

Ramp Safety for Airport Personnel Evacuation, Lightning Threat:
Literature Review from NLSI Library, Sept 24, 2018

1. ACI Airside Safety Handbook extract, 4th Edit., 2010.

from P. 5: *Local procedures should be in place for a controlled and measured response to varying conditions. These procedures may result in a reduction of capacity but they should never result in a reduction of safety.*

2. NTSB May 18, 2012 Safety Recommendations.

from P. 1: *Because lightning detection networks operate independently of weather radar systems, their coverage areas complement each other and lightning information may indicate the presence of thunderstorms outside the range of ground-based weather radar systems.*

3. Airline Operations Center Usage of FAA Terminal Weather Information Products, by Dr. James E. Evans, MIT Lincoln Laboratory MA

from 3. SUMMARY : *Terminal Weather is a critical factor in airline operations.*

4. New Zealand AASG Recommended Industry Practice.
References IATA Airport Handling Manual Chpt 630 section 6
Severe Weather Operations. 28 Nov 2000.

*...ensuring staff...are warned of approaching
storms...where necessary are withdrawn from activities.*

...Tstorm Alert at 10 nm...Operations Shutdown at 5 nm.

*Back to Alert when storm passes 5 nm. Can be cancelled
at 5 nm and storm is receding.*

5. Email from Steve Goodman, NASA on detector operating
frequencies.

NEXRAD L Band 23 cm wavelength

NLDN LF 500 kHz ?

NMT Mapping Array VHF 60-78 MHz

LIS and OTD optical at 777.4 nm

Vaisala SAFIR VHF 110-300 MHz, 114 MHz typical

Vaisala GAIL DAR II 50-120 MHz

GAI VLF 20-57 kHz

RDI (Stan Kris(and UK Met office 9.8 kHz

6. Triggered Lightning Testing of an Airport Runway Lighting System, Bejlire at al, IEEE Transactions of EMC, Feb 2004.

Role of counterpoise on protecting lightning system.

7. Thomas Hauf, IMPACT OF WEATHER. How to Assist Pilots and Controllers in the Decision Making Process, Instit. fur Meteorologie und Kimatologie. Leibniz Univers., Hanover.

40-50 page Power Point. Excellent !

8. Multiple Papers by Deierling/Steiner/et al. Widely available.

9. Journal of Air Traffic Control, Summer 2013,

Balancing Safety and Efficiency of Airport Operations under Lightning Threat

10. Aerodrome Meteorological Observation and Forecast Study Group (AMOFSG), 9-12- Sept 2008, author Kees Blom.

...describes methods used by KNMI at Amsterdam Schiphol Airport.

11. M. Sasse and T. Hauf, 29 Dec 2006 in Meteorological Applications Vol. 10, Issue 1.

A Study of thunderstorm-induced delays at Frankfurt Airport.

12. TRB Journal, Vol. 2501, Economic Impact of a Lightning Strike-Induced Outage of ATCTower, Case Study BWI.

Sept 12, 2013 lightning struck within 300m of BWI tower causing injuries and ATC tower and airport closures.

13. 25th ICLP 2000, 18022 Sept 2000. Frentzel & Scheller, Specific Lightning Protection and LEMP Measures for Airport Systems Related to Safety and Availability.

Discusses protection, not detection or ramp safety.

14. American Airlines, Oct 17 2007. Dir. of Safety, Lightning Safety Briefing.

*P. 17 describes known 1997-2005 ramp lightning incidents.
P. 18 describes useful Risk Assessment Matrix.*

15. ACRP Sept 2011, Protecting Airport Personnel from Lightning Strikes.

16. www.airlines.net/forum

*See “ground handling in thunderstorms” on search box.
Many citations here.*

