

# **Loads**

- LE11 - Vertical tail high loads in service events - AAL903

# **Loads**

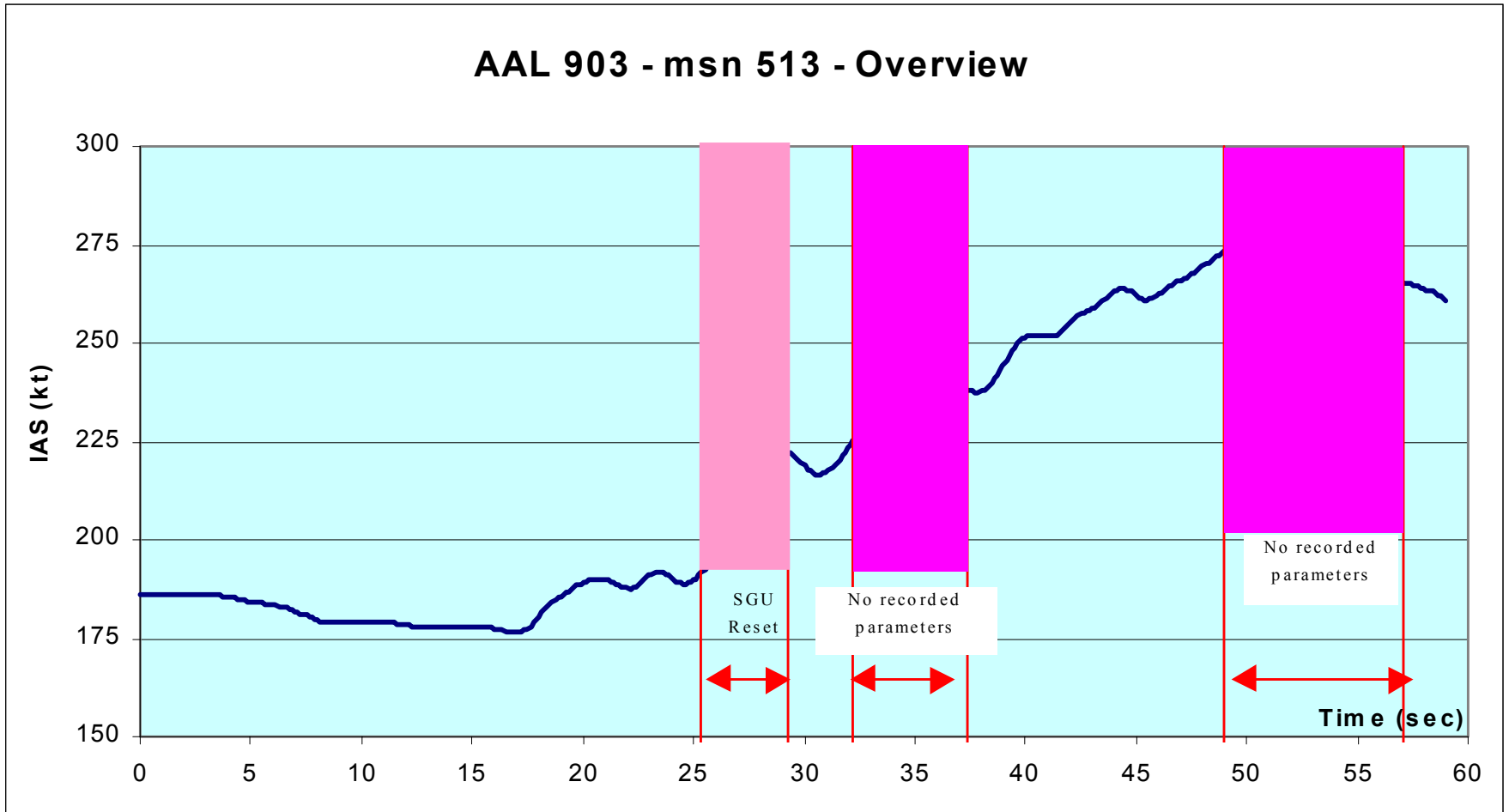
- **LE11 - Vertical tail high loads in service events - AAL903**
  - Summary of the event
    - MSN513 experienced severe loading on approach to Miami during the flight 903 on May 12 1997.
    - Airplane descending to land in Miami, with a tornado in the vicinity
    - Airplane stalled during a coordinated turn.
    - Control was recovered by the introduction of roll, yaw and pitch strong inputs.
    - Several rudder “doublets” can be seen on the DFDR (in combination with strong roll inputs), leading to a lateral load factor going up to 0.7g.
    - The vertical load factor oscillated between -0.45g and 2.84g

# **Loads**

- **LE11 - Vertical tail high loads in service events - AAL903**
  - DFDR parameters analysis
    - Information not complete:
      - . SGU's went into a reset mod, leading to a non recording of several parameters for several seconds:
        - airplane attitudes, speed, angle of attack and altitude not recorded,
        - Ny (lateral acceleration) and rudder deflection were still recorded.
      - . Two additional slice of time where no parameters recording for several seconds

# Loads

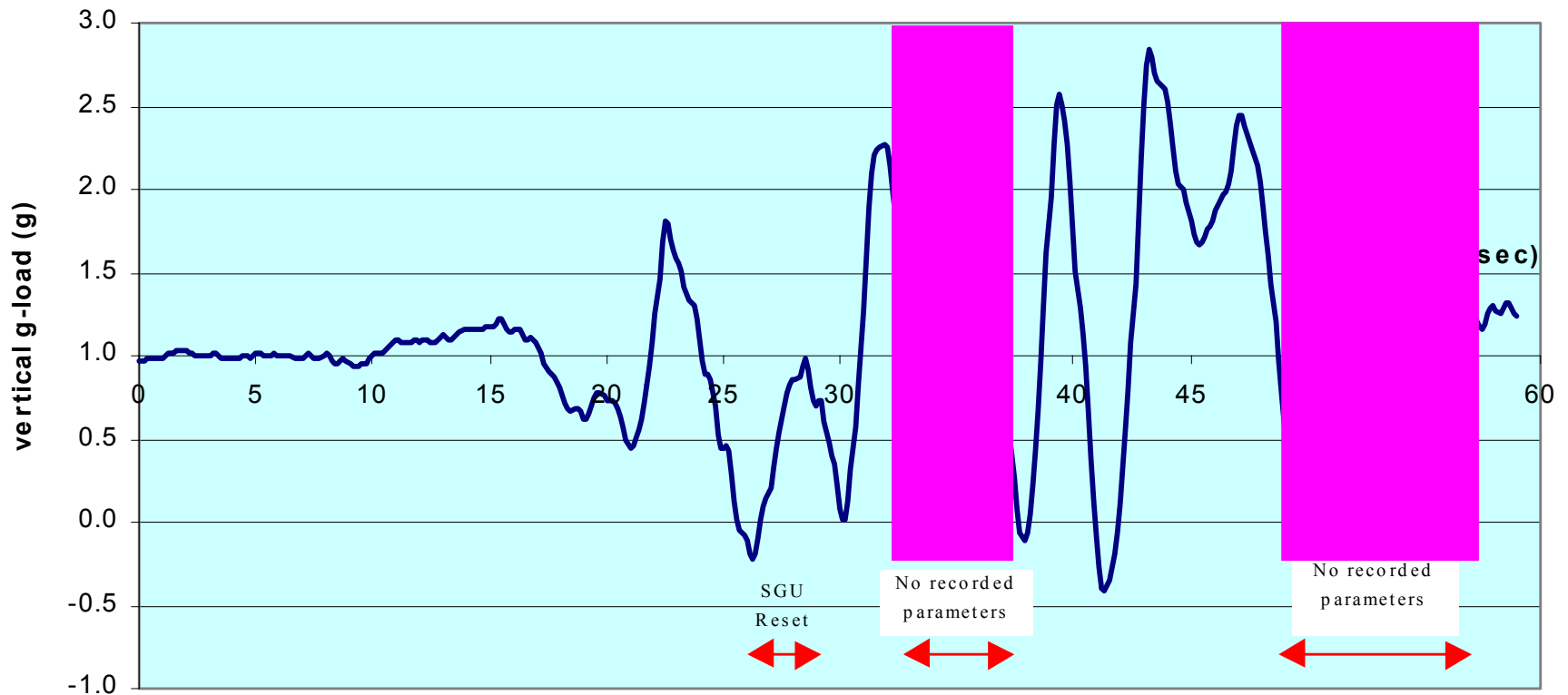
- LE11 - Vertical tail high loads in service events - AAL903



# Loads

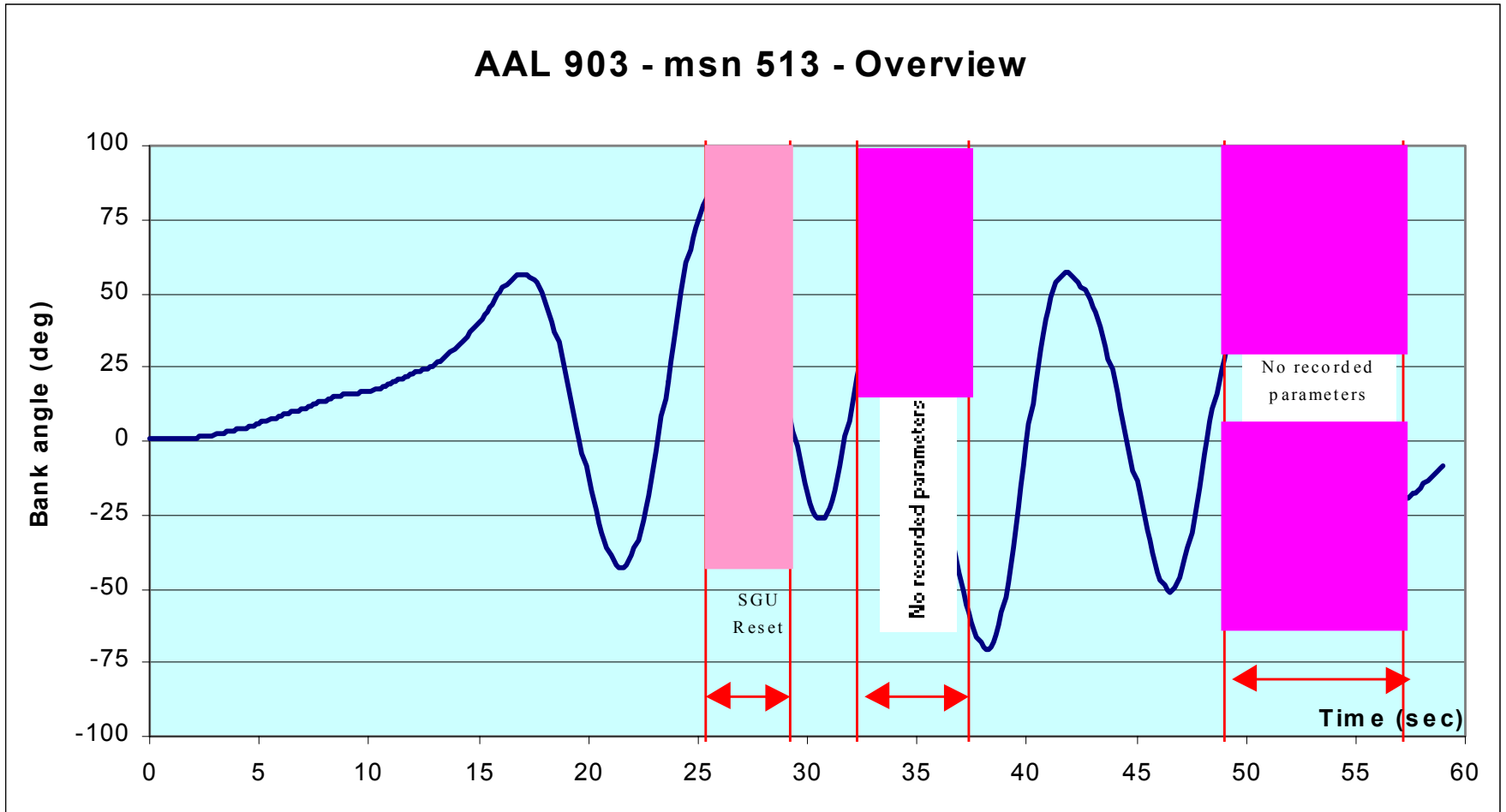
- LE11 - Vertical tail high loads in service events - AAL903

AAL 903 - msn 513 - Overview



# Loads

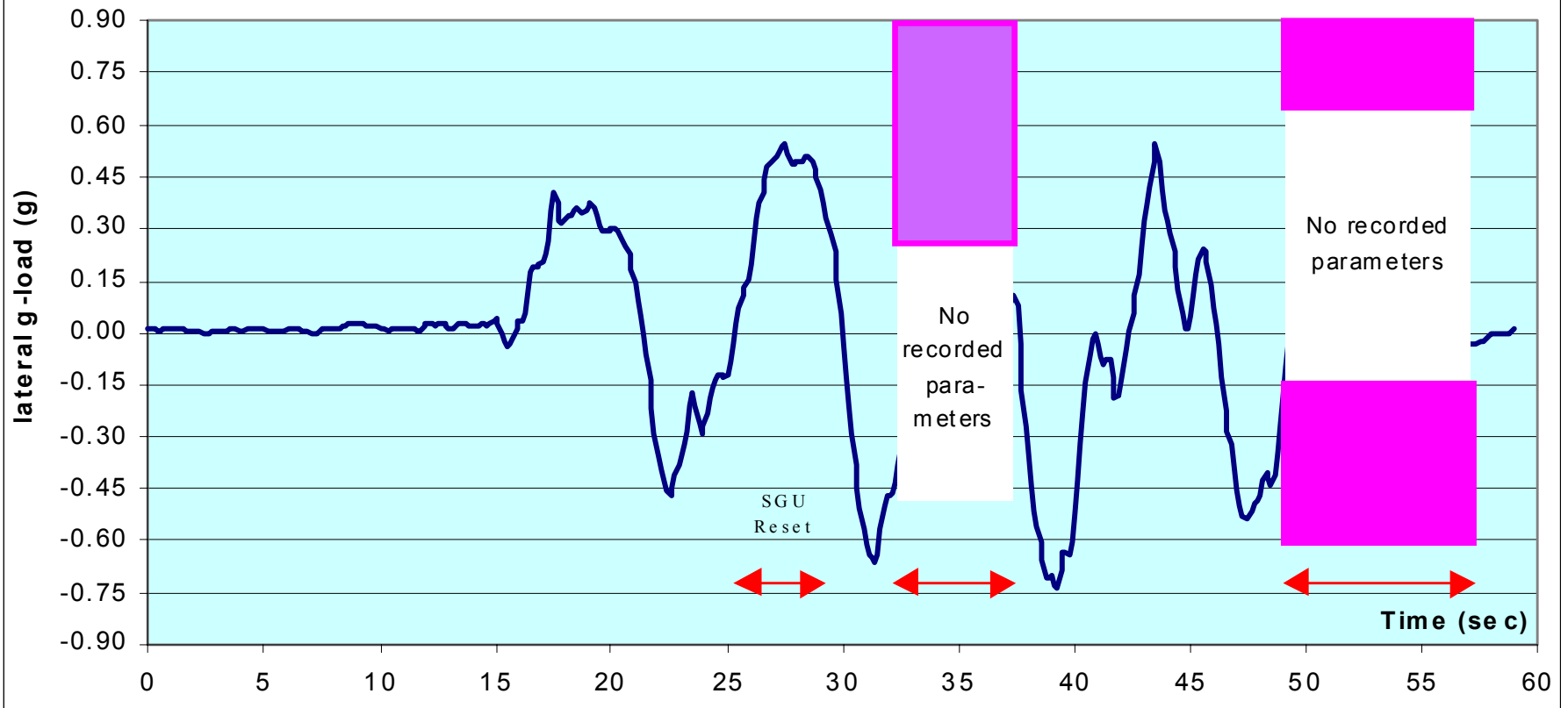
- LE11 - Vertical tail high loads in service events - AAL903



# Loads

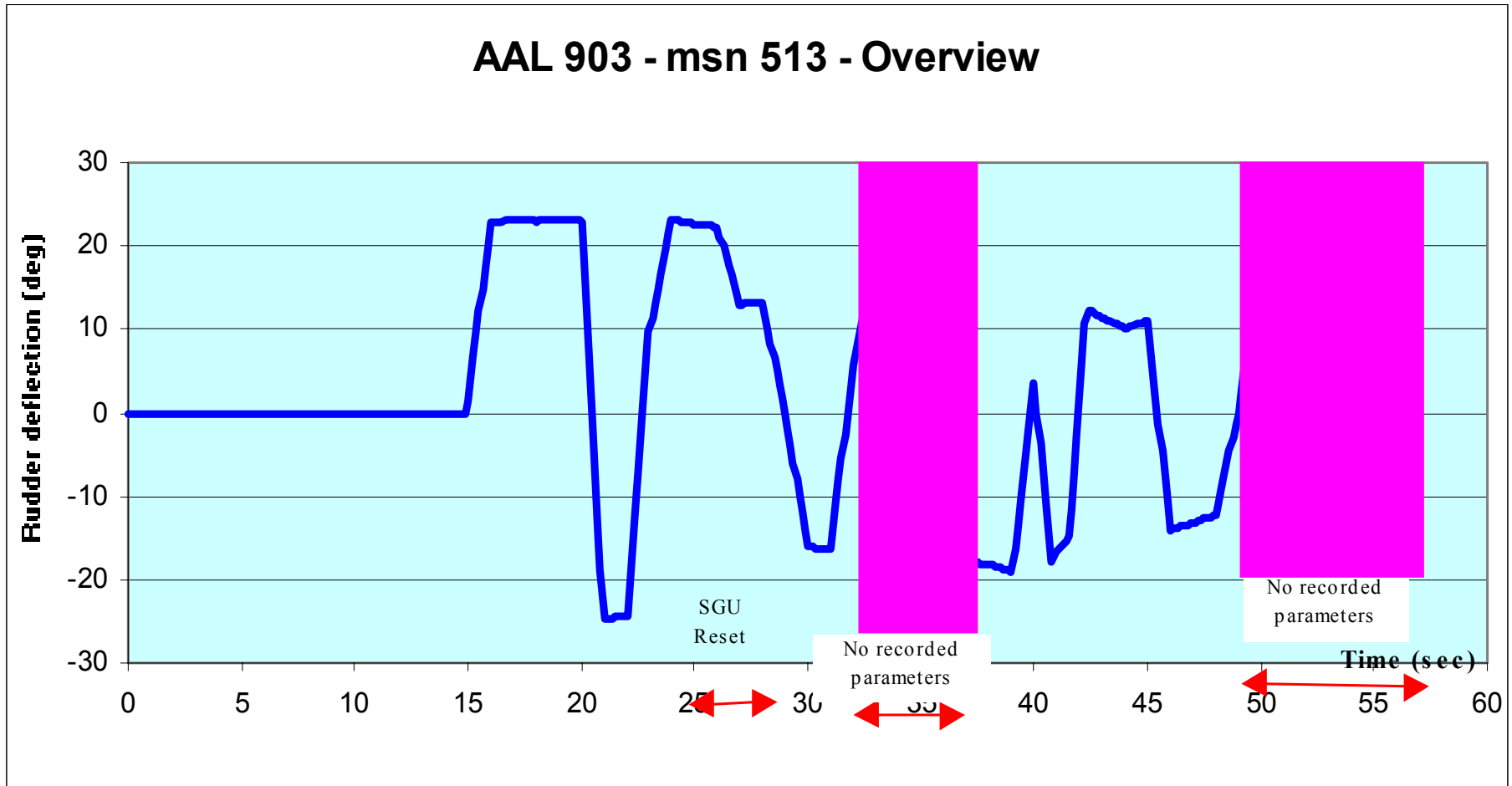
- LE11 - Vertical tail high loads in service events - AAL903

AAL 903 - msn 513 - Overview



# Loads

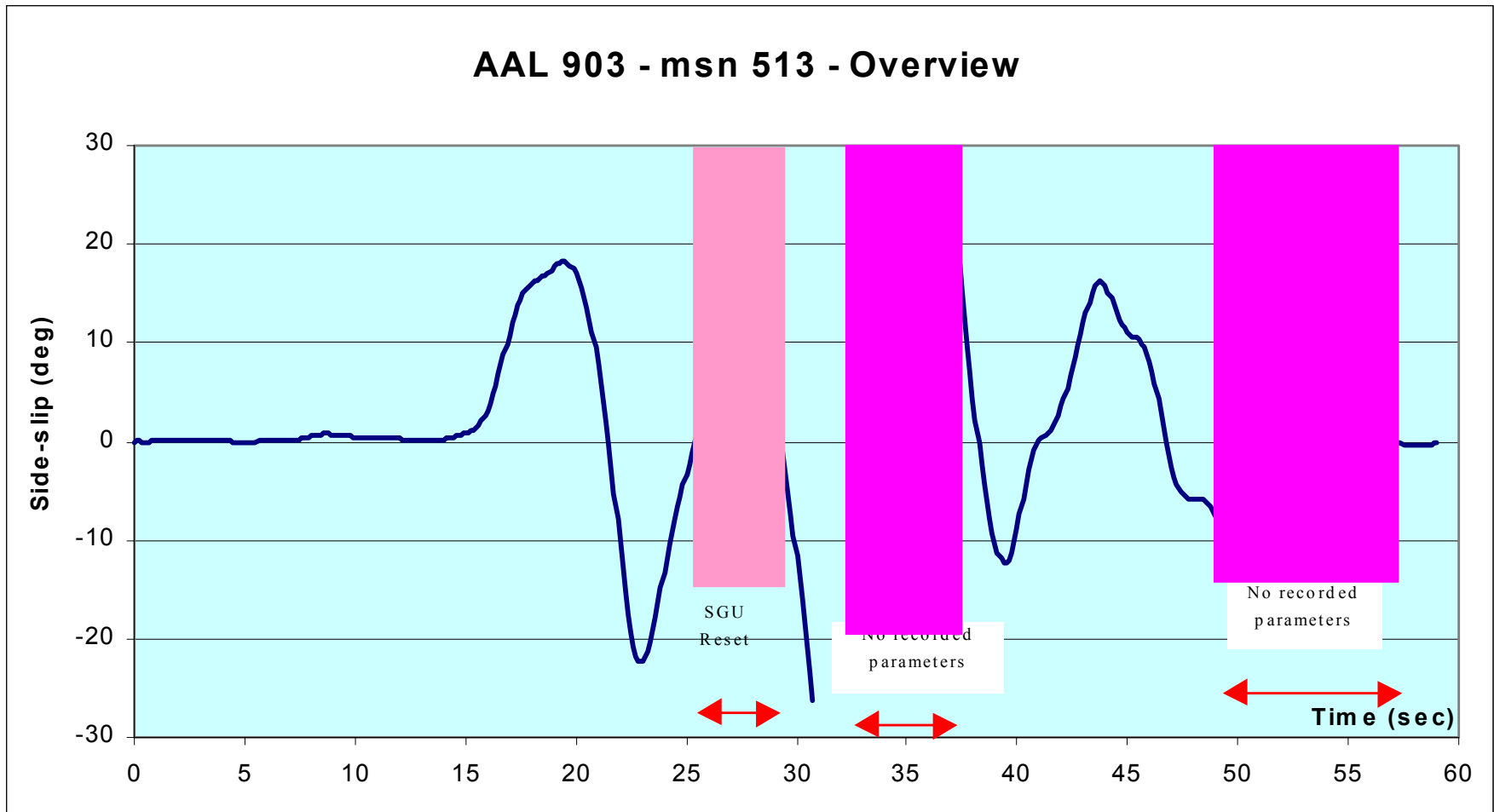
- LE11 - Vertical tail high loads in service events - AAL903





# Loads

- LE11 - Vertical tail high loads in service events - AAL903



# Loads

- LE11 - Vertical tail high loads in service events - AAL903

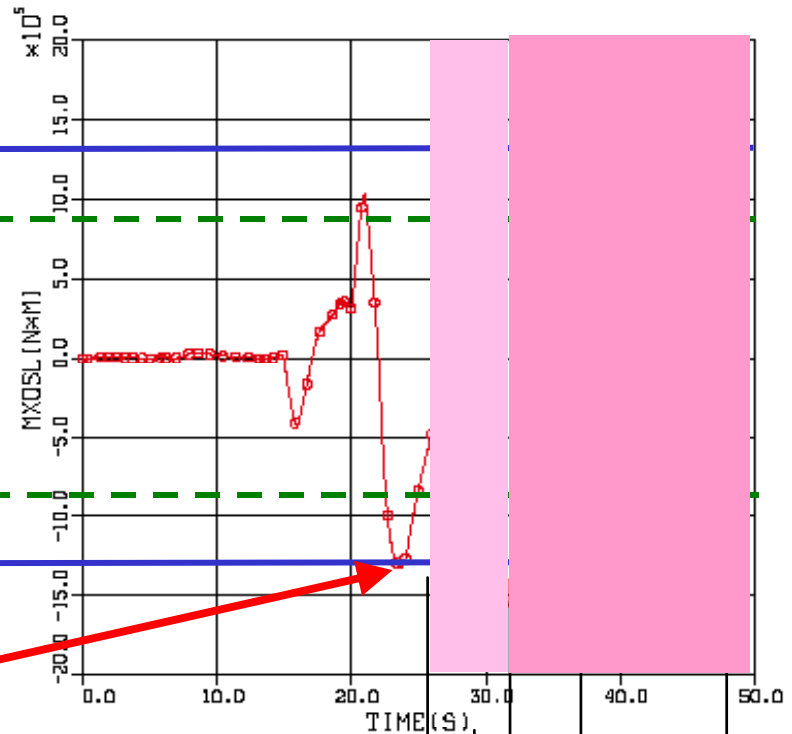
## Load estimation on the fin

Bending moment

Limit Loads

1.53 LL reached

Loads accuracy doubtful



SGU Reset

No DFDR Recording

# Loads

- LE11 - Vertical tail high loads in service events - AAL903

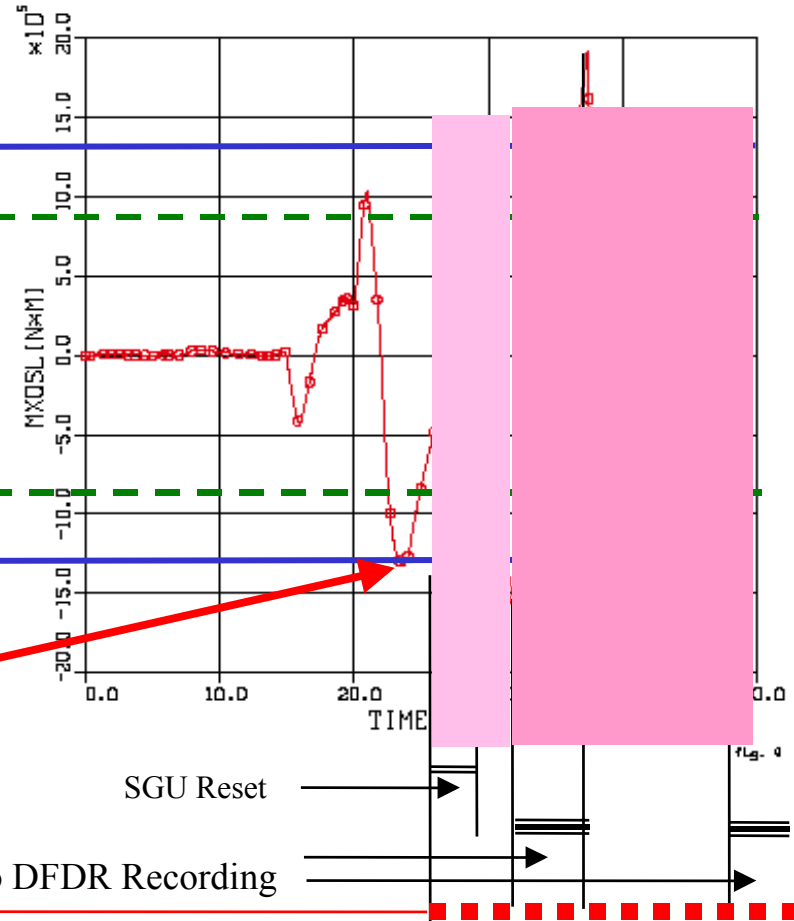
## Load estimation on the fin

Bending moment

Limit Loads

1.53 LL reached

Loads accuracy doubtful  
Estimate - not reliable



# Loads

## LE11 - Vertical tail high loads in service events - AAL903

