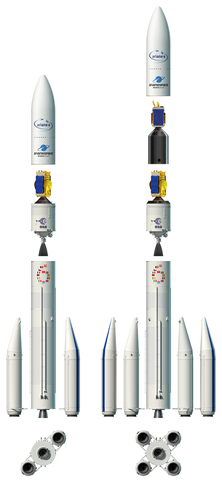
Blast off with ESA's new rockets!



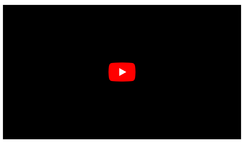
Ariane 6 rockets can be equipped with two strap-on boosters (on the left), or four (on the right). Copyright: ESA- David Ducros, 2018

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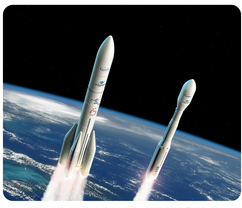
03 June 2019

ESA are busy developing new and exciting ways of launching satellites and cargo into space. Here you can find out all about Ariane 6, Vega-C, and Space Rider!

Launching in 2020 will be ESA's Ariane 6! This powerful new rocket will be over 60 metres tall, and be available in two types. The A62 version will have two strap-on boosters, allowing it to launch cargo weighing up to 7000 kg. If even more power is needed, then the A64 version will be called upon. Featuring four strap-on boosters, this mammoth rocket will lift payloads of up to 16 000 kg into space!



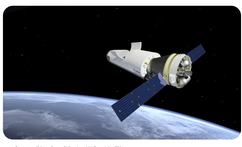
Ariane 6 rockets will put satellites into orbit to help with communication, navigation, meteorology, observing the Earth, and lots of other kinds of science. It is not just large, heavy satellites that will be carried by Ariane 6, though. Lighter satellites will be able to "piggyback" on the launch of larger ones, meaning that many missions can be sent to space at the same time on the same rocket!



An artist's impression of an Ariane 6 (on the left) and a Vega-C (on the right). Copyright: ESA - D. Ducros

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Also scheduled for first launch in 2020 is a rocket called Vega-C. Standing 35 metres tall, it will be more powerful than ESA's current Vega rocket, and will be able to place equipment of different shapes and sizes in space. The Vega-C rocket will also launch a high-tech new ESA craft called Space Rider!



Soon we will have Space Riders in orbit! Copyright: ESA

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Space Rider will be like a mobile space laboratory. Fitted with different experiments depending on the mission, Space Rider will let its cargo do lots of different things, such as:

- Perform tests in microgravity
- Test new types of robots
- Observe our planet Earth
- Experiment with new communication technology
- Inspect satellites in orbit around Earth

After being launched on a Vega-C rocket, Space Rider will be in orbit for about two months. Then, instead of burning up in the atmosphere, or being left in orbit as space junk, it will land back on Earth and the scientists and researchers will get their experiments back. Space Rider can then be prepared for its next mission. Reusing Space Rider in this way makes a lot of sense, as it is both cheaper and better for the environment.



Space Rider offers return tickets to space, but not for humans. Copyright: ESA

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ESA have been working with engineering companies across Europe to develop Ariane 6, Vega-C, and Space Rider. In fact, over 600 industrial partners have contributed to Ariane 6. These developments keep Europe at the forefront of rocket technology and allow ESA to continue exploration of space without relying on other space agencies for launches.

It is a very exciting time to be interested in space. With ESA's Ariane 6, Vega-C, and Space Rider systems being ready soon, many more exciting missions are just around the corner!

Cool fact: These new rockets will be launched from Europe's Spaceport in French Guiana, which covers the area of 255 football fields!

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