

TUESDAY, DECEMBER 07th, 2021

08:30	REGISTRATION & WELCOME
	PLENARY ROOM
09:00	OPENING PLENARY SESSION Louis LE PORTZ, 3AF President Emmanuel DELORME, MBDA - Yannick DEVOUASSOUX, ArianeGroup - Luc DINI, Thales Group, Conference Co-Chairs
	PLENARY ROUND TABLES
09:30	<u>GOVERNMENTS VIEWS 1: POLICY</u> General Luc DE RANCOURT, Deputy Director Directorate General for International Relations and Strategy (DGRIS), MOD, FR Camille GRAND, Assistant Secretary General for Defence Investment, NATO, BE Bruce TURNER, Senior Bureau Official for the Bureau of Arms Control, US State Dept., US Thomas KRECHEL, Head of Ground Based Air and Missile Defence Branch, GerMan MOD,
11:00	COFFEE BREAK
11:30	<u>GOVERNMENTS VIEWS 2 : PROGRAMS</u> Jean-Christophe VIDEAU, DGA, Ministry of Defense, FR General Moshe PATEL, Israel Missile Defense Organization, MOD,IL Anthony WRAIGHT, Director, Missile Defence Center, UK Steen SONDERGAARD, Head of Research & Science, Danish Defense Acquisition & Logistics Organization (DALO) , DK
13:00	NETWORKING LUNCH
14:30	<u>GOVERNMENTS VIEWS 3 : PROGRAMS</u> General Philippe ADAM, EMA, FR General Volker SAMANNS, Commander Ground Based Forces, German Air Force, DE Commodore VAN DE SANDE, Netherlands Maritime Force (COMNLMARFOR), NL Colonel Tamir ZIMBER, Air and Missile Defense Wing, Israel Air Defense Command, IL
16:00	COFFEE BREAK
16:30	<u>INDUSTRIALS VIEWS</u>
18:30	End of Sessions
19:30	GALA DINNER

WEDNESDAY, DECEMBER 08th, 2021

08:30		PLENARY ROUND TABLE: "Political and military aspects of IAMD" - Moderator: Emmanuel DELORME, MBDA Perry JAGO, Director of Pear Tree Ltd and participant of the Nimble Titan experimentation Stefanova RADOSLAVA, Chairwoman of the DPPC MD			
		ROOM 1	ROOM 2	ROOM 3	ROOM 4
		SESSION 1 Chairperson : D. VANDENSAVEL, NATO, BE	SESSION 2 Chairperson : Y. DEVOUASSOUX, ArianeGroup, FR	SESSION 3 Chairperson : L. DINI, Thales Air Systems, FR	SESSION 4 Chairperson : J. UZDZINSKI, Lockheed Martin, US
		International & European Policy and Cooperation (including NATO, BMD, NATO IAMD, EU and others)	Defence Architectures & Integration of Air and Missile Defence - 1	Sensor systems & Sensor networks incl. Space - 1	Modelling & Simulation - 1
09:30	1	45 The NATO BMD Programme progress Laurent SMITH, NATO COMMUNICATION AND INFORMATION AGENCY	69 The SkyCeptor interceptor as a significant key player in the Multi-Layered ADS concept Ronen LEIBOVICH, RAFAEL	110 A Comparison of Sensor Orbit Regions for Space-Based Detection and Tracking of Hypersonic Vehicles Sebastian STABROTH, Airbus Defence and Space GmbH	112 Examination of Fundamental Kill-Chain Relationships in Multi-Tiered Kill Web Architectures Joseph UZDZINSKI, Lockheed Martin
09:50	2	46 NATO BMD Tranche 21: the road to operations Joe MAGGS, NATO COMMUNICATION AND INFORMATION AGENCY	53 Changing the Scope of Aegis Ashore Roy BALACONIS, MITRE	116 Polarization Diverse Radar Benefits Over Fixed Polarization Radars Koubiadis FOTIS, Lockheed Martin	114 Design of air defence missile evaluation model by using hybrid fuzzy dematel and fuzzy vikor approach Özüm öyküm KATLI, ROKETSAN A.Ş.
10:10	3	50 The TWISTER project, with a focus on the interceptor part Grégoire FARON, MBDA	71 A Proposed Placement Option for Missile Defense Assets Azriel LORBER, RTG	31 Very Long Range Radar (TLP): Overview and Experimentation for Early Warning Ronan MOULINET, Thales LAS France	43 Integrated Modeling and Simulation (M&S) to Support the Digital Mission Engineering Environment Stephen THOMAS, Parsons
10:30 COFFEE BREAK					
		SESSION 5 Chairperson : E. DELORME, MBDA, FR	SESSION 6 Chairperson : F. KREUTZER, IABG, DE	SESSION 7 Chairperson : W. FUJITO, WBB, US	SESSION 8 Chairperson : E. LEVY, Linkcom Telecom Ltd, IL
		International & National Programs	Defence Architectures & Integration of Air and Missile Defence - 2	Sensor systems & Sensor networks incl. Space - 2	Modelling & Simulation - 2
10:50	1	94 The European Defence Fund Frans KLEYHEEG, TNO Defence & Security	100 Hypersonic capabilities and their impact on military operations Andreas SCHMIDT, JAPCC	127 Naval Cooperative Surveillance - Adding Land based and Airborne Sensors for Improved Situation Awareness Renaud BARATTE, Naval Group	28 Contribution to the Simulation and to the analysis of the French Initial Early Warning Capability For NATO BMD benefit Michel CUGINI, Thales LAS France
11:10	2	87 SAMP/T NG, going forward: Programme View Philippe CHOPIN, EUROSAM	108 Hypersonic Weapons – A non-technical view of threat perception and general options to counter them Joerg TREIBER, Competence Center Surface Based Air and Missile Defence	32 Dynamic engagement against air and missiles threat Luc DINI, Thales LAS France	44 Multi-Objective, Multi-Variate Optimization for Mission Level Digital Engineering Stephen THOMAS, Parsons
11:30	3	90 SAMP/T Transformation to address new challenges Alain DEUDON, Thales	76 Hypersonic Weapon - Is it a Gamer Changer? Omer ROTENBERG, Elisra	37 Thales Groundmater 200 MM/C Matthijs GEUTJES, Thales Netherlands	34 Optimal hypersonic threats and interceptors: Matlab dynamic optimisation tool GIANT Wouter HALSWIJK, TNO Defence, Safety & Security
11:50	4	59 MBDA Experience in European Business Claudio PONZI, MBDA Italia SpA	70 Open Architecture Concept in the Evolving Air Defense Arena Shachar SHOHAT, RAFAEL	42 Development and Integration of Novel IAMD Discrimination Sensor and C2 System Tod SCHUCK, Lockheed Martin	56 Track Generation of Hypersonic Glide Vehicles for Defended Area Analysis Daniel PAUKNER, IABG
12:10 NETWORKING LUNCH					

WEDNESDAY, DECEMBER 08th, 2021

13:30	PLENARY ROUND TABLE : "Outlook into the future of missile defence" Lt. Gen. Henry "Trey" OBERING			
	ROOM 1	ROOM 2	ROOM 3	ROOM 4
	SESSION 9 Chairperson : L. DUPORT, MBDA, FR	SESSION 10 Chairperson : Y. THOMAS, ArianeGroup, FR	SESSION 11 Chairperson : M. GEUTJES, Thales, NL	SESSION 12 Chairperson : S. SHOHAT, Rafael, IL
	Ballistic & Hypersonic Missile threat - Dual threat (ABT & TBM)	Defence Architectures & Integration of Air and Missile Defence - 3	Sensor systems & Sensor networks incl. Space - 3	Modelling & Simulation - 3
14:30	1 36 Hypersonic Aerodynamics of Glide Vehicles (HGV) for Interdisciplinary Analysis Jannis BONIN, IABG	65 The Benefits of centralized Multi-Tier Missile Defense Alon KAHANA, IAI	51 Scalable IAMD sensor technologies and related developments within BAE Systems Martin WIDGERY, BAE Systems	67 System process analysis in missile defense systems Aviel BARNETT, IAI
14:50	2 38 A Study of Aerothermodynamic Loads on Hypersonic Glide Vehicles Dominik HAUGER, University of the Federal Armed Forces in Munich	52 A Service-Oriented Architecture for Ground-Based Air Defence Systems Alberto MACRÌ PELLIZZERI, MBDA Italia SpA	62 New approach in Tactical Radars design to support CRAM, Counter UAV, GBAD & NBAD missions Gil SCHWARTZ, RADA	84 Debris - What you see is what you get Ofri BECKER, WALES, Ltd.
15:10	3 78 Measurement of liquid ablation in hypersonic shock tunnel Flavien DENIS, ISL	129 Reinforcement Learning for Defence Architecture Improvement Yann KERMARREC, ArianeGroup	63 SMART-L Multi Mission - Status update Gilles PREMEL CABIC, Thales Hengelo	95 MBSE for Optimization of Air Defense Tim GAYDOS, Parsons
15:30	COFFEE BREAK			
16:00	PLENARY SESSION - KEYNOTE SPEECH Missile Defense and Defeat: An Outlook for Policy, Programs, and Posture Tom KARAKO, Center of Strategic and International Studies, US			
	SESSION 13 Chairperson : B. WELMER, Dutch MoD, NL	SESSION 14 Chairperson : T. MERLIN, ArianeGroup, FR	SESSION 15 Chairperson : S. INSALACO, Leidos, US	SESSION 16 Chairperson : J.VAN HOOF, TNO, NL
	Ballistic & Hypersonic Missile threat / Identification and discrimination - 1	Interceptors & Weapons Systems and Technologies - 1	Sensor systems & Sensor networks incl. Space - 4	Naval IAMD Systems
17:00	1 82 Hypersonic Glider Vehicle (HGV) Flight Optimization Professor Joseph Z. BEN ASHER, WALES, Ltd.	115 Standard Missile Cross-Platform Integration. Challenges, Benefits and Progress Dean GEHR, IERUS	64 Sea Fire / Ground Fire, a flexible new Multifunction Radar family Nico DE BRUIJN, Thales	92 Eurosam contribution in naval systems Jean-Noël BRUGNAUX, EUROSAM
17:20	2 88 Concepts for Fusion of Sensor and Intelligence Data for Exploitation within Naval Air Defence Gareth REES, MBDA	121 Pathway for a modernized M-IAMD capability Pierre ROTY, MBDA	77 Neural network adapted Kalman filter Sami JOUABER, Thales LAS France	128 Naval Cooperative Engagement for IAMD - Beyond Force Threat Evaluation & Weapons Assignment Philippe LE CLÉACH, Naval Group
17:40	3 29 Advances in discrimination of air breathing targets and ballistic missiles using Deep Learning Massimo LOFFREDA, Leonardo SpA	48 Command Shaping Optimal Guidance for High-altitude Interceptor with Acceleration Limit Hyungho NA, Agency for Defense Development	91 Determine the impact point of hypersonic missile using "The Funnel Model" Haim Yuval AVIRAM, IAI- ELTA	25 Naval 3-Dimensional Air and Surface Radar Can See Beyond Horizon Özlem TURGUT, ASELSAN
18:00	END OF DAY 2			

THURSDAY, DECEMBER 09th, 2021

08:30	PLENARY ROUND TABLE : "Disruptive factors of IAMD" - Moderator: Luc DINI, Thales Group, FR			
	ROOM 1 SESSION 17 Chairperson : A. HERMETZ, Wales Ltd., IL	ROOM 2 SESSION 18 Chairperson : TBD, Raytheon, US	ROOM 3 SESSION 19 Chairperson : TBD, Weibel, DK	ROOM 4 SESSION 20 Chairperson : E. HICKEY, Northrop Grumman, US
	Ballistic & Hypersonic Missile threat / Identification and discrimination - 2	Interceptors & Weapons Systems and Technologies - 2	Sensor systems & Sensor networks incl. Space - 5	Directed Energy Weapons / CRAM
09:30	1 73 EO/IR Spectroradiometry Supporting Missile defense Pk improvement Eliahu LEVY, Linkcom	49 Adaptive Attitude Control for a High-altitude Interceptor with Divert and Attitude Thrusters under Input Constraint Yongwoo LEE, Agency for Defense Development	79 Comparative Coverage of Hypersonic Threats from High-Altitude Air Platforms Bob CHILD, Optima Systems Consultancy	132 Weapons Systems networking Metin BUGRU, NATO
09:50	2 47 Infrared synthetic image dataset preparation for automatic target detection algorithm development Inyong KIM, Agency for Defense Development	57 Innovative ArianeGroup Controllable Solid Propulsion Technologies Pascal CAUBET, ArianeGroup	80 Satellite array as a sensor for missile defense mission Eran GURFINKEL, IAI	96 Vulnerability to high-energy lasers Eric DUCLOUX, MBDA
10:10	3 41 RCS-based ballistic threat classification using Machine Learning Bernadetta DEVECCHI, TNO	131 Airbus's vision on TWISTER, PESCO program for the development of Space Based Missile Timely Warning & Interception Laurent BOULOGNE, Airbus Defence and Space	86 The Potential of MIMO Over the Horizon Radar for Missile Detection Paul CANNON, University of Birmingham	130 C-UAS, The need for initiating a new generation Philippe JUGE, Thales
10:30	COFFEE BREAK			
	SESSION 21 Chairperson : P. LE CLÉACH, Naval Group, FR	SESSION 22 Chairperson : B. HORE, BAE Systems, UK	SESSION 23 Chairperson : TBD, IAI, II	SESSION 24 Chairperson : Y. PAKYARDIM, Aselsan, TR
	Command and Control - C2	Space and disruptive technologies	Testing, Targets & Demonstration Programs	CRAM, Counter UAV, GBAD & NBAD
10:50	1 117 NATO ACCS Road to Systems Federation Philippe KRAIT, Thales Raytheon Systems	66 Advanced Grid Structure for Missiles with Embedded Fiber Optic Sensing Capability Ilan WEISSBERG, IAI	20 A Presentation of NATO Missile Firing Installation Operation & Capabilities Stylios RODOUSAKIS, NATO Missile Firing Installation	120 Dual-Layer VL MICA / MISTRAL GBAD weapon system : the efficiency of a structured GBAD Product Line Pascal VINCENT, MBDA
11:10	2 118 Aegis Ashore 2.0 Jeff SMITH, Lockheed Martin	109 Disruptive & Low-cost cruise missile engines. An inevitable part of future missile programs Radim JANSKA, PBS Group, a.s.	30 ASD/FS-21 A Dutch perspective Rogier NOORLAND, Thales Netherlands	54 Detecting UAS, air breathing threats and RAM using FMCW Doppler technology José NAVARRO, Weibel Scientific
11:30	3 27 Mastering complexity of the Ballistic Missiles Defense Command and Control through an augmented multi-domain Indications and Warnings (I&W) process. Gilles LTGEN (R) DESCLAUX, Thales Raytheon Systems AMDC2	74 Difference in damage caused by low-velocity and hyper-velocity impacts Eliahu LEVY, Linkcom	35 Unmanned Aerial Target Platform - Air Defence Training and beyond Reto SCHNIEDERMEIER, Airbus Defence and Space	83 A Reference Model for UAV Swarm Attack Alik HERMETZ, WALES, Ltd.
11:50	4 68 Data visualization for complex and multi-layered analysis Yoav COHEN, IAI	125 Extension of missile defence simulation to hypersonic defence: going to space Fatima IERVOLINO, ArianeGroup	72 Targets Converted from Combat Missiles, to Simulate Threats for Flight Tests. Ephraim BASHAN, EZB	93 C-UAS : Incremental answer to an unexpected threat Alain BANDINI, MBDA
12:10	NETWORKING LUNCH			

THURSDAY, DECEMBER 09th, 2021

SESSION 25

PLENARY SESSION : "Evolution of the threat"

Moderator: Uzi RUBIN, Begin Sadat Center for Strategic Studies, IL

13:30	1	39 Ballistic and Hypersonic missile threat Julie CENDRIER, MBDA
13:50	2	33 Beyond the 2000 km range limit, Iranian IRBMs Ralph SAVELSBURG, Netherlands Defence Academy
14:10	3	61 The New Challenge: From Ballistic Threats to Aeorballistic Threats Uzi RUBIN, Begin Sadat Center for Strategic Studies
14:30	4	126 Russian A2/AD : Capacity, experience, perspectives. Dr. Pierre GRASSER, PhD, Capt. (Air), CESA
14:50		CLOSING ADDRESS - Conference Co-Chairs Emmanuel DELORME, MBDA - Yannick DEVOUASSOUX, ArianeGroup - Luc DINI, Thales Group
15:30		<i>End of IAMD 2021</i>