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sion like this one, says Nicollier, will help their application stand out, whether for the position of astronaut or for other jobs in aerospace, of which there are many.

Zimmermann found the Asclepios mission enriching and "a very rewarding communal experience". Becoming an astronaut remains an "absolute" dream for her. A dream or an objective? She is under no illusions about her future: "It's a job with so many incredibly interesting aspects," she says. Unfortunately, very few peo"It's harder to come back from Antarctica than from the International Space Station, even though it's on the same planet."

Anna Zimmermann

ple get to become astronauts. There is no way of knowing whether there will soon be a selection process. That's why she prefers to describe her ambition as a dream.

A more realistic goal for her is to conduct research into space travel, as a space doctor, for example. She is

considering such a career path but is not necessarily set on it: "My philosophy for life is to remain interested and open and see what opportunities arise."

# The research centre dream

And what if a job were to come up in the Antarctica station? "Yes, that would be my dream research position," she says - explaining in the same breath how she would have to

# A loose screw in space

Claude Nicollier is still the only Swiss person to have been in space. What was it like to be weightless? And what does he think now about expeditions to the Moon and Mars?

Past meets future astronaut Claude Nicollier taking a selfie with one of the Asclepios project participants Photo: Asclepios IV Mission



### INTERVIEW: DÖLF BARBEN

Claude Nicollier, the astronaut from Vevey, is one of Switzerland's most famous sons. He left the Earth four times between 1992 and 1999 to spend a total of 42 days, 12 hours and five minutes in space. He impressed experts with his calmness while helping repair the Hubble Space Telescope. Nicollier celebrated his 80th birthday on 2 September 2024

There is another Swiss astronaut: Marco Sieber from Berne (see "Swiss Review" 2/2023). But he has yet to visit space. Nicollier is thus still the only Swiss person to have experienced weightlessness, for example. It's not usually the first thing that comes to mind when thinking about space travel. Still, as simulations of space missions (see report on page 18) show, prolonged weightlessness cannot be replicated here on Earth.

# Claude Nicollier, when and how does weightlessness kick in when going into space?

When the space shuttle reaches orbit and the engine cuts off, you become weightless all of a sudden. Many people don't feel well during the first few hours, like being seasick. Once your body adjusts, you can enjoy it.

#### How do you enjoy it?

You can walk wherever you want instead of having to stay on the floor. You can walk on the ceiling or the wall. It's a wonderful feeling.

Astronauts Michael Foale (left) and Claude Nicollier replacing sensors on the Hubble Space Telescope (1999). Nicollier is securely attached to the space shuttle's robotic arm. Photo: Keystone/NASA

prepare for it. This shows that she has done her homework. She says that being completely cut off for months is a big problem. You can't just go home – not even if someone close to you falls ill or dies. "It's harder to come back from Antarctica than from the International Space Station, even though it's on the same planet," she says, adding: "I could see myself doing it."

https://asclepios.ch



# And what's sleeping like?

The space shuttle had sleeping bags, which you could attach to a wall or the ceiling. You can't just float around while sleeping.

## Why not?

You need a certain stability to sleep. Especially for the head. You attach your head to the pillow with a fabric band. It's the same on Earth: if your head is sticking out over the end of the bed, you won't sleep.

# While repairing the Hubble Space Telescope, you worked with a battery-powered screwdriver. Were you not at risk of suddenly turning yourself instead of the screw?

Yes, that is a risk. That's why you have to hold onto something with your other hand before using a screwdriver. If you are using both hands, you need to anchor yourself with your feet. As soon as you start expending energy in a state of weightlessness, there is an action and a reaction. You have to practise for that.

## How do you do that? You can't simulate weightlessness.

You have to differentiate. If you move around slowly in a water tank, the sensation is similar to weightlessness. So, that's a good way to practise working with tools. But it only works for slow movements. You can also use your arms and feet to push off when underwater, and that doesn't work when you're weightless.

# If you could have your time again, would you still want to be an astronaut?

Most definitely.

#### And would you fly to the Moon? Or even to Mars?

I would love to fly to the Moon, for sure. It's not even that far, just a few days; it's almost a suburb of the Earth. Mars is a different proposition. If I were 30, I probably would go for it – in the knowledge that it would be very draining, both mentally and physically.

#### Why?

Mars is very far away. The Earth would just be a small blue dot surrounded by blackness. It would take up to 20 minutes for radio signals to reach it. It would be a very isolating experience for a person. That would be extremely challenging psychologically.

#### What does that mean for the gradual colonisation of Mars?

People who are born to explore could take on a journey like that with all the huge difficulties it entails. That's why I see the exploration of Mars as feasible. But I don't see millions of people moving there.

You can find more pictures of Nicollier's space missions in our online version of this article at www.revue.link/nic