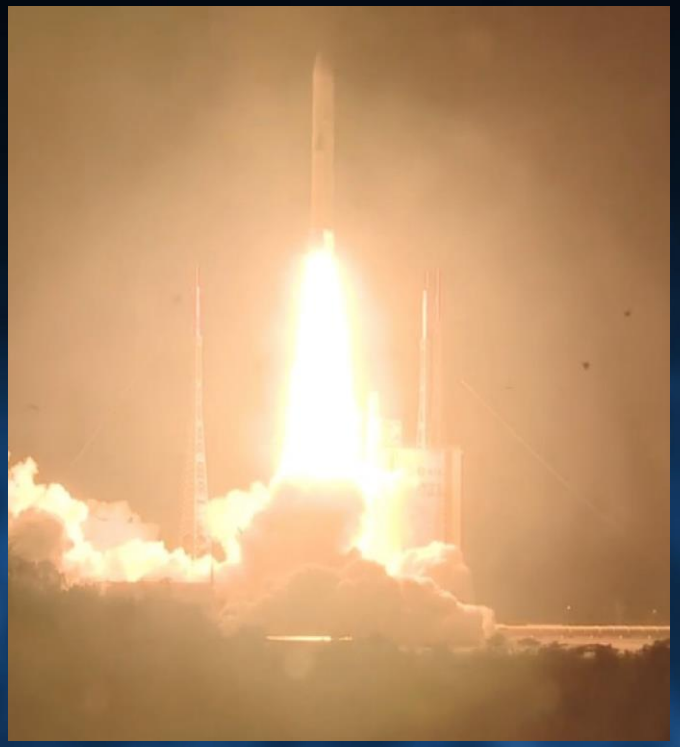
GOLD Mission to Image Earth's Interface to Space

NASA's Global-scale Observations of the Limb and Disk, or GOLD, mission successfully launched aboard SES-14, a commercial communications satellite, following separation from an Arianespace Ariane 5 rocket. SES-14 launched Thursday, Jan. 25, 2018, at 5:20 pm EST from the Guiana Space Centre in Kourou, French Guiana. GOLD is a heliophysics mission that uses an ultraviolet imaging spectrometer and flies aboard SES-14. It is the first NASA science mission to fly as a hosted payload on a commercial satellite.

GOLD will investigate the dynamic region where Earth's uppermost atmosphere meets near-Earth space: the coupled ionosphere-thermosphere system that is increasingly part of the human domain. Historically difficult to observe, this little understood system responds to terrestrial weather in the lower atmosphere below, space weather from above and conditions in Earth's magnetosphere.

From its geostationary vantage point above the Western Hemisphere, GOLD will provide global-scale measurements of the upper atmosphere's temperature and composition, scanning the entirety of the Earth's disk every half hour. At this unprecedented cadence, the mission enables study of the drivers responsible for the day-to-day weather, rather than long-term climate, in this critical boundary layer.



An Ariane 5 launches on Jan. 25, 2018, at 5:20 pm EST, with NASA's newest mission – GOLD – on board.

A few seconds after ignition of the upper stage, the second tracking station located in Natal, Brazil, did not acquire the launcher telemetry. This lack of telemetry lasted throughout the rest of powered flight. Arianespace states that initial investigations show that the situation results from a trajectory deviation. SES has announced that it has successfully established a telemetry and telecommand connection to its SES-14 spacecraft and is setting up a new orbit raising plan in response to the anomaly that occurred during the launch. SES informed NASA that there is minimal impact on the SES-14 satellite other than the satellite will reach geostationary orbit four weeks later than originally planned. As the spacecraft is in good health, we anticipate no effect on the quality of GOLD observations and data.