onboard discovered a radiation belt which protects our planet from the dangerous radiation from the sun.

### *7. First men and woman in space – on the way to the Moon*

After the **Sputnik shock**, the USSR added another one – **J. Gagarin** became the first man in space in **April 1961. J.F.Kennedy** answered with a planned „landing on the Moon before this decade is out". The race to the Moon had already begun. In **1963 V. Tereshkova** became the first woman in space, **A. Leonov** became the first man to perform an **EVA**, while the USA just had a **Gemini** spacecraft in orbit. **W. von Braun`s** rocket, the **Saturn-V** was ready to fly in 1968 – **Apollo 8** cleared the way for the USA to the Moon in **December 1968** while the Soviets performed the first manned docking in Earth orbit. Explosions in Baikonur of the Soviet Moon **rocket N–1** set an end to the space race. In **July 1969 Apollo 11** landed successfully on the Moon - **N. Armstrong** set the first foot on the Moon. Five lunar landings followed.

### *8. The space stations - Salyut (USSR), Skylab (USA), ISS (International) and Tiangong (China) – time for real space mail*

In 1971 the USSR launched a spacecraft into orbit – unmanned, the **Space Station Salyut-1**. The first crew couldn`t perform a docking, the crew of **Soyuz 11** spent 3 weeks onboard – when returning, **Soyuz 11** lost its atmosphere and the crew **died.** The USA modified the **Saturn V** – the third stage became a manned Space station for 3 crews. 1975 was the year of the first USA/USSR-flight and docking in space – the **ASTP** became the first international space station. Three decades of **Space Shuttle** missions followed, the great Soviet space stations **Salyut-6/7, MIR** and the internationally one, **the ISS built up.** China followed with its manned space program in 2003 and installed space stations **Tiangong** in orbit. In the 2010`s private US companies developed spacecrafts offered to NASA. The Soviets installed permanent post offices in the space stations since **Salyut-6** – mail from the space and to space become reality, also for collectors all over the planet Earth.

## *Literature:*


1.) Walter M. Hopferwieser, „Pioneer Rocket Mail and Space Mail", Mediaprint Solutions GmbH, 2019, ISBN: 978-3-9500207-1-7
2.) http://www.Wikipedia.de, „Die freie Enzyklopädie", german and english language
3.) P. Baudin, M.and R.Weemaels, „Weebau Catalogue", R-editions s.a., Belgium, 2nd Edition, 1991, ISBN: 90-6812-020-4
4.) http://www.weltraumphilatelie.de, „Weltraum-Philatelie", Vereinshefte, Stuttgart Deutschland, ISSN: 0948-6097, since 1976
5.) http://www.g-w-p.ch, Space Phil News, „Gesellschaft der Weltall-Philatelisten", Vereinshefte, Hegnau Schweiz, since 1971
6.) Personal discussions with cosmonauts and astronauts during private meetings, stamp exhibitions and ASE congress


Important pieces are shown in red instead of blue passe-partout - *philatelic aspects in Italian letters*

Dr.Stephen Lachhein

## Synopsis:

## Important items for the exhibit „How Mankinds Dream to reach for the Stars became Reality“

-2 Flown Moon landing covers of Apollo 14 (Ed Mitchel) and Apollo 15 (Sieger)

-2 insurance covers from Apollo 11

-Copernicus full proof sheet imperforate from generalgouvernement

-Letter from Alexander von Humboldt and letter from Wernher von Braun

-Piccard flown stratosphere balloon flown cover from 1932

-Kipfer stratosphere balloon cover from 1932

-Piccard signed 3 stamps from Belgium 1932

-Ziolkowski page from his diary flown with Soyuz to ISS

-a huge amount of rocket mails especially from Schmiedl for example R1 and N6

- flown cover from Schmiedl first with rocket V16 and second directly lateer with Zeppelin to Brasil very rare!

-Tiling cover

-Several covers showing the development of the V2 in Peenemünde

-2 covers from the Kommnadostelle „S“ responsible for the launch coordiantion of the V2

- Gagarin launch (Vostok 1) cover red kiew cancel

Launch covers from the desaster with Space Shutlle STS 25 and STS 107 both signed by the crews

-Lake Champlain and Randolph rescue covers from Mercury missions (Shepard and Grissom)

-a huge amount of flown covers to the different space stations Saljut/MIR and ISS and back to earth

-Around 10 flown covers from the ISS adressed from the cosmonauts to the collector

-Flown covers from the chinese space missions

-Flown covers from the ISS with Dragon (SpaceX) to earth

-Complete full sheet of the first stamps from Kasakztan Michel 1 and 2, one kind of a piece

-Complete full sheet from the unkown astronaut, first man on the moon, one kind of a piece

-First russian crash mail, flown and rescued covers from the desaster flight Soyuz MS-10

-Complete full sheet of not issued stamps of Poland with Zenon Jankowski

-2 letters fom the prephilatelistic time from the „k.k Fireworks corps command Wiener Neustadt“

-1 letter fom the prephilatelistic time from Copenhagen 1807 „Congreve rockets bombardement of Copenhagen“

Short description of the exhibit:

## How mankind`s dream to reach for the stars became reality:

The exibit shows the development of the manned spaceflights and the investigations of the univers from the beginning with the first astronomers as there are Copernicus and Kepler over the first launches of satellites like Sputnik and Explorer, the competition between the Sowjets and the US to reach first the moon (Soyuz and Apollo) and the current reasearch missions to the different orbital space stations Salyut, MIR, ISS and Tiangong from China to open the way in the future to travel in deeper space including the private space missions for example with SpaceX.