

Severe Turbulence Encounter Reports:

PIC (Check Pilot) Report:

I was conducting day 3 OE with a new hire First Officer. The majority of the flight was uneventful.

As we prepared for our descent, the ACARs could not receive the PIE METAR. We tried to pull the landing performance data for preliminary wind/temp/QNH data, but it didn't calculate due to also not receiving PIE METAR data.

I showed the FO how to message dispatch to ask for a current METAR as we were still out of ATIS range. Dispatch sent a valid METAR, and I was going to show the FO how to insert specific weather information into the PERF/DATA page so we could get good data.

At this point the AOC Menu key stopped working. I elected to wait on an ACARs reset until on the ground and take advantage of teaching Fly Smart landing data.

I would not say that I was task saturated, but these minor system glitches did increase our workload.

As we started our descent into PIE on the DADES1 arrival the radar indicated some small returns near CAPOH intersection, which we deviated around easily.

We were given direct OLENE after initial deviation and instructed to cross OLENE at 13,000 feet and 250 knots. We were at approximately 23,000 feet at this point. The initial crossing restriction was given late by ATC, and we were already 4,500 feet high on the VDEV before we even started down. The First Officer was pilot flying and operating at a slower pace (as would be expected for an OE student). It was an opportunity to teach descent technique with autopilot off and full speed brakes.

It appeared we would make the restriction so, for the sake of learning, I didn't bother to tell ATC unable. I was focused on monitoring the FO, our ND, VDEV and the restriction. As we started to level off, I noticed a small cumulus build up in front of us. Its top was at 13,200 feet. There was no precipitation return on the radar. The seatbelt sign was on, but as we had not descended through 10,000 feet the FAs had not been chimed yet.

Having flown thousands of hours descending into cumulus clouds in Florida, I knew it would be bumpy as we penetrated, and told the FO, "This one will be bumpy", but I did not think it would be an issue as it was a low level build up with no radar return. Additionally, there no reports or advisories given by ATC of any turbulence in the area.

Initially we encountered some moderate chop, but just prior to exiting the cloud we experienced a severe jolt of turbulence that induced a strong negative G force that lasted about 1.5 seconds, altitude and roll was maintained throughout the encounter.

In over 14,000 hours of flying, I have never experienced turbulence like this and never in a cloud with tops that low. I immediately called back to see if the FAs and passengers were ok and that's when I was told there were injuries.

I became very task saturated at this point but continued to allow the FO to fly as I was busy coordinating with the FAs and calling ahead for emergency medical personnel to meet the aircraft. I asked for priority handling to PIE as we were very close to landing. When it became apparent the controller was

still going to vector us around more than necessary, I declared an emergency and elected to land on Runway 18. I still could not send any messages to dispatch as the ACARS was still frozen. I tried to coordinate emergency vehicles, ATC, and ground crew as much as I could. Once done I took controls from the FO and landed normally.

Emergency personnel met the aircraft at the gate and attended to the injured.

SIC Report:

I'm a new First Officer for Allegiant Air. It was my 3rd day of OE and my 9th flight overall on the Airbus. On the previous 2 days of OE, I flew to Florida where we made minor deviations to circumvent bad weather. This day was no different

It was a normal day with 4 legs. We completed our first 2 legs from Asheville, NC (AVL) to Boston, MA (BOS), and returned to AVL. We were near the end of our 3rd leg from AVL to St. Pete-Clearwater, FL (PIE) when the incident occurred. It was the captain's last day of OE with me and he wanted to make sure I understood ACARS and its functions.

As we approached St. Pete-Clearwater International Airport we attempted to get the METAR but were unable. We were out of range of ATIS, so the captain showed me how to send a message to dispatch. However, when we attempted to input the data into ACARS the AOC button was frozen on both MCDUs. He decided to use FlySmart to confirm that we had accurate landing data.

We were on the DADES 1 RNAV Star into KPIE when we were given an altitude restriction to cross OLENE at 13,000ft. It appeared that we were already high on the descent profile, so we applied speed brakes and turned the auto pilot off to meet that restriction. The autopilot was turned off to utilize full speed brakes on the A320 aircraft

I don't recall any reports of turbulence in that area and there were no precipitation returns on the radar. When we started our descent, we were in clear air and a relatively smooth ride. As we approached our level off altitude there was a base layer of clouds that were unavoidable around 13,000ft. The clouds were not dark and looked no different than clouds we had previously flown through. As we entered the cloud, there was some minor expected jolts, but shortly thereafter the aircraft was severely shaken. Everything that was not tied down in the cockpit became airborne. It was extremely short in duration, perhaps a second or two. The captain commented that it was the worst turbulence he had ever encountered.

We turned the auto pilot on, and the captain chimed the flight attendants to check for injuries and asked ATC for priority handling direct to KPIE. Upon learning that there were multiple injuries and that we may be vectored around, he declared an emergency and elected to land on Runway 18 as soon as possible.