Euro-Russian craft enters Mars orbit, but lander's fate unknown

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High-stakes manoeuvres should see a lander dubbed Schiaparelli make a dash for the surface of Mars, while the Trace Gas Orbiter enters orbit in phase one of the ExoMars mission

Europe and Russia celebrated placing a robot explorer into Mars orbit on Wednesday, but ground controllers faced an anxious night searching for the tiny lander it had despatched to the Red Planet's surface.

The "Schiaparelli" lander, a trial-run for a Mars rover to follow, was meant to touch down at 1448 GMT, after separating from its mothership, the Trace Gas Orbiter (TGO), on Sunday.

But contact with the paddling pool-sized lander was lost during its six-minute descent through the Red Planet's thin, carbon dioxide-rich atmosphere.

"It's clear these are not good signs," ESA operations head Paolo Ferri said at ground control in Darmstadt, Germany. "But we need more information" before declaring the operation failed.

Schiaparelli was Europe's first attempt at a Mars landing since the British-built Beagle 2 was lost without trace 13 years ago .

An update should be ready by 0800 GMT on Thursday, Ferri said.

On the upside, flight operations manager Michel Denis announced that the TGO itself, which is to sniff Mars' atmosphere for gases possibly excreted by molecular life forms, had correctly entered Red Planet's orbit.

"It's a good spacecraft in the right place, and we have a mission around Mars," he said.

The TGO and Schiaparelli comprise phase one of the ExoMars mission through which Europe and Russia seek to join the United States in probing the hostile Martian surface.

Schiaparelli's experiences will inform technology for a rover set for launch in 2020—the second phase and high point of ExoMars.