

# Solar plane departure from Japan for Hawaii postponed

June 23 2015, by Miki Toda, Koji Ueda And Elaine Kurtenbach

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A solar-powered plane carrying no fuel has postponed its departure from central Japan for Hawaii due to worse than expected weather conditions.

Swiss pilot and project co-founder Bertrand Piccard said the weather window for the flight early Wednesday had closed. After analyzing conditions, the decision was made to take the plane back to its mobile hangar.

"It's a bad moment. It's really a bad moment. It was on the edge. We took the decision to go, but not everybody was enthusiastic. We had a conclusion that it's not worth trying anymore," said Piccard, who is taking turns flying the plane with his co-pilot Andre Borschberg.

Borschberg, who is to fly the Japan-Hawaii leg of the round-the-world journey, sat for hours in the cockpit waiting and then got back out.

"I trust they took a good decision. We discussed it on the radio. Despite the fact it's very hard it's the right way to go," he said in an interview carried live on the Internet.

A live video feed showed the staff in the control center in Monaco engaged in intense discussions over the weather and possible strategies. The plane needed to take off before sunrise because otherwise it would become too hot and windy to either leave or return it to the inflatable mobile hangar at Nagoya's Komaki airport.

Borschberg landed on June 1 while en route from the Chinese city of Nanjing to Honolulu. He was to fly the plane solo during the roughly five-day trip, taking short naps, doing yoga and meditating to endure the lack of sleep.

The airplane carries no fuel, so project engineers are using simulations to determine when it is safe to fly. The first Pacific leg is the riskiest because there is no place to land.

In the end, the project's simulation team decided conditions on day four of the journey would likely be too cloudy for the plane's batteries to recharge safely, Piccard said, expressing sympathy for Borschberg.

"He knows, like us, that it's better to get out of the plane on the tarmac in Nagoya than on the 3rd day with a parachute overhead," Piccard said in an interview from Monaco. He is taking turns with Borschberg in flying the plane solo.

Borschberg has been waiting for a weather front stretching from Alaska to Taiwan to clear enough for him to resume the 8,175-kilometer (5,079-mile) journey across the western Pacific, the longest leg of the round-the-world journey which began in Abu Dhabi on March 9.

On the ground in Nagoya, the plane was slightly damaged when a cover was touselled by the wind, but it has been repaired and ready to go for days.

The Solar Impulse 2 is powered by more than 17,000 solar cells on its wings that recharge its batteries, enabling it to fly. But bad weather and nights are challenges because diverting around clouds takes extra energy, and the aircraft is not designed to withstand rain, turbulence and heavy winds.

The aircraft travels at about the same speeds as a vehicle. At night, it descends from its maximum altitude of 8,500 meters (27,900 feet) to 3,000 meters (9,850 feet) to minimize power consumption as it draws from its batteries.

In the morning, the plane resumes producing power, but it needs to have enough left-over power to ascend to the daytime altitude.

The Solar Impulse project is meant to demonstrate the potential of improved energy efficiency and clean power, though solar-powered air travel is not yet commercially practical, given the slow travel time, weather and weight constraints of the aircraft.

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