



National Transportation Safety Board

FedEx Flight 1478 Operational Factors

Captain David J. Ivey
Group Chairman



Operational Factors

- Decision to land on runway 9
- Visual Approach Procedures
- Stabilized Approach Corridor



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Decision to land on runway 9

- Early decision to land on runway 27
 - ILS, PAPI, approach lights, TDZ lights, and runway lights
- Late decision to land on runway 9
 - No electronic approach, PAPI, no approach or TDZ lights, only runway lights
- Improperly flown visual approach



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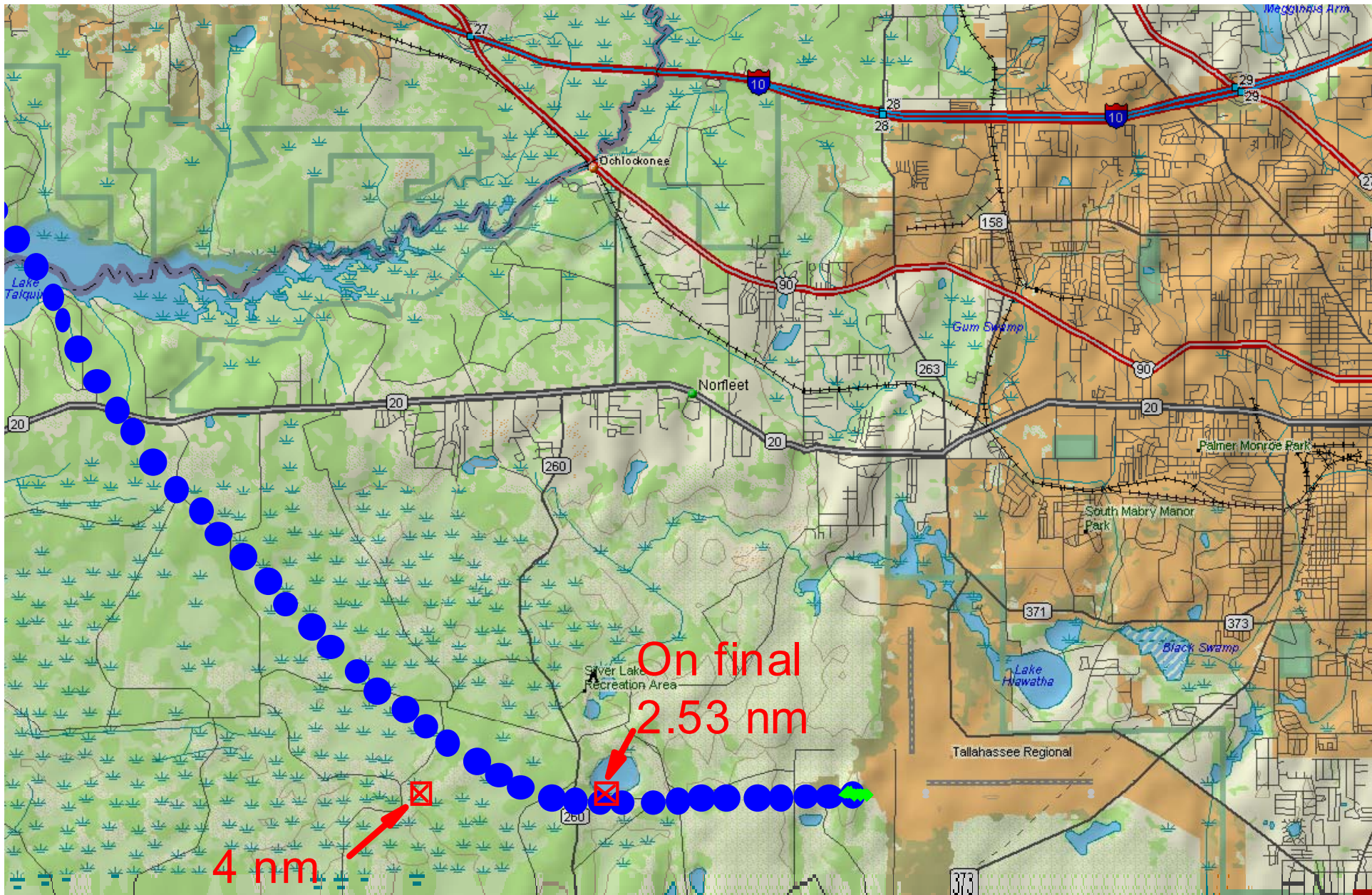
Visual Approach Procedures

- Plan to be established on runway centerline **NO LATER** than **4nm** from the runway threshold
- Turn to final at an altitude that will allow sufficient time to **stabilize** at **500** feet
- Rate of descent **<1,000 FPM** on final
 - Advisory Callouts such as visual cues (PAPI), “sink rate”



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Stabilized Approach Corridor 500 Feet AGL

- Landing gear/flaps/slats in final landing configuration
- Stable Airspeed (± 5 knots of target)
- Engines spooled up and steady at proper approach setting
- Proper descent angle/rate of descent

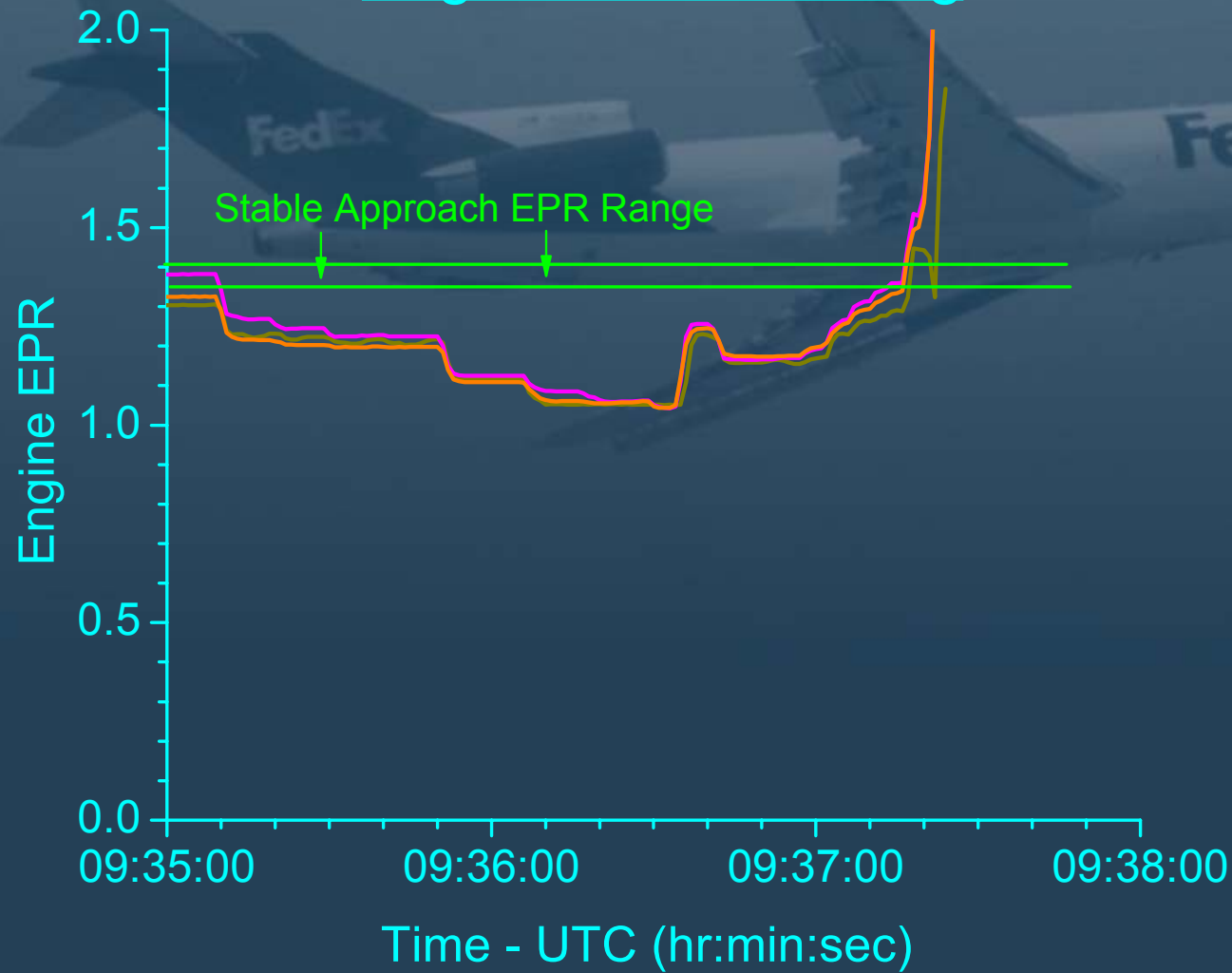
MANDATORY CONDITIONS/LIMITS



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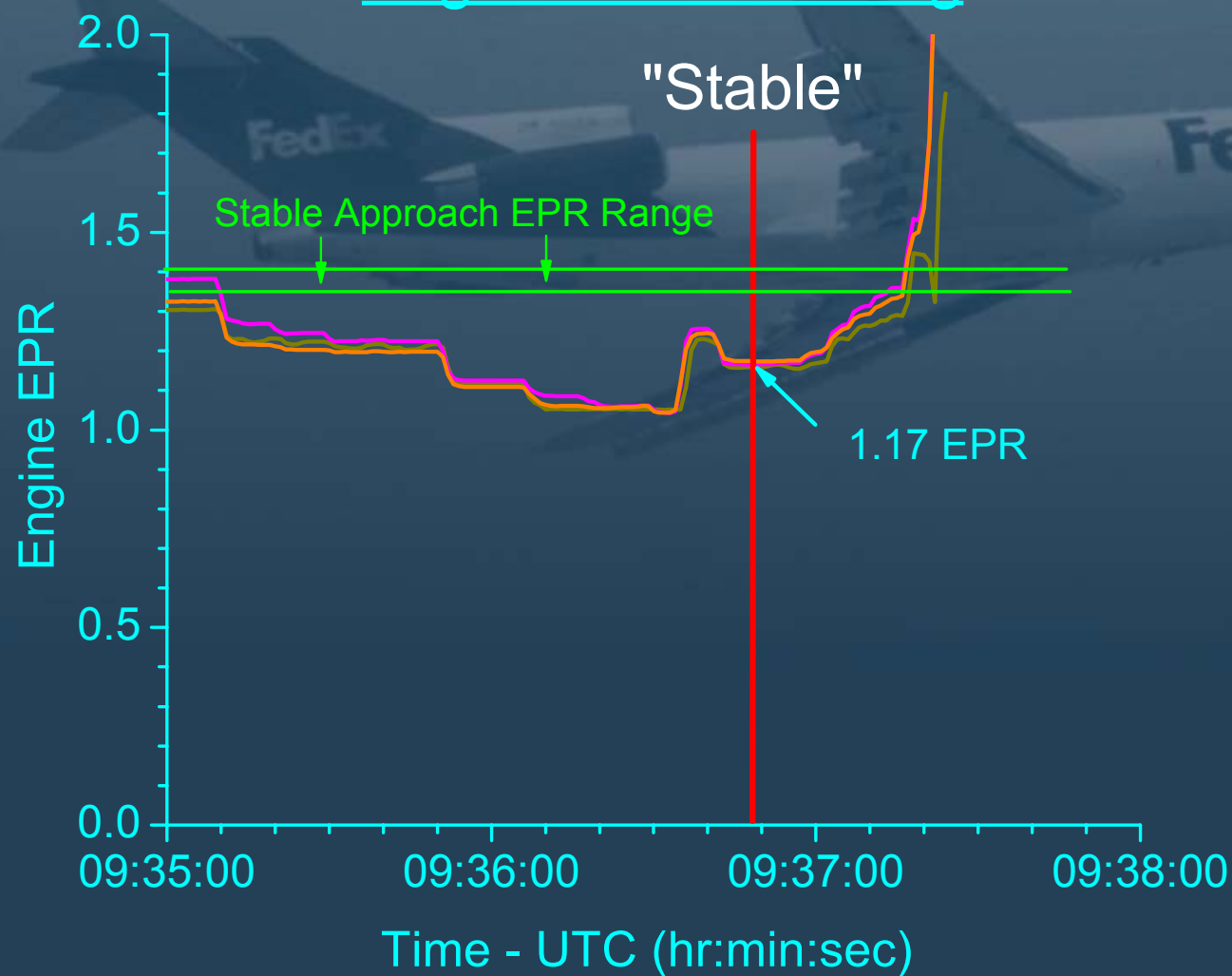
Engine Power Setting



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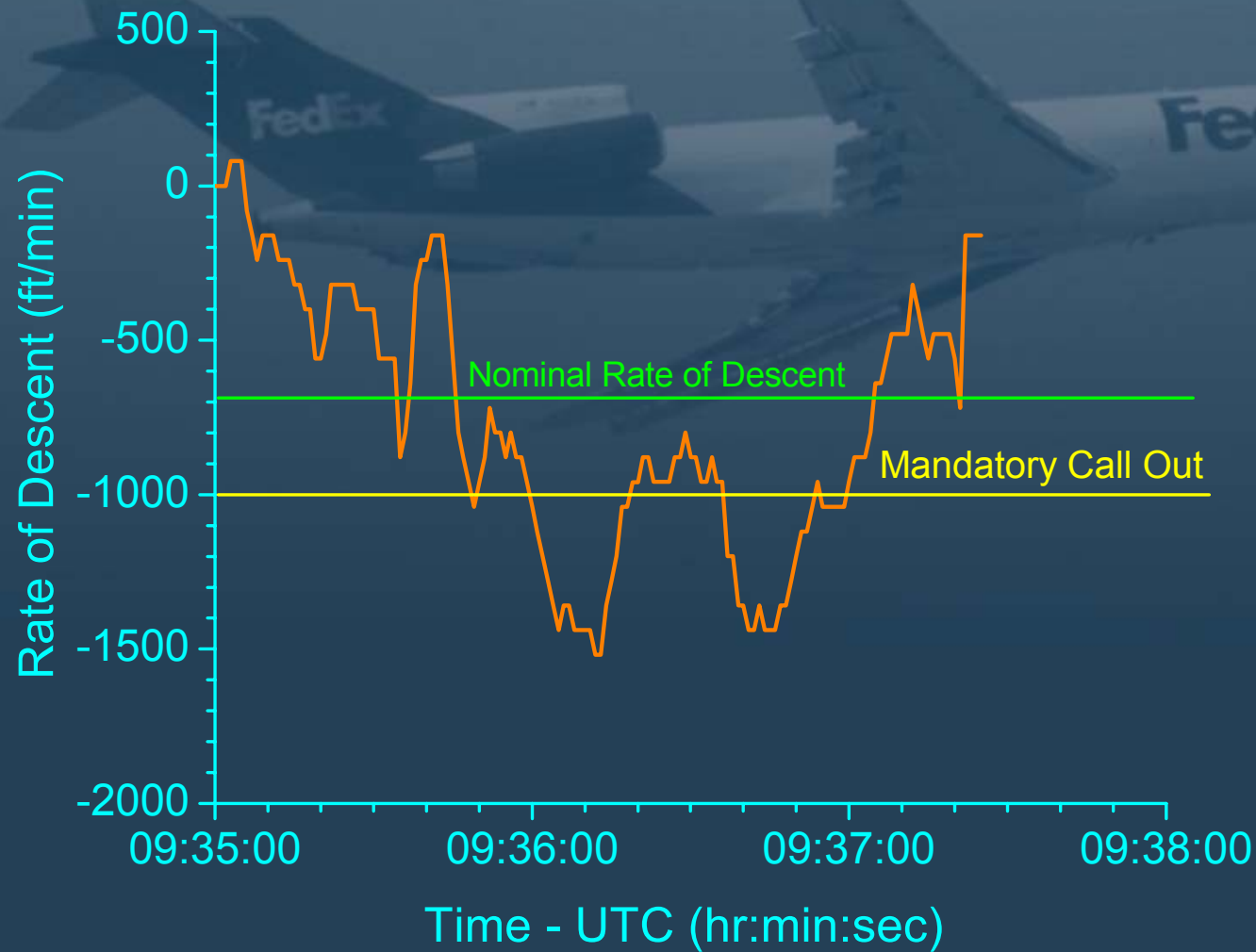
Engine Power Setting



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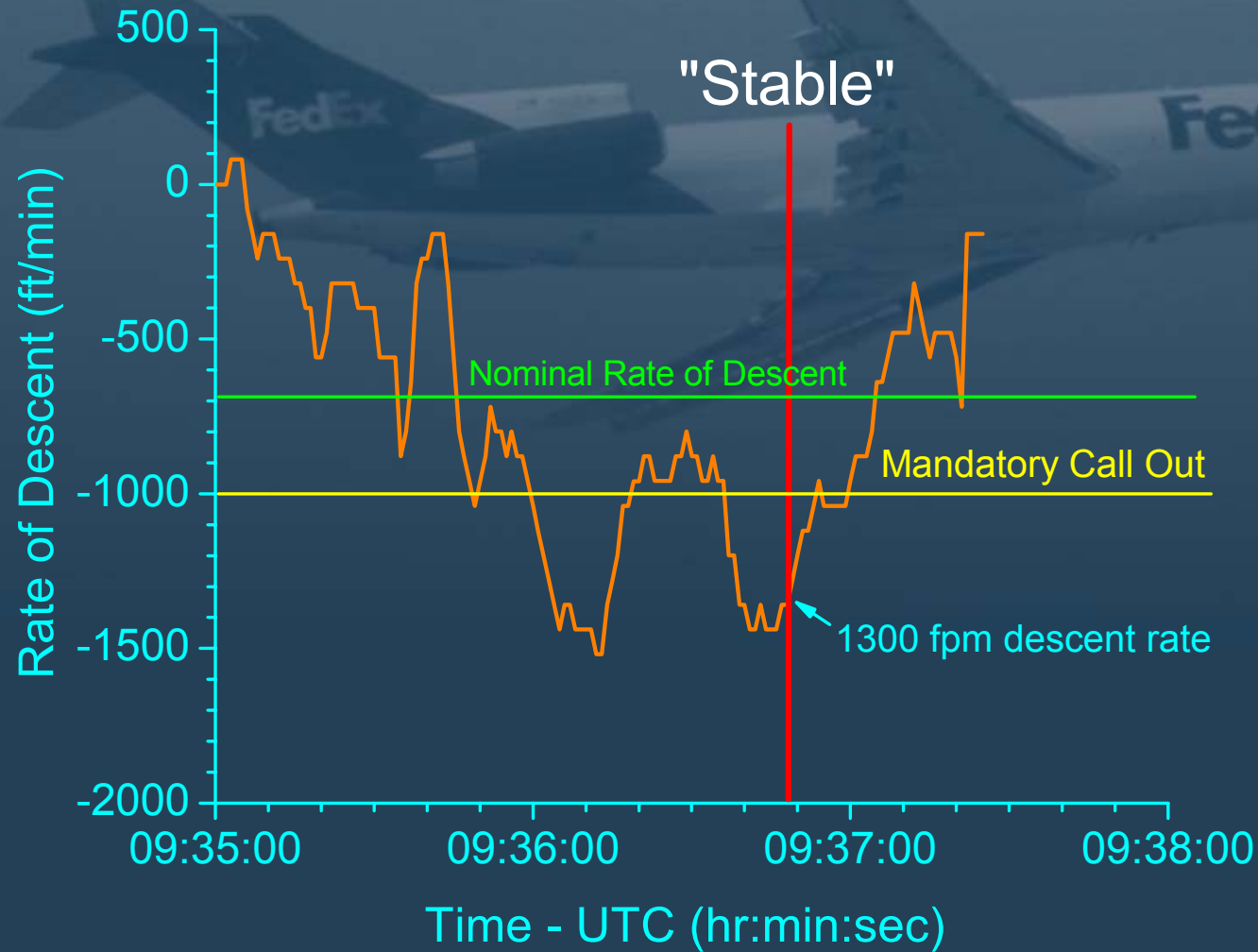
Airplane Rate of Descent



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Airplane Rate of Descent

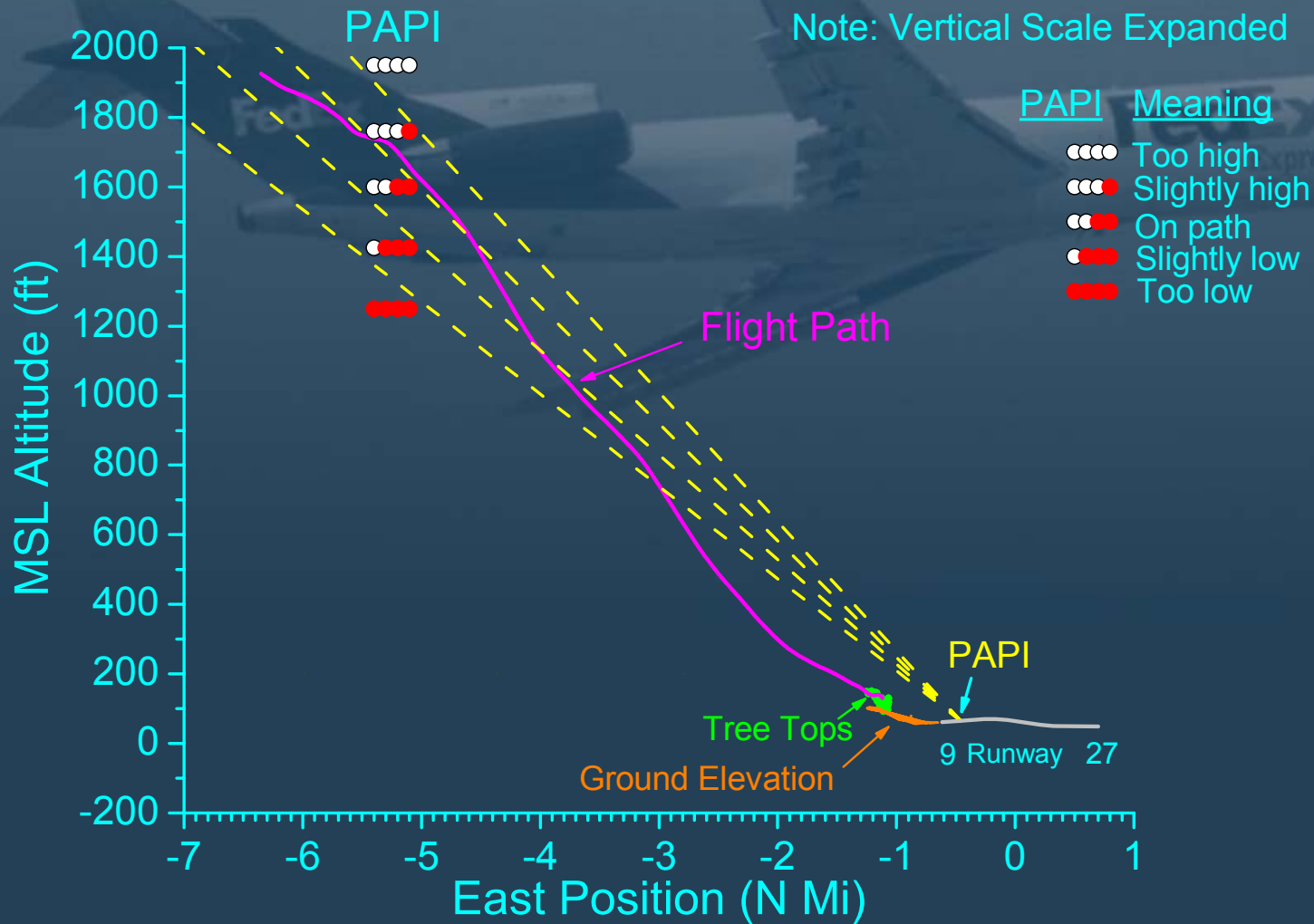


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Flight Profile with PAPI Indications

Note: Vertical Scale Expanded

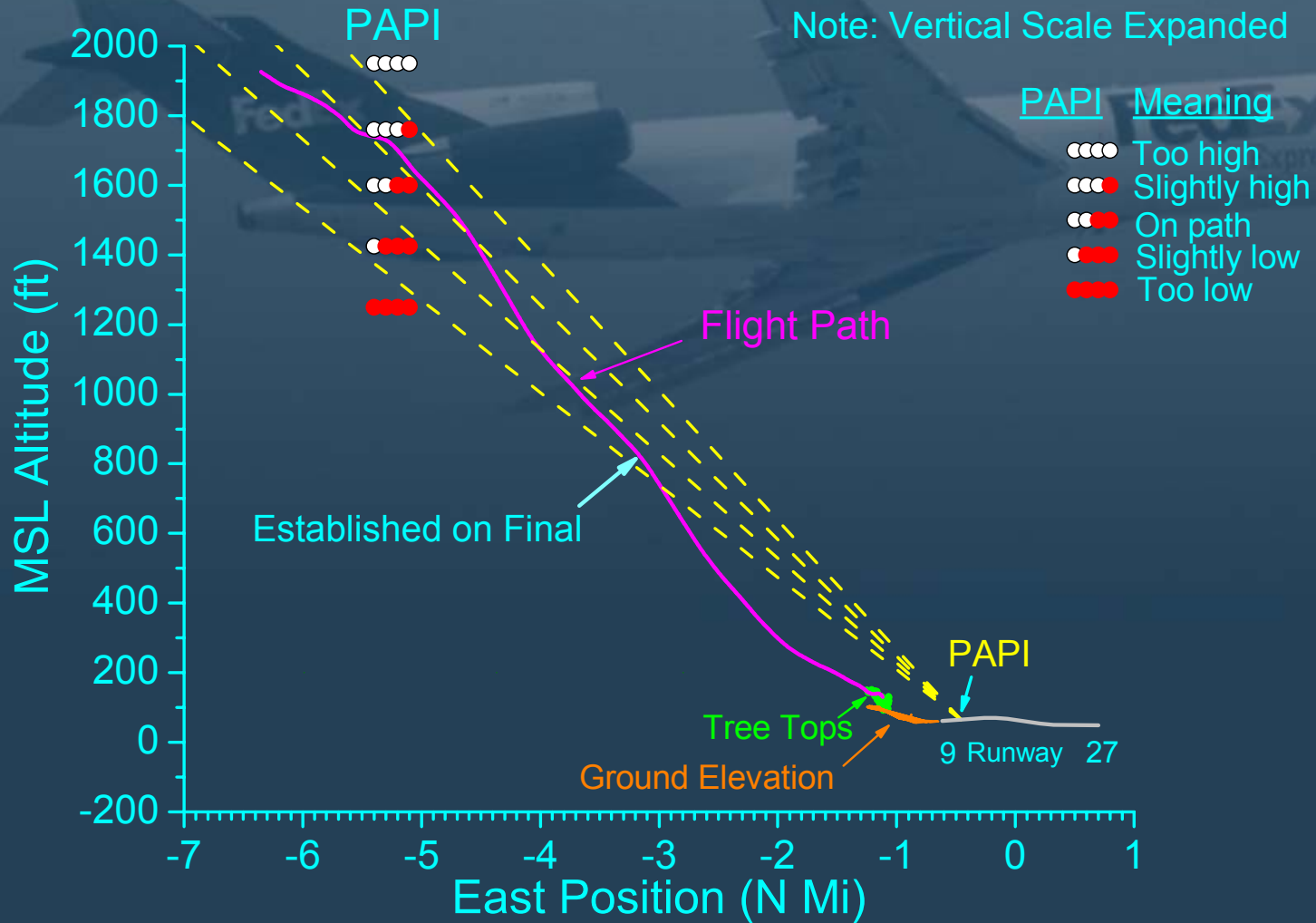


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Flight Profile with PAPI Indications

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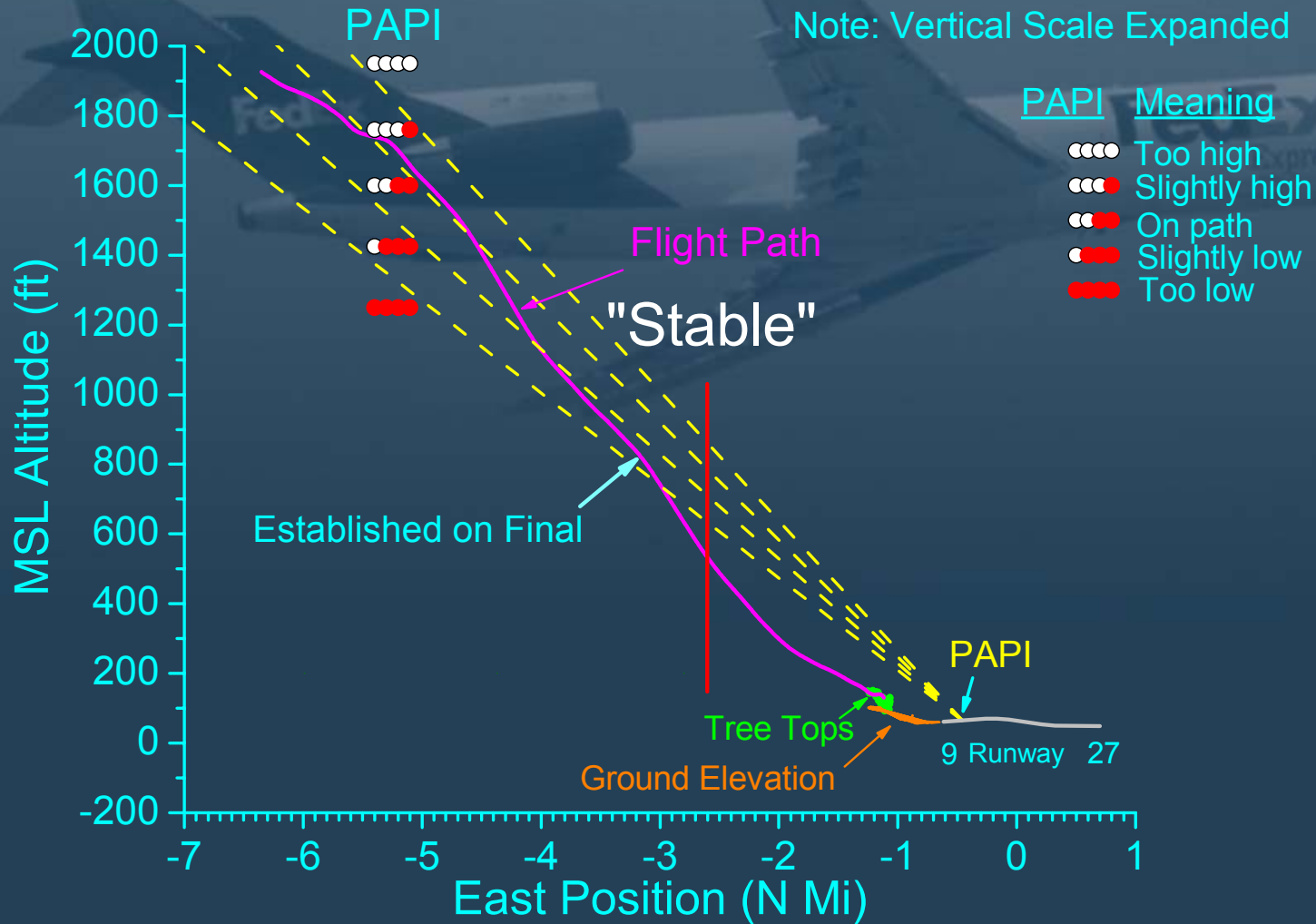


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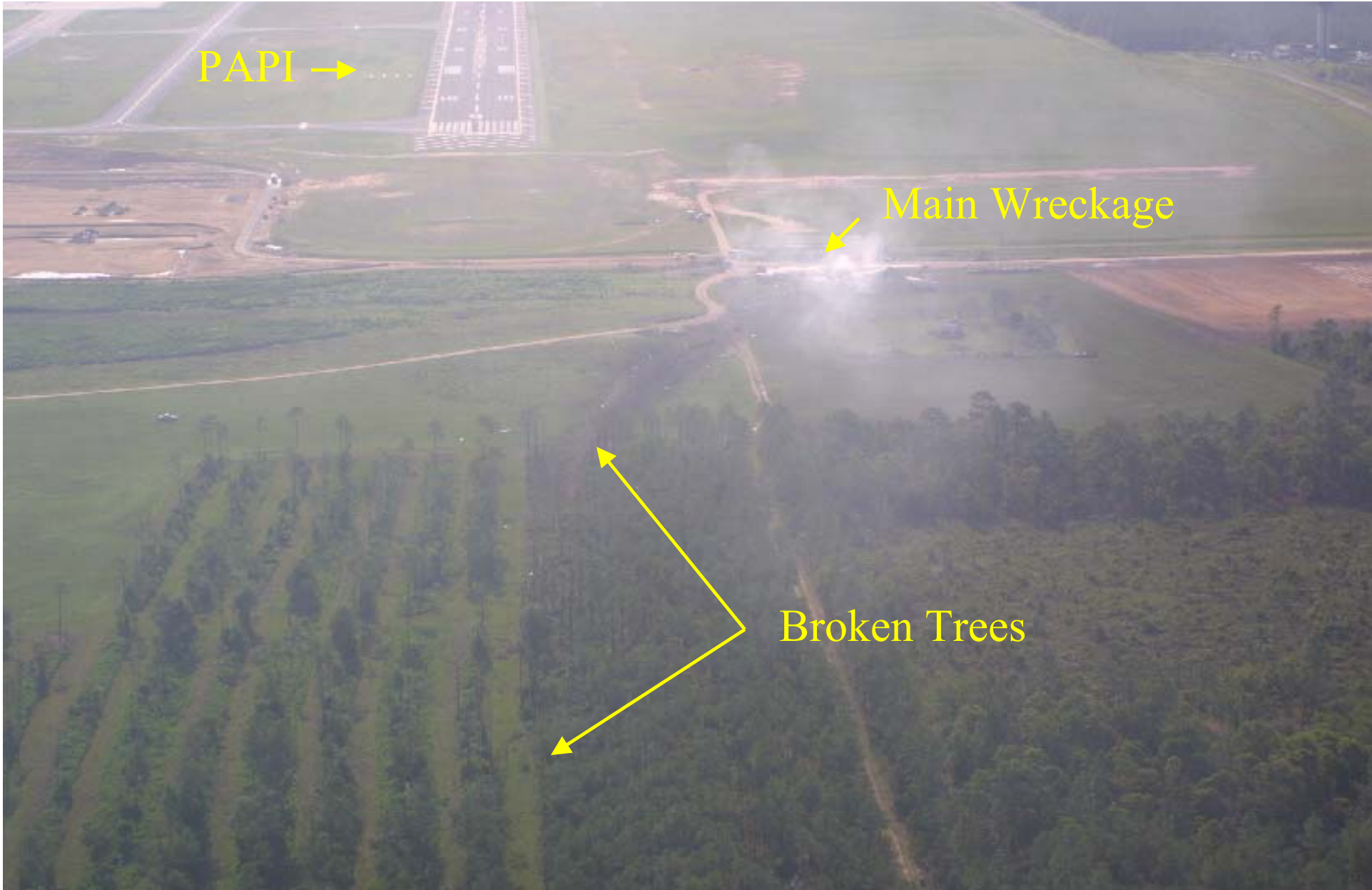
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