

I was the Captain (PIC) of JetBlue flight 1256 on September 24th, 2023. In preparation for flight 1256 GYE-FLL we reviewed the flight dispatch release, flight plan, and dispatch remarks. FD pro and WSI weather apps were referenced to observe any weather along our planned route. Areas of light weather were observed on the the south side of Cuba on both weather apps. No takeoff or landing alternates were required, VFR conditions were present at GYE and VFR conditions were forecast for FLL at our arrival time. I contacted dispatch on the sat phone to discuss some volcanic activity being reported east of the airport and to discuss a flight plan filing issue with ATC.

During takeoff, climb, and initial cruise at FL 340 the flight progressed normally, weather radar was on. Flight conditions were smooth, skies were clear, no convection activity was observed and confirmed utilizing the weather radar. Once in aircraft wifi coverage both FD pro and WSI weather apps were open and active. The seatbelt sign was on.

Approximately 100 miles south of Jamaica we encountered severe turbulence with precipitation. The weather radar was not showing any weather returns. Radar tilt was .25 down, the Captain side range rotary selector was set at 160 mile range with the outer ND knob set full bright. The turbulence encounter lasted approximately 20 seconds. I made an announcement over the PA for the the inflight crew to be seated. Once normal flight was recovered we contacted the inflight crew to make a cabin assessment. We were informed that there was possibly 1 inflight crew member injured along with several passengers. Inflight crew informed me that they would continue to asses the cabin and get back to me in a timely matter. I contacted dispatch via the sat phone and asked to have EMS, a company representative and maintenance meet us at the gate. The seatbelt sign remained on as it had been the entire flight. All aircraft systems were operating normally.

As we continued northbound we observed a large area of weather between Jamaica and Cuba that would require weather deviations. We were suspect of the weather radar's functionality as it was only giving us weather returns on the outer scale. We instructed the inflight crew to remain seated. We constantly adjusted the weather radar's tilt and range to navigate safely around the weather and we also followed an aircraft observed on TCAS approximately 40 miles ahead of us.

Once clear of the weather we proceeded to FLL where EMS, a company representative and maintenance met us at the gate. We entered "weather radar inoperative and severe turbulence encounter" in the aircraft maintenance logbook.