

DOCKET NO. **SA- 516**

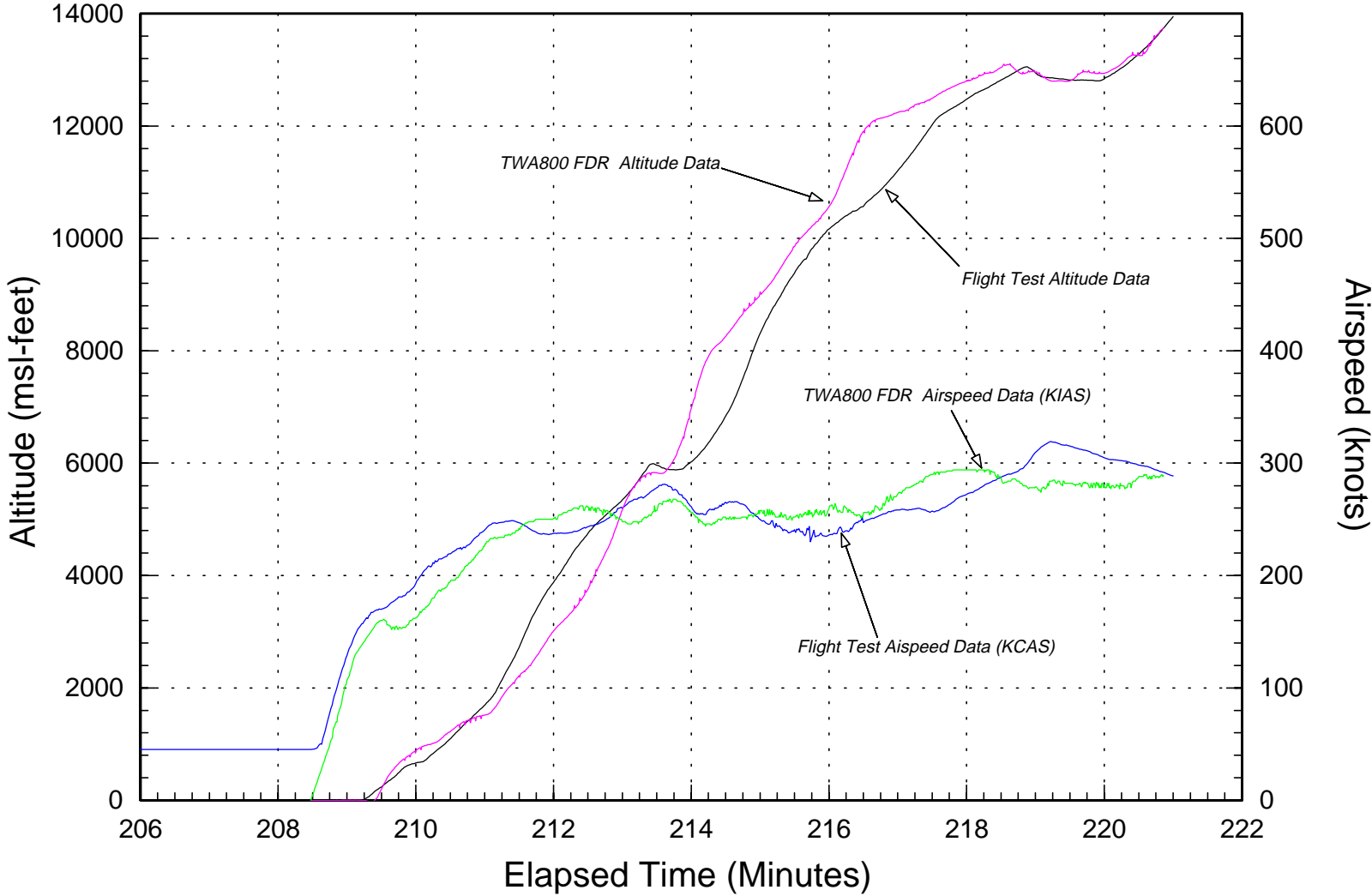
EXHIBIT NO. **23F**

**NATIONAL TRANSPORTATION SAFETY BOARD  
WASHINGTON, D.C.**

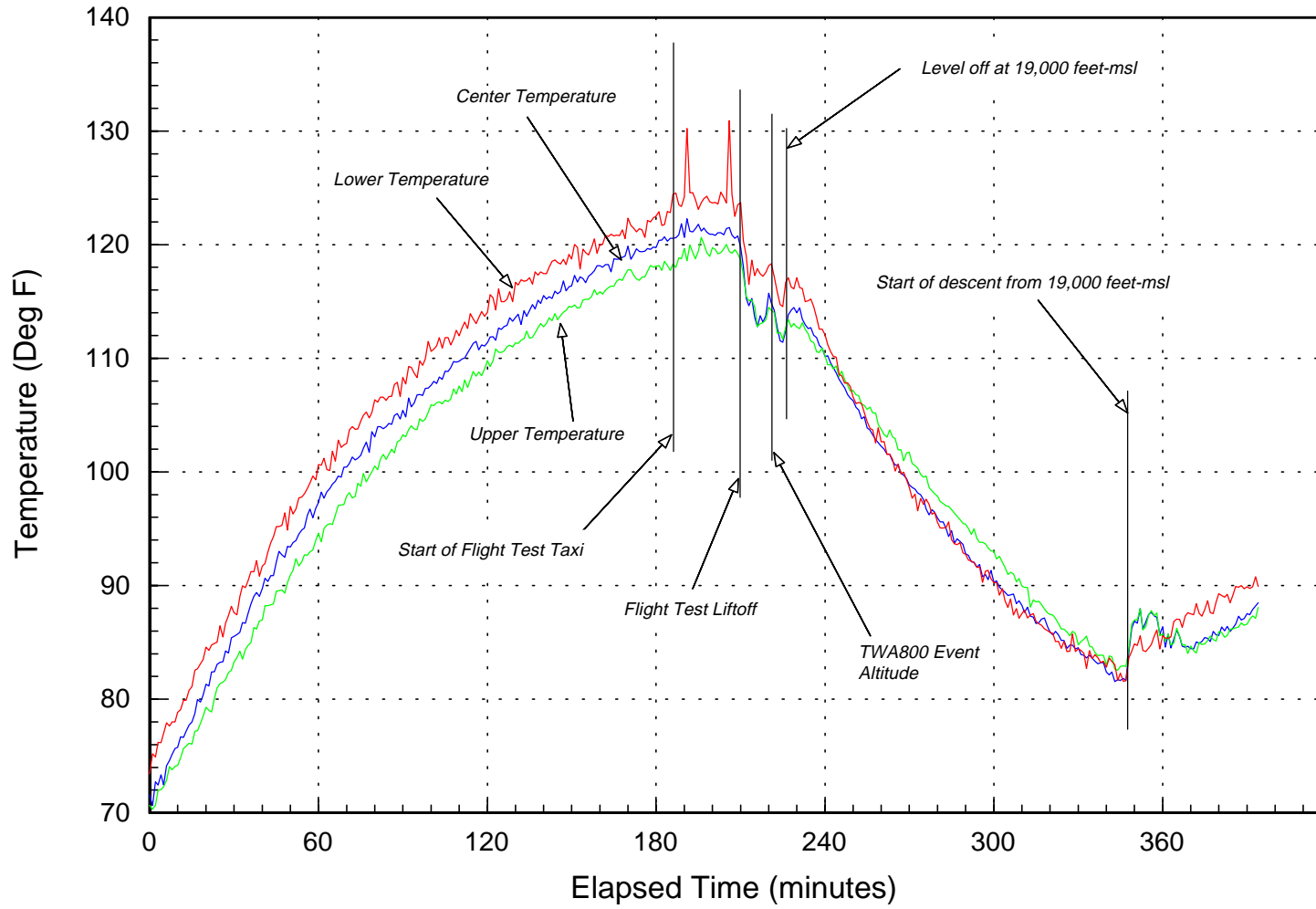
**FLIGHT TEST RESULTS:  
TWA800 EMULATION FLIGHT**

**(37 Pages)**

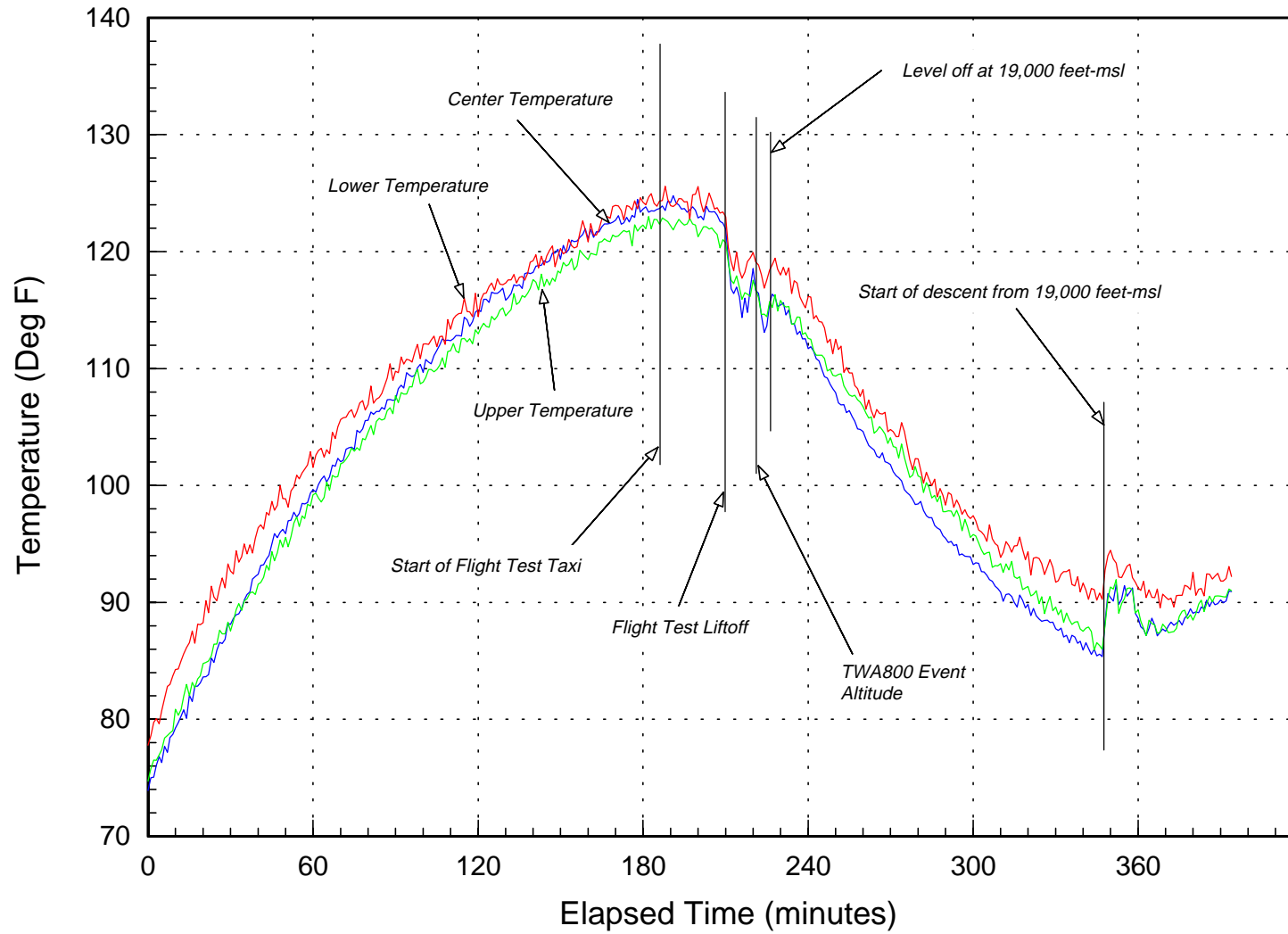
# Flight Parameters TWA800 Emulation Test Flight Ascent Portion



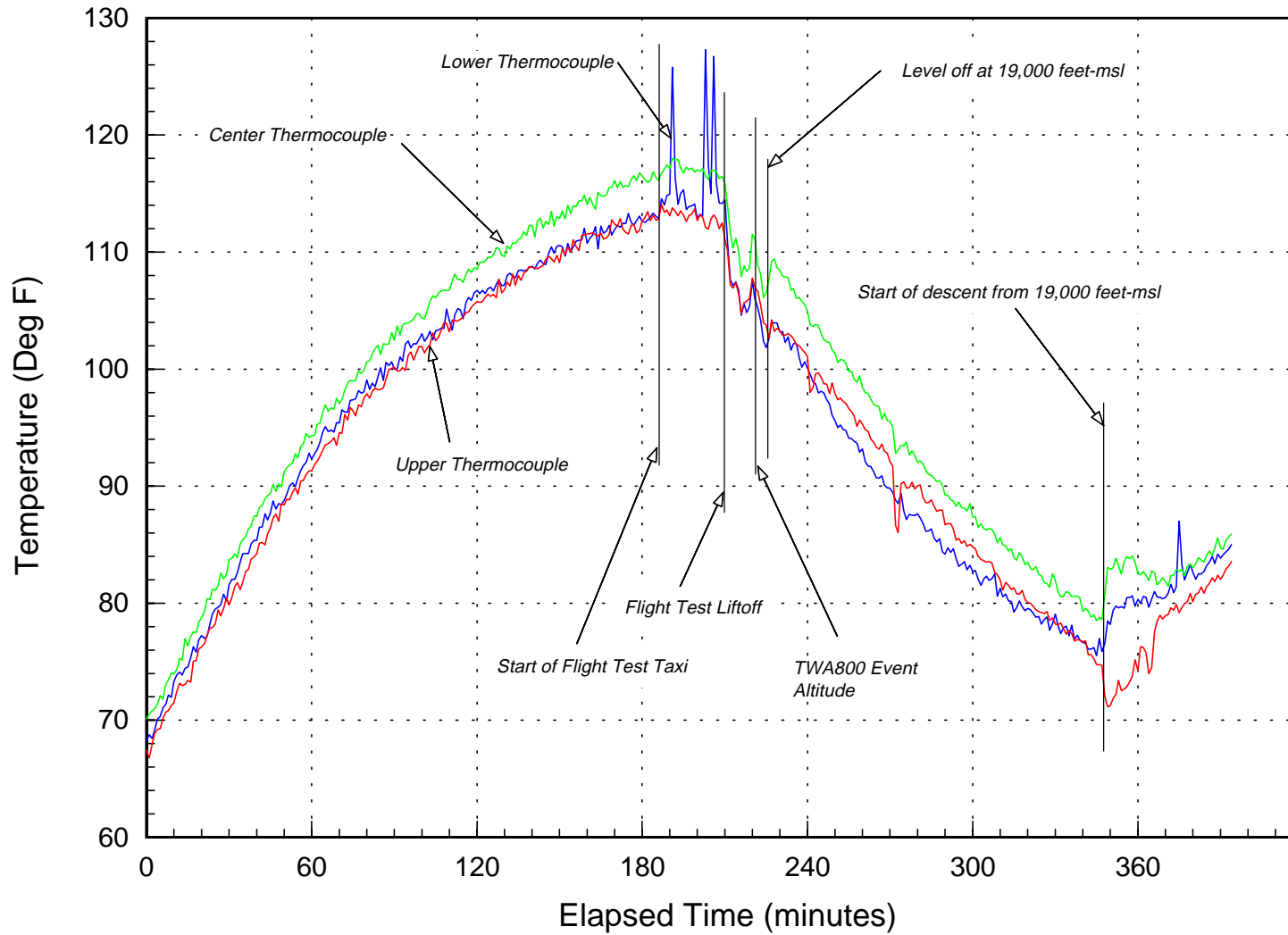
CWT Forward Bay Between Spanwise Beams 2 and 3  
Ullage Temperatures  
TWA800 Emulation Flight



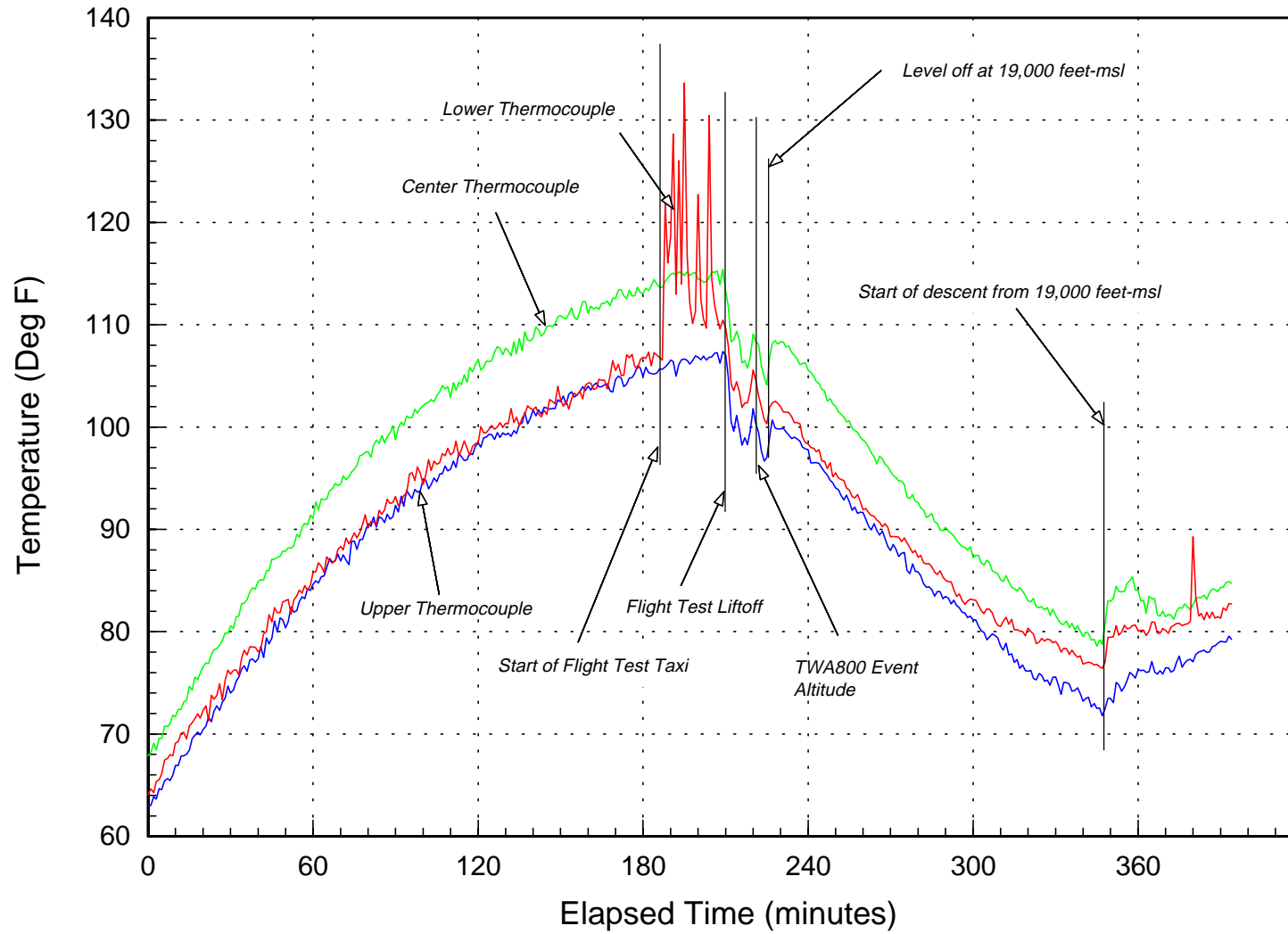
# CWT Forward Bay Between Spanwise Beam 2 and Mid Spar Ullage Temperatures TWA800 Emulation Flight



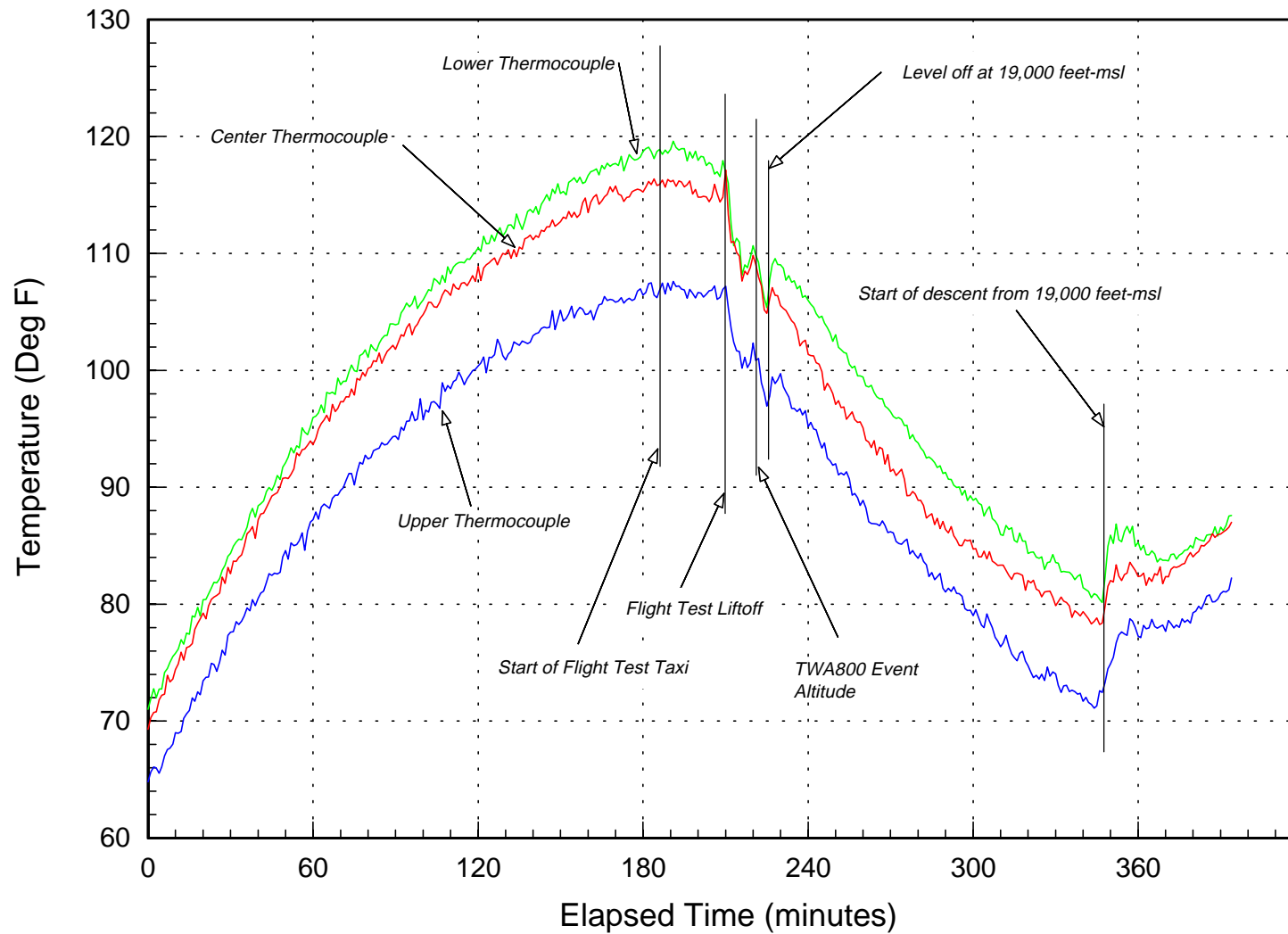
CWT Forward Bay Between Spanwise Beam 2 and 3  
Ullage Temperatures near Left Side of Tank  
TWA800 Emulation Flight



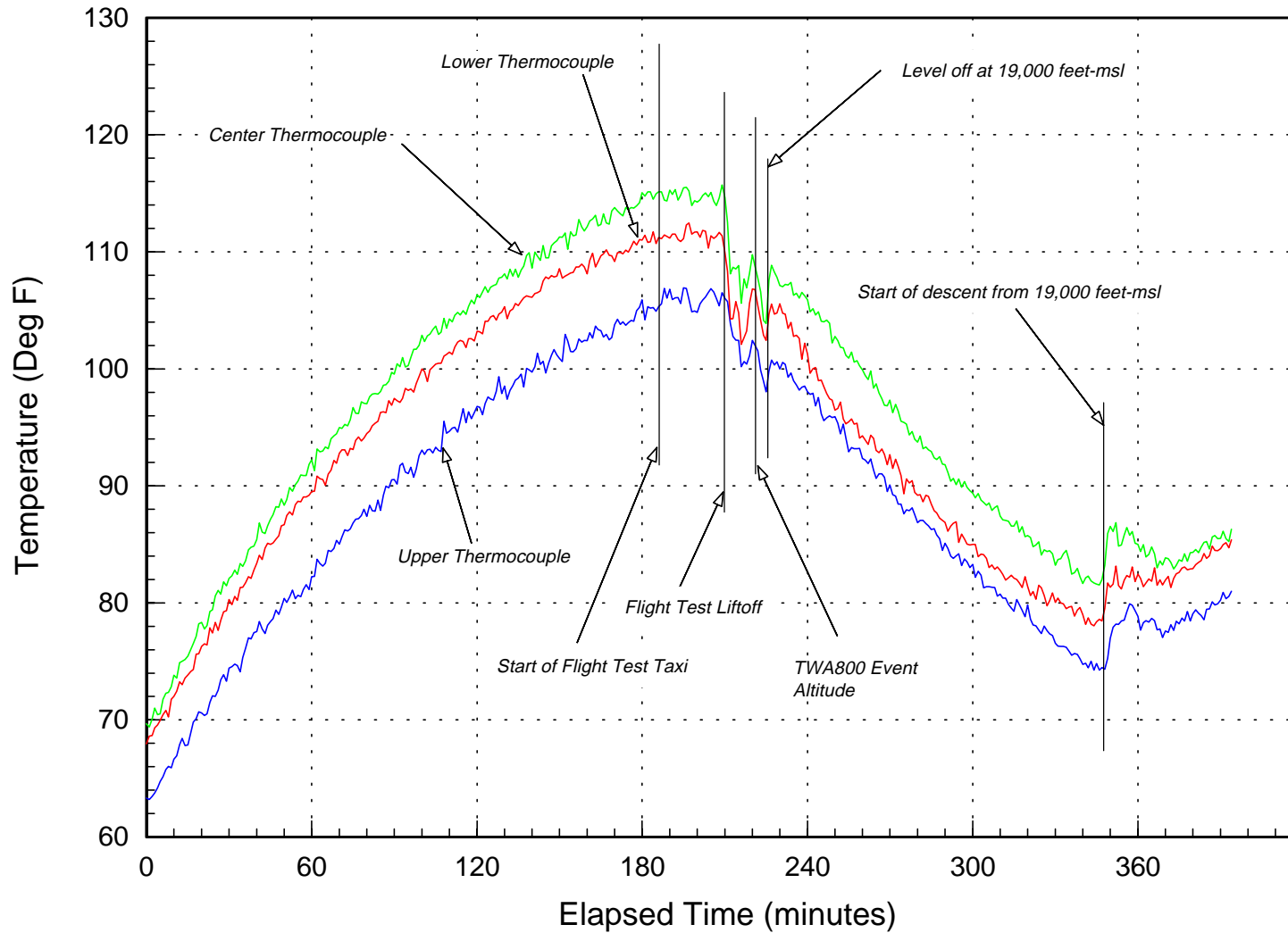
# CWT Forward Bay Between Spanwise Beam 2 and 3 Ullage Temperatures near Right Side of Tank TWA800 Emulation Flight



# CWT Forward Bay Between Spanwise Beam 2 and Mid Spar Ullage Temperatures near Left Side of Tank TWA800 Emulation Flight

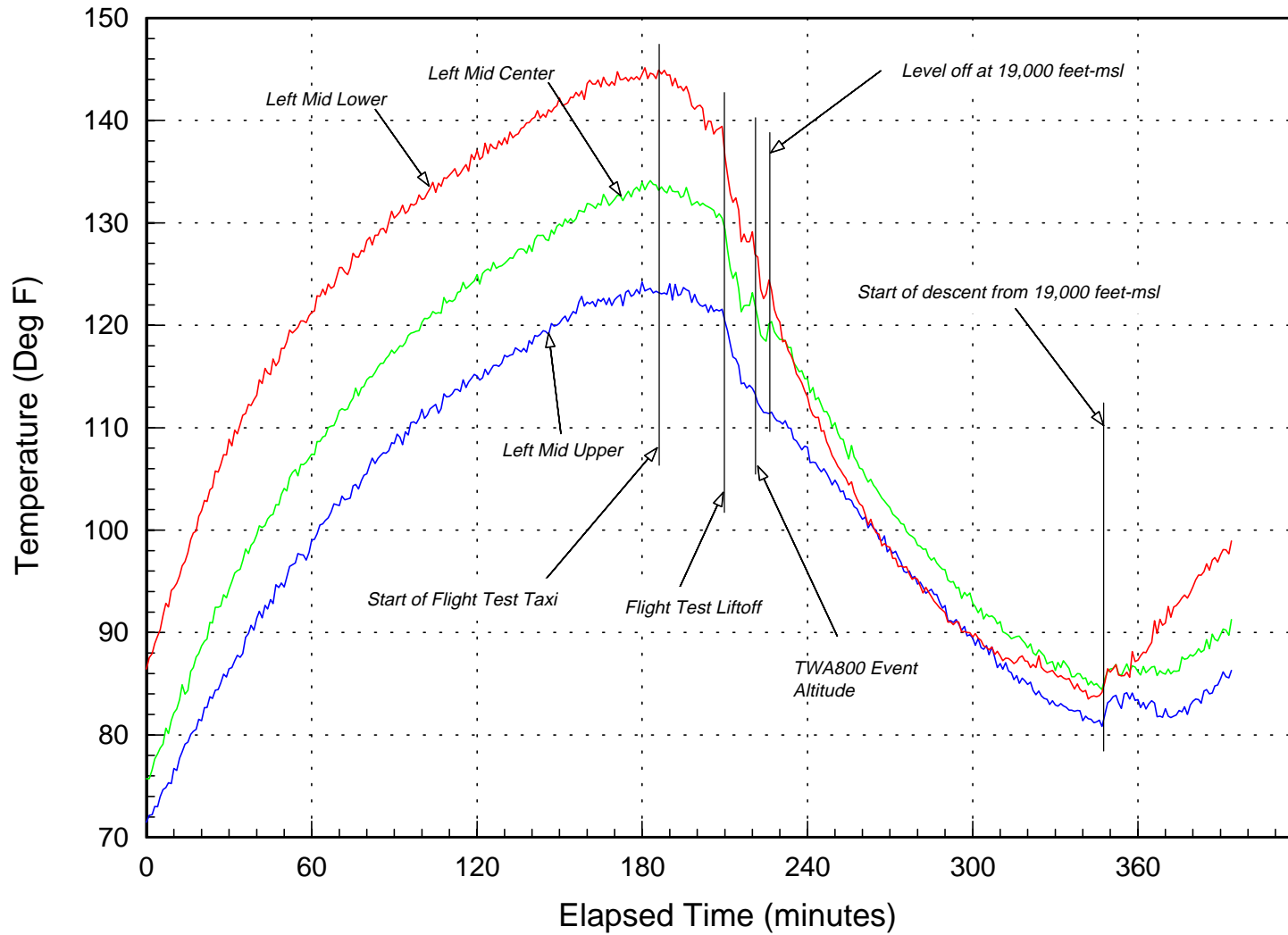


# CWT Forward Bay Between Spanwise Beam 2 and Mid Spar Ullage Temperatures near Right Side of Tank TWA800 Emulation Flight

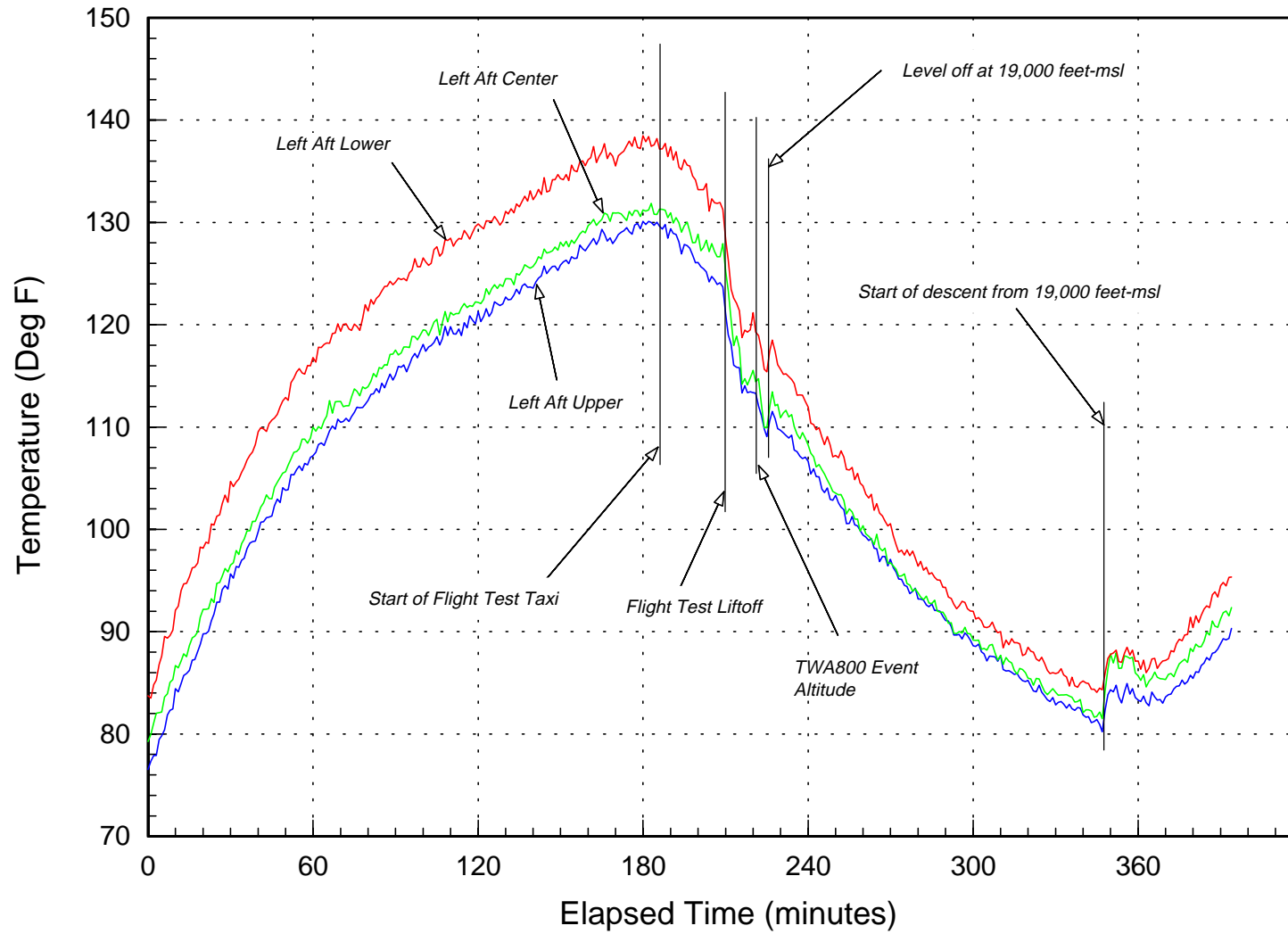




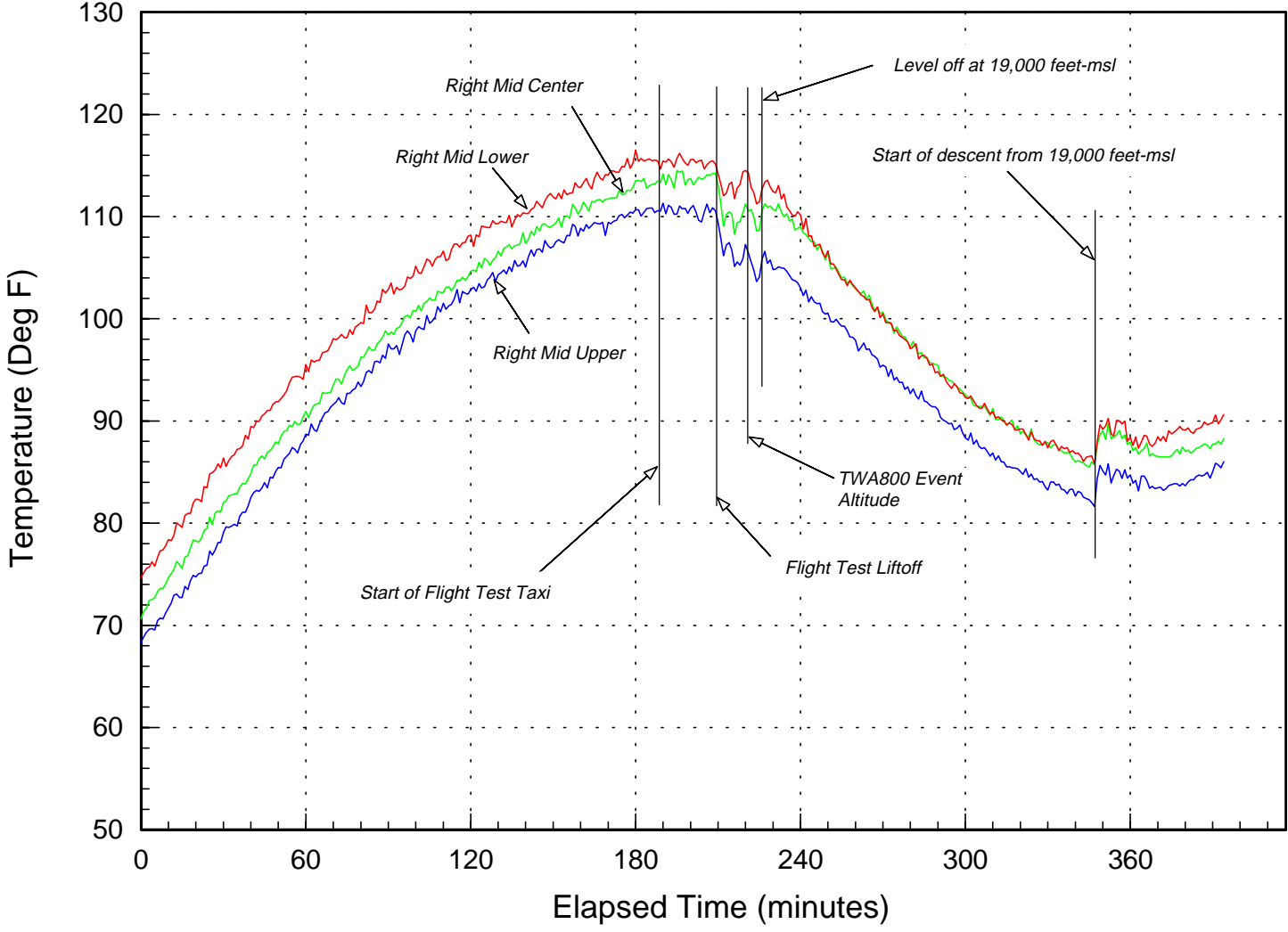
# CWT Left Mid Bay Ullage Temperatures TWA800 Emulation Flight



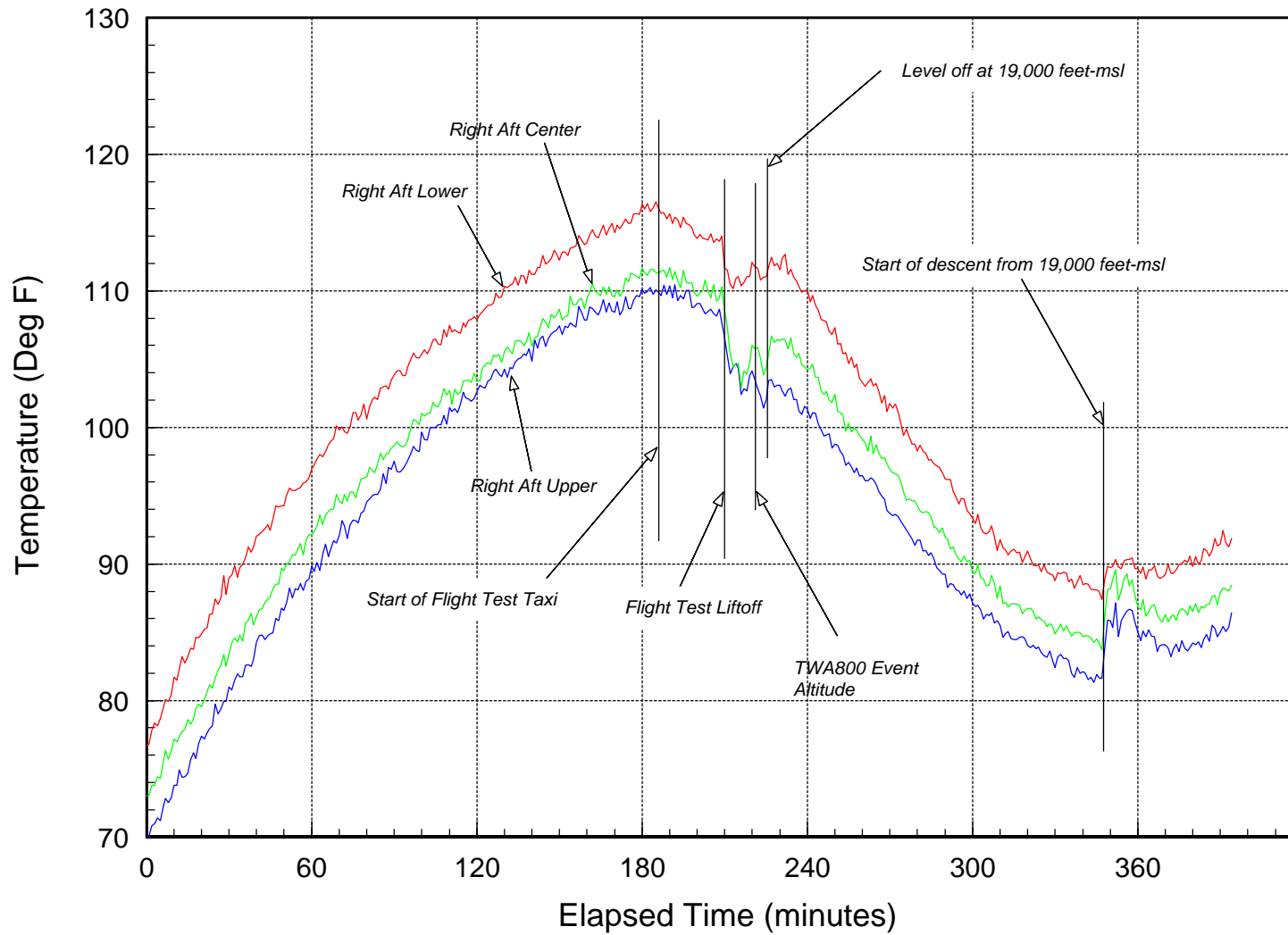
# CWT Left Aft Bay Ullage Temperatures TWA800 Emulation Flight



# CWT Right Mid Bay Ullage Temperatures TWA800 Emulation Flight



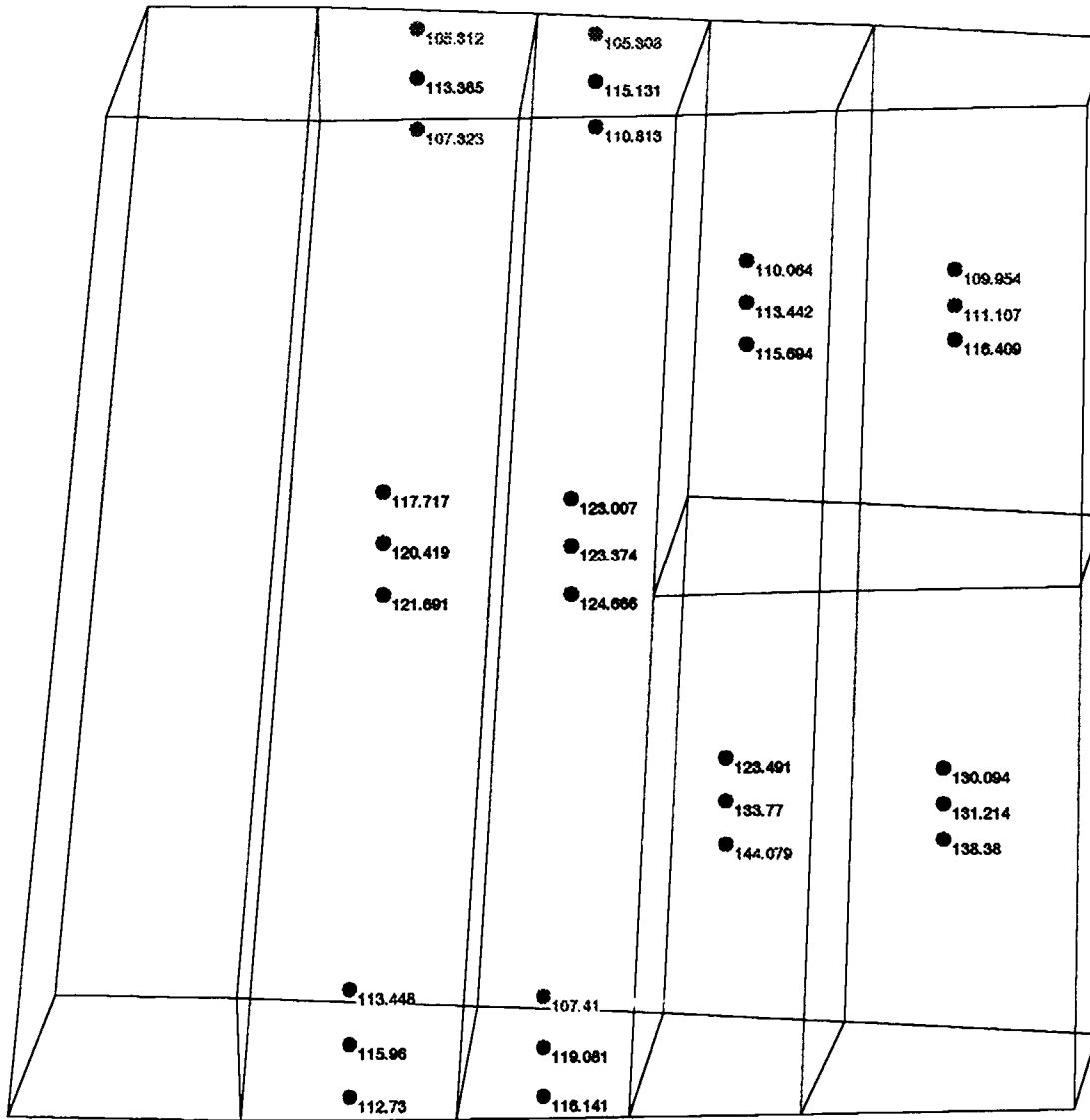
# CWT Right Aft Bay Ullage Temperatures TWA800 Emulation Flight



# TWA800 Emulation Flight

## CWT Ullage Temperatures

### Prior to taxi

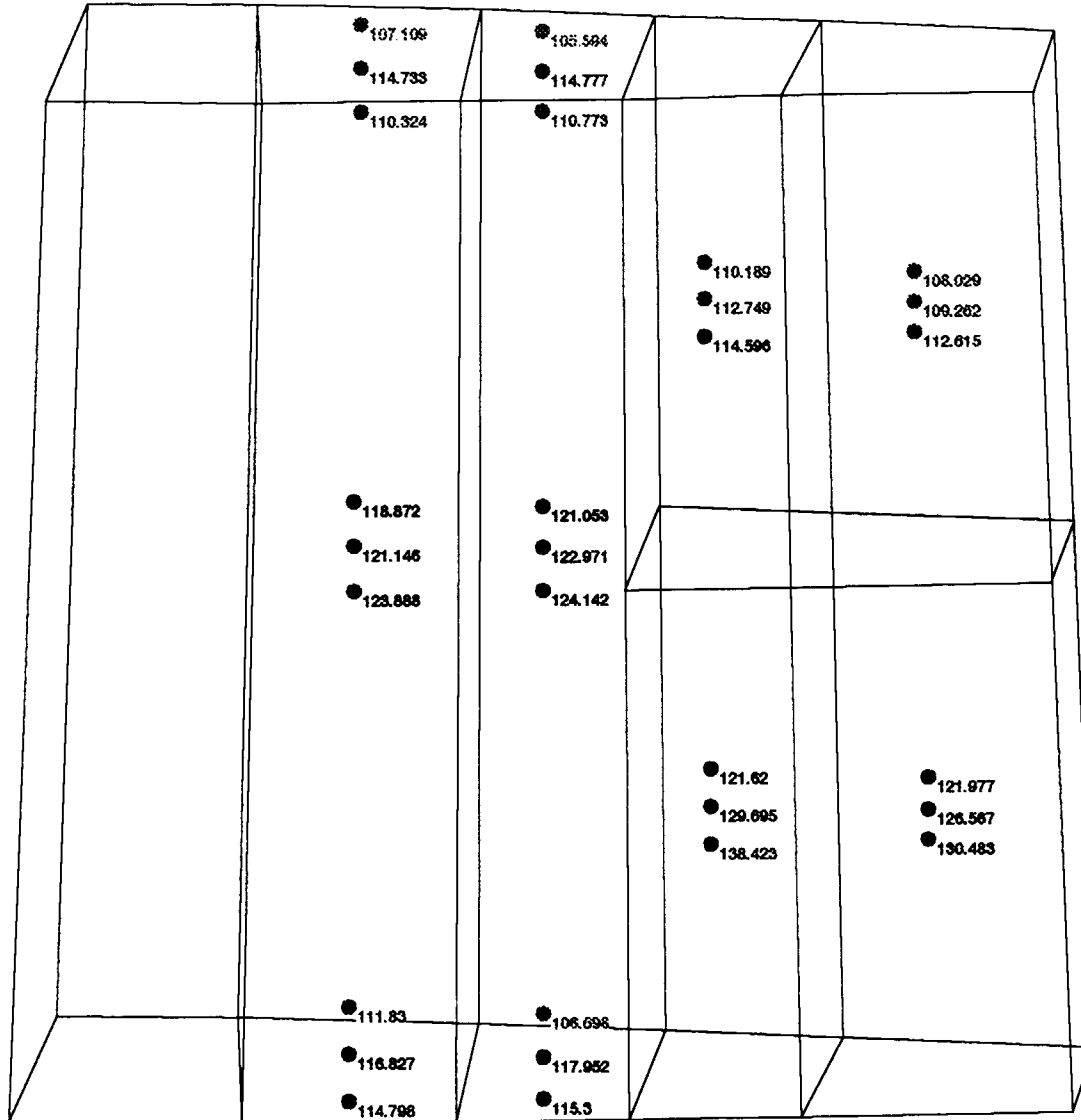


TIME, = 182

#### Color Key

- ▨ 70
- ▨ 90
- 110
- 130
- 150

# TWA800 Emulation Flight CWT Ullage Temperatures at Takeoff

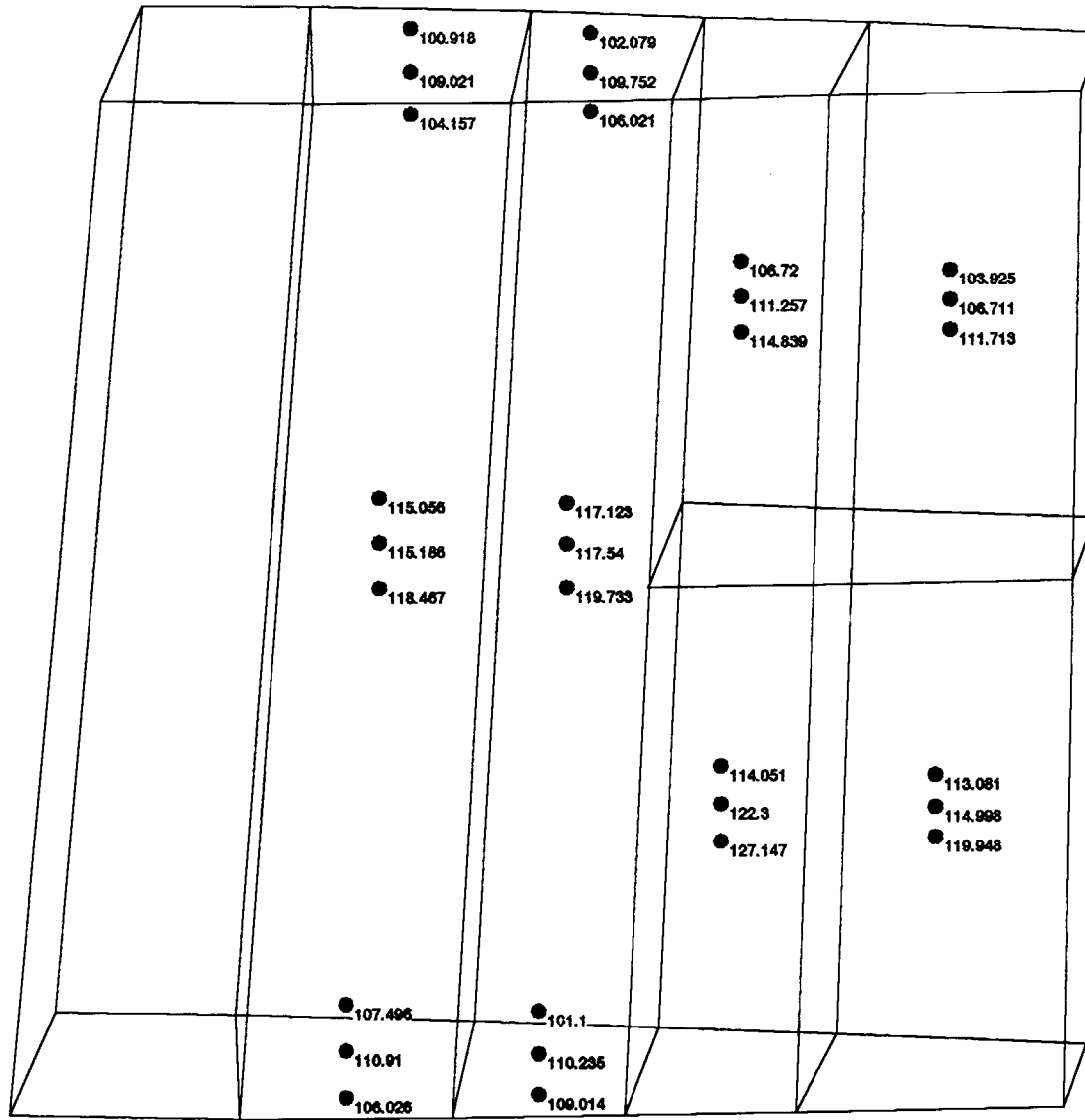


**TIME, = 209.25**  
**VCAS, = 159.391**  
**ALTITUDE, = 9.39913**

### Color Key

- 70
- 90
- 110
- 130
- 150

# TWA800 Emulation Flight CWT Ullage Temperatures at Event Altitude

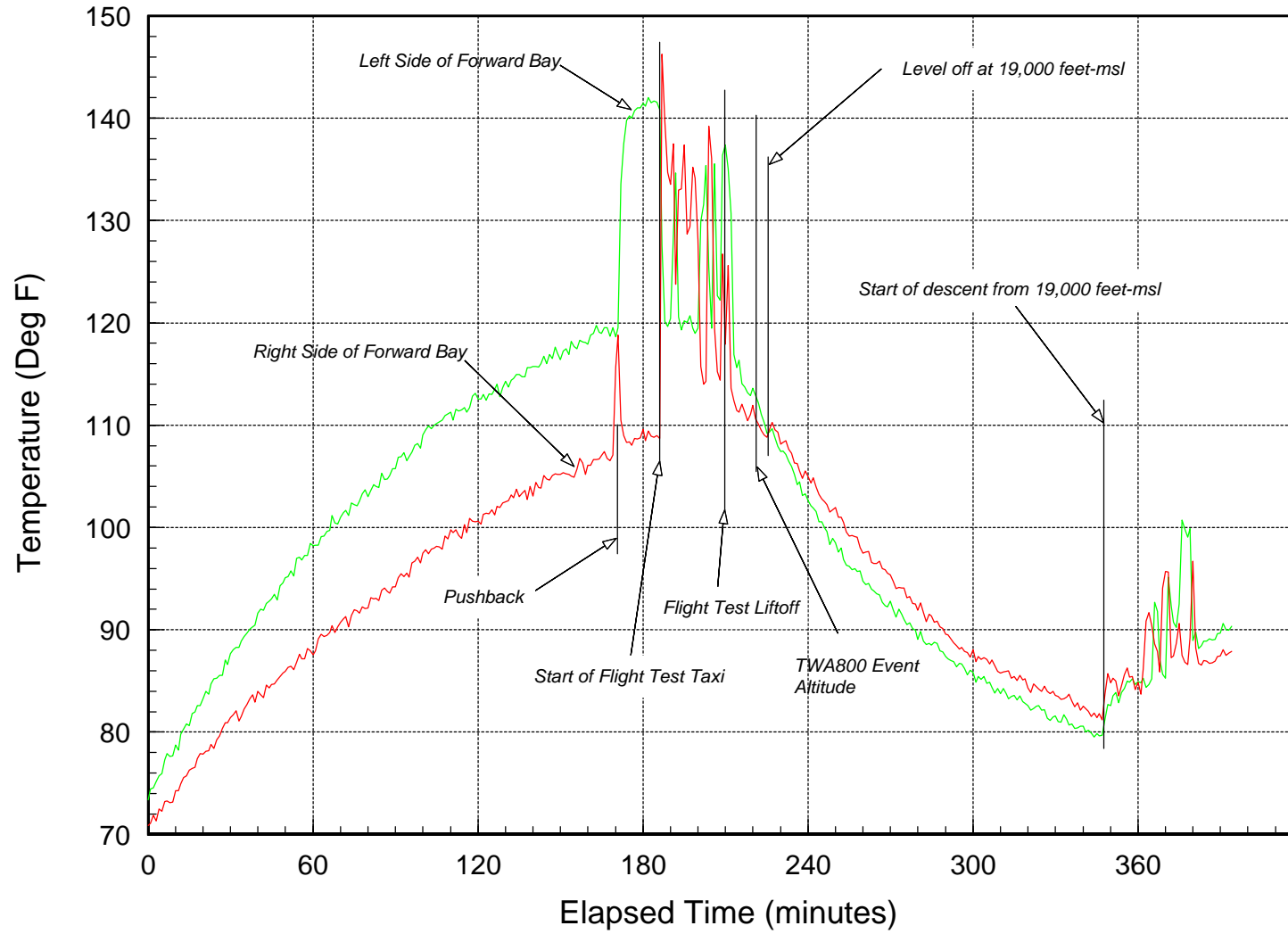


**TIME, = 220.9**  
**VCAS, = 290.829**  
**ALTITUDE, = 13799.4**

### Color Key

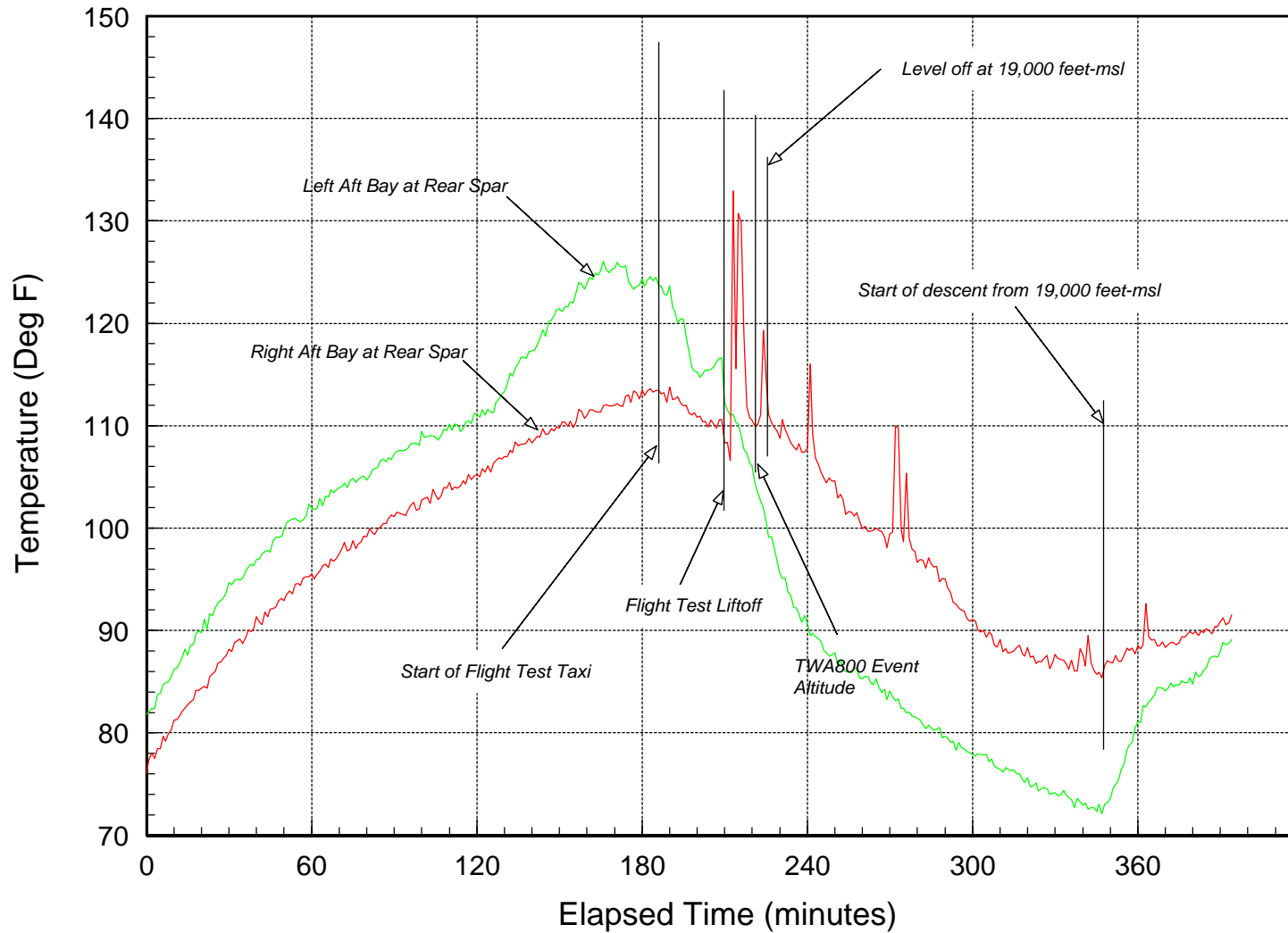
- 60
- 80
- 100
- 120
- 140

# Fuel Temperatures Measured in CWT Forward Bay TWA800 Emulation Flight

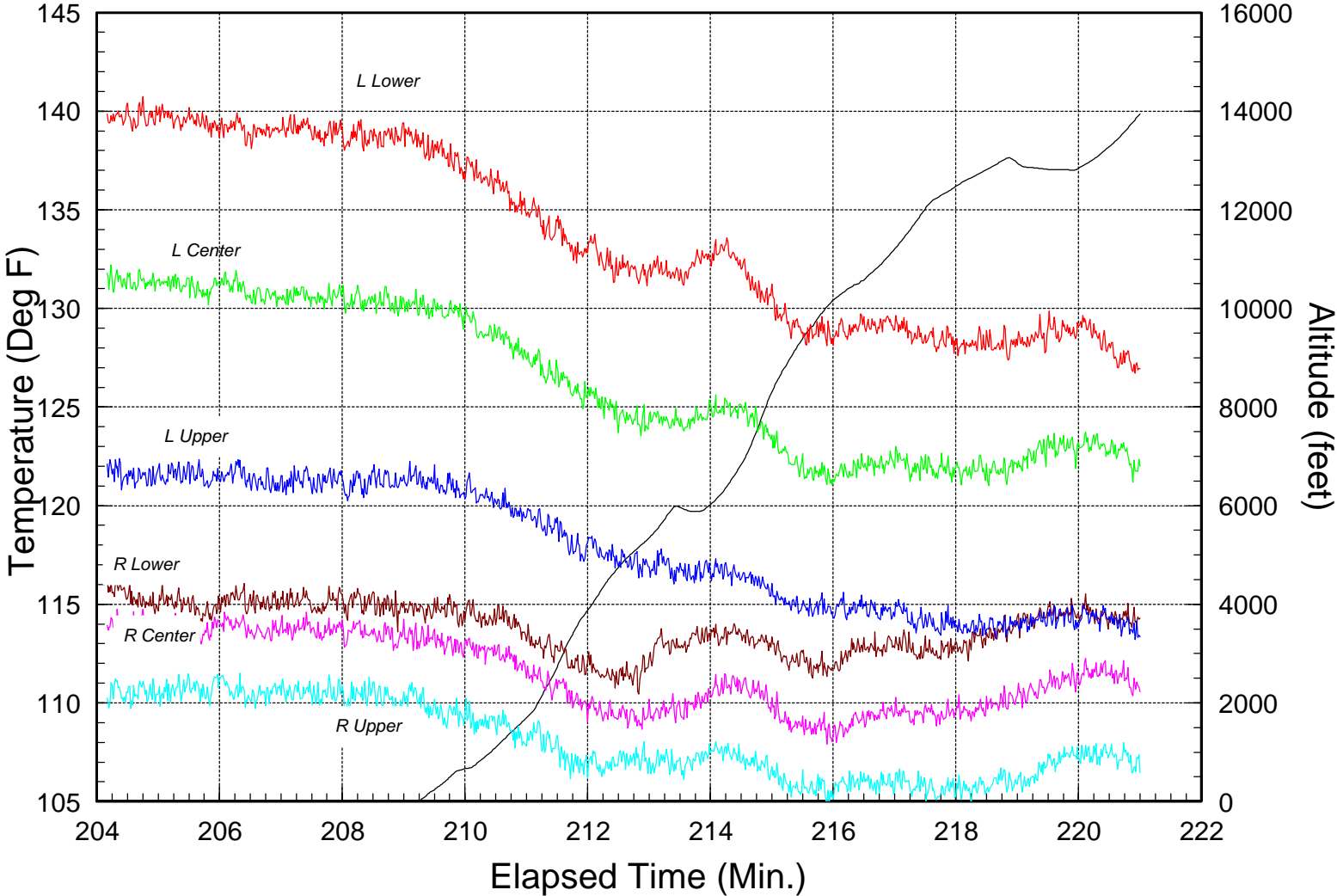




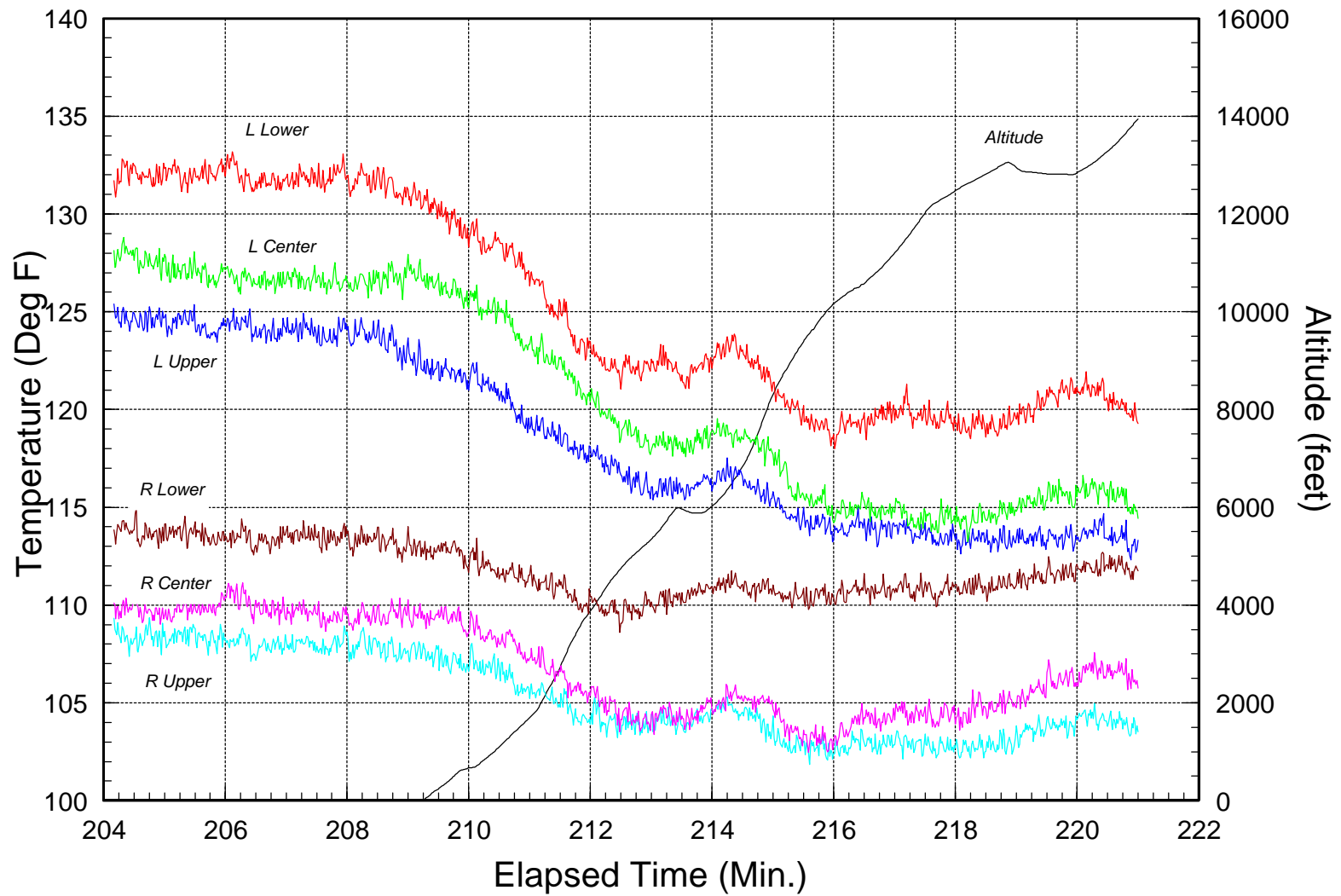
# Fuel Temperatures Measured at CWT Rear Spar TWA800 Emulation Flight



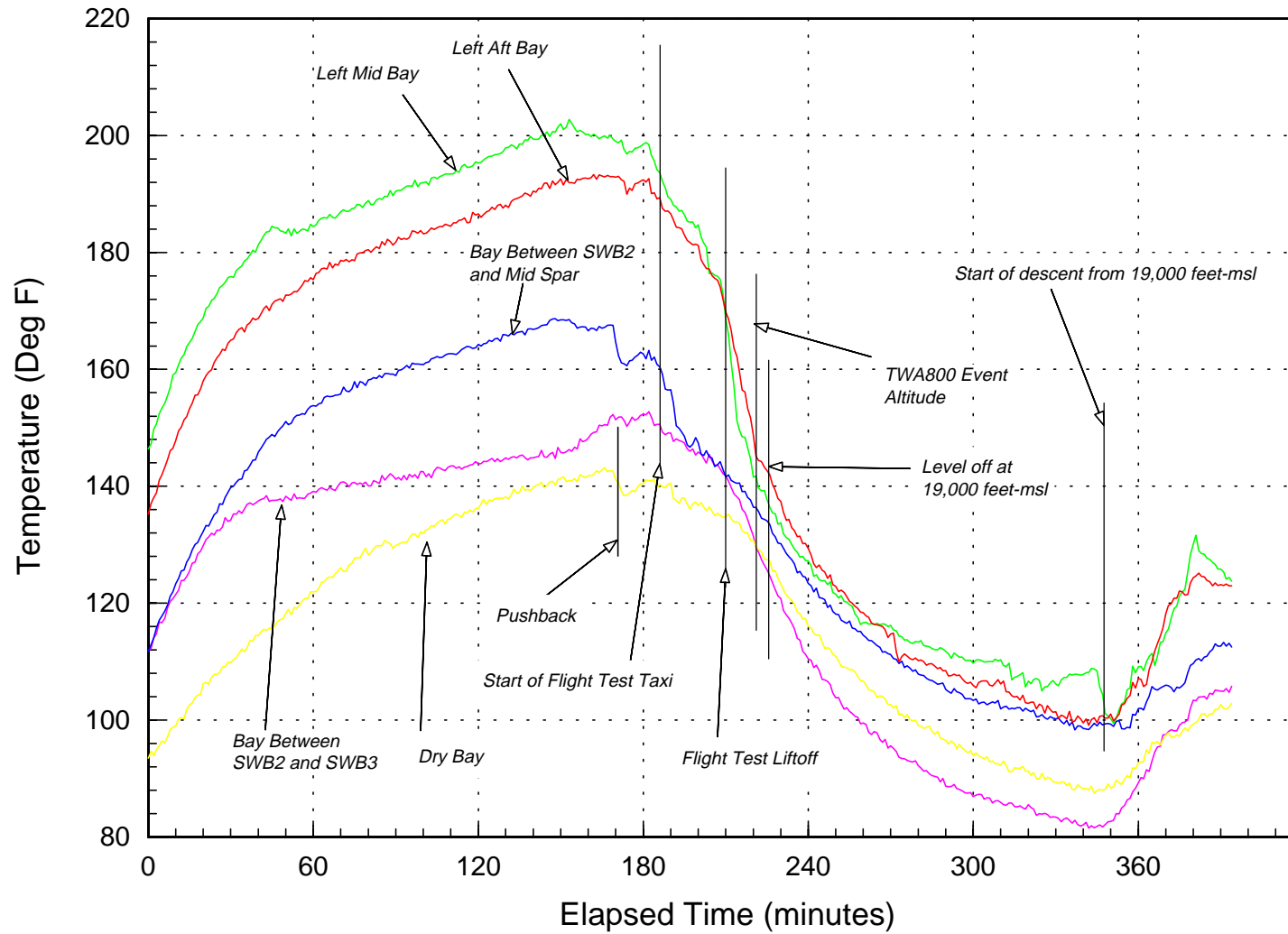
CWT Mid Bay Temperatures  
TWA800 Emulation  
Ascent Portion



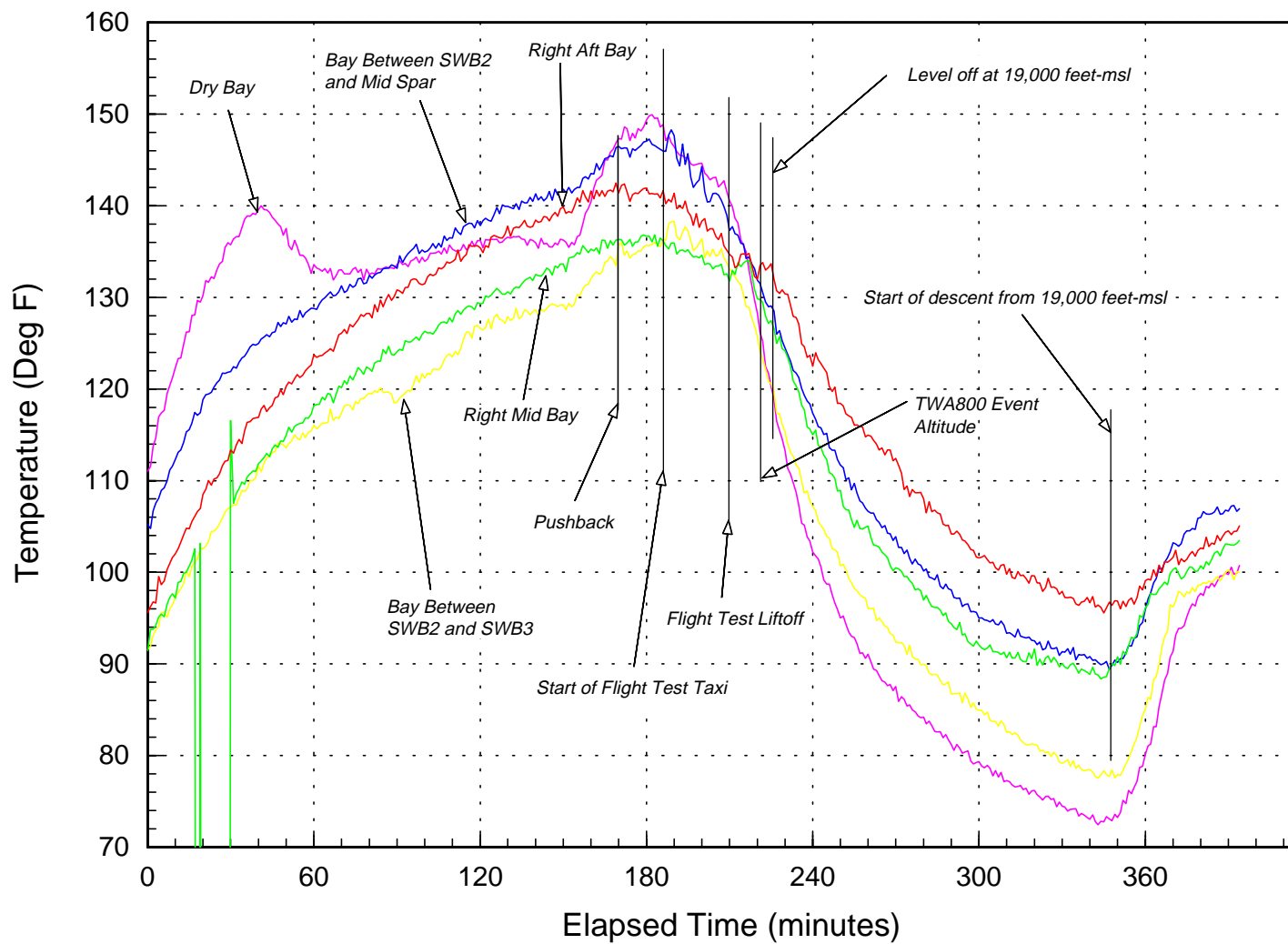
# CWT Aft Bay Temperatures TWA800 Emulation Ascent Portion



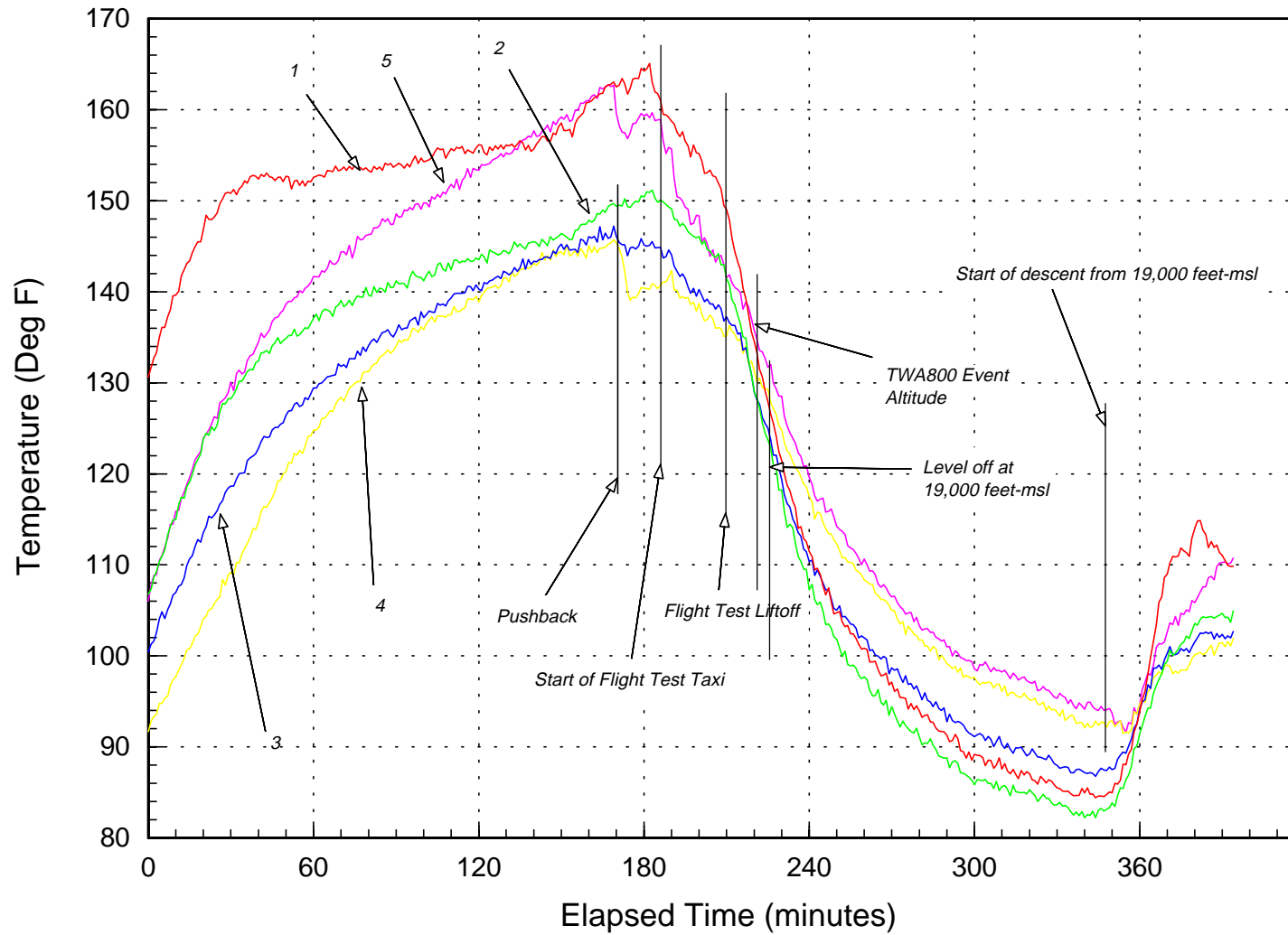
# CWT External Bottom Surface Temperatures BL 22 on Left side of Keel Beam TWA800 Emulation Flight



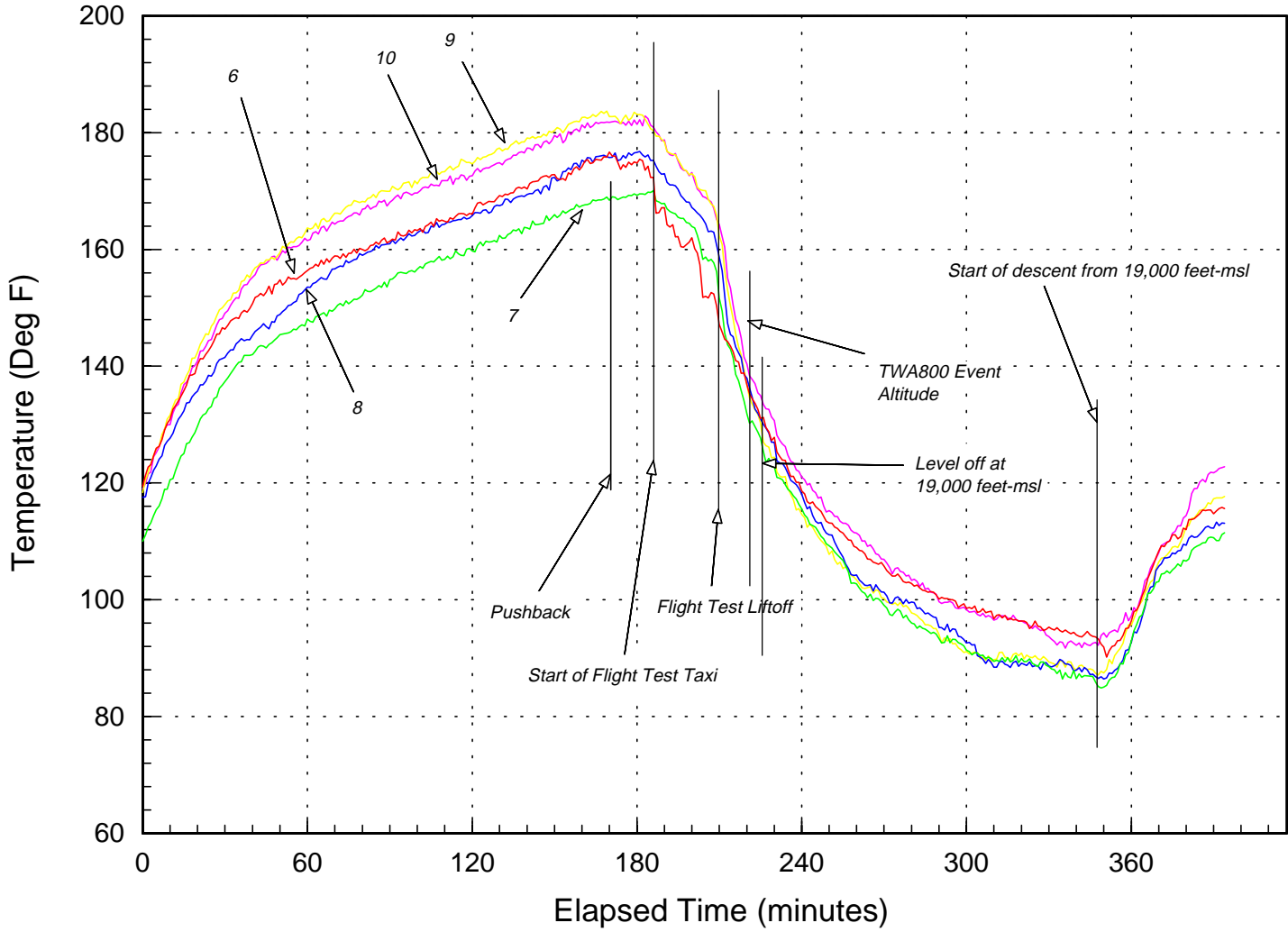
# CWT External Bottom Surface Temperatures BL 22 on Right side of Keel Beam TWA800 Emulation Flight



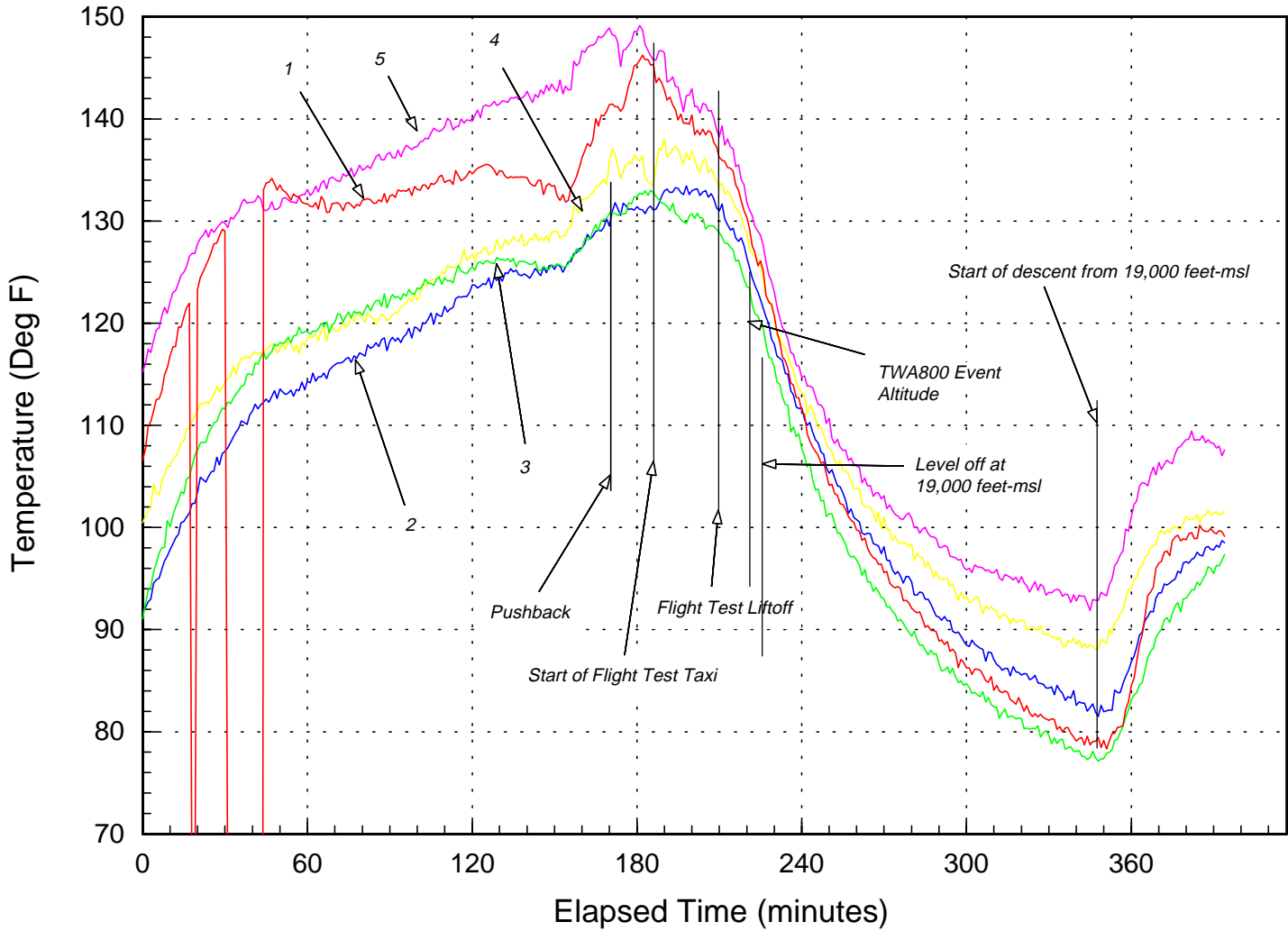
CWT External Bottom Surface Temperatures  
BL 58 on Left side of Keel Beam  
TWA800 Emulation Flight



CWT External Bottom Surface Temperatures  
BL 58 on Left side of Keel Beam  
TWA800 Emulation Flight

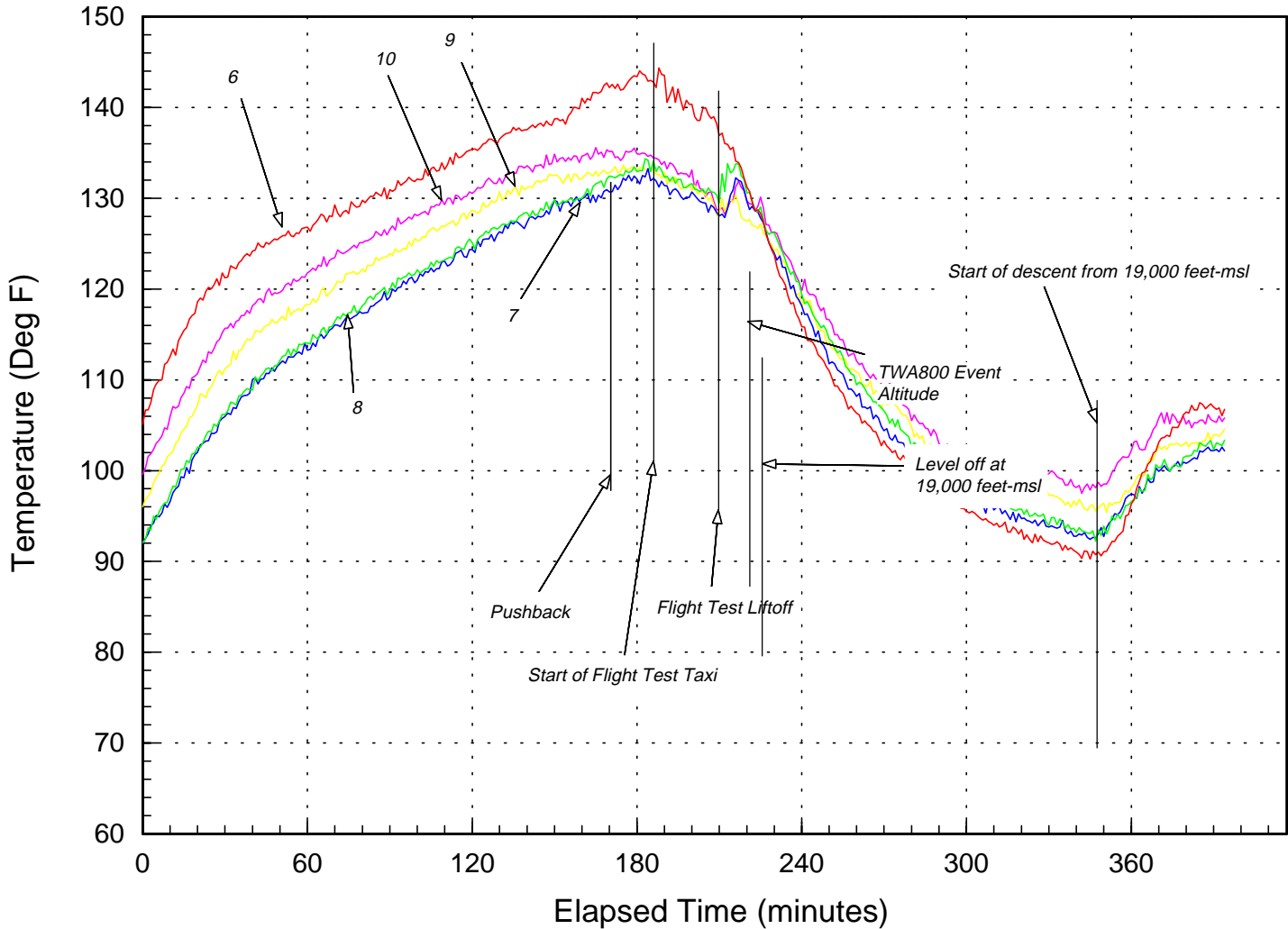


CWT External Bottom Surface Temperatures  
BL 58 on Right side of Keel Beam  
TWA800 Emulation Flight

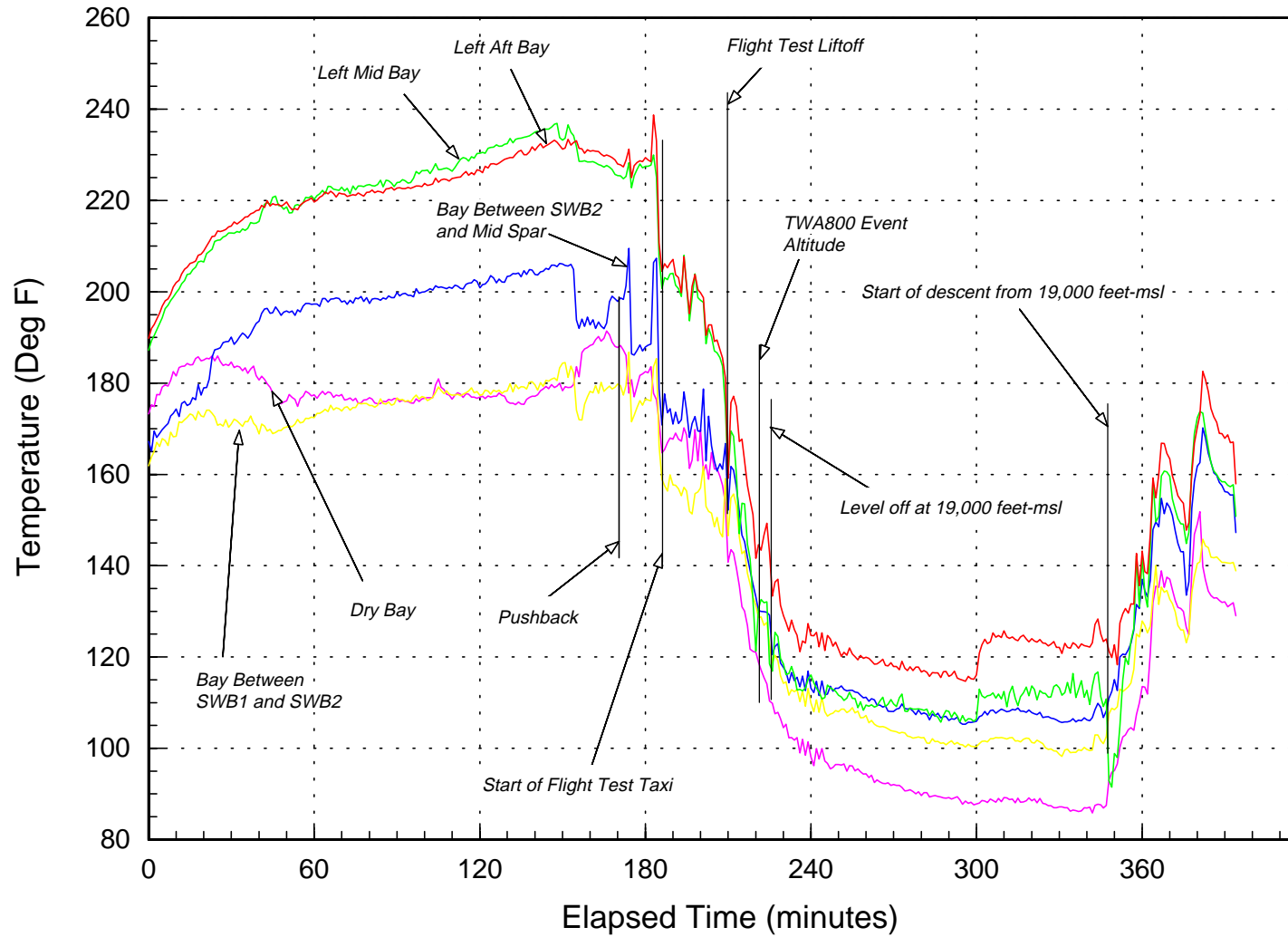




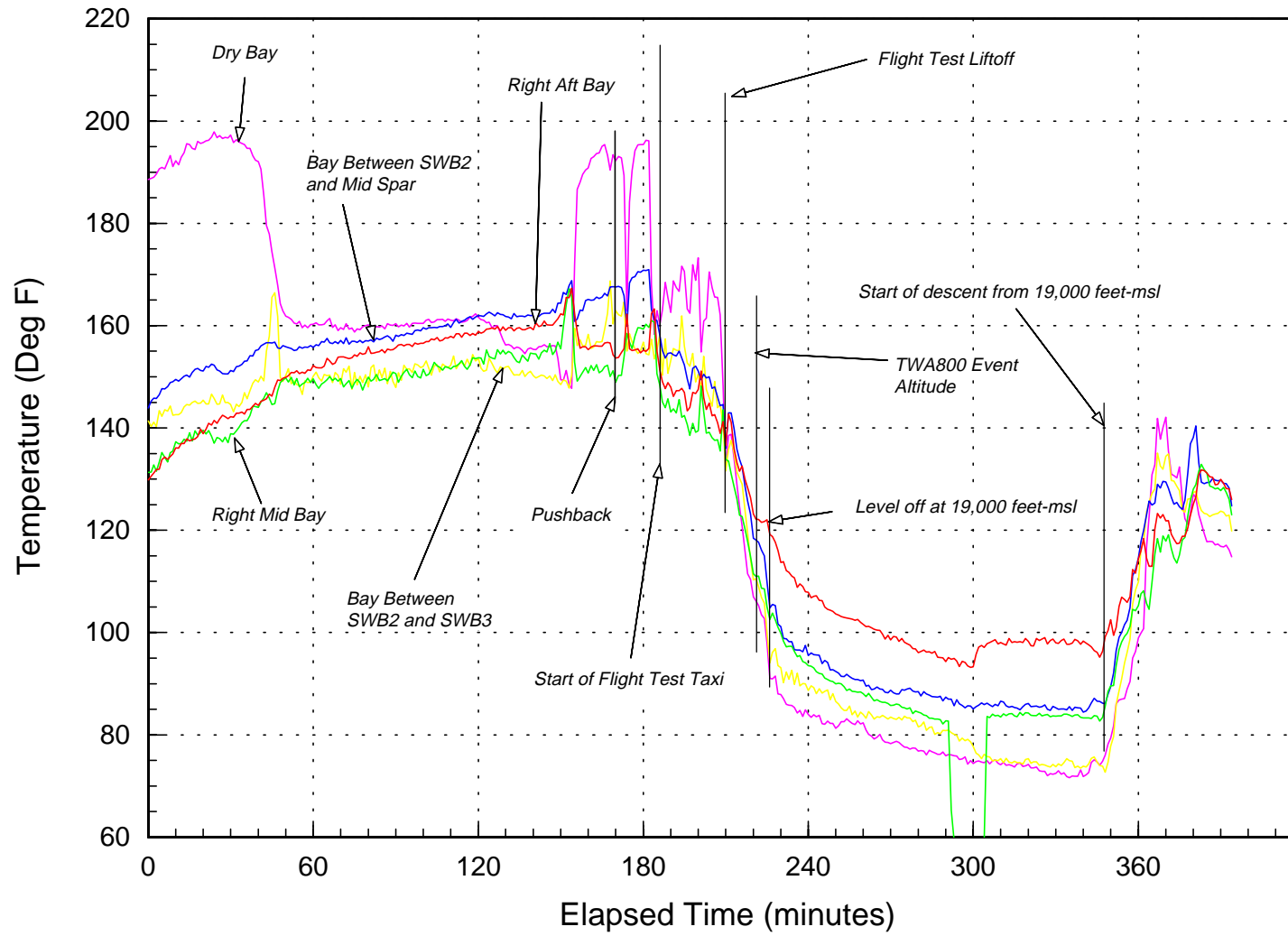
CWT External Bottom Surface Temperatures  
BL 58 on Right side of Keel Beam  
TWA800 Emulation Flight



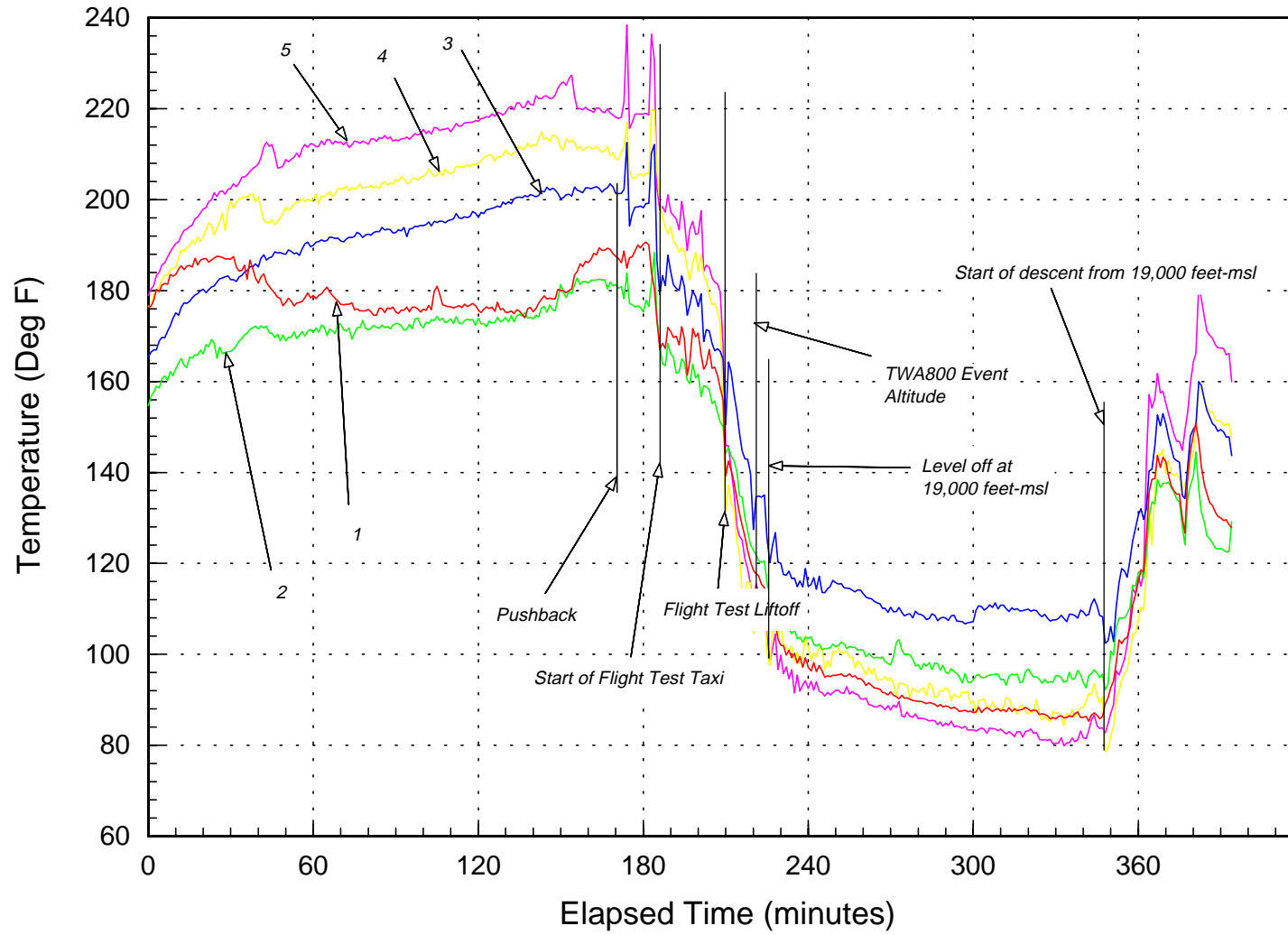
ECS Pack Bay Air Temperatures  
BL 22 on Left side of Keel Beam  
TWA800 Emulation Flight



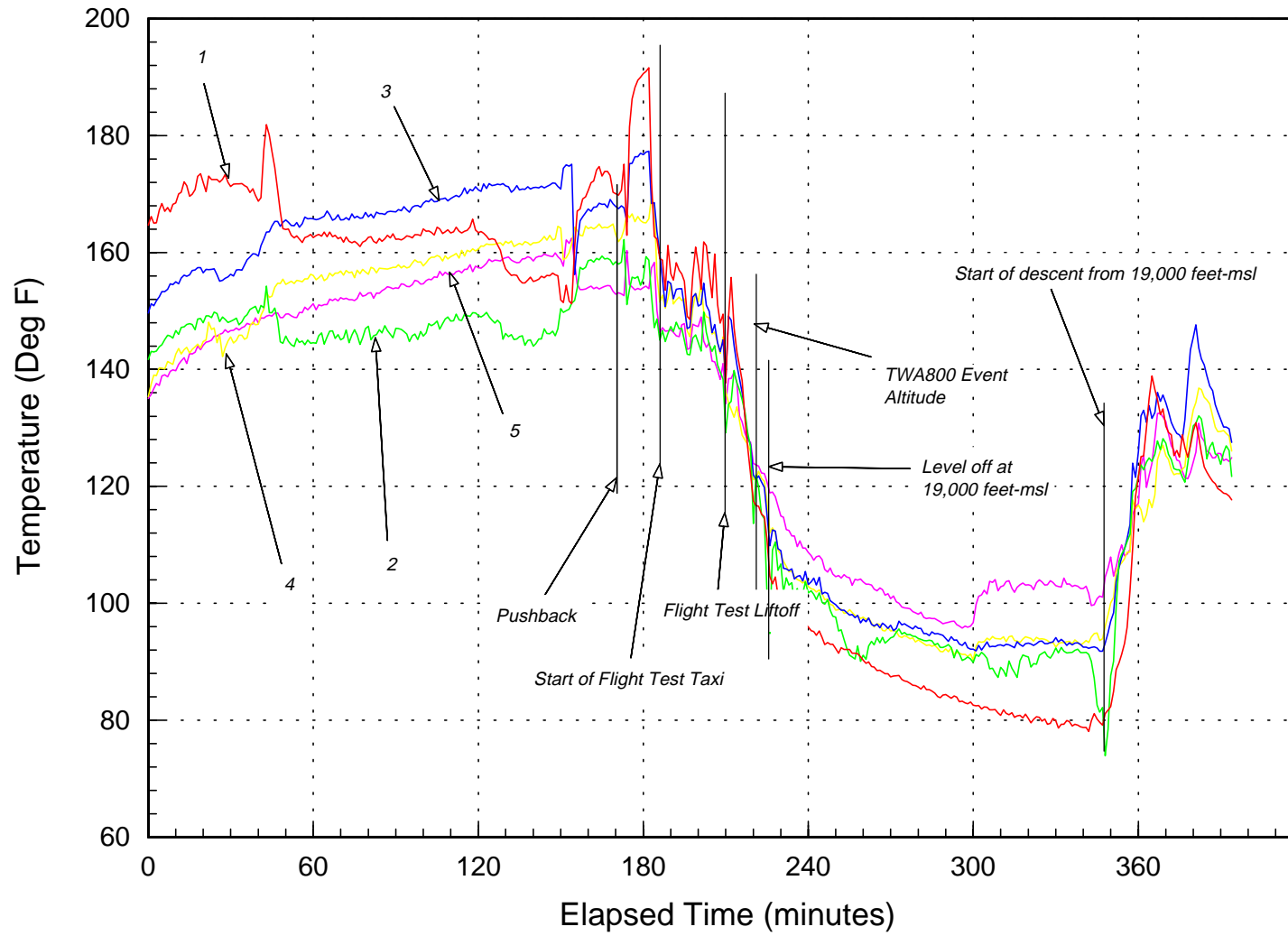
# ECS Pack Bay Air Temperatures BL 22 on Right side of Keel Beam TWA800 Emulation Flight



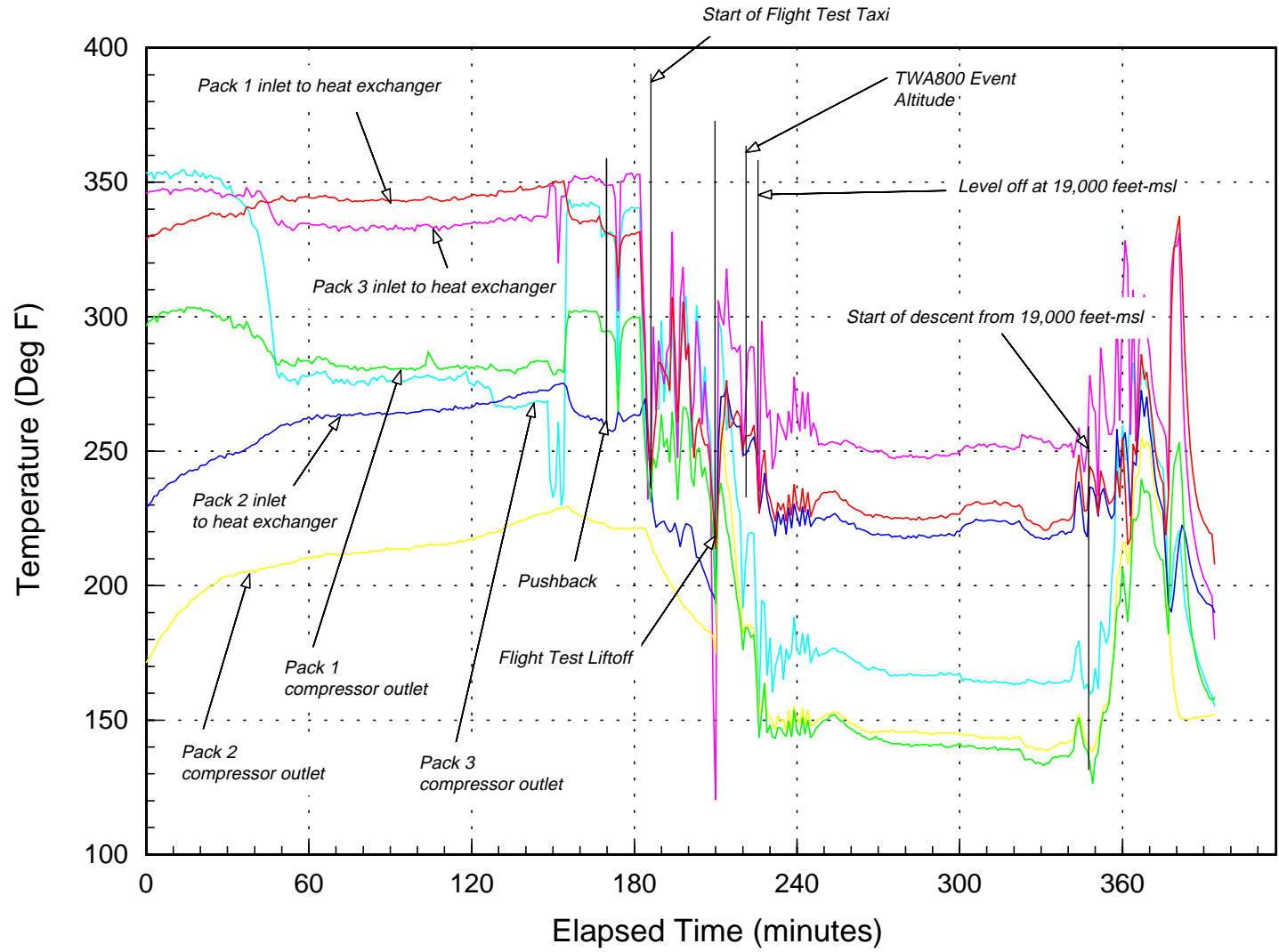
ECS Pack Bay Air Temperatures  
BL 58 on Left side of Keel Beam  
TWA800 Emulation Flight



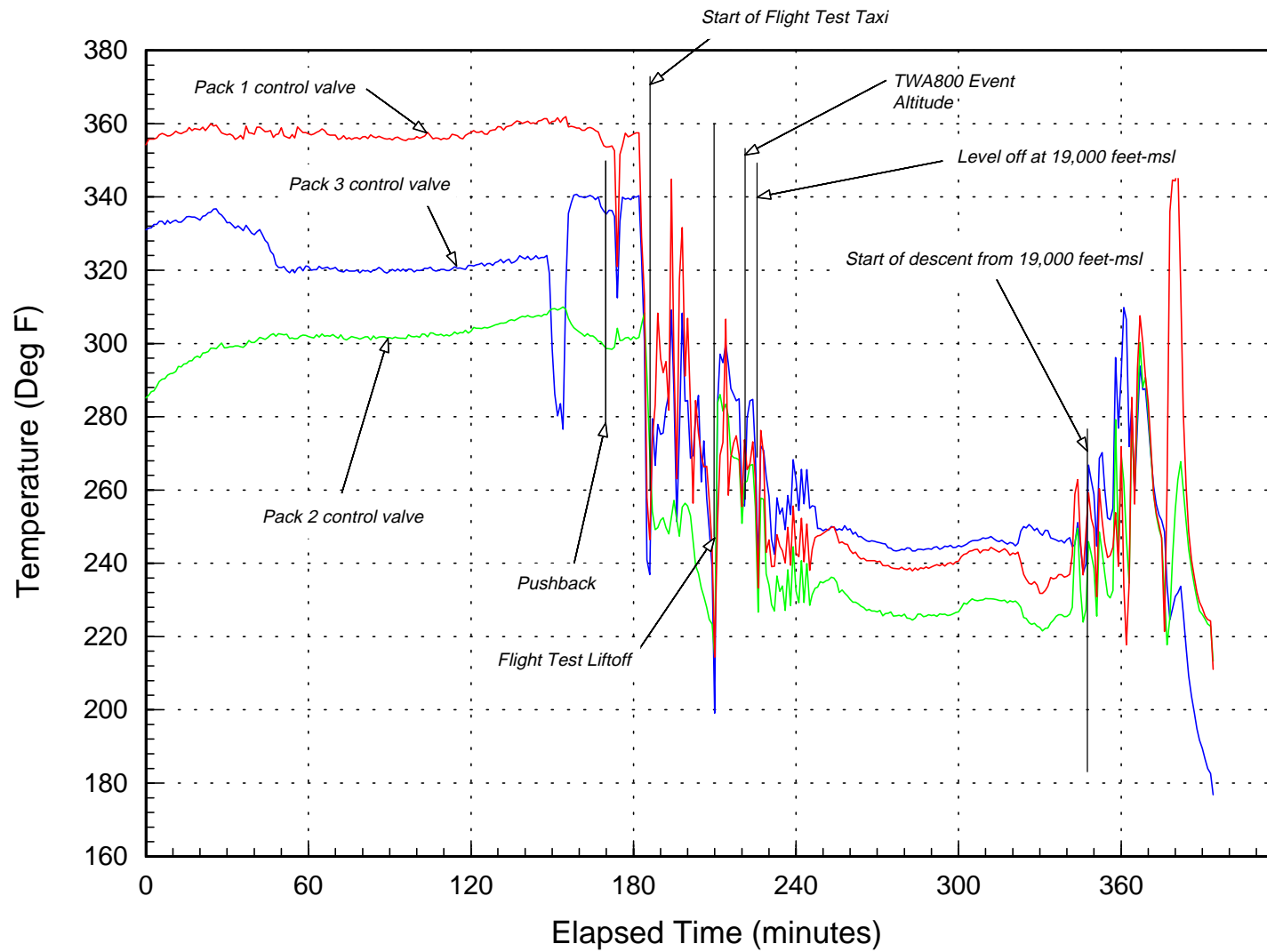
ECS Pack Bay Air Temperatures  
BL 58 on Right side of Keel Beam  
TWA800 Emulation Flight



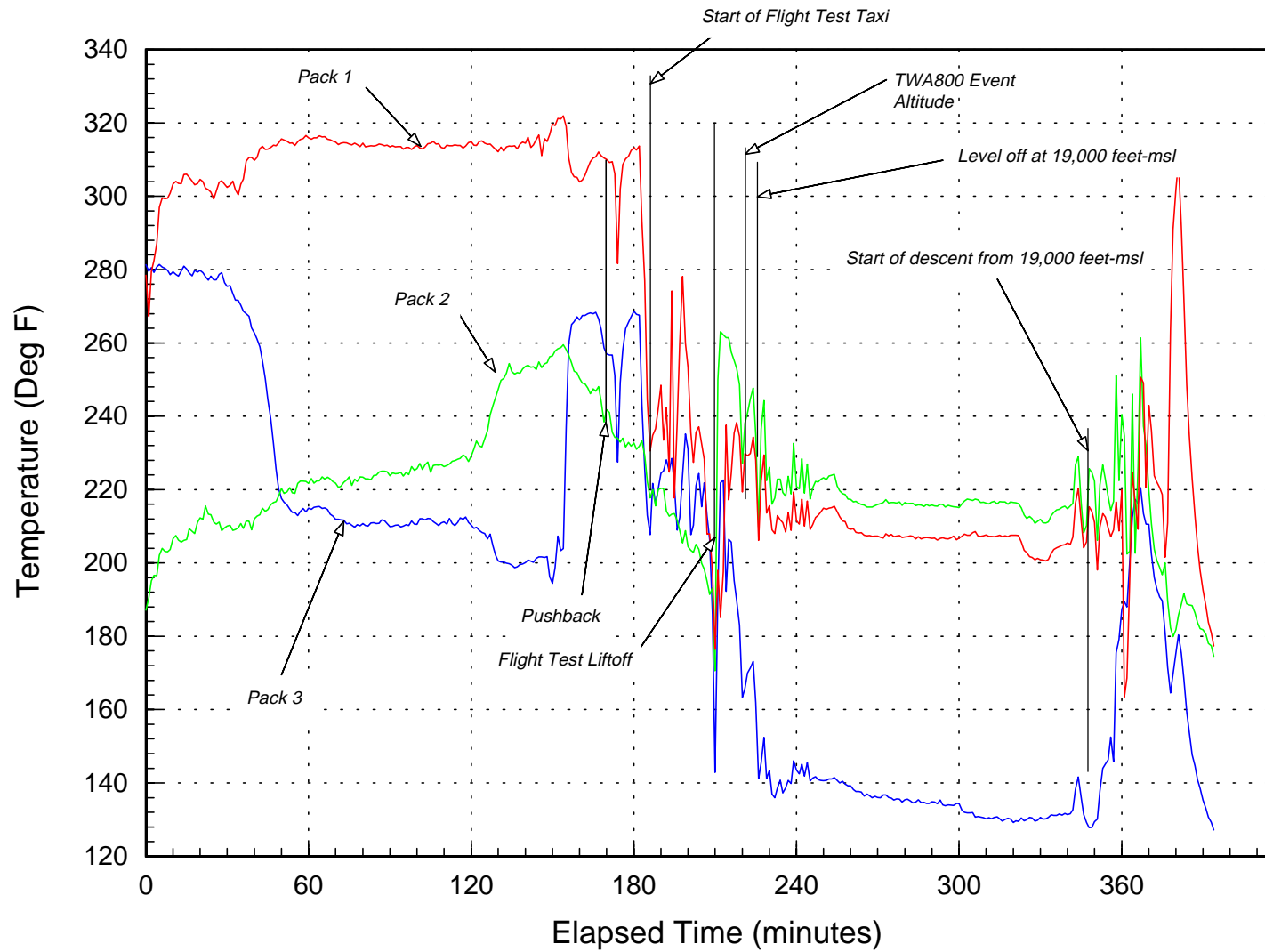
# ECS Pack Component Surface Temperatures Heat Exchanger and Compressor TWA800 Emulation Flight



# ECS Pack Component Surface Temperatures Pneumatic Bleed Flow Control Valve TWA800 Emulation Flight

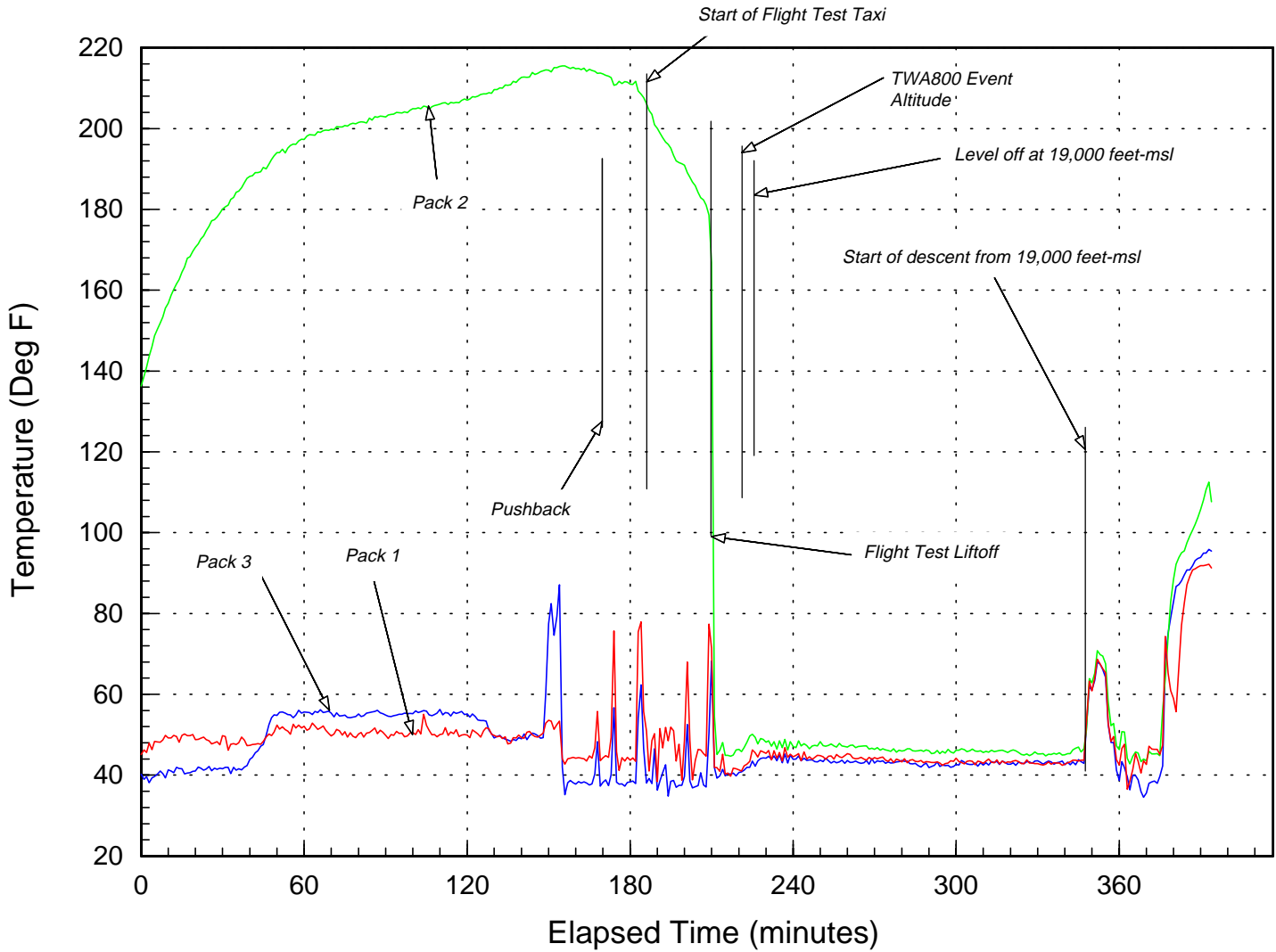


# ECS Pack Component Surface Temperatures Exhaust Louvers TWA800 Emulation Flight

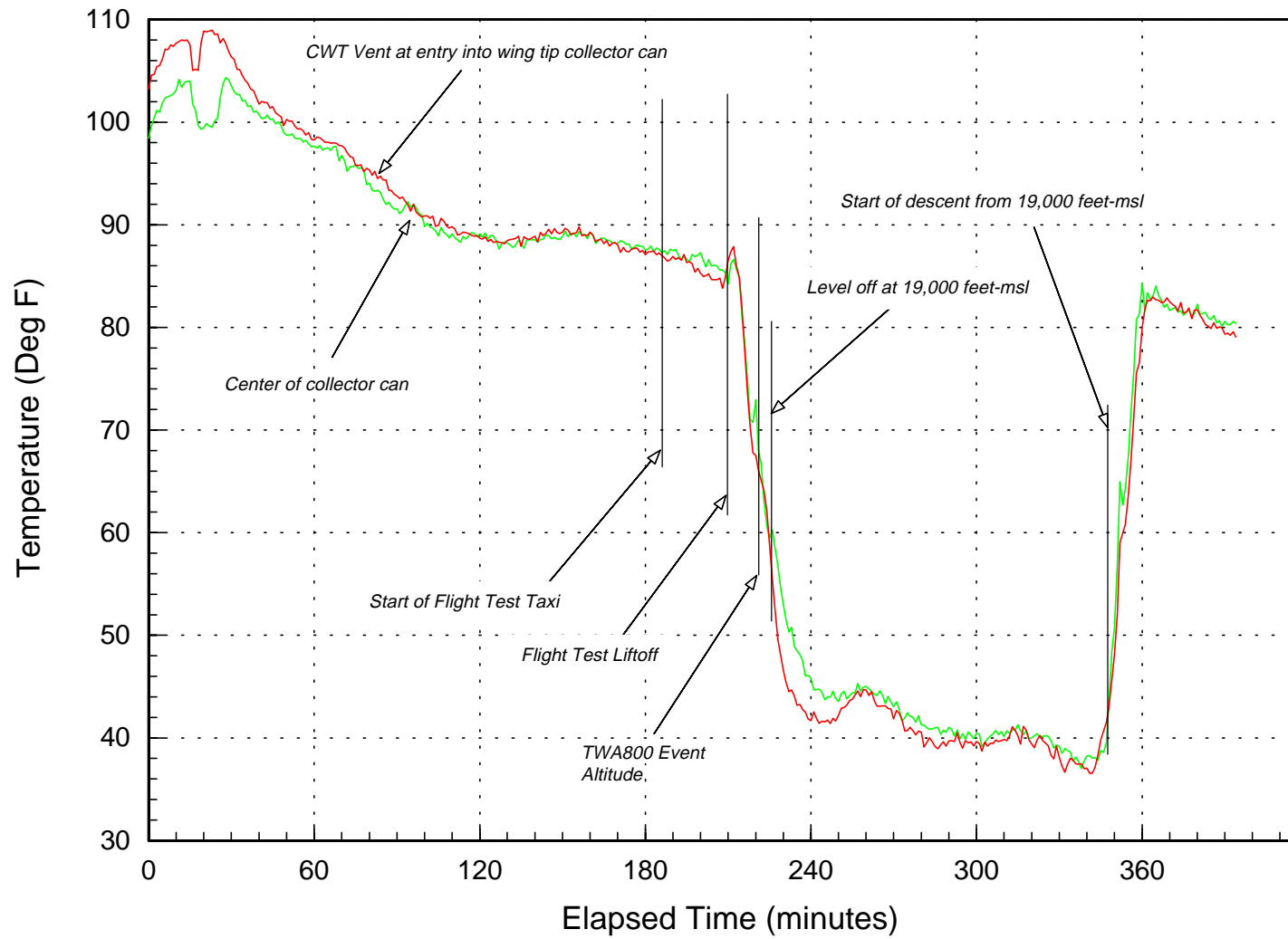




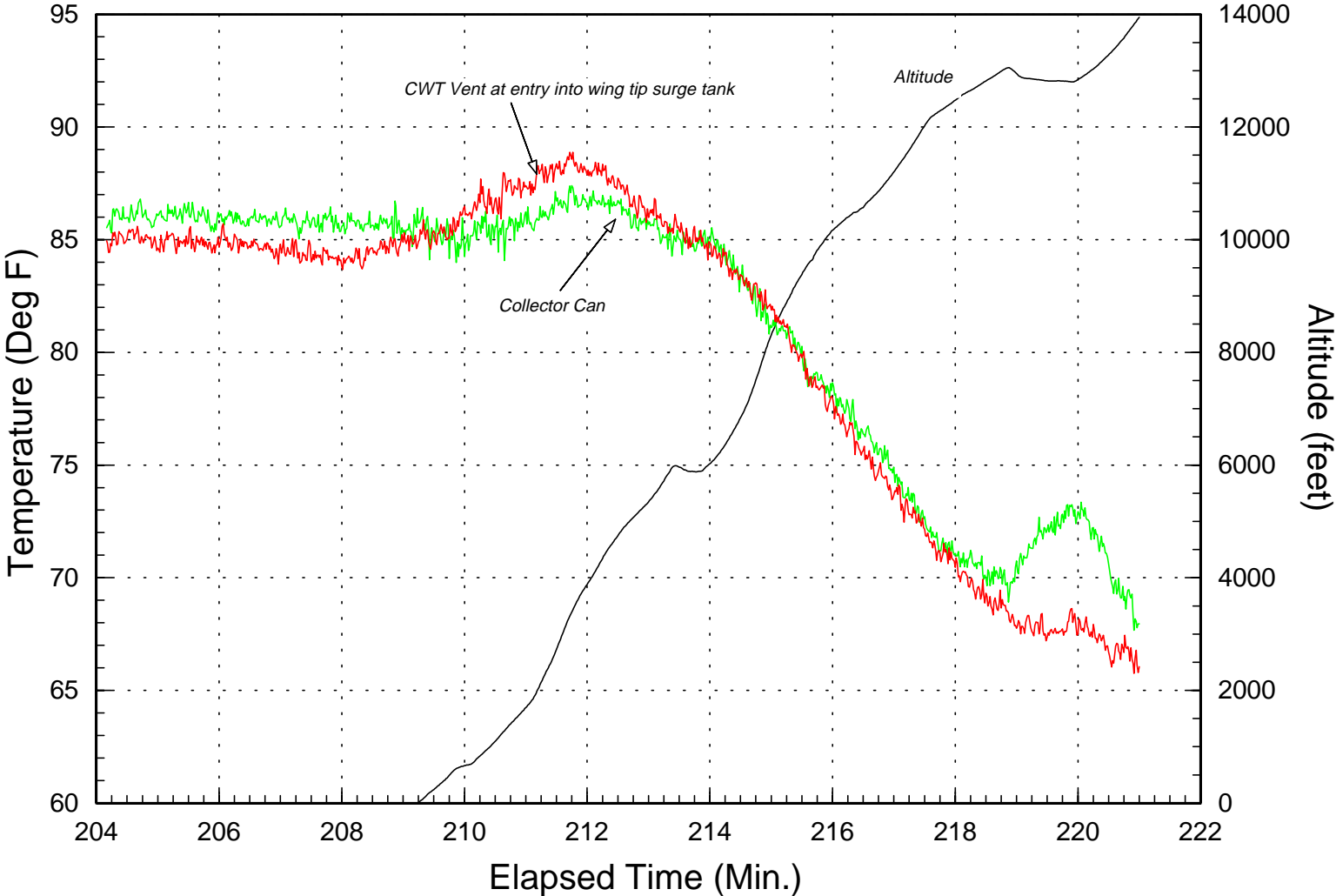
# ECS Pack Component Surface Temperatures Water Separator TWA800 Emulation Flight



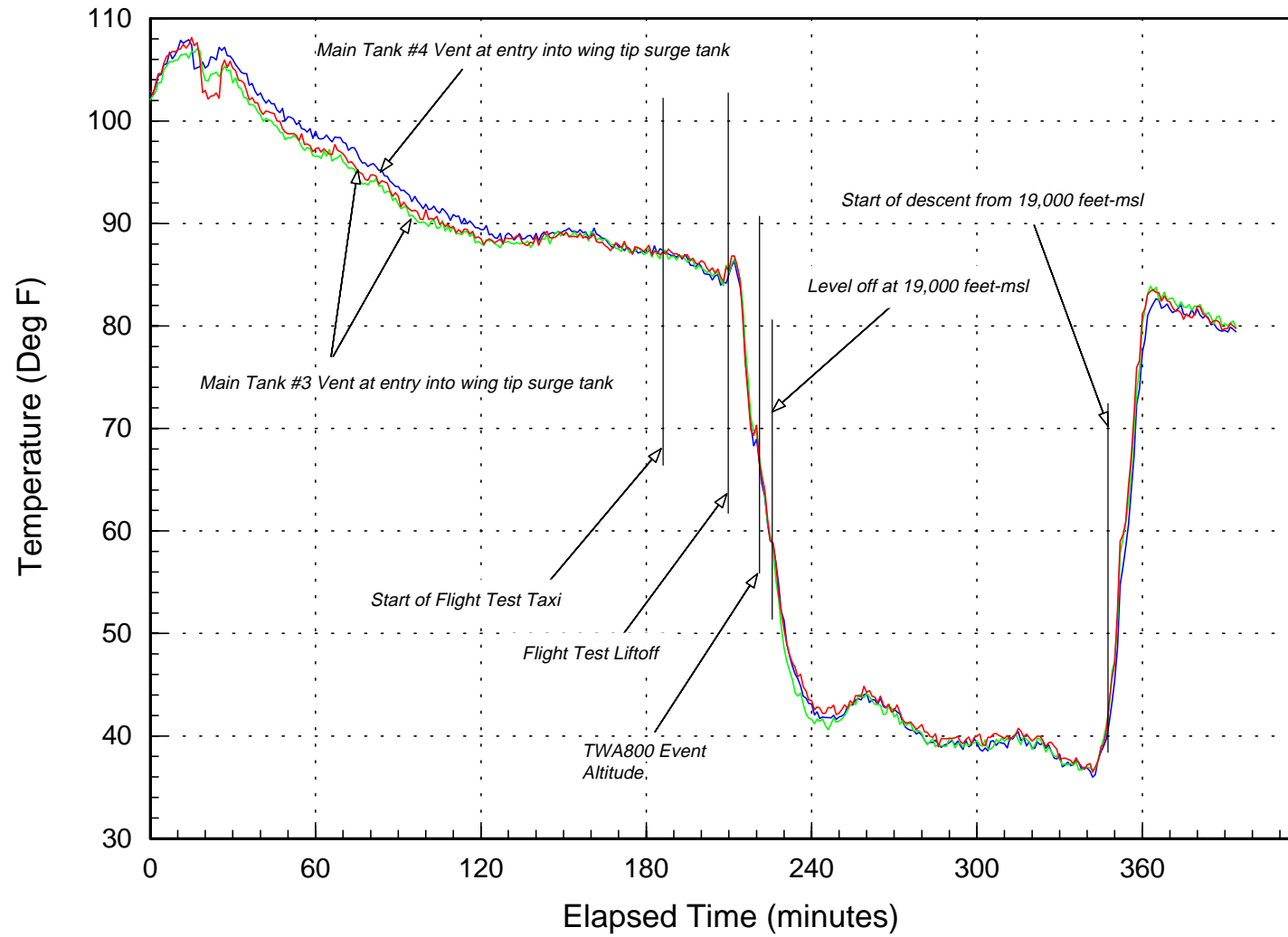
# Right Wing CWT Vent Temperatures TWA800 Emulation Flight



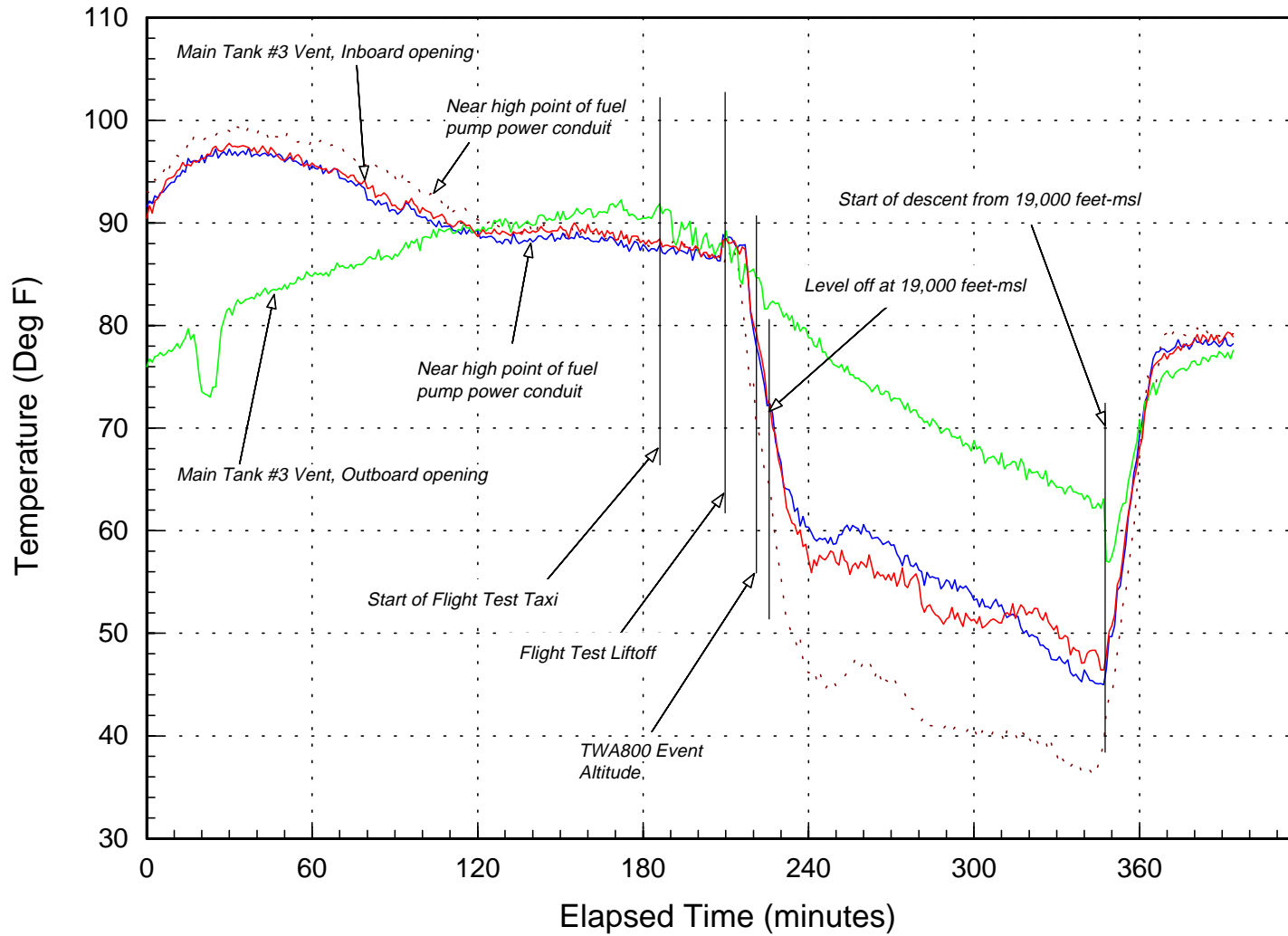
Right Wing CWT Vent Temperatures  
TWA800 Emulation  
Ascent Portion



# Right Wing Tank Vent Temperatures TWA800 Emulation Flight



# Main Wing Tank #3 Ullage Temperatures TWA800 Emulation Flight



# Main Wing Tank #3 Ullage Temperatures TWA800 Emulation Ascent Portion

