

Canadä

1.	Transport Canada Publication No.	2. Project No.		3. Recipient's C	Catalogue No.		
	TP 15231E						
4.	Title and Subtitle		5. Publication Date				
	Cold Climate Technologies – Investigation of Sensor Technologies as an Alternative Means of Detecting Aircraft						
	Icing		6. Performing Organization Document No.				
				CM2265.001			
7.	Author(s)			8. Transport Canada File No.			
	John D'Avirro						
9.	Performing Organization Name and Address			10. PWGSC File No.			
	APS Aviation Inc.						
	6700 Cote-de-Liesse, Suite 105						
	Montreal, Quebec			11. PWGSC or I	ransport Canada Co	ontract No.	
	Canada						
12.	Sponsoring Agency Name and Address			13. Type of Publ	13. Type of Publication and Period Covered		
	Transportation Development Centre			Draft	Draft		
	Transport Canada						
	330 Sparks St., 26th Floor			14. Project Officer			
	Ditawa, Ontario KTA UNS Canada			Yvan C	Yvan Chabot		
15.	Supplementary Notes (Funding programs, titles of related publications, etc.)						
	Several research reports for testing of de/anti-icing technologies were produced for previous winters on behalf of Transport Canada. These are						
	available from the Transportation Development Centre (TDC). Several reports were produced as part of this winter's research program. Their subject matter is outlined in the preface. This project was co-sponsored by the Federal Aviation Administration.						
16.	Abstract						
	This research program aims to respond to the emerging challenges and opportunities for Canada and its northern communities and address Transport Canada's Adaptation to Cold and Changing Climates and Sustainable Transportation Research and Development Strategic Priorities.						
	The objective of the program is to investigate sensor technologies as an alternative means of detecting aircraft icing in northern and cold climates. Seven research projects, each with a different research initiative, were completed in the winter of 2012-13 to meet the program objective. The research projects are listed below.						
	 Support for the use of Ice Detection Cameras at End of Runway (including Flight Crew Survey; and Analysis of Incident Reports. 						
	 Regression Coefficients and Equations Used to Develop the Winter 2012-13 Aircraft Ground Deicing Holdover Time Tables. 						
	3. Development of Light and Very Light Snow Holdover Times for Type II and Type IV Fluids (Phases 1 & 2).						
	4. Support for Development of Specifications for Holdover Time Determination Systems (HOTDS).						
	5. Non-Precipitation Type Dependent Regression Curves for LWE and HOTDS.						
	6. Variance Analysis of HOTDS 10-Minute Intensity Measurements.						
	7. Evaluation of Sensor For Nowcasting Active Frost.						
	<u> </u>						
17.	Key Words 18. Distribution Statement						
	ROGIDS, Ice Detection, Incident Rep	orts, Flight crew	Limited number of copies avai		ailable from	the	
	survey, HOTDS, LWE, Active frost, Very light snow, Transportation Development Centre						
	Deicing, Holdover time						
19.	Security Classification (of this publication)	20. Security Classification (of	this page)	21. Declassification (date)	22. No. of Pages	23. Price	
Unclassified		Unclassified			xii, 14 app.	—	