

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



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ELECTRONIC DEVICE

Specialist's Factual Report

April 29, 2024

TABLE OF CONTENTS

A. ACCIDENT.....	3
B. ELECTRONIC DEVICE SPECIALIST	3
C. DETAILS OF THE INVESTIGATION	3
1.0 DEVICE DESCRIPTION	3
1.1 Data Recovery	3
1.2 Recording Description	4
D. FIGURES AND TABULAR DATA.....	4

A. ACCIDENT

Location: Clay, Kentucky
Date: March 8, 2024
Time: 2310 central standard time (CST)
Airplane: Cessna 150L, N1703Q

B. ELECTRONIC DEVICE SPECIALIST

Specialist: Gerald Kawamoto
Recorder Specialist
National Transportation Safety Board (NTSB)

C. DETAILS OF THE INVESTIGATION

A group was not convened. The NTSB Vehicle Recorder Division received the following electronic device:

Recorder Manufacturer/Model: Sentry ADS-B Receiver
Recorder Serial Number: 8009753

1.0 Device Description

The Sentry ADS-B receiver is a portable ADS-B and GPS receiver designed by uAvioni for ForeFlight.¹ The unit generates a Wi-Fi network allowing it to communicate and exchange data with portable electronic devices such as smartphones and tablets. Devices with ForeFlight can then receive and display inflight weather, traffic, and position data.

1.1 Data Recovery

The device was in good condition upon arrival at the Vehicle Recorder Division, as shown in Figure 1. Historical flight data was recovered from an internally mounted microSD card.

¹ Automatic Dependent Surveillance-Broadcast (ADS-B) is a surveillance technology deployed throughout the national airspace system. The ADS-B system is composed of aircraft avionics and a ground infrastructure. Onboard avionics determine the position of the aircraft by using the GPS and transmit its position along with additional information about the aircraft to ground stations for use by air traffic control (ATC) and other ADS-B services. This information is transmitted at a rate of approximately once per second. Operators equipped with ADS-B realize additional benefits from ADS-B broadcast services: Traffic Information Service - Broadcast (TIS-B) (traffic information) and Flight Information Service - Broadcast (FIS-B) (weather information).



Figure 1. Front and back of Sentry ADS-B receiver as received.

1.2 Recording Description

The recorded data included sessions from January 1, 2024, through March 9, 2024, UTC (coordinated universal time). An offset of 6 hours was applied such that data is displayed in CST, the local time of the accident. The session containing the accident event started at 22:43:23 CST on March 8, 2024, and ended at 00:23:54 CST on March 9, 2024. The approximate time of the accident event was 23:10:00 CST on March 8, 2024, after which point the device remained powered on and recorded data for an additional 1 hour and 14 minutes.

D. FIGURES AND TABULAR DATA

Figure 2 and Figure 3 are graphical overlays generated using Google Earth showing the accident flight. Weather and lighting conditions in Google Earth are not necessarily the weather and lighting conditions present at the time of the recording. Figure 2 is an overview of the entire session. Figure 3 shows approximately the final minute of the flight and the reported wreckage location.

Figure 4 is a plot of parameters of the entire flight. The time shown is 22:34:00 to 23:11:00 CST.

Figure 5 is a plot of parameters for the final minute of the flight. The time shown is 23:09:00 to 23:10:10 CST.

The corresponding tabular data used to create figures 2 through 5 are provided in electronic comma-separated value (CSV) format as attachment 1 to this report.

Submitted by:

Gerald Kawamoto
Recorder Specialist

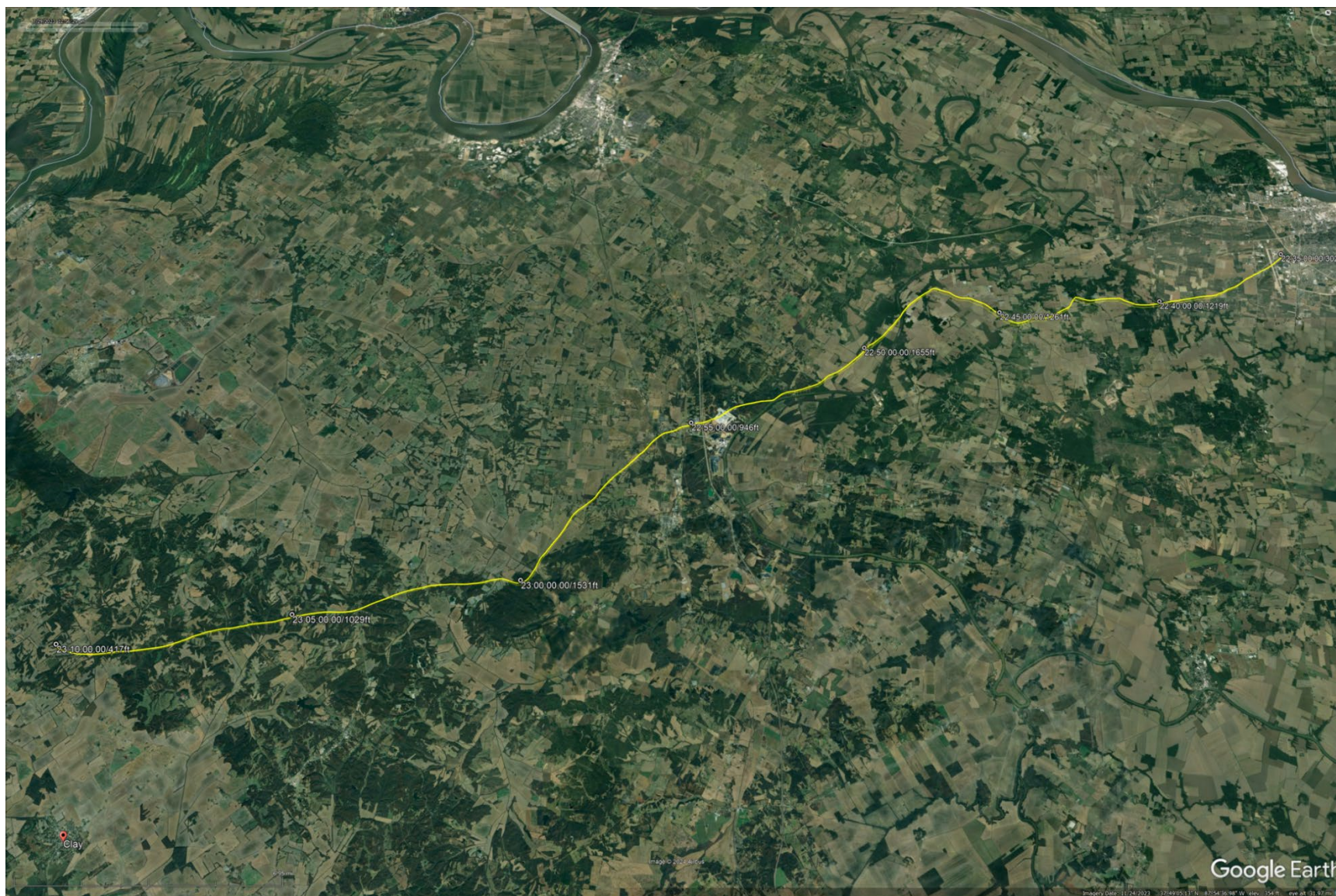


Figure 2. Google Earth overlay of the entire accident flight.

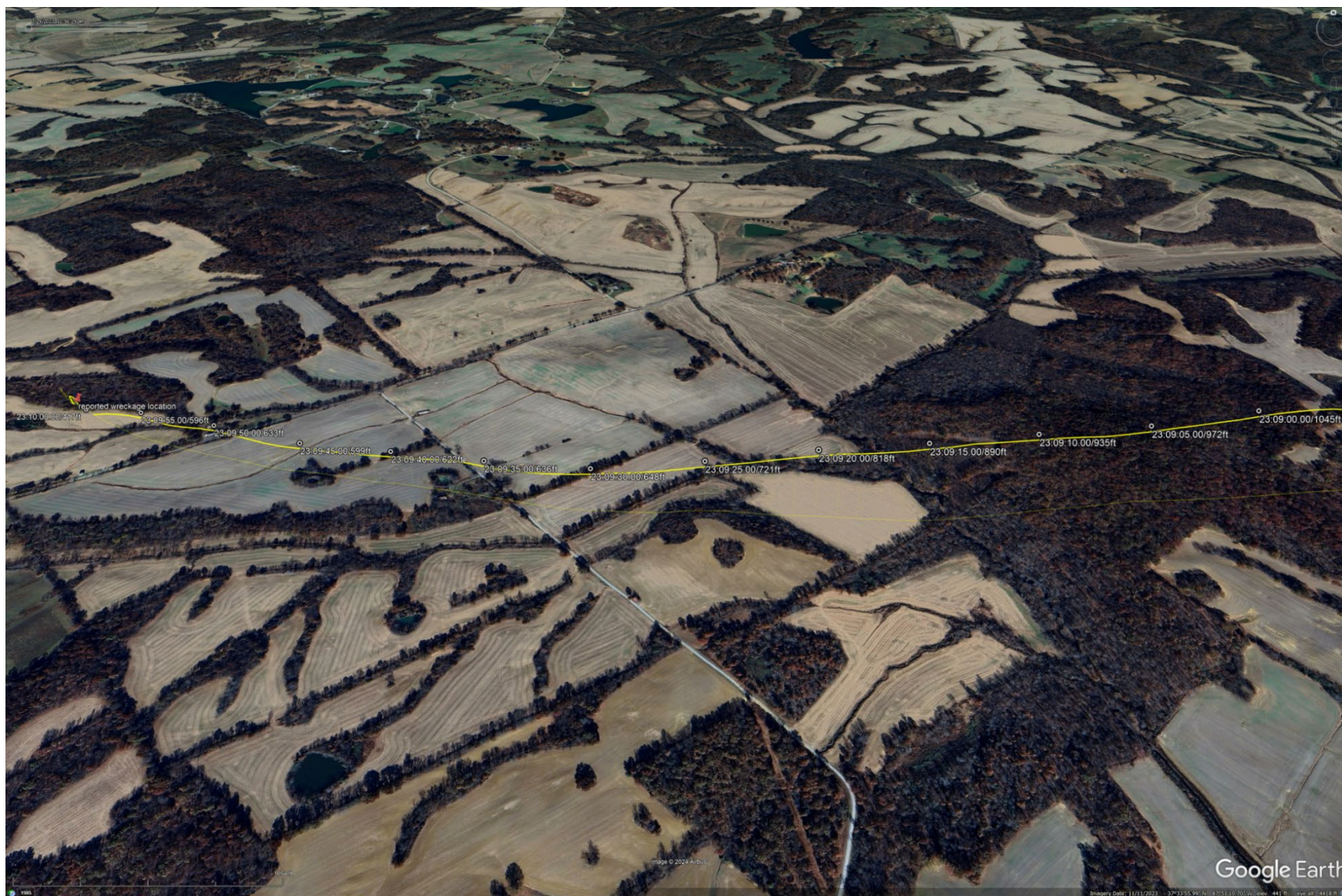


Figure 3. Google Earth overlay of the end of the accident flight and the reported wreckage location.

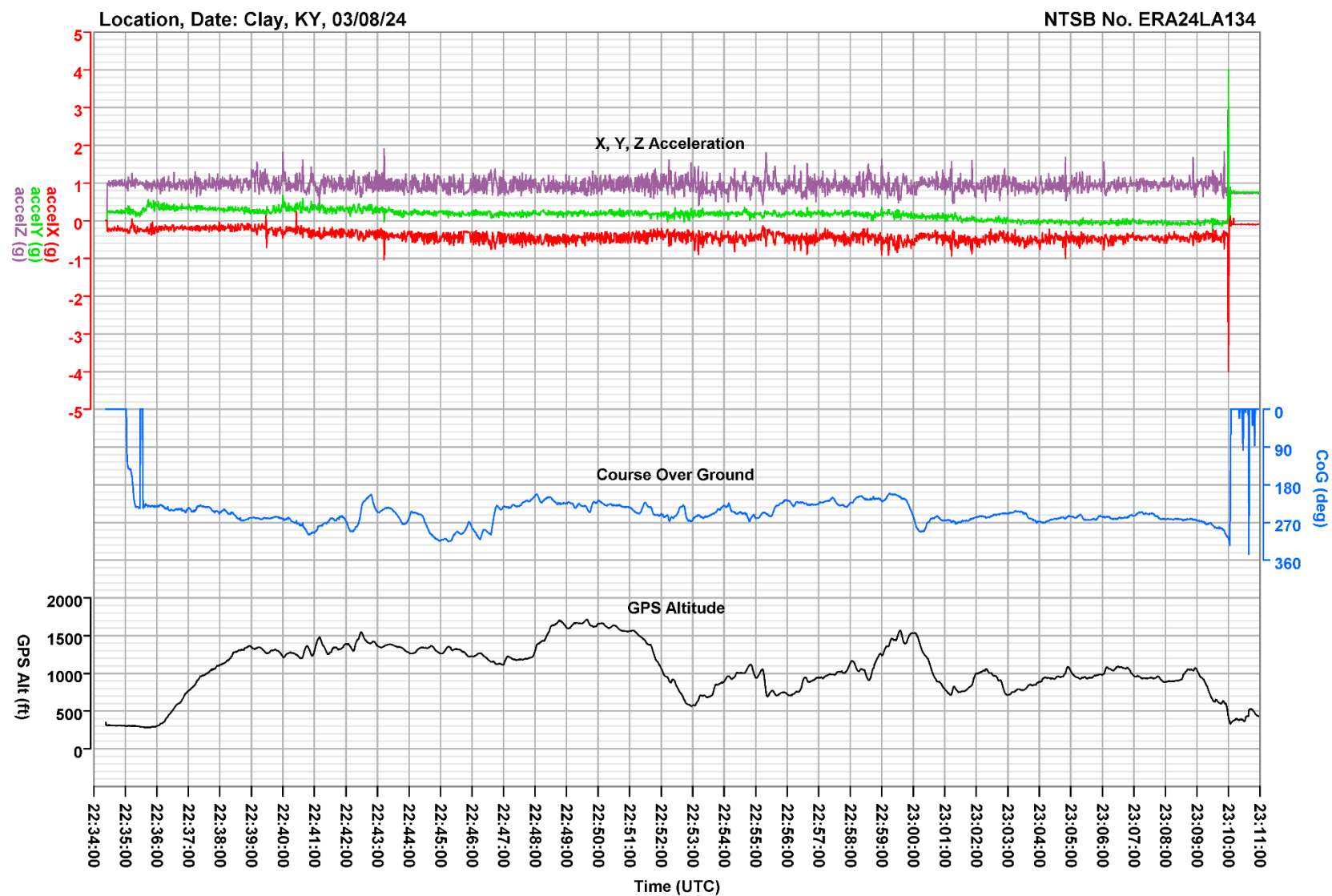


Figure 4. Plot of parameters recorded on the Sentry for the accident flight.

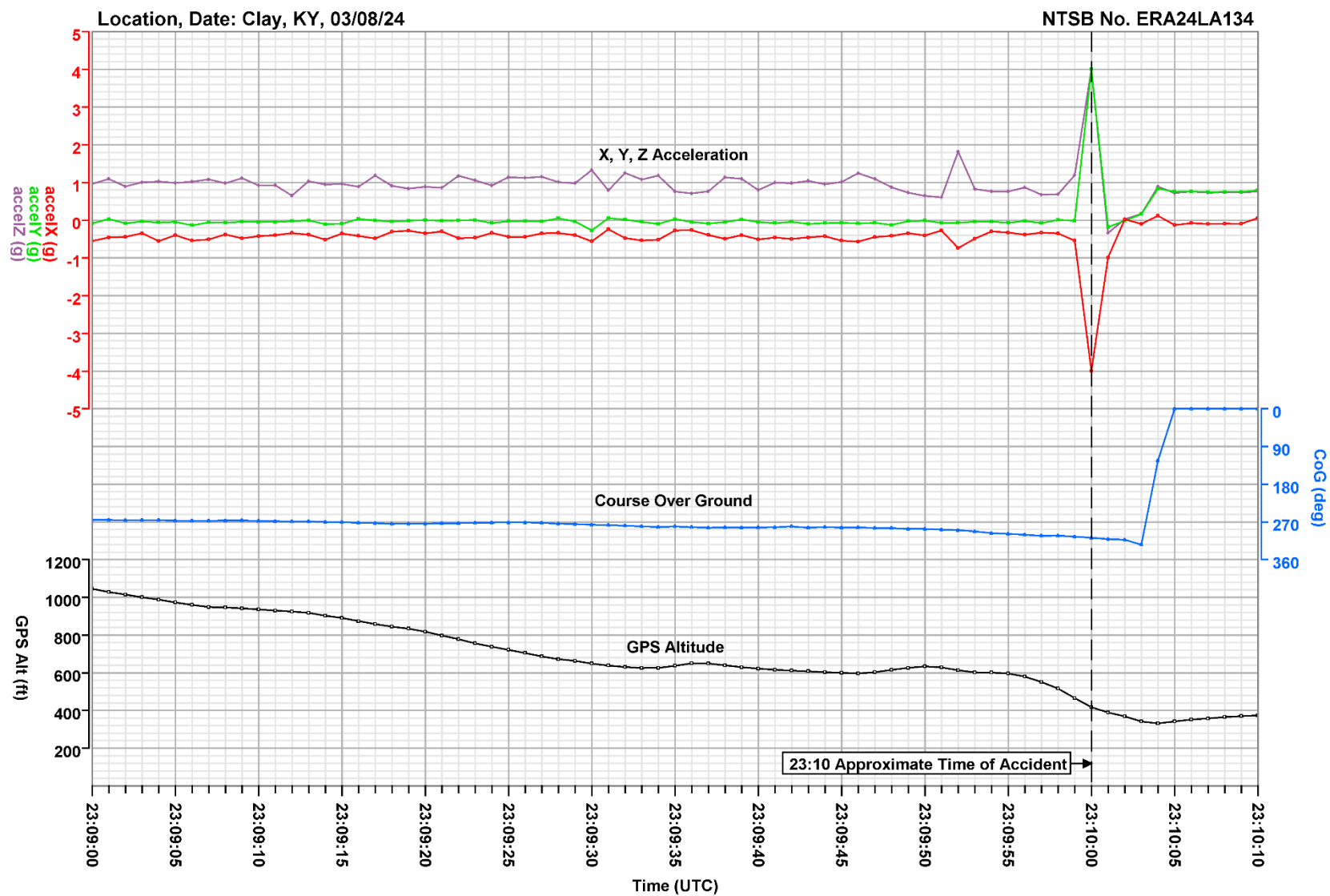


Figure 5. Plot of parameters recorded on the Sentry at the end of the accident flight.