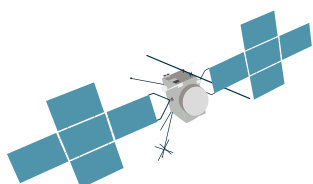


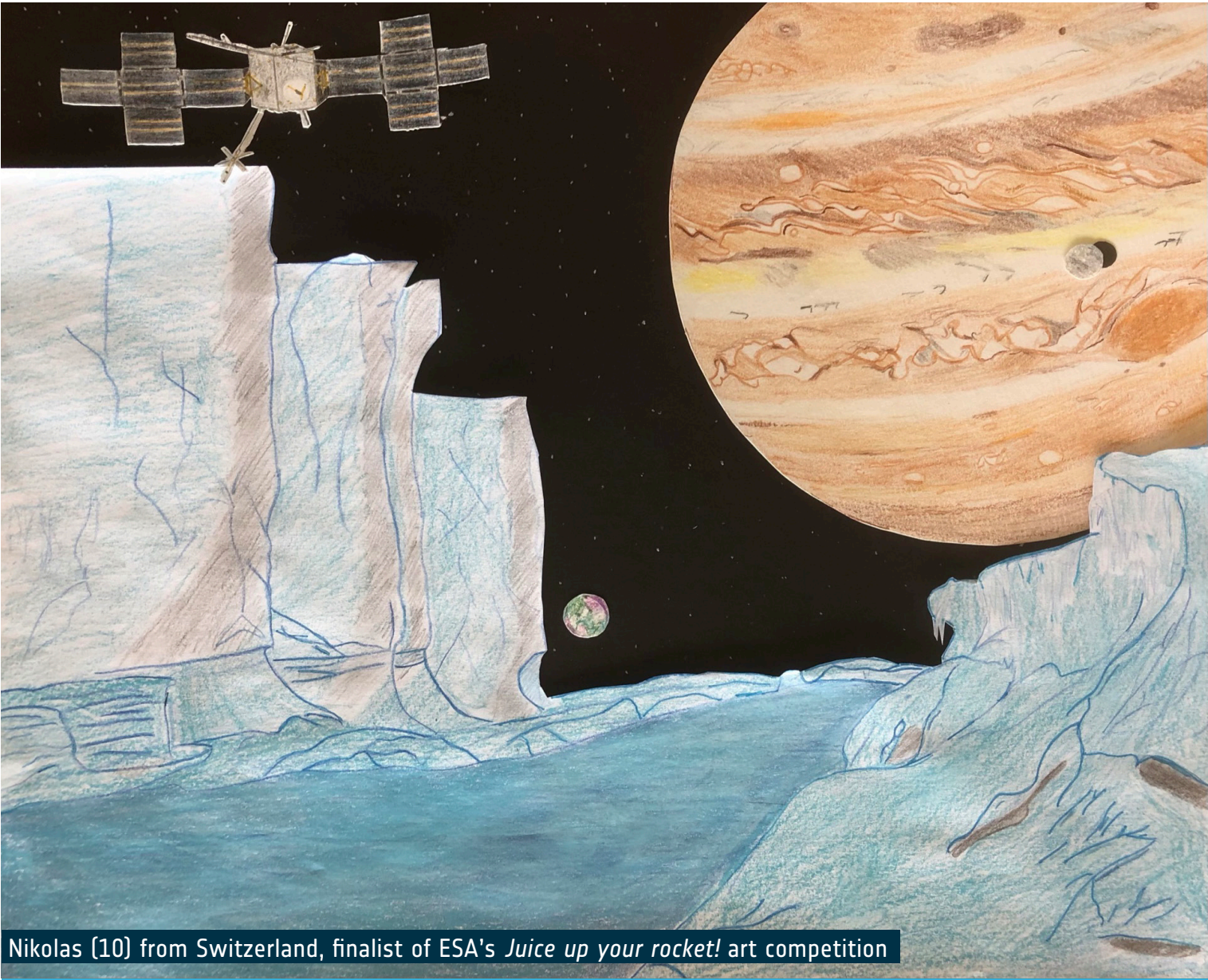
2023

## JUICE & children of the world



"Science and in particular Astrophysics and Space Science are inspiring all reaches of people. It is wonderful to see that in particular the young generation, whom we so urgently need for our future society, can be the most excited of all! I thank all the children of the world who have participated in our competition in this difficult time and congratulate the winners." Prof. Günther Hasinger, Director of Science, ESA

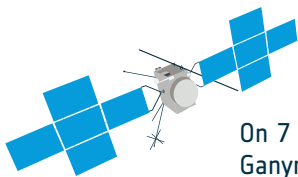




Nikolas (10) from Switzerland, finalist of ESA's *Juice up your rocket!* art competition

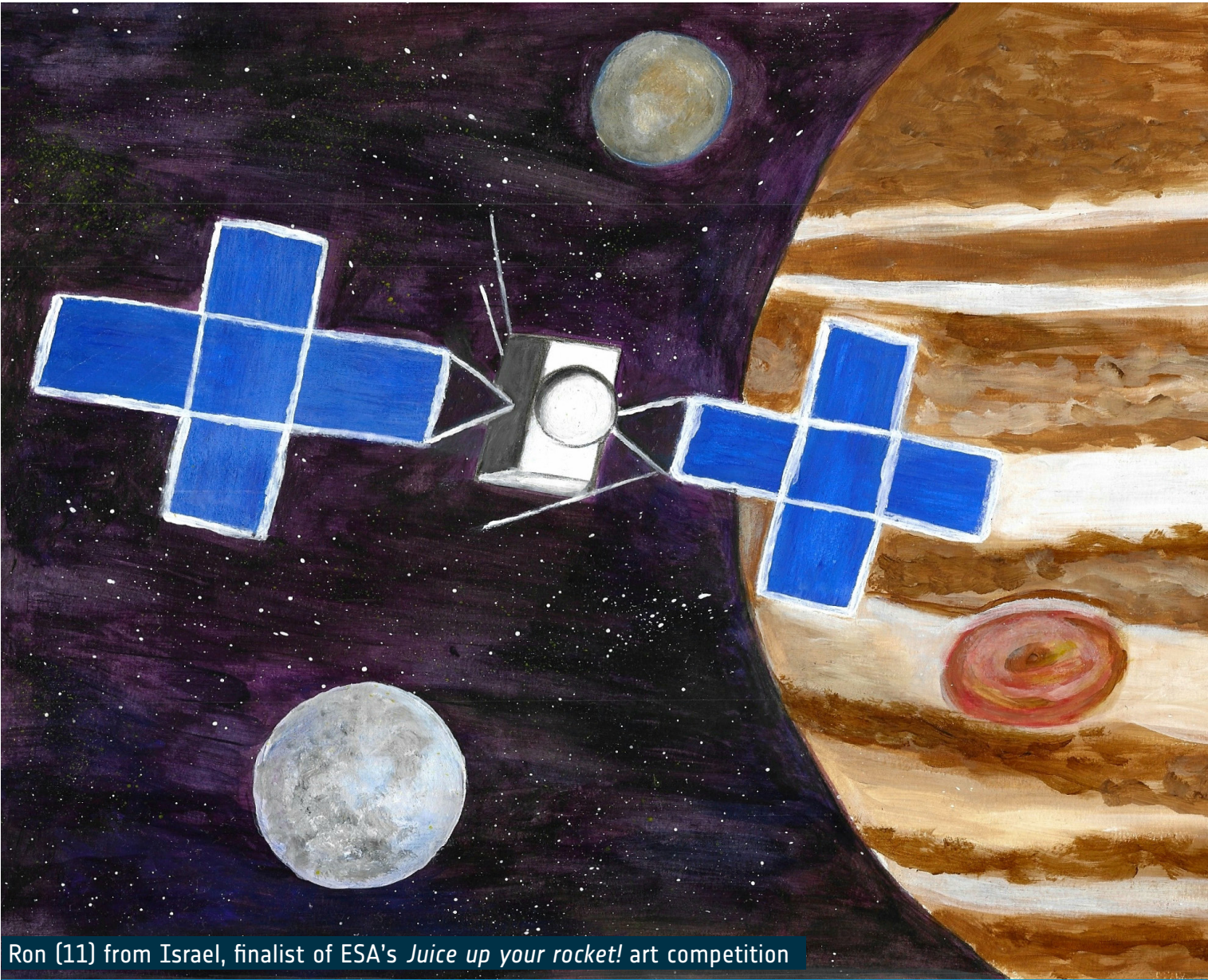
JANUARY

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On 7 January 1610, Galileo Galilei discovered Jupiter's 4 large moons with his telescope. Io, Europa, Ganymede and Callisto are known as the 'Galilean Moons'. Did you know that the three icy moons Europa, Callisto and Ganymede have a liquid ocean underneath their icy surface? Ganymede contains more water than all of Earth's oceans combined! Identifying liquid water is important in the search for life as we know it.

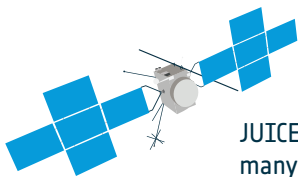




Ron [11] from Israel, finalist of ESA's *Juice up your rocket!* art competition

FEBRUARY

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JUICE is powered by solar panels that cover a surface of 85m<sup>2</sup>. That produces enough electricity to power many homes on Earth. But when it arrives to Jupiter, JUICE will have only enough electricity to power a microwave oven!

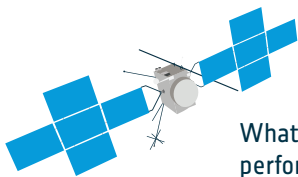




Samuel (4) from El Salvador, finalist of ESA's *Juice up your rocket!* art competition

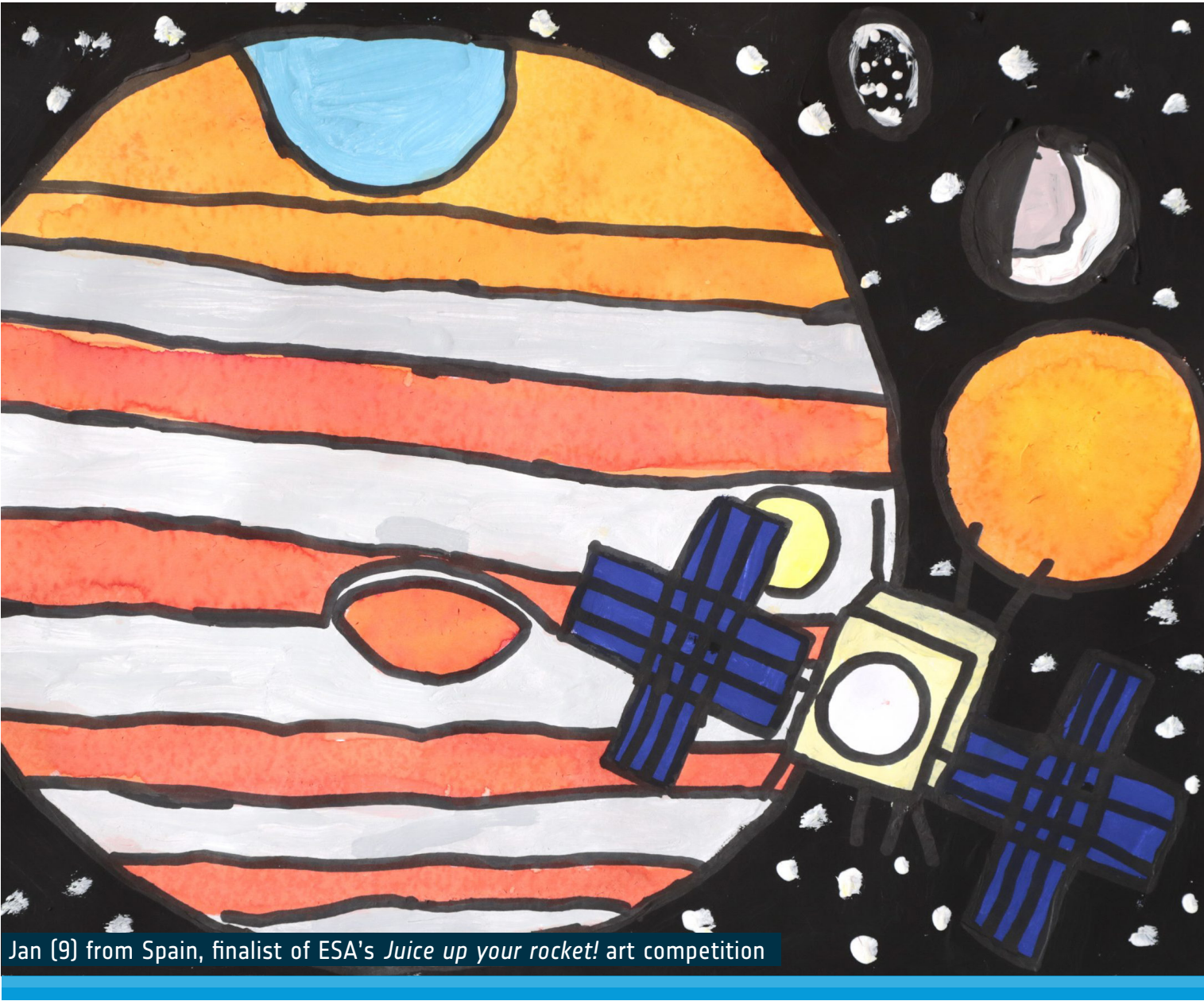
## MARCH

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What are the reasons behind Jupiter's weather and climate and how do these change over time? JUICE will perform many orbits of Jupiter so it can understand its constantly changing atmosphere and why this is happening.

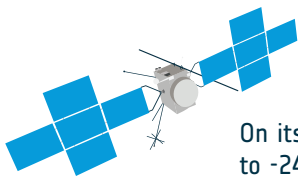




Jan [9] from Spain, finalist of ESA's *Juice up your rocket!* art competition

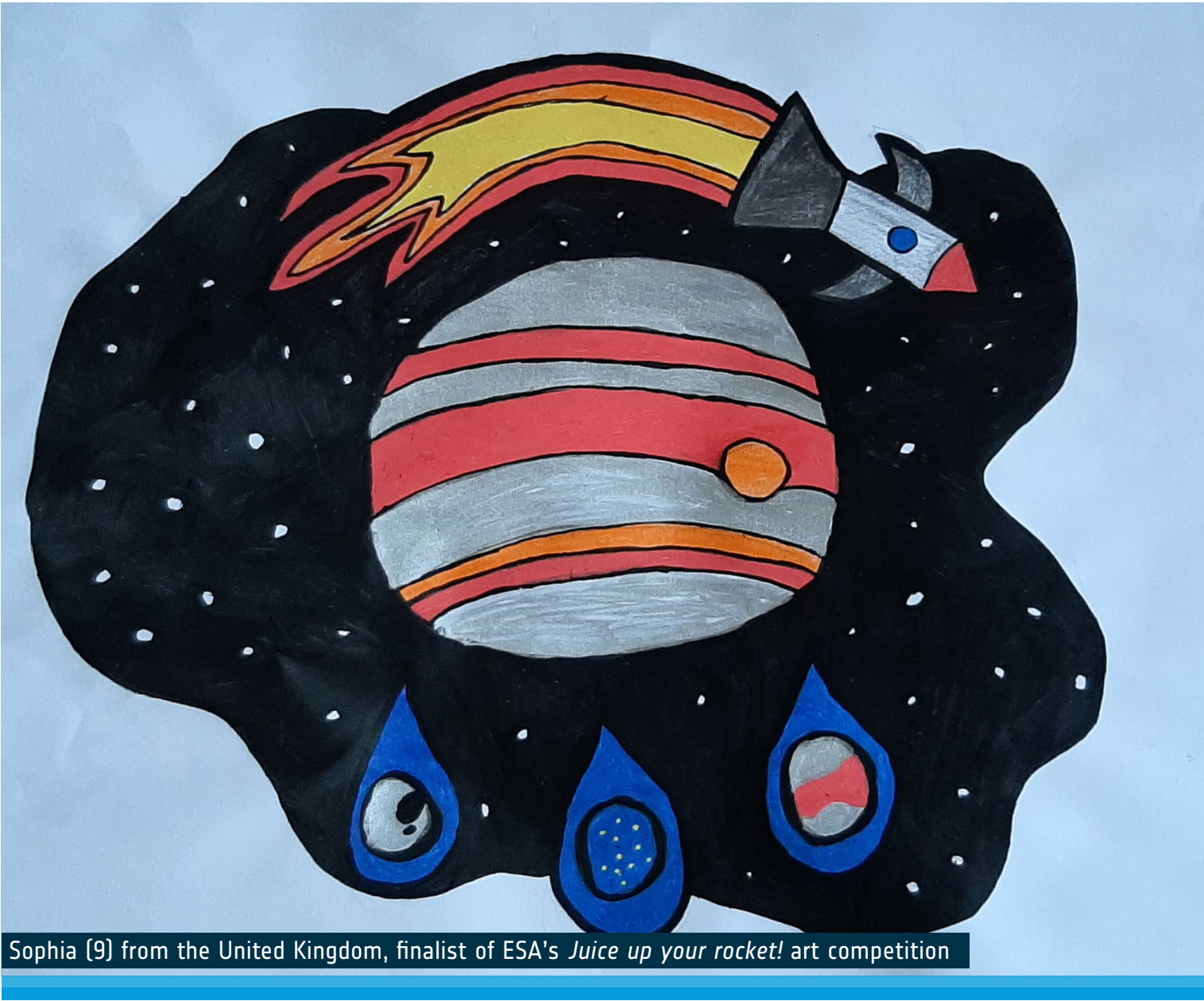
APRIL

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On its way to Jupiter, JUICE will experience temperatures ranging from +230°C when passing by Venus, down to -240°C when it finally arrives at Jupiter. This is why it is wrapped up nice and cosy in about 500 thermal blankets that weigh about 100 kg. That's roughly the amount of foil covering 100,000 chocolate Easter eggs!

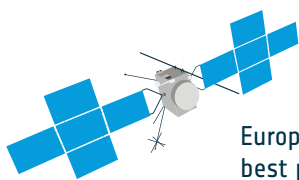




Sophia (9) from the United Kingdom, finalist of ESA's *Juice up your rocket!* art competition

MAY

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Europa is the smallest of the Galilean moons. Underneath its surface is a water ocean. Europa is one of the best places in the Solar System to search for signs of life beyond Earth. Did you know that there are geysers erupting on Europa?

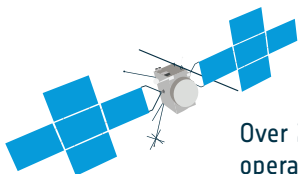




Nils (6) from Estonia, finalist of ESA's *Juice up your rocket!* art competition

JUNE

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Over 2,000 people from 23 countries designed and built the JUICE spacecraft. More than 40 people will operate it during its journey!

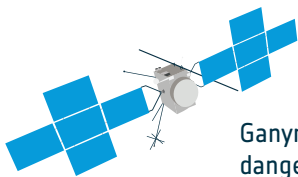




Leif (10) from Germany, finalist of ESA's *Juice up your rocket!* art competition

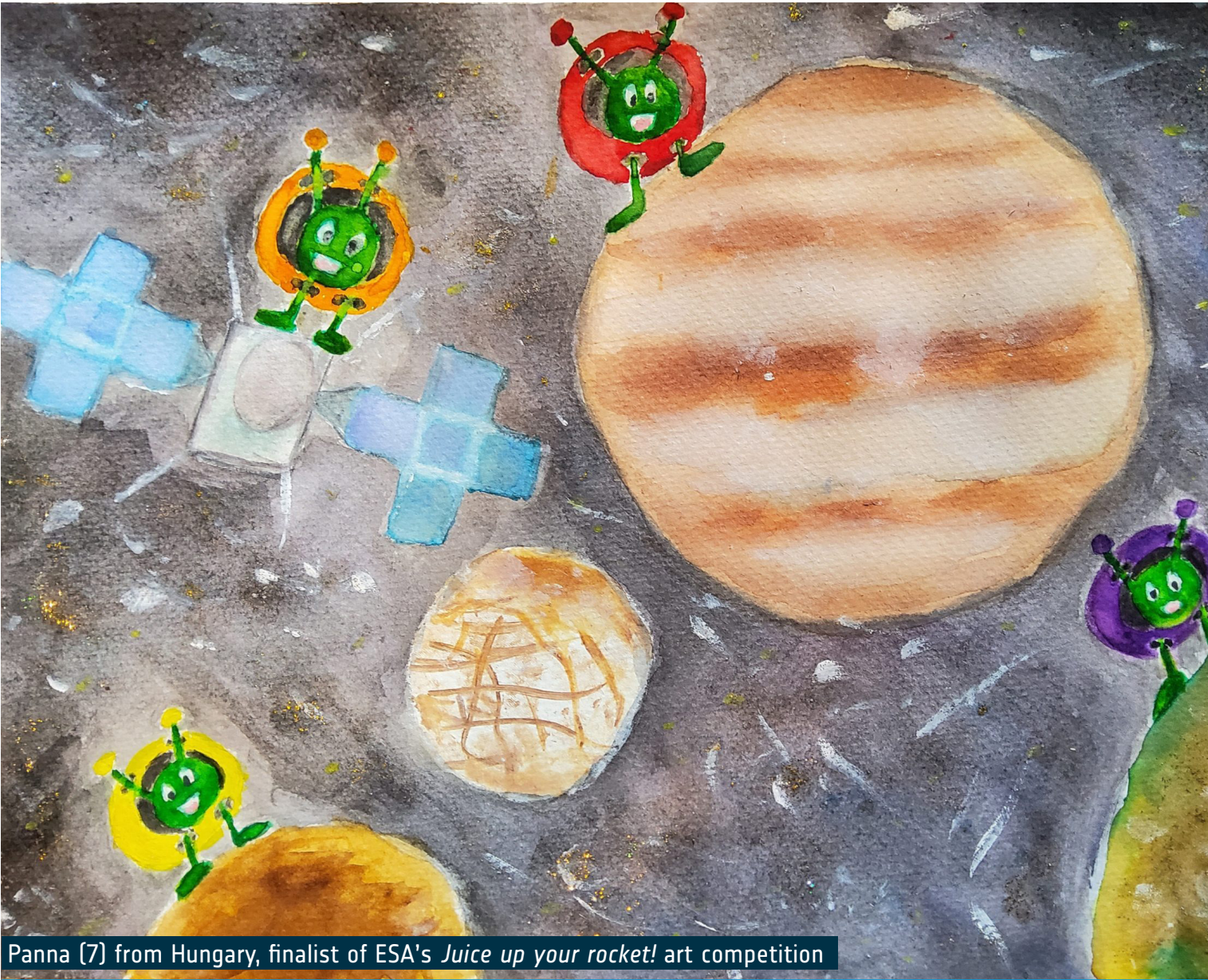
JULY

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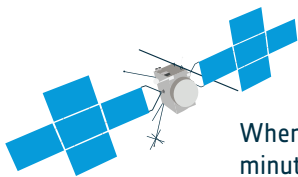
Ganymede is the only moon to have its own magnetic field. It is similar to Earth's, which protects us from dangerous radiation coming from the universe. Ganymede is also bigger than planet Mercury!





## AUGUST

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When you call your friends on the phone, they instantly reply. When we call JUICE out in space, it will take 90 minutes to hear back from the spacecraft. This is because it is over 600 million km away and the signal needs time to travel that distance. In case of problems, the spacecraft is able to identify the issue and fix it by itself.

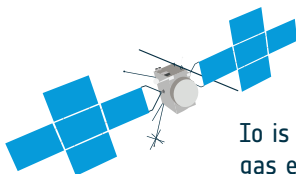




Chenitha (5) from Sri Lanka, finalist of ESA's *Juice up your rocket!* art competition

SEPTEMBER

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Io is the most volcanically active object in the Solar System. This moon releases about 1 tonne of poisonous gas every second, which is 2,000 times more than all the volcanic eruptions on Earth!

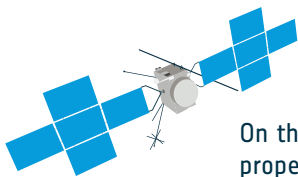




Bianca (9) from Italy, finalist of ESA's *Juice up your rocket!* art competition

OCTOBER

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On the rocket, JUICE weighs over 6 tonnes, but most of this weight is fuel. It's like a small bus loaded with propellant, because it needs a lot to travel to Jupiter and to enter its orbit.

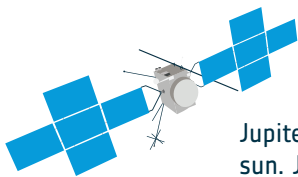




Samuel (5) from France, finalist of ESA's *Juice up your rocket!* art competition

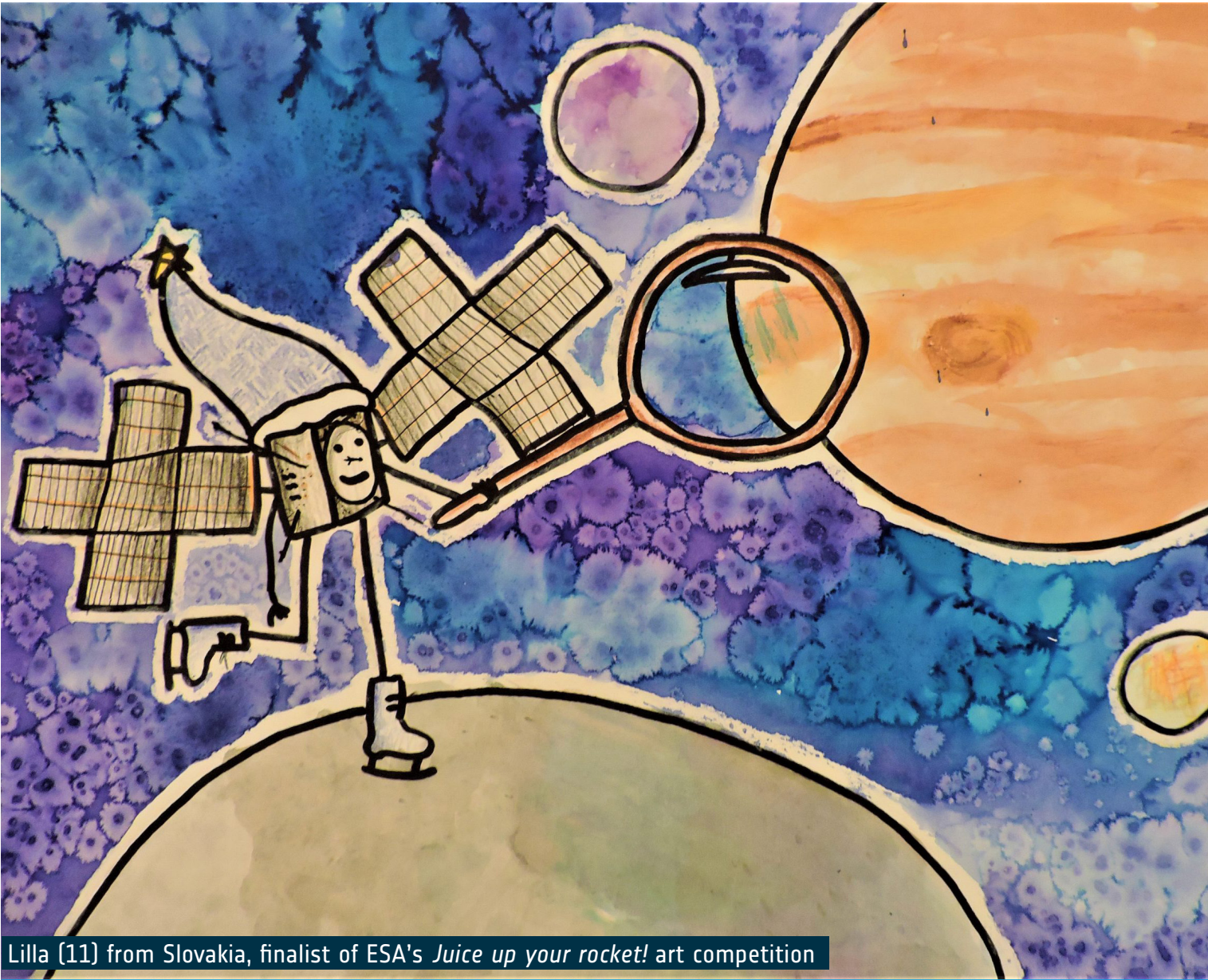
## NOVEMBER

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Jupiter will be closest to Earth on 3 November, when the two planets will be in line on the same side of the sun. Jupiter will be visible in our night sky. Out in space, JUICE will perform 35 fly-bys of Jupiter's moons over 3 and a half years. It will visit Europa twice, Ganymede 12 times, and Callisto 21 times. We can do some great science with closer views of these moons!

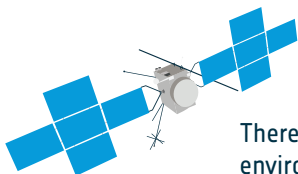




Lilla (11) from Slovakia, finalist of ESA's *Juice up your rocket!* art competition

DECEMBER

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There are 10 instruments on board JUICE. They will record images and other information about the environment around Jupiter and its moons. JUICE will collect over 5,000 GB of data, which is over 1 million pictures taken on a camera phone.





Rajkovics [11] from Slovakia, honourable mention in ESA's *Juice up your rocket!* art competition

JUICE Mission



ESA Kids



→ THE EUROPEAN SPACE AGENCY