

Aviation Weather (CT-AWX)

Cecilia Miner, NOAA NWA Aviation Weather Services

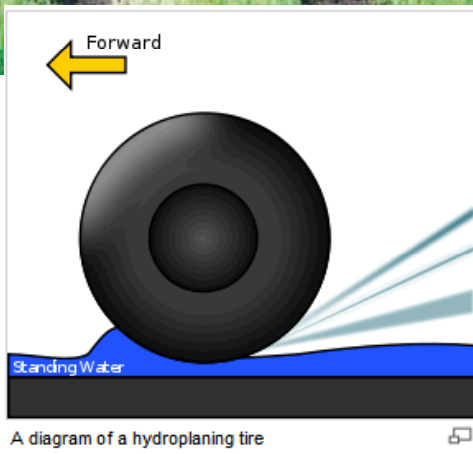
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Table 4: Landing overrun risk factors distribution.

Factor	Number of accidents	Percent
Non-precision approach	289	72.3%
Long landing	211	52.8%
Excess approach speed	111	27.8%
Hydroplaning of the tires	60	15.0%
Late or no application of available stopping devices	60	15.0%
Visual approach	56	14.0%
Tailwind present	49	12.3%
High on approach	29	7.3%
Brakes inoperative	21	5.3%
Reverser inoperative	10	2.5%
Ground spoilers inoperative	2	0.5%

Source: National Aerospace Laboratory of the Netherlands report NLR-TP-2005-498, 2005

CT-AWX Requirements

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Observation Requirement	Program Acronym	Prty	T / O	Geographic Coverage	Vertical Resolution		Horizontal Resolution		Measurement Accuracy		Sampling Interval		Data Latency	
					V	U	V	U	V	U	V	U	V	U
Precipitation Rate														
Precipitation Rate CONUS + AK & HI	CT-AWX (CONUS + AK & HI)	1	T	CONUS+AK+HI	na	na	10	km	1	mm/hr	15	min	3	min
			O	CONUS+AK+HI	na	na	5	km	1	mm/hr	15	min	3	min
Precipitation Rate Global	CT-AWX (Global)	1	T	Global	na	na	15	km	1	mm/hr	3	hr	3	min
			O	Global	na	na	5	km	1	mm/hr	1	hr	3	min
Precipitation Type														
Precipitation Type	CT-AWX	1	T	Global	na	na	10	km	20	%	15	min	3	min
			O	Global	na	na	5	km	10	%	15	min	3	min

Legend:

T = Threshold O = Objective

V = Value U = Unit

Validated attributes in GREEN color

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- Future: Next Generation Air Transportation System (NextGen)
 - End-state functional requirements developed
 - Observe the occurrence of liquid precipitation at the surface of terminal airspace within an interval of 1 minute or less
 - Determine the location of rain in super-density terminal airspace with horizontal accuracy of plus or minus 0.25 km
 - Determine liquid precipitation type with an accuracy greater than or equal to 98 percent
 - measure the accumulation of liquid precipitation at the surface of super-density terminal airspace with an accuracy of plus or minus 0.07 inches per hour
 - End-state performance requirements to be released for comment in September

Gaps in current satellite product suite

- Spatial (coverage) gaps: Unknown
- Temporal gaps: Unknown
- Latency gaps: Unknown
- Accuracy shortcomings: Unknown
- How GPM era products might help (if it's possible to speculate):
 - Thunderstorm movement beyond radar coverage
 - Precipitation estimates
 - Post-analysis of events