

FPAW Fall 2013

FAA Guidance for Thunderstorms AC 00-24C



Federal Aviation
Administration



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Date: **October 24, 2013**

History

AC 00-24B Thunderstorms dated 1/20/83 = out dated

NTSB Recommendation A-11-23 based on Hawker 800A accident in Owatonna, Minnesota (OWA)

- Work with the National Weather Service to revise Advisory Circular 00-24B, “Thunderstorms,” by including explanations of the terms used to describe severe thunderstorms, such as “bow echo,” “derecho,” and “mesoscale convective system.”

AC 00-24C Thunderstorms – Published 2/19/13

AIM Section 7-1-29 ‘Thunderstorm Flying’ revision set for February, 2014



General Changes and Updates

New color graphics

General Terminology

- Old verbiage: Almost any thunderstorm can spell disaster to the wrong combination of aircraft and pilot
- New verbiage: Any thunderstorm can lead to an accident and fatalities to those on board

Examples of new thunderstorm terminology included in this AC

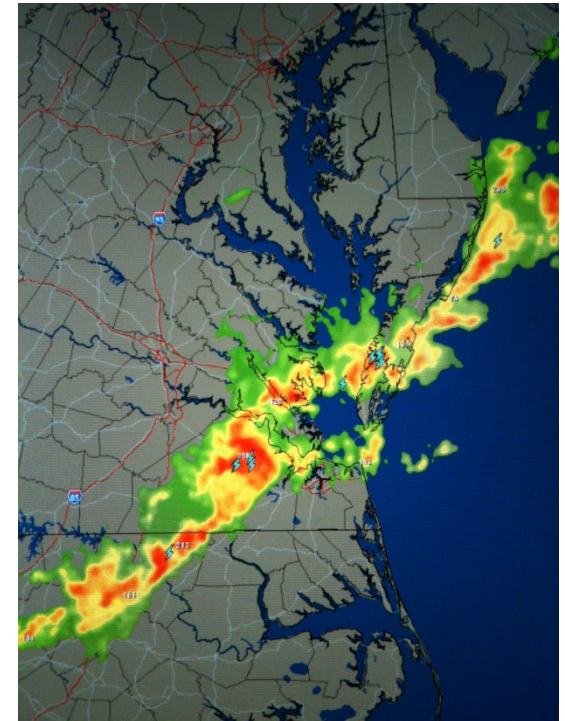
- Anvil
- Bow echo
- Derecho
- Extratropical cyclone
- Gust front
- Mesoscale Convective system
- Meteorological impact Statement
- Roll Cloud
- Severe Thunderstorms
- Shelf cloud
- Updraft



General Changes and Updates

Ground Radar (NexRAD) guidance

- dBZ
- Radar modes – Precipitation vs. Clear Air
- Radar reflectivity – Base vs. Composite
- Data link of ground radar to the cockpit
 - Latency
 - “As the current location of a thunderstorm cell may be different than the broadcast weather product, do not attempt to find a hole in a thunderstorm solely using data-linked weather”
 - “Pilots must avoid individual storms by visual sighting or by airborne weather radar”



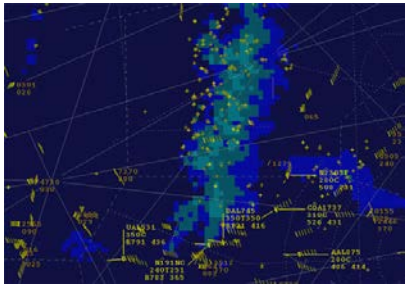
Dos and Don'ts of Thunderstorm Avoidance

Genesis: NTSB Safety Alert #17 (issued in 2012)

- Don't use data-linked weather next generation weather radar (NEXRAD) mosaic imagery as the sole means for negotiating a path through a thunderstorm area (tactical maneuvering).
- Do remember that the data-linked NEXRAD mosaic imagery shows where the weather was, not where the weather is. The weather conditions may be 15 to 20 minutes older than the age indicated on the display
- Do use data-linked weather NEXRAD mosaic imagery (e.g., Flight Information Service-Broadcast (FIS-B)) for route selection to avoid thunderstorms entirely (strategic maneuvering)



Dos and Don'ts of Thunderstorm Avoidance



Genesis: ATSAP Corrective Action Request #31

- Do listen to chatter on the ATC frequency for Pilot Weather Reports (PIREP) and other aircraft requesting to deviate or divert
- Do ask ATC for radar navigation guidance or to approve deviations around thunderstorms, if needed
- Do advise ATC, when switched to another controller, that you are deviating for thunderstorms before accepting to rejoin the original route
- Do ensure that after an authorized weather deviation, before accepting to rejoin the original route, that the route of flight is clear of thunderstorms



Contact Information

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