After long wait, Malaysia releases jet data

May 27 2014, by Chris Brummitt

A visitor looks out from the viewing gallery as Malaysia Airlines aircraft sit on the tarmac at the Kuala Lumpur International Airport (KLIA) in Sepang, Malaysia, Tuesday, May 27, 2014. The Malaysian government on Tuesday released 45 pages of raw satellite data it used to determine the flight path of the missing jetliner, information long sought after by some of the relatives of the 239 people on board the plane. (AP Photo/Vincent Thian)

Close to three months after the Malaysian jetliner disappeared, the government on Tuesday released reams of raw satellite data it used to determine that the flight ended in the southern Indian Ocean, a step long demanded by the families of some of the passengers on board.

But while the 45 pages of information may help satisfy a desire for more

transparency in a much criticized investigation, experts say it's unlikely to solve the mystery of Flight 370—or give much comfort to relatives stuck between grieving and the faintest hope, no matter how unlikely, their loved ones might still be alive.

"It's a whole lot of stuff that is not very important to know," said Michael Exner, a satellite engineer who has been independently researching the calculations. "There are probably two or three pages of important stuff, the rest is just noise. It doesn't add any value to our understanding."

He and others said the needed assumptions, algorithms and metadata to validate the investigators' conclusion were not there.

The release of the information came as the underwater hunt for the jet is poised to pause until later in the summer while new, powerful sonar equipment is obtained, a sign of just how difficult it will be to locate the jet and finally get some answers on how it went missing with 239 people on board.

Air traffic controllers lost contact with the Boeing 777 soon after it took off from Kuala Lumpur on March 8 on a night flight to Beijing over waters between Malaysia and Vietnam.

An international investigation team led by Malaysia has concluded that the jet flew south after it was last spotted on Malaysian military radar to the west of peninsular Malaysia and ended up in the southern Indian Ocean off western Australia. The conclusion is based on complex calculations derived largely from brief hourly transmissions or "handshakes" between the plane and a communications satellite operated by Britain's Inmarsat company.

Investigators say they believe the plane was deliberately diverted from its

flight path, but without finding the plane or its flight data recorders they have been unable to say with any certainty what happened on board. Theories range from mechanical failure to hijacking or pilot murder-suicide.

The families—many of whom have been highly critical of the Malaysian government and, in the absence of any wreckage, have been unwilling to accept that their loved ones were dead—had been asking for the raw satellite data for many weeks so it could be examined by independent experts. Malaysia initially balked at doing so, but then reconsidered.

In a posting on its Facebook page, a group representing some of the families said: "Finally, after almost three months, the Inmarsat raw data is released to the public. Hope this is the original raw data and can be used to potentially 'think out of the box' to get an alternative positive outcome."

In this April 6, 2014 file photo, a man writes messages for passengers aboard the

missing Malaysia Airlines Flight MH370 before a mass prayer for them, in Kuala Lumpur, Malaysia. The Malaysian government on Tuesday, May 27, 2014, released 47 pages of raw satellite data used to conclude that the missing Malaysia Airlines jet crashed into the southern Indian Ocean. (AP Photo/Lai Seng Sin, File)

Steve Wang, whose mother was on the plane, said he was disappointed that the release did not contain an account of exactly what investigators did to conclude the plane had taken the southern route.

"We are not experts and we cannot analyze the raw data, but we need to see the deduction process and judge by ourselves if every step was solid," he said. "We still need to know where the plane is and what is the truth. We know the likelihood that our beloved ones have survived is slim, but it is not zero."

Sarah Bajc, whose husband was on the flight, has been at the forefront of a campaign to press the government for more transparency.

She said that "a half dozen very qualified people were looking" at the information and she hoped to have their conclusions soon.

The investigators were forced to rely on the Inmarsat data because the plane's other communication and navigation systems were disabled. They determined the plane's direction by measuring the frequency of the signals sent to the satellite. By considering aircraft performance, the satellite's location and other known factors such as the amount of fuel on board, they determined the plane's final location was to the south of the satellite.

In early April, search crews picked up a series of underwater signals in

the area the satellite data indicated was the likely crash site. The signals appeared to be consistent with the "pings" from aircraft black boxes, which contain flight data and cockpit voice recordings. The head of the search operation, Angus Houston, said the signals were "a most promising lead" and hopes were initially high for a breakthrough, but an intensive search by an unmanned submarine found nothing.

In an interview with CNN earlier this week, Inmarsat chief engineer Mark Dickinson said the planned release of the satellite data would not be enough for independent researchers to replicate the calculations. Some aviation experts have speculated that governments might not want to release all the data, or other needed information on the satellite system, because of commercial or national security reasons.

But Dickinson said he was highly confident of the data.

In this April 8, 2014 file photo, relatives of Chinese passengers onboard Malaysia Airlines Flight 370 offer prayers during a candlelight vigil for their

loved ones at a hotel in Beijing, China. The Malaysian government on Tuesday, May 27, 2014, released 47 pages of raw satellite data used to conclude that the missing Malaysia Airlines jet crashed into the southern Indian Ocean. Some family members of the 239 people on board have been demanding Malaysia release the data so that independent experts can verify it. (AP Photo/Andy Wong, File)

"This data has been checked, not just by Inmarsat but by many parties, who have done the same work, with the same numbers, to make sure we all got it right, checked it with other flights in the air at the same, checked it against previous flights in this aircraft," he said. "At the moment there is no reason to doubt what the data says."

Congregating in Internet chat rooms and blogs, many scientists, physicists and astronomers have been trying to replicate the math used to determine the southern route, either as an intellectual exercise or out of a belief they are helping the relatives or contributing to transparency in the investigation.

Duncan Steel, a British scientist and astronomer, said some of the data "may" explain the belief that the aircraft went south rather than north, but that a further confirmation would take a day or so. But he too was disappointed. "One can see no conceivable reason that the information could not have been released nine or 10 weeks ago. Even now, there are many, many lines of irrelevant information in those 47 pages," he said in an email.

The final "handshake" message sent to the satellite didn't coincide with the previous, hourly pings.

Ground crew stand near a Malaysia Airlines aircraft on the tarmac at the Kuala Lumpur International Airport (KLIA) in Sepang, Malaysia, Tuesday, May 27, 2014. The Malaysian government on Tuesday released 45 pages of raw satellite data it used to determine the flight path of the missing jetliner, information long sought after by some of the relatives of the 239 people on board the plane. (AP Photo/Vincent Thian)

In a report on its website titled "Considerations on defining the search area," the Australian Transport Safety Bureau said the last message was a "logon request from the aircraft that was consistent with satellite communication equipment on the aircraft powering up following a power interruption."

It said the interruption may have been caused by fuel exhaustion, a potentially significant finding.

Given that investigators believe the plane was deliberately diverted, the

role of the pilots has come under scrutiny. Much of the speculation has centered on whether the aircraft could have suffered a mechanical failure in which the pilots struggled to regain control before all on board were somehow incapacitated, or whether it was crashed deliberately.