

TRANSITION 2023

2nd EUROPEAN SYMPOSIUM ON LAMINAR/TURBULENT
TRANSITION IN HYPERSONIC REGIME

BORDEAUX (France) – OCTOBER 4th – 6th 2023

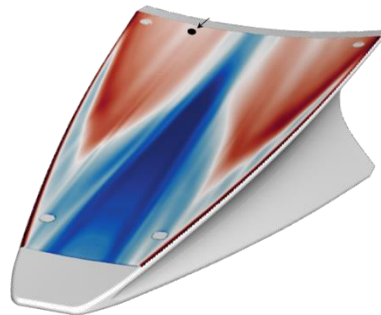
Symposium schedule

September 4th 2023
(last issue)



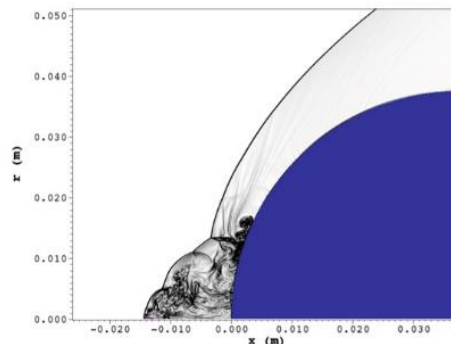
Wednesday 4th October

Start	End		Duration
13:00	13:45	Welcome and registration	0:45
13:45	14:00	Opening address (P.H. Maire, President of HyFAR-ARA)	0:15
14:00	15:30	Keynote 1 <i>Hypersonic laminar-turbulent transition: an overview</i> S. Schneider - (Purdue University)	1:30
15:30	16:00	Coffee break	0:30
16:00	17:40	Technical session 1 : flight tests, ground tests, design Chair : Johan Steelant (ESA) <i>Laminar-turbulent transition on the STORT flight experiment</i> Sebastian Willems (DLR) <i>Experimental hypersonic transition investigation over the BOLT forebody</i> Loïc Sombaert (ONERA) <i>Fundamental breakdown of second modes in the High Enthalpy Shock Tunnel Göttingen</i> Divek Surujhlal (DLR) <i>Establishing vehicle design criteria to postpone transition onset along trajectories of generic flight vehicles</i> Jacobs Frederik (ESA/ESTEC)	1:40



Thursday 5th October

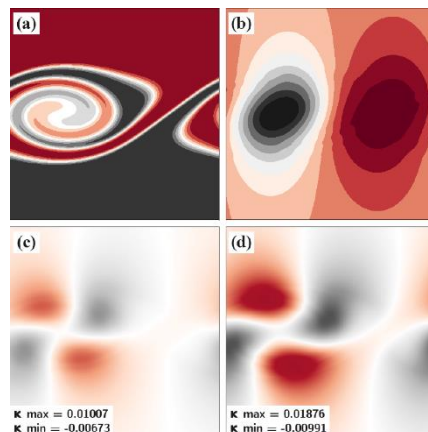
Start	End		Duration
8:30	10:10	<p>Technical session 2 : damping materials, stag point Chair : Philippe Tran (ArianeGroup)</p> <p><i>OCTRA as ultrasonically absorptive thermal protection material for hypersonic transition suppression analyzed on a 7° Cone</i> Viola Wartemann (DLR)</p> <p><i>Numerical investigation of porous coatings stabilizing capabilities on hypersonic boundary-layer transition</i> Riwan Hammachi (ONERA)</p> <p><i>A new approach towards tailored thermal protection material for hypersonic boundary layer control</i> Alexander Wagner (DLR)</p> <p><i>Phenomenology and modeling of bow shock perturbation in particle-gas flows</i> Julien Amorosetti (CEA)</p>	1:40
10:10	10:40	Coffee break	0:30
10:40	11:55	<p>Technical session 3 : cone-cylinder-flare Chair : Jean-Philippe Brazier (ONERA)</p> <p><i>Design of a cylinder-flare configuration for hypersonic boundary-layer stability analyses and measurements with attached and separated flow</i> Sébastien Esquieu (CEA)</p> <p><i>Experimental investigation of the transition process and boundary layer separation on a hypersonic cone-cylinder-flare geometry</i> Mathieu Lugin (ONERA)</p> <p><i>Numerical investigation of the transition process and boundary layer separation on a hypersonic cone-cylinder-flare geometry</i> Clément Caillaud (CEA)</p>	1:15
11:55	13:30	Lunch	1:35



Thursday 5th October

(continued)

Start	End		Duration
13:30	14:45	<p>Technical session 4 : flow control, streaks effects Chair : Julien Lefieux (MBDA)</p> <p><i>Adjoint-based linear sensitivity of a hypersonic boundary layer to steady wall blowing or heating</i> Denis Sipp (ONERA)</p> <p><i>Control of second mode instability using streak employment method</i> Muhittin Celep (CORIA/INSA Rouen)</p> <p><i>Hypersonic blunt bodies: modelling streaks and their effect on different transition mechanisms</i> Guillaume Lehnasch (PPRIME Institute)</p>	1:15
14:45	15:15	Coffee break	0:30
15:15	16:30	<p>Technical session 5 : advanced simulation methods Chair : Neil Sandham (University of Southampton)</p> <p><i>High-order simulation of turbulent hypersonic flows</i> Paolo Scuderi (VKI)</p> <p><i>Linear stability analysis of the wake of an isolated roughness</i> Jean-Philippe Brazier (ONERA)</p> <p><i>Thermal non-equilibrium of a high-enthalpy free shear layer during breakdown to turbulence</i> Ali Musawi (University of Southampton)</p>	1:15
16:30	17:00	Coffee break	0:30
17:00	18:00	<p>Keynote 2 <i>HIFiRE – Hypersonic Boundary Layer Transition Experiments on sounding rockets</i> Sebastian Willems (DLR)</p>	1:00
19:30	22:00	Social event at "Le Café Maritime" restaurant	2:30



Friday 6th October

Start	End		Duration
8:30	9:45	Technical session 6 : ground tests Chair : Olivier Chazot (VKI) <i>Experimental investigation of boundary layer instabilities and transition on sharp and blunt cones in Oxford's High-Density Tunnel</i> Andrew P. Ceruzzi (University of Oxford) <i>Free-stream fluctuations of a hypersonic conventional wind-tunnel using static and stagnation pressure sensors</i> Sylvain Morilhat (ONERA) <i>Quantitative determination of the intermittency factor in a transitional Mach 6 flat plate boundary layer using three independent measurement methods</i> Jens Lunte (DLR)	1:15
9:45	10:15	Coffee break	0:30
10:15	11:30	Technical session 7: RANS simulations Chair : Marina Olazabal (CEA) <i>Comparison of RANS transition model predictions on hypersonic three-dimensional forebody configurations</i> J.I. Cardesa (ONERA) <i>Laminar-turbulent transition prediction for hypersonic vehicle with RANS-based models</i> Laurent Muscat (CEA) <i>Numerical simulation of hypersonic transition to turbulence within the NSMB CFD solver</i> Yannick Hoarau (Université de Strasbourg)	1:15
11:30	12:30	Round table	1:00
12:30	12:45	Conclusions	0:15
12:45	14:15	Lunch	1:30

