4th IAA Planetary Defense Conference

Assessing Impact Risk & Managing Response
13-17 April 2015
Frascati, Italy

PROGRAM

2015 IAA Planetary Defense Conference: PROGRAM
Assessing Impact Risk & Managing Response PDC 2015

DAY 1		**April 13, 2015**	
0800		**REGISTRATION**	
0900		**WELCOMING REMARKS**	
0915	IAA-PDC-15-00-01	**KEYNOTE:** 15.02.2013 Chelyabinsk. Are we ready for a recurrence?	O. Atkov
0945		**BREAK**	
		SESSION 1: INTERNATIONAL PROGRAMS & ACTIVITIES **Session Chairs: Detlef Koschny, Lindley Johnson**	
1000	IAA-PDC-15-01-01	The Near-Earth Object Segment Of ESA's SSA Programme	G. Drolshagen
1020	IAA-PDC-15-01-02	Astronomical Aspects Of Building A System For Detecting And Monitoring Hazardous Space Objects	B. Shustov
1040	IAA-PDC-15-01-03	The Achievements Of The NEOShield Project And The Promise Of NEOShield-2	A. Harris (DLR)
1100	IAA-PDC-15-01-04	Recent Enhancements To The NEO Observations Program: Implications For Planetary Defense	L. Johnson
1120	IAA-PDC-15-01-05	Asia-Pacific Asteroid Observation Network	M. Yoshikawa
1140		**INJECT 1: HYPOTHETICAL THREAT**	
1200		**LUNCH**	
		SESSION 2: DISCOVERY, TRACKING, CHARACTERIZATION **Session Chairs: Alan Harris (US), Alan Harris (DLR), Line Drube**	
1315	IAA-PDC-15-02-01	PAN-STARRS Search For Near Earth Objects	R. Wainscoat
1330	IAA-PDC-15-02-02	Design Characteristics Of An Optimized Ground Based NEO Survey Telescope	S. Larson
1345	IAA-PDC-15-02-03	ATLAS – Warning For Impending Impact	J. Tonry
1400	IAA-PDC-15-02-04	Sentinel Mission For Planetary Defense	H. Reitsema
1415	IAA-PDC-15-02-05	Building On The NEOWISE Legacy With NEOCAM, The Near-Earth Object Camera	A. Mainzer
1430	IAA-PDC-15-02-06	An Assessment of Current and Proposed Alternatives for Detecting Small Near Earth Objects (NEO)	B. Lal
1445		**Poster Papers**	
	IAA-PDC-15-P-01	Simulating Current And Future Optical Ground Based NEO Surveys	T. Grav
	IAA-PDC-15-P-02	The Need For Speed In Near Earth Asteroid Characterization	J. Galache
	IAA-PDC-15-P-03	Discovery Of Near-Earth Objects At Venus	T. Widemann
	IAA-PDC-15-P-04	Strategies For Secure And Recovery Near-Earth Objects	M. Birlan
	IAA-PDC-15-P-05	GAIA Observations Of Asteroid And Potential For NEA Discovery And Characterization	P. Tanga
1500		**BREAK**	
1530	IAA-PDC-15-02-07	NEOSTEL Fly Eye sensors for the NEO Discovery	L. Cibin
1545	IAA-PDC-15-02-08	NEO Follow-Up, Recovery And Precovery Campaigns At The ESA NEO Coordination Centre	M. Micheli

1600	IAA-PDC-15-02-09	The First Year Of The NEOWISE Restarted Mission	J. Bauer
1615	IAA-PDC-15-02-10	Asteroids Coupled Dynamics Analysis By Means Of Accurate Mass Distribution And Perturbations Modeling	F. Ferrari
1630	IAA-PDC-15-02-11	The Linear Method For Impact Probability Estimation Using A Curvilinear Coordinate System	D. Vavilov
1645		**Poster Papers**	
	IAA-PDC-15-P-06	New Results Of NEO-Surface: Near-Earth Objects Survey Of Asteroids Close To The Earth	S. Ieva
	IAA-PDC-15-P-07	Non-Gravitational Perturbations in NEODyS - The Case Of Asteroid (410777) 2009 FD	F. Spoto
	IAA-PDC-15-P-08	Apophis: Complex Rotation And Hazard Assessment	D. Farnocchia
	IAA-PDC-15-P-09	CoLiTec-Multifunction Software For The CCD Image Processing	S. Khlamov
	IAA-PDC-15-P-10	PoDET: A Hub For Dedicated Orbits And Ephemerides Computations And General Predictions	D. Hestroffer
1700		**BREAK**	
1715		**PANEL SESSION: RESPONSE TO HYPOTHETICAL THREAT**	
1800		**ADJOURN DAY 1**	
		WELCOME RECEPTION	

DAY 2		**April 14, 2015**	
0855		**INTRODUCTORY REMARKS**	
		SESSION 2: DISCOVERY, TRACKING, CHARACTERIZATION (Continued) **Session Chairs: Line Drube, Alan Harris (US), Alan Harris (DLR)**	
0900	IAA-PDC-15-02-12	Thermal And Spin Properties Of Near-Earth Objects: Constraints From Next-Generation Infrared Surveys	T. Statler
0915	IAA-PDC-15-02-13	The Population Of Small NEAs	A. Harris (US)
0930	IAA-PDC-15-02-14	An Automated System For Short-Term Impact Warning	S. Chesley
0945	IAA-PDC-15-02-15	Target-Of-Opportunity Characterization Of Sub-200 Meter Near-Earth Asteroids	W. Ryan
1000	IAA-PDC-15-02-16	Physical Characterization Of Chelyabinsk-Sized (~20 Meter) Near-Earth Asteroids: Implications For Impact Hazard, Meteorite Source Bodies, And Human Exploration	V. Reddy
1015	IAA-PDC-15-02-17	New NEODYS Graphic Tool For Orbit Visualization	F. Bernardi
1030		**Break**	
1100	IAA-PDC-15-02-18	High-Resolution Radar Imaging Of Potentially Hazardous Near-Earth Asteroids	M. Busch
1115	IAA-PDC-15-02-19	Constraining Physical Properties Using Meteor Observations	R. Weryk
1130	IAA-PDC-15-02-20	Characterizing The Near-Earth Asteroid Population In The Framework Of The NEOShield Project	D. Perna

1145		**Poster Papers**	
	IAA-PDC-15-P-11	NEOSHIELD-2 EU Project: Physical And Compositional Characterization Of Small NEAs	M. Barucci
	IAA-PDC-15-P-12	Planetary Defense: A Meteorite Perspective	D. Sears
	IAA-PDC-15-P-13	Optimal Strategies For Characterizing Potentially Dangerous Asteroids Below the Traditional Size Limit	M. Elvis
	IAA-PDC-15-P-14	The Detection Rate And Size-Frequency Distribution Of H>18 NEOs And ARM Targets By Pan-Starrs1 And Pan-Starrs2 Surveys	E. Lilly (Schunova)
	IAA-PDC-15-P-15	Results of the Asteroid Tracker Algorithm Challenge	R. Sergeev
1200		**INJECT 2: HYPOTHETICAL THREAT**	
1215		**LUNCH**	
		SESSION 3: DEFLECTION AND DISRUPTION TECHNIQUES **Session Chairs: Brent Barbee, Bong Wie, Paul Miller**	
1330	IAA-PDC-15-03-01	Asteroid Characterization Priorities For Planetary Defense	P. Miller
1345	IAA-PDC-15-03-02	Characterizing The Effect Of Asteroid Topography On Hazardous Asteroid Kinetic Impact Deflection Scenarios	D. Scheeres
1400	IAA-PDC-15-03-03	Influence Of Porosity On Impulsive Asteroid Mitigation Scenarios	E. Herbold
1415	IAA-PDC-15-03-04	Stand-Off Nuclear Deflection: The Importance Of Shape, Composition And Spectrum	K. Howley
1430	IAA-PDC-15-03-05	When An Impactor Is Not Enough: The Realistic Nuclear Option For Standoff Deflection	D. Dearborn
1445	IAA-PDC-15-03-06	Optimizing Surface Ablation Deflection In The Presence Of Realistic Asteroid Topography And Rotation	J. McMahon
1500		**BREAK**	
1530	IAA-PDC-15-03-07	Directed Energy Planetary Defense Mission	P. Lubin
1545	IAA-PDC-15-03-08	A Comparison Of Kinetic Impactor And Nuclear Deflection For Two Scenarios: Bennu And The 2015 PDC Scenario	J. Owen
1600	IAA-PDC-15-03-09	Suborbital Asteroid Intercept And Fragmentation For Very Short Warning Time Scenarios	R. Hupp
1615	IAA-PDC-15-03-10	A New Terminal Guidance Sensor System For Asteroid Intercept Or Rendezvous Missions	J. Lyzhoft
1630	IAA-PDC-15-03-11	QBOLT - Directed Energy System Concepts For Asteroid Threat Mitigation	M. Thangavelu
1645		**BREAK**	
1700		**PANEL SESSION: RESPONSE TO HYPOTHETICAL THREAT**	
1800		**ADJOURN DAY 2**	
1800		***REFRESHMENTS AND POSTER REVIEW***	

DAY 3		April 15, 2015	
0850		**INTRODUCTORY REMARKS**	
		SESSION 3: CONTINUED	
0900	IAA-PDC-15-03-12	ASTEROID DEFENCE: COMPARISON OF Kinetic-Impact And Nuclear Stand-Off Schemes	G. Gisler
0915	IAA-PDC-15-03-13	Disruption Limits Of Kinetic-Impactor Mitigation	M. Bruck Syal
0930	IAA-PDC-15-03-14	Los Alamos RAGE Simulations Of The HAIV Mission Concept	R. Weaver
0945	IAA-PDC-15-03-15	GPU-Accelerated Computational Tool Development For Studying The Effectiveness Of Nuclear Subsurface Explosions	B. Zimmerman
1000		**BREAK**	
		SESSION 4: MISSION AND CAMPAIGN DESIGN AND EXECUTION **Session Chairs: Ian Carnelli, Patrick Michel, Marco Tantardini**	
1030	IAA-PDC-15-04-01	Asteroid Impact & Deflection Assessment Mission: Science Return And Mitigation Relevance	P. Michel
1045	IAA-PDC-15-04-02	Asteroid Impact & Deflection Assessment: DART	A. Cheng
1100	IAA-PDC-15-04-03	Asteroid Impact Mission: A Unique Opportunity To Demonstrate Planetary Defense While Testing Technologies For Future Missions And Performing Asteroid Scientific Investigations	I. Carnelli
1115	IAA-PDC-15-04-04	Aida Double Asteroid Redirection Test (Dart) Mission: Modeling Expected Outcomes	A. Stickle/O. Barnouin
1130	IAA-PDC-15-04-05	NEOShield: The Fate Of Ejecta From A Kinetic Impactor Strike On A Near-Earth Object	S. Schwartz
1145	IAA-PDC-15-04-06	A Direct Observation The Asteroid's Structure From Deep Interior To Regolith: Why And How Do It?	A. Herique
1200	IAA-PDC-15-04-07	Using Mission Images To Study Evidence Of Block Motion On Asteroids: Implications For Seismology Of Small Bodies	J. Noviello
1215	IAA-PDC-15-04-08	Relevance of PHILAE And MASCOT In-Situ Investigations for Planetary Defense	S. Ulamec
1230		**INJECT 3: HYPOTHETICAL THREAT**	
1245		**LUNCH**	
		SESSION 4: CONTINUED	
1400		**Poster Papers**	
	IAA-PDC-15-P-16	Asteroid Impact Monitoring Mission: Mission Analysis And Innovative Strategies For Close Proximity Maneuvering	F. Ferrari
	IAA-PDC-15-P-17	Fast Spinning Primaries Of NEA Binaries: The Case Of Didymos, AIDA Mission's Target	A. Campo Bagatin
	IAA-PDC-15-P-18	Asteroid Surface Gravimetry For Characterizing Asteroid Mass And Internal Structure	K. Carroll
	IAA-PDC-15-P-19	Solar-Sailing Trajectory Design For Close-Up NEA Observations Mission	A. Peloni

	IAA-PDC-15-P-20	Large Lightweight Deployable Structures For Planetary Defense: Solar Sail Propulsion, Solar Concentrator Payloads, Large-Scale Photovoltaic Power	P. Seefledt
1415	IAA-PDC-15-04-09	Investigations Of Short Warning Time Response Options For Hazardous Near-Earth Objects	B. Seery
1430	IAA-PDC-15-04-10	An Innovative Solution To NASA's NEO Impact Threat Mitigation Grand Challenge And Flight Validation Mission Architecture Development	B. Wie
1445	IAA-PDC-15-04-11	Enhanced Gravity Tractor Technique For Planetary Defense	D. Mazanek
1500	IAA-PDC-15-04-12	Mission Design For A Gravity Tractor Demonstration Mission	N. Faber
1515	IAA-PDC-15-04-13	Metrics For Evaluating Effective Disruption Of Hazardous Near-Earth Objects	B. Kaplinger
1530		**BREAK**	
1555	IAA-PDC-15-04-14	NEOShield: Post Mitigation Impact Risk Assessment For Asteroid Deflection Demonstration Missions	S. Eggl
1610	IAA-PDC-15-04-15	Vision-Based Navigation System For Cost-Efficient Mitigation Missions	J. Gill
1625	IAA-PDC-15-04-16	NEO Threat Mitigation Software Tools Within the NEOShield Project and Application to 2015 PDC	J.L. Cano
1640	IAA-PDC-15-04-17	From Sail To Soil – Getting Sailcraft Out Of The Harbor On A Visit To One Of Earth's Nearest Neighbors	T. Grundmann
1650	IAA-PDC-15-04-18	Mission Analysis For The Ion Beam Deflection Of Fictitious Asteroid 2015 PDC	C. Bombardelli
1700	IAA-PDC-15-04-19	Impact Risk Assessment And Planetary Defense Mission Planning For Asteroid 2015 PDC	G. Vardaxis
1710		**BREAK**	
1720		**PANEL SESSION: RESPONSE TO HYPOTHETICAL THREAT**	
1800		**ADJOURN DAY 3**	
		PUBLIC EVENT	

DAY 4		**April 16, 2015**	
0850		**INTRODUCTORY REMARKS**	
		SESSION 4: CONTINUED	
0900	IAA-PDC-15-04-20	Robotic Missions To Small Bodies And Their Potential Contributions To Human Exploration And Planetary Defense	P. Abell
0915	IAA-PDC-15-04-21	NASA's Asteroid Redirect Mission Leverages Enhanced PHA Detection And Demonstrates Potential Mitigation Options	M. Gates
0930	IAA-PDC-15-04-22	The Mission Accessibility of Near-Earth Asteroids	B. Barbee
0945	IAA-PDC-15-04-23	BILLIARDS: A Demonstration Mission for Hundred-Meter Class Near Earth Asteroid Disruption	M. Marcus
1000	IAA-PDC-15-04-82	A KINETIC-IMPACTOR DEMONSTRATION MISSION TO CHANGE THE SPIN OF AN ASTEROID	L. Drube
1015	IAA-PDC-15-04-25	NEOShield Kinetic Impactor Demonstration Mission	K. Engel, Albert Falke
1030		**BREAK**	
		SESSION 5: CONSEQUENCES OF IMPACTS **Session Chairs: Mark Boslough, Barbara Jennings, Alan Harris (US)**	
1100	IAA-PDC-15-05-01	New Risk Assessment And Early Warning Of Airbursts From Small NEOs	M. Boslough
1115	IAA-PDC-15-05-02	Break-Up Modeling And Trajectory Simulation Under Uncertainty For Asteroids	P. Mehta
1130	IAA-PDC-15-05-03	Analysis Of The Airburst Phenomenon From An Aerothermodynamic Point Of View: The Case Of Chelyabinsk	N. Minster
1145	IAA-PDC-15-05-04	Sensitivity Of Ground Damage Predictions To Meteoroid Breakup Modeling Assumptions	D. Mathias
1200	IAA-PDC-15-05-05	Wave Generation, Wave Propagation, And Onshore Consequences Of The 2015 PDC Asteroid-Impact Scenario	S. Ezzedine
1215	IAA-PDC-15-05-06	Consequences Of The Impact Of A 300-M-Diameter Asteroid	V. Svetsov
1230		**INJECT 4: HYPOTHETICAL THREAT**	
1245		**LUNCH**	
		SESSION 6: DISASTER & MITIGATION PLANNING & PUBLIC EDUCATION **Session Chairs: Nahum Melamed, Dave Baiocchi, L.A. Lewis, Victoria Friedensen**	
1400	IAA-PDC-15-06-01	NEOShield Public Outreach / New Media activities	R. Hermsen
1415	IAA-PDC-15-06-02	Understanding Risk Perceptions and Public Information Needs from the Bottom-Up: Important Elements for Managing Responses to Hazardous NEO's	M. Race
1430	IAA-PDC-15-06-03	Means of Education about The Impact Hazard – Evaluation and Suggestions Talking 'Planetary Defense' in Schools, Media and Museums	M. Muller

1445	IAA-PDC-15-06-04	When The Sky Falls: Performing Initial Assessments Of Bright Atmospheric Events	W. Cooke
1500		**BREAK**	
1530	IAA-PDC-15-06-06	Is A Special Legal Regime For Planetary Defence Measures Necessary?	H. Mayer
1545	IAA-PDC-15-06-07	A Probabilistic Framework for Asteroid Risk Assessment	J. Reinhardt
1600	IAA-PDC-15-06-08	A Simulated Asteroid Impact Over The Swiss-German Border	D. Koschny
1615	IAA-PDC-15-06-09	Covering for impact: Russian media's reporting on planetary defense matters before and after the Chelyabinsk meteor	O. Dobrovidova
1630	IAA-PDC-15-06-10	Communicating About Asteroid Impact Hazards: Lessons Learned, Challenges To Meet	L. Billings
1645		Poster Papers	
	IAA-PDC-15-P-21	NASA'S Meteoroid Environments Office's Response to bright bolide events over continental USA	R. Blaauw
	IAA-PDC-15-P-22	The 2013 SGAC Name-An-Asteroid Campaign – Overview, Results, Lessons Learned – A Strategy for IAWN to Educate the General Public	A. Karl
	IAA-PDC-15-P-23	International NEO Education And Public Outreach	J. Burke
	IAA-PDC-15-P-24	The International Space University Space Studies	M. Thangavelu
	IAA-PDC-15-P-25	Not Just "Rocks From Space": Communicating The Conceptual Foundations Of The Neo Hazard To Non-Science Professionals Through Short Videos	T. Statler
1655		**BREAK**	
1700		**PANEL SESSION: RESPONSE TO HYPOTHETICAL THREAT**	
1800		**ADJOURN DAY 4**	
		CONFERENCE BANQUET	

DAY 5	**April 17, 2015**
0900	**INTRODUCTORY REMARKS**
	SESSION 7: THREAT RESPONSE EXERCISE **Session Chair: Debbie Lewis, Victoria Friedensen**
0910	**INJECT 5: HYPOTHETICAL THREAT**
1040	**BREAK**
1110	**INJECT 6: HYPOTHETICAL THREAT**
1230	**LUNCH**
1345	**INJECT 7: HYPOTHETICAL THREAT**
1600	**DISCUSSION: LESSONS LEARNED AND RECOMMENDATIONS**
1700	**CONFERENCE ENDS**

		POSTERS	
	IAA-PDC-15-P-26	Overview Of A New NASA Project Focused On Planetary Defense	J. Arnold
	IAA-PDC-15-P-27	About Development Of Base Components Of The International Planetary Defence System “CITADEL”	A. Zaitsev
	IAA-PDC-15-P-28	NEAR REAL TIME BOLIDE IMPACT ASSESSMENT	E. Tagliaferri
	IAA-PDC-15-P-29	EDEN SHIELD: Strategies and Concepts for Planetary Defense	M. Thangavelu
	IAA-PDC-15-P-30	Status of NEO confirmation observations at the Thüringer Landessternwarte (033)	B. Stecklum
	IAA-PDC-15-P-31	HIGH-FIDELITY SIMULATION OF GROUND-BASED OPTICAL NEO SURVEYS	E. Christensen
	IAA-PDC-15-P-32	ON THE KEYHOLE POSITIONS OF APOPHIS	L. Sokolov
	IAA-PDC-15-P-33	Observing NEOs from French Polynesia	JP. Barriot
	IAA-PDC-15-P-34	KLENOT NEO FOLLOW-UP PROGRAM IN EUROPEAN FRAMEWORK	J. Ticha
	IAA-PDC-15-P-35	CURRENT STATE AND FUTURE PROSPECTS FOR ISON ASTEROID PROGRAM	L. Elenin
	IAA-PDC-15-P-36	GAIA FOLLOW-UP OF SOLAR SYSTEM OBJECTS	W. Thuillot
	IAA-PDC-15-P-37	Dynamical evolution of asteroid 1999 RQ (Bennu). Close approaches to the Earth	A. Abedin
	IAA-PDC-15-P-38	THE SHOEMAKER NEO GRANT PROGRAM: MAKING A DIFFERENCE	B. Betts
	IAA-PDC-15-P-39	ACCURATE ORBIT PROPAGATION OF PLANET-ENCOUNTERING BODIES	G. Bau
	IAA-PDC-15-P-40	UNSTABLE GIANT COMETS IN THE OUTER SOLAR SYSTEM AS A FUTURE CONCERN FOR PLANETARY DEFENCE	D. Steel
	IAA-PDC-15-P-41	THE NEO SYSTEM OF THE ESA SPACE SITUATIONAL AWARENESS PROGRAMME	E. Perozzi
	IAA-PDC-15-P-42	Detection Performance of L1-based NEO Surveys	P. Maier
	IAA-PDC-15-P-43	Near Earth Object Detection by Continues Sky Imaging for Observing Occultation from different visual Points	A. Patil
	IAA-PDC-15-P-44	A WIDE FIELD SURVEY OF NEAR-EARTH OBJECTS	V.V. Emel'yanenko
	IAA-PDC-15-P-45	Visible spectra of near-Earth asteroids obtained with Isaac Newton Telescope: setting up the framework and first results	M. Popescu
	IAA-PDC-15-P-46	Results of the Asteroid Data Hunter algorithm challenge	A. Beasley
	IAA-PDC-15-P-47	A SPACE TELESCOPE FOR MASS DETECTION OF DECAMETER BODIES IN THE NEAR SPACE	A.S. Shugarov

	IAA-PDC-15-P-48	Prediction of impactors: method based on an Exhaustive Search of Orbital Planes	Y. Medvedev
	IAA-PDC-15-P-49	Radar Astrometry and Physical Characterization	M. Nolan
	IAA-PDC-15-P-50	POTENTIALLY HAZARDOUS ASTEROIDS DETECTION FROM SPACE-BASED NETWORK ON DISTANT RETROGRADE ORBITS	C. Colombo
	IAA-PDC-15-P-51	Momentum transfer via direct impact: Experimental measurements	K. Housen
	IAA-PDC-15-P-52	Directed Energy Deflection Laboratory Measurements	T. Brashears
	IAA-PDC-15-P-53	1D to 3D MAPPING FOR NUCLEAR ENERGY DEPOSITION	R. Managan
	IAA-PDC-15-P-54	PHYSICS OF NUCLEAR ENERGY DEPOSITION FOR THE DEFLECTION OF ASTEROID AND COMETS	K. Howley
	IAA-PDC-15-P-55	INTERNAL GRAVITY, SELF-ENERGY, AND DISRUPTION OF ASTEROIDS	A. Dobrovolskis
	IAA-PDC-15-P-56	DESIGN OF THE FLIGHT SCHEME AND S/C NAVIGATION SUPPORT ENSURING THE GOALS OF THE BLAST DEFLECTION DEMONSTRATION MISSION TO THE POTENTIALLY HAZARDOUS ASTEROID 2001 JV1	Yu Kolyuka
	IAA-PDC-15-P-57	EFFECTS OF IMPACT DEFLECTION ON HAZARDOUS ASTEROIDS: THE ROLE OF ASTEROID INTERIOR STRUCTURE	Zhang Yun
	IAA-PDC-15-P-58	A FAST RESPONSE NEO IMPACT AND FLYBY MISSION CONCEPT DEMONSTRATOR	B. Rishikof
	IAA-PDC-15-P-59	ASTEROID'S ORBIT AND ROTATIONAL CONTROL USING LASER ABLATION: ADVANCES IN PHYSICAL AND SIMULATION MODELLING	M. Vetrisano
	IAA-PDC-15-P-60	IMPROVED EQUATIONS OF STATE AND STRENGTH MODELS FOR ASTEROID IMPACT AND DEFLECTION	D. Swift
	IAA-PDC-15-P-61	Differences in Nuclear Deflection Scenarios with Oddly Shaped Asteroids	J. Wasem
	IAA-PDC-15-P-62	MATERIAL MODELS OF SMALL SOLAR SYSTEM BODIES FOR USE IN IMPACT HAZARD MITIGATION MODELING	C. Plesko
	IAA-PDC-15-P-63	SIMPLE GRAVITATIONAL MODELS AND CONTROL LAWS FOR AUTONOMOUS OPERATIONS IN PROXIMITY OF UNIFORMLY ROTATING ASTEROIDS	A. Turconi
	IAA-PDC-15-P-64	Mobile Asteroid Surface Scout (MASCOT) – Design, Development and Delivery of a Small Asteroid Lander aboard HAYABUSA-2	JT. Grudmann
	IAA-PDC-15-P-65	Technology and knowledge reuse concepts to enable responsive NEO characterization missions based on the MASCOT lander	C. Lange
	IAA-PDC-15-P-66	On Time, On Target – How the Small Asteroid Lander MASCOT Caught a Ride Aboard HAYABUSA-2	C. Grimm

		in 3 Years, 1 Week and 48 Hours	
	IAA-PDC-15-P-67	KINETIC DEFLECTION UNCERTAINTIES FOR REAL ASTEROID SHAPES	J. Feldhacker
	IAA-PDC-15-P-68	Momentum transfer measurement of laboratory hypervelocity impact experiments on asteroid-like materials as a function of target porosity and projectile shape	J. Hupfer
	IAA-PDC-15-P-69	CASTALIA PROPOSAL: EXPLOITING A SCIENCE MISSION FOR ASTEROID DEFLECTION	A. Gibbings
	IAA-PDC-15-P-70	INSIGHTS FOR NEO DEFLECTION	N. Melamed
	IAA-PDC-15-P-71	Recent Improvement in the Theoretical Modelling of a Laser-Based Deflector for Asteroids	N. Thiry
	IAA-PDC-15-P-72	LASER RETROREFLECTORS AS NEO POSITIONING AND GEODETIC TARGETS	S. Dell'Agnello
	IAA-PDC-15-P-73	DEFLECTION OF ASTEROIDS AND COMETS CONSIDERED AS AN AGGLOMERATED BODY	G. Tancredi
	IAA-PDC-15-P-74	Asteroid Deflection by Broadside Impact	J.L. Watson
	IAA-PDC-15-P-75	Apophis Explorer, Taking The Opportunity of its 2029 Flyby for a Characterization Mission	JY. Prado
	IAA-PDC-15-P-76	Feasibilities OF SPACE-rocket complexes for CREATION OF NEAR ECHELON OF THE EARTH PROTECTION SYSTEM	VG. Degtiar
	IAA-PDC-15-P-77	Project SEUSS: Save Earth Using Solar System Assets	M. Thangavelu
	IAA-PDC-15-P-78	Performance Assessment of the Nuclear Cycler Concept	N. Thiry
	IAA-PDC-15-P-79	NEAR EARTH ASTEROIDS ANALYSIS AS THE OBJECTS FOR MOTION CONTROL USING GRAVITY ASSIST MANEUVERS	A. Ledkov
	IAA-PDC-15-P-80	CURRENT ACTIVITIES OF YUZHNOYE STATE DESIGN OFFICE ON PLANETARY DEFENSE	M. Kaliapin
	IAA-PDC-15-P-81	Demo-mission for deflection of the asteroid 2001 JV1. Conceptions	T. Afanasieva
	IAA-PDC-15-P-83	NEOSHIELD: FINDING SAFE HARBORS IN ASTEROID DEFLECTION MISSIONS	S. Eggl
	IAA-PDC-15-P-84	GLOBAL IMPACT DISTRIBUTION OF ASTEROIDS	C. Rumpf
	IAA-PDC-15-P-85	Physics Based Modeling of Meteor Entry and Breakup	D.K. Prabhu
	IAA-PDC-15-P-86	MASS EXTINCTIONS AS LOGNORMAL STOCHASTIC PROCESSES	C. Maccone
	IAA-PDC-15-P-87	LOCATION AND CONSEQUENCES OF CELESTIAL BODIES COLLISION WITH THE EARTH	Y. Bondarenko
	IAA-PDC-15-P-88	CONSEQUENCES' MODELLING OF AIR, LAND AND UNDERWATER EXPLOSIONS OF DANGEROUS celestial BODIES	A. Aleksandrov
	IAA-PDC-15-P-89	FIREBALL PROPERTIES DEPENDING ON THE PRE-ATMOSPHERIC METEOROID PARAMETERS	M. Gritsevich

	IAA-PDC-15-P-90	NEO PUBLIC OUTREACH AND EDUCATION AT KLET OBSERVATORY AND CESKE BUDEJOVICE PLANETARIUM	J. Ticha
	IAA-PDC-15-P-91	WHAT ABOUT COMETS?	J. Marks
	IAA-PDC-15-P-92	Communication Planning For The International Asteroid Warning Network	L. Billings
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