

Unfolding Gaia

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(Phys.org) —Gaia, ESA's billion-star surveyor, will be launched into space towards the end of this year. In the meantime, ESA Space Science has launched a new 'minisite' focused on the Gaia mission.

At www.esa.int/gaia you will find the latest news from the mission, as well as background articles explaining the [mission objectives](#), the spacecraft, its heritage and more.

You'll also find links to in-depth reports and journal entries covering the test campaign as Gaia was put through its paces before being shipped to ESA's launch site in Kourou.

Once in space, Gaia will spend five years determining the precise distances and velocities of a billion stars. It will observe each star about 70 times, recording vital statistics such as brightness, colour and temperature.

The resulting census will enable astronomers to identify different generations of stellar populations, and reconstruct their journey through space over time, thus providing the most detailed picture of our Galaxy's structure and its evolution ever achieved.

In the animation presented here, Gaia is shown shortly after launch as it unfolds its 10 m-wide [sunshield](#) 'skirt'.

The shield has two purposes: to shade Gaia's sensitive telescopes and cameras, and to provide power to operate the spacecraft. Gaia will

always point away from the Sun, so the underside of the skirt is partially covered with [solar panels](#) to generate electricity.

New animations like this, along with supporting background articles and topical news items, will be added to the minisite as the launch draws nearer, to explain in more detail the exciting science that [Gaia](#) will perform and how it will help us learn more about our place in the Universe.

Provided by European Space Agency

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