AGENDA for the 1st AIAA ICE PREDICTION WORKSHOP

DAY 1 — Monday - 7/26/2021

Session I: Opening Remarks — *Chair(s): Andy Broeren - NASA Glenn*

Start	End	
9:00	9:20	**Part 1 - Introduction** Agenda, objectives, test cases, geometry/grid, solvers, experimental data, participants *Andy Broeren - NASA Glenn Research Center,* *Isik Ozcer - Ansys,* *Bryan Hinson - Textron Aviation*
9:20	9:40	
9:40	10:00	
10:00	10:20	**Part 2 - Code-to-code Comparisons** **Data Analysis Taskforce:** *S. Bourgault-Côté [1], H. Papillon Laroche [1], M. Blanchet [1], E. Laurendeau [1], D. Cook [2], E. Radenac [3], A. Broeren [4], M. Potapczuk [4]* *[1] Polytechnique Montreal, [2] Boeing, [3] ONERA, [4] NASA*
10:20	10:40	
10:40	11:00	
11:00	11:20	***20 min break***

Session II: Participant presentations — *Chair(s): Andy Broeren - NASA Glenn*

11:20	11:40	NASA Glenn Research Center — *William Wright* — **LEWICE GlennICE**
11:40	12:00	Textron Aviation — *Bryan Hinson* — **LEWICE LEWICE3D**
12:00	12:20	Boeing Commercial Airplanes — *Donald Cook* — **LEWICE LEWICE3D**

12:20	13:00	**Session III: Group Discussion** Collection efficiency cases Drag coefficient, Eulerian/Lagrangian approaches, droplet distribution, shadow zones Moderator(s): *Karthik Narayanasamy - Honeywell*

DAY 2 — Tuesday - 7/27/2021

Session IV: Participant presentations — *Chair(s): Galdemir Botura - Collins Aerospace*

	FAA Technical Center — *Ezgi Oztekin*	**LEWICE LEWICE3D**
	The French Aerospace Lab (ONERA) — *Emmanuel Radenac*	**IGLOO**
	Italian Aerospace Research Centre (CIRA) — *Francesco Capizzano*	**ZEN-IMP3D SIMBA-ICE**
	National Research Council Canada (NRC) — *Krzysztof Szilder*	**NRC-MORPHO**
	Embraer — *Rodrigo Hoffmann Domingos*	**AIPAC**
	AeroTex GmbH — *Richard Moser*	**TAC3D+ ITA**
	20 min break	
	ATS — *Daniel Ribeiro de Barros, Diogo Pio*	**CFD++**
	Siemens - Lockheed — *Chris Nelson*	**STAR-CCM**
	Ansys - Bombardier — *Isik Ozcer*	**FENSAP-ICE**

Session V: Group Discussion

2D cases
Roughness, convective heat transfer, evaporative heat transfer, runback, water film formation, ice density, scale effects, case 242

Moderator(s):
Eric Laurendeau - Polytechnique Montreal

DAY 3 — Wednesday - 7/28/2021

Session VI: Participant presentations — *Chair(s): Richard Hann - NTNU*

	Honeywell — *Karthik Narayanasamy*	**FENSAP-ICE**
	Austrian Institute of Technology GmbH (AIT) — *Damiano Tormen*	**FENSAP-ICE ICEAC2D**
	Norwegian Univ. of Science & Technology (NTNU) — *Joachim Wallisch*	**FENSAP-ICE**
	Naval Air Systems Command (NAVAIR) — *Eric Stewart*	**FENSAP-ICE**
	Politecnico di Milano — *Myles Morelli*	**POLIMICE**
	University of Oxford — *Xin Yang*	**ICICLE**
	20 min break	
	Technische Universität Braunschweig — *Denis Sotomayor Zakharov*	**DICEPS**
	Ecole Polytechnique Montreal — *Simon Bourgault-Côté*	**CHAMPS**
	Georgia Tech - NASA Glenn — *Avani Gupta*	**GaTech In-House Tools**

Session VII: Group Discussion

3D cases
Three-dimensionality, effect of sweep angle, 3D comparison metrics

Moderator(s):
Richard Moser - AeroTex

DAY 4 — Thursday - 7/29/2021

Session VIII: Closing remarks — *Chair(s): Andy Broeren - NASA Glenn*

Part 1 - Summary
Andy Broeren
NASA Glenn Research Center

Part 2 - Future Work
Experimental data requirements, areas of improvements for models/submodels, development of better "test to model comparison" parameters, future test cases
Eric Laurendeau - Ecole Polytechnique Montreal
Alberto Pueyo - Bombardier

ADJOURN

All times listed are Eastern Daylight Time (EDT, GMT-4)

Last updated on July 20th, 2021

Participant Identification

Participant	ID
Boeing	01
NASA	03
ONERA	04
GeorgiaTech/NASA	05
Politechnico Di Milano	06
Textron	07
CIRA	08
Oxford	09
AIT	10
NTNU	11
NRC	12

Participant (cont'd)	ID
ANSYS-Bombardier	13
Embraer	14
Polytechnique Montreal	15
FAA	16
Honeywell	17
AeroTex GmbH	18
Siemens – Lockheed	19
Universität Braunschweig	20
ATS	21

Participant Information Summary

Code	Participant	Code	Dataset option
01.1	Boeing	LEWICE	
01.2	Boeing	LEWICE3D	
03.1	NASA	GlennICE	
03.2	NASA	LEWICE	
04.1	ONERA	IGLOO3D	
04.2	ONERA	IGLOO2D	
05.1	GeorgiaTech	ANSYS Fluent/GTDROP-Uns/GT-ICE	
06.1	PolitechnicoDiMilano	SU2/PoliDrop/PoliMIce	
07.1	Textron	USM3D/LEWICE/LEWICE3D	
08.1	CIRA	SIMBA	
08.2	CIRA	MultiIce	
08.3	CIRA	ZEN-IMP3D	
08.4	CIRA	Open-Foam	
09.1	OxfordUniversity	Fluent/ICICLE-2D	No Particle Rotation
09.2	OxfordUniversity	Fluent/ICICLE-2D	With Particle Rotation
10.1	AIT	CFX/ICEAC2D	Experimental Tinf and LWC
10.2	AIT	CFX/ICEAC2D	Experimental Tinf-1 deg.
10.3	AIT	CFX/ICEAC2D	Tinf=266.05, LWC= 0.8

Participant Information Summary (cont'd)

Code	Participant	Code	Dataset option
10.4	AIT	CFX/ICEAC2D	Experimental Tinf-2 deg.
10.5	AIT	Fluent/FENSAP-ICE	Single size droplets
10.6	AIT	Fluent/FENSAP-ICE	7-bins droplet distribution
10.7	AIT	Fluent/FENSAP-ICE	Void density
11.1	NTNU	FENSAP-ICE	Single size droplets
11.2	NTNU	FENSAP-ICE	Droplet size distribution
12.1	NRC	Cobalt	
13.1	Ansys-Bombardier	FENSAP-ICE	Constant Ice Density
13.2	Ansys-Bombardier	FENSAP-ICE	Variable Ice Density
14.1	Embraer	CFD++/AIPAC	
15.1	PolyMtl	CHAMPS	2D/3D
15.2	PolyMtl	CHAMPS	2.5D
16.1	FAA Tech Center	LEWICE / LEWICE3D	
17.1	Honeywell	FENSAP-ICE	
19.1	Siemens – Lockheed	Simcenter STAR-CCM+	
20.1	Universitat Braunschweig	DICEPS-V3.0/FLUENT	Single size droplets
20.2	Universitat Braunschweig	DICEPS-V3.0/FLUENT	Droplet size distribution
21.1	ATS	Metacomp CFD++	