

Gaia status update—safe mode and recovery

March 22 2018



Credit: European Space Agency

Last month, ESA's Gaia satellite experienced a technical anomaly followed by a 'safe mode' event. After thorough examination, the spacecraft was successfully recovered and resumed normal scientific operations, while the mission team keeps investigating the exact cause of the anomaly.

On 18 February, errors of two [electrical units](#) on the [service module](#) of Gaia led the spacecraft to trigger an automatic safe mode. Safe modes occur when certain spacecraft parameters fall out of their normal operating ranges and the spacecraft automatically takes measures to preserve its safety. During this safe mode, the [science instruments](#) were disabled in order to protect them, and telecommunication with Earth took place through the spacecraft's low-gain antenna.

Following the anomaly, the mission team conducted an initial inquiry into what caused the spacecraft to activate the [safe mode](#). They quickly identified the problem as deriving from a failure in one of the two transponders on board Gaia, but the root cause of the malfunction is still being investigated. After an in-depth inquiry, the team recovered the satellite, which went back to its normal scientific operations on 28 February using the second identical back-up transponder.

The team is still investigating the origin of the anomaly and its possible relation to the lifetime of the second transponder. Meanwhile, Gaia has been collecting data since it resumed operations at the end of last month.

Scientists worldwide are looking forward to the [second data release](#) of

Gaia, which will take place [on 25 April](#) and is based on observations performed between mid 2014 and mid 2016. The mission has already collected all data needed for its [third release](#); these data will be processed and analysed over the next few years.

Provided by European Space Agency

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