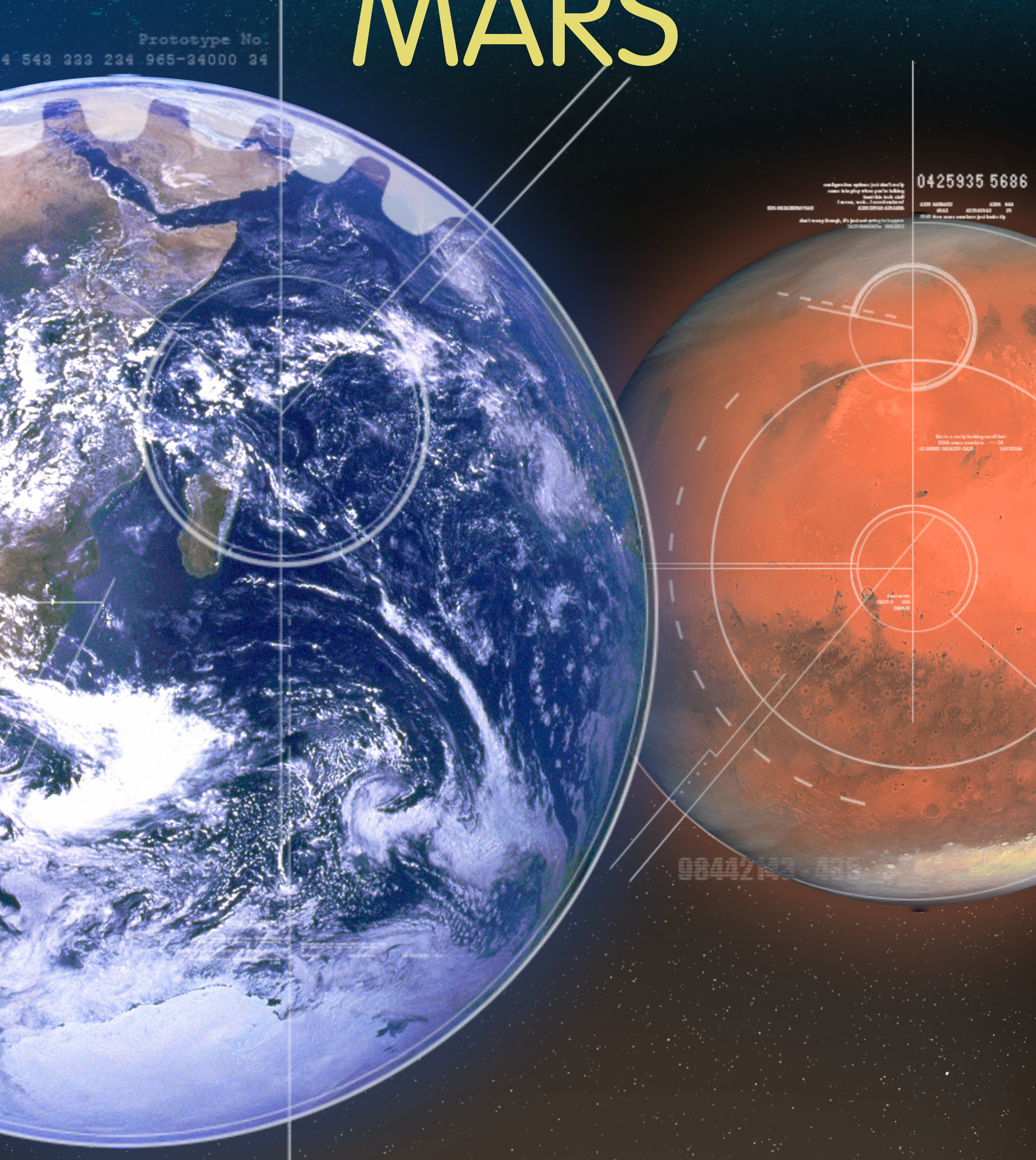
SPACE

MARS



COMPARISON EARTH/MARS

ERDE
Diameter: 12756 km
Moons: 1
Gravity: 100%.
hours/day: 24
Average temperature: +15° C
Inclination axis of rotation: 23.44°
Orbit period: 365 days

MARS
Diameter: 6794 km
Moons: 2 (Phobos and Deimos)
Gravity: 28% of the Earth
hours/day: 24,39
Average temperature: -55° C
Inclination axis of rotation: 25,19°
Orbit period: 687 days

MISSIONS

The history of the expedition to Mars goes back a very long time. As early as 1940 mankind dreamt of a mission to Mars, but it was not until 1960 that Mars was targeted for the first time as a mission goal. To date, there have been over 30 more missions, but more than half of them have failed. Only seven missions actually reached Mars.

MISSION VIKING 1

1975 - NASA's Viking 1 and Viking 2 probes make their way to Mars. On June 20, Viking 1 manages a soft landing on Mars. By November 11, 1982, the Viking 1 Lander will send information to Earth.

MISSION VIKING 2

Viking 2 also lands successfully on the Red Planet. A huge mass of data and over 50,000 photos are sent to Earth by the two probes. The equipment of the landers includes, for example: Gas chromatographs, mass spectrometers, meteorological instruments, colour cameras, a device for taking soil samples and instruments for biological experiments. On April 11, 1980, the latest data was received from Viking 2.

MISSION PATHFINDER

In 1997 NASA can celebrate a double success. The first probe after the Viking series lands on Mars - Pathfinder. Around 16,000 images are sent to Earth by him and his robot vehicle Sojourner. In September, the Mars Global Surveyor also enters orbit on the Red Planet and can map the surface. The most important discovery of this mission: The radar data indicate extensive occurrences of water ice in the subsoil of the polar regions of Mars.

MISSION SPIRIT AND OPPORTUNITY

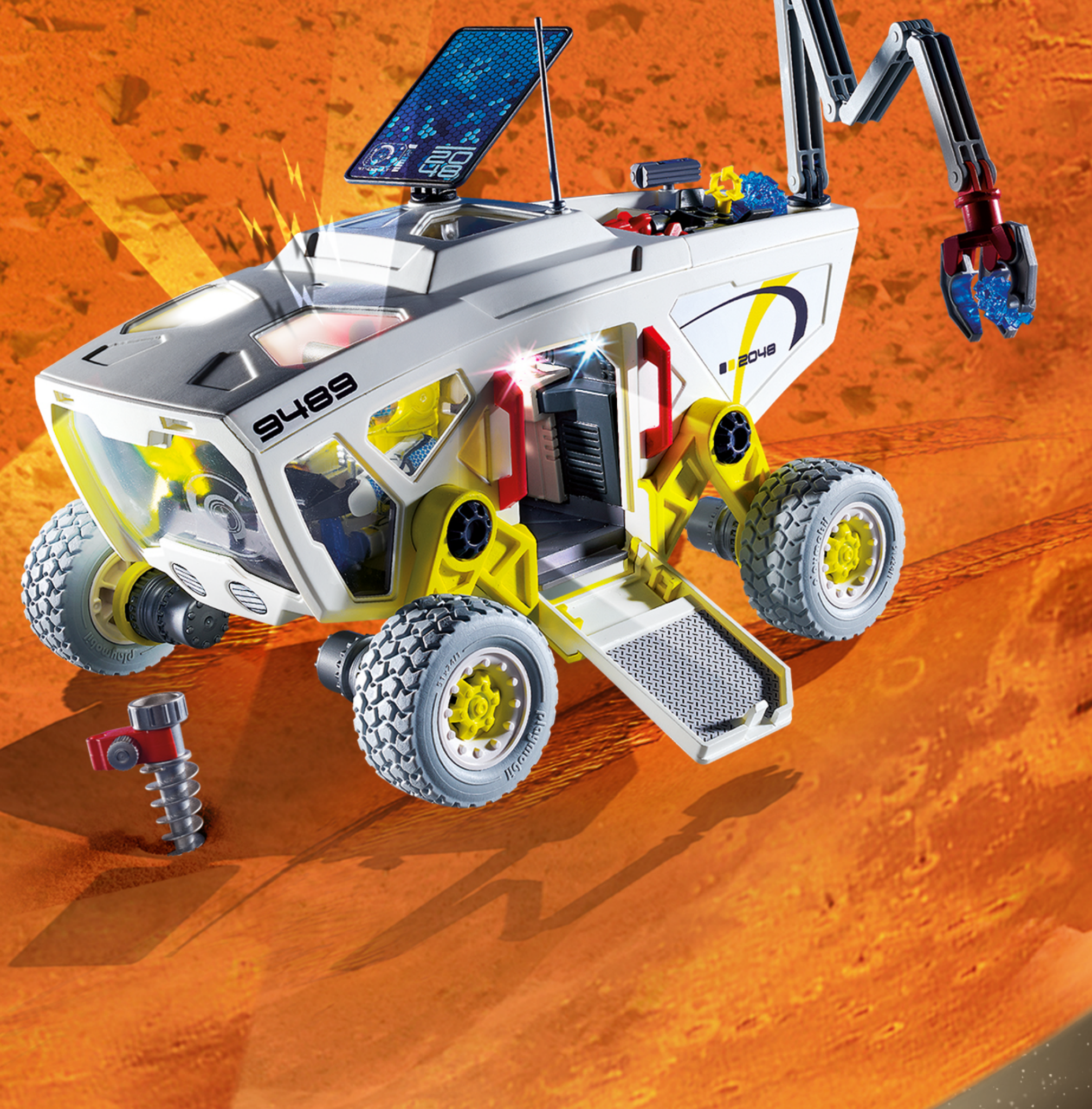
Spirit and Opportunity, two NASA rovers, make their first landing on the Red Planet in January 2004. The sensation follows beginning of March 2004: There must have been liquid water on Mars earlier. The Rover Opportunity detects sulphates (sulphur compounds) that can only form in liquid water. The two Mars rovers send several hundred thousand photos to Earth. In March 2010 the last signals will be received by Spirit, but Opportunity is still active on the surface of Mars after 13 years and transmits data to Earth.

MISSION PHOENIX

In May 2008, NASA's Phoenix probe lands in the Arctic latitudes of the northern Martian hemisphere. Phoenix is equipped with a two-meter long gripper arm, which makes it possible to search for ice that is suspected in the ground. Already the first dredging work on Mars is a direct hit: Phoenix can detect water ice with 100% certainty only a few centimetres below Mars dust. Unfortunately, the last signals will be received from Phoenix on November 2, 2008. Since the life span of this probe is dependent on solar energy and the days, as on Earth, in the far north of Mars become shorter in winter, the source of energy runs dry after a few months.

MISSION CURIOSITY

On August 6, 2012, Curiosity - the new NASA rover - lands on the surface of the planet in an impressive manner. A landing in the protective airbag, as with the predecessor models, is impossible due to its mass of 900 kilograms and the size of a small car, it would burst on impact. The alternative solution is a platform floating 20 metres above the surface of Mars with the aid of retrorockets: Skycrane. The Mars rover is lowered onto the surface by plastic ropes. Just a few days after landing, the rover provides further evidence of earlier water deposits on Mars. Among other things, Curiosity finds river pebbles baked together to form sediments. During the course of the mission, the Mars rover will examine soil samples in the on-board laboratory for traces of simple life forms. He will also climb the central mountain of Gale Crater to find out more about the climate history of Mars.



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