

## 100 Sextillions of Stars

In this projection we will be able to see approximately 2500 stars as soon as our eyes will have adjusted to the darkness. This is quite a lot of stars, but these are by far not all stars in the universe.

Researchers estimate the number of stars to 100 sextillion. We can hardly imagine what 100 sextillion means. What we can imagine, is a tablespoon full of sand. If we were to count the grains of sand on a tablespoon, this would probably take a long time, because it is quite a fumbling. After a while we would probably come to a number that is about as large as the number of stars we now see here in the planetarium: 2500. The number of stars in the universe, however, is about as large as the number of grains of sand in the Sahara desert.

The Sahara Desert in Africa is about 6 feet high covered with sand and has about the size of the United States of America.

This is an unimaginably large number which reminds us that we cannot know much about the stars, because we are not even able to count them.

There are also researchers who estimate the number of stars in the universe to 200 sextillion. These are perhaps more stars than there are grains of sand on the whole earth.

If we said: The stars have been there for 24 hours; then we would have to say: We humans as living beings have only existed for a second.

Thus, the stars existed very long before us humans. One thing is clear: Before a person can develop, a planet like the Earth has to be there first. And before a planet can arise, there first has to be a star like the sun. Therefore, we humans were created only as a last resort.

But as long as there have been people, we look up at night to the sky.

We explore the sky by night, we see the stars and we are guided by the stars.

Former times people have probably done that a lot more often than we do today. Previously, there was no TV and no internet, no radio and no phone and no navigation equipment.

At that time, people used to sleep a lot more often outside at night, because they did not have houses like we have today. And then they were watching the stars while falling asleep. And at some point, someone might have said, "Hey guys look, those seven stars, I saw them yesterday and the day before; and last week too! – I promise you; they will be there again tomorrow!"

And they will. Every night the stars appear to us in the same order.

And because there are so many stars, the people agreed upon the imagination, that some stars would belong together. Those stars that belong together, we call constellations.