	C 1 21 <sup>st</sup>	N 1 1 <sup>st</sup>	T 1 and	W 1 1 2rd	TI 1 4 <sup>th</sup>
	Sunday, $31^{st}$	Monday, 1 <sup>st</sup>	Tuesday, 2 <sup>nd</sup>	Wednesday, 3 <sup>rd</sup>	Thursday, 4 <sup>th</sup>
07.00	October	November	November	November	November
07:30	\ /	Chairpersons' meeting	Chairpersons'	Chairpersons'	Chairpersons'
08:00	\ /	Reception	meeting	meeting	meeting
08:30	\ /	Reception	Reception	Reception	Reception
08:40		Omening Section /	Reception	Кесерион	Reception
09:00		Opening Session /	D 11 1 G 1	D 11 1 G 1	D 1110 1
		Plenary Session 1	Parallel Session	Parallel Session	Parallel Session
			<b>3A1</b> : Innovative Reactor	<b>4A1</b> : Innovative	5A1: Innovative
			Concept 2	Reactor Concept 4	Reactor Concept 5
			<b>3B1</b> : Innovative Partition-	4B1: Heat Transfer/	(Transmutation 2)
			ing and Separation 1	Materials (Pb-Bi)	<b>5B1</b> : Non-Proliferation
10:20			(micro/nano technologies)		
10:20			Coffee Break	Coffee Break	Coffee Break
10.40			Parallel Session	Parallel Session	Plenary Session 2 /
	$\setminus$		3A2: Innovative Reactor	4A2: Innovative	Closing Session
	V V		Concept 2	Reactor Concept 4	
	$\wedge$		3B2: Innovative Partition-	4B2: Heat Transfer/	
			ing and Separation 1	Materials	
10.10			(micro/nano technologies)	(Po, Pb-Bi, GCR)	
12:10		Group Photo	Lunch		
12:20		Lunch		Lunch	
10.00		Lunon		Lanch	
13:00					
13:30		Parallel Session	Parallel Session	Students' Session/	
		<b>2A1</b> : Innovative	<b>3A3</b> : Innovative Reactor	Panel Discussion	
		Reactor Concept 1	Concept 3	4A3	INES-1 Advisory
		<b>2B1</b> : Innovative	<b>3B3</b> : Innovative Partition-		Review Meeting
		Energy Transmutation	ing and Separation 2		(Hikari)
	/	Lifergy Hanshutation	ing and Separation 2		(IIIKall)
14:50					
15:00		Coffee Break		-	,,
15:10	Reception		Coffee Break		
15:20	(up to 19:00)	Parallel Session			
15:30		2A2: Innovative	Parallel Session		
		Reactor Concept 1	<b>3A4</b> : Innovative Reactor	Coffee Break	
15:45		<b>2B2</b> : Innovative	Concept 3		
		Energy Transmutation	(Transmutation 1)	Poster Session	
15.05			3B4: Innovative Partition-	PB1	
17:00	Welcome		ing and Separation 2		X
17:30	Reception			Removal of	
18:00	(Aozora)			Posters	
18:30	(1102010)			-	
19:00				Banquet	
20:30					
20.30					

	Monday, 1 <sup>st</sup>	Tuesday, 2 <sup>nd</sup>	Wednesday, 3 <sup>rd</sup>	Thursday, 4 <sup>th</sup>
	November	November	November	November
08:00	Reception			
08:30		Reception	Reception	Reception
08:40	Opening Session /	Reception	Reception	Reception
09:00	Plenary Session 1	3A1: Innovative Reactor Concept 2 I. Kinoshita (CRIEPI),	4A1: Innovative Reactor Concept 4 K. Matsui(IAE),	5A1: Innovative Reactor Concept 5 (Transmutation 2) V. Artisyuk (Obninsk U.),
	T. Yano(Tokyo Tech), S. Anghaie (U. Florida)	A. V. Gulevich (IPPE) 3B1: Innovative Partitioning and Separation 1 H. Tomiyasu (Shinshu U.), M. Ozawa (JNC)	C. Forsberg (ORNL) 4B1: Heat Transfer /Materials T. Obara (Tokyo Tech), E. Loewen (INEEL)	T. Sasa (JAERI) 5B1: Non-Proliferation M. Saito (Tokyo Tech), L. Ponomarev (Kurchatov)
10:20				
10:40		Coffee Break	Coffee Break	Coffee Break
10110		3A2: Innovative Reactor Concept 2 N. Nakae (JNC), K. Y. Suh (SNU)	4A2: Innovative Reactor Concept 4 T. Takizuka (JAERI), Xu Yuanhui (Tsinghua U.)	Plenary Session 2 / Closing Session H. Sekimoto (Tokyo Tech),
		3B2: Innovative Partitioning and Separation 1 K.L. Nash (WSU),	4B2: Heat Transfer /Materials M. Takahashi (Tokyo Tech), N. Li (LANL)	M. Kazimi (MIT)
12:10	C DI	Z. Yoshida (JAERI)		
12:20	Group Photo	Lunch		
	Lunch		Lunch	
13:00				
13:30	2A1: Innovative Reactor	3A3: Innovative Reactor	Students' Session/	
	Concept 1 H. Ninokata (Tokyo	Concept 3 K. Hibi (MHI),	Panel Discussion 4A3	
	Tech), P. Hejzlar (MIT)	V. Kuznetsov (IAEA) 3B3: Innovative Partitioning	Chair: Ismail (Tokyo Tech)	INES-1 Advisory
	2B1: Innovative Energy	and Separation 2		Group Meeting
	Transmutation R. B. Duffey (AECL),	B. Raj (Indira Gandhi Center	M. Kazimi (MIT), N. Li (LANL),	(Hikari)
14:50	Y. Kato (Tokyo Tech)	for Atomic Research), K. Suzuki (IRI)	G. Kashino (Nagasaki U.)	
	Coffee Drest		H. Murakawa (Tokyo Tech),	
15:00	Coffee Break		H. Sagara ( Tokyo Tech )	
15:10	2A2: Innovative Reactor	Coffee Break		
15:20	Concept 1	3A4: Innovative Reactor		
15:30	T. Obara (Tokyo Tech), S. Zaki (BIT) 2B2: Innovative Energy	Concept 3 (Transmutation 1) M. Hron (Czech), E. Kryuchkov (MEPhI)	Coffee Break	
15:45	Transmutation	3B4: Innovative Partitioning	Poster Session	
	K. Verfondern (Research Center Jülich ), Y. Izumizaki, (Shinshu U.)	and Separation 2 Y. Fujii (Tokyo Tech),	PB1	
17:30	C. Forsberg (ORNL),	H. Akatsuka (Tokyo Tech)		
18:00	H. Karasawa (Hitachi)		Removal of Posters	
18:30				
19:00			Banquet	
20:30				
21:00				

## COE-INES International Symposium, INES-1 Chairperson's List

	A (Akebono)	B (Aozora)
08:40	Opening Session / Plenary Session 1	
	8:40-8:50 Opening Address	
	Hiroshi Sekimoto (Tokyo Tech)	
	8:50-9:00 Greetings	
	Masao Takuma (AESJ)	
	9:00-9:10 Greetings	
	Masuo Aizawa (Tokyo Tech)	
	9:10-9:40 #92 The 21 <sup>st</sup> Century COE Program	
	"Innovative Nuclear Energy Systems for	
	Sustainable Development of the World"	
	COE-INES,	
	Hiroshi Sekimoto (Tokyo Tech.)	
	9:40-10:10 (invited) #58 Nuclear power for	
	sustainable development and relevant IAEA	
	activities for the future,	
	Akira Omoto (IAEA)	$\downarrow$
	10:10-10:40 (invited) #115 Innovation in the	
	United States Department of Energy Advanced	
	Nuclear Research Programs,	
	C. Savage (DOE)	
	10:40-11:10 (invited) #89 For the 21 <sup>st</sup> Century:	
	Enhanced Nuclear Energy Economy and Safety,	
	Mujid S. Kazimi (MIT)	
	11:10-11:40 (invited) #94 CEA R&D Strategy	
	on 4 <sup>th</sup> Generation Nuclear Systems for a	
	Sustainable Energy Development,	
	Frank Carre (CEA)	
	11:40-12:10 (invited) #105 OECD/NEA	
	Activities Relating to Innovative Nuclear	
	Energy Systems	
	Gail H. Marcus (OECD/NEA)	
12:10		
12:20	Group Photo	
	Lunch	
13:30		

# (Monday 1<sup>st</sup> November 2004)

	A (Akebono)	B (Aozora)
13:30	2A1: Innovative Reactor Concept 1 (System Concept) 13:30-14:10 (invited) #34 New IAEA's Activities for Small and Medium Sized Reactors (SMRs), Vladimir Kuznetsov (IAEA) 14:10-14:50 (invited) #14 Optimum Utilization of Nuclear Fuel with Gas and Vapor Core Reactors, Samim Anghaie (Univ. Florida)	2B1: Innovative Energy Transmutation 13:30- 14:10 (invited) #56 Past and Present Research in Europe on the Production of Nuclear Hydrogen with HTGR, Karl Verfondern (Research Center Jülich) 14:10-14:50 (invited) #72 Futures for Hydrogen Produced Using Nuclear Energy, Charles W. Forsberg (ORNL)
14:50	Coffee Break	
15:10	<ul> <li>2A2: Innovative Reactor Concept 1 (System Concept)</li> <li>15:10-15:30 #37 Development of Medium and Small</li> <li>Sized Reactors: DMS, K. Tominaga (Hitachi)</li> <li>15:30-15:50 #48 Development of the Package</li> <li>Reactor (1), K. Hibi (MHI)</li> <li>15:50-16:10 #49 Development of the Package</li> <li>Reactor (2)-Core Characteristics-, T. Hino (Hitach)</li> <li>16:10-16:30 #18 Core Performance of New Concept</li> <li>Passive-Safety Reactor "KAMADO" -Safety,</li> <li>Burn-up and Uranium Resources Problem-,</li> <li>T. Matsumura (CRIEPI)</li> <li>16:30-17:10 #93 Application of CANDLE Burnup</li> <li>Strategy for the Future Nuclear Energy Utilization,</li> <li>H. Sekimoto (Tokyo Tech)</li> <li>17:10-17:30 #1 The Feasibility Study on Perfect</li> <li>Burning Reactor System (PBRS), N. Nakae (JNC)</li> <li>17:30-18:10 (invited) #22 Cascade subcritical molten</li> <li>salt reactor (CSMSR), A. M. Kalugin (Kurchatov)</li> </ul>	2B2: Innovative Energy Transmutation 15:10-15:50 (invited) #84 R&D on Nuclear Hydrogen Production Using HTGR at JAERI, K. Onuki (JAERI) 15:50-16:10 #51 Carbon Dioxide Zero-Emission Hydrogen System based on Nuclear Power, Y. Kato (Tokyo Tech) 16:10-16:30 #35 Cost Evaluation for Centralized Hydrogen Production, H. Karasawa (Hitachi) 16:30-16:50 #43 Synergistic Hydrogen Production by Nuclear-Heated Steam Reforming of Fossil Fuels, M. Hori (Nuclear System Association) 16:50-17:10 #57 Particular Safety Aspects of the Combined HTTR/Steam Reforming Complex for Nuclear Hydrogen Production, K. Verfondern (Research Center Jülich) 17:10-17:30 #9 Sustainable Futures Using Nuclear Energy, R. B. Duffey (AECL) 17:30-17:50 #27 Hydrogen Production from Supercritical Water - Mechanism of Catalytic Reactions of Biomass by Ruthenium(IV) Oxide -, Y. Izumizaki, (Shinshu U.)
19:00		

## (Monday 1<sup>st</sup> November 2004)

	A (Akebono)	B (Aozora)	
09:00	<ul> <li>3A1: Innovative Reactor Concept 2</li> <li>(Pb and Pb-Bi Cooled Reactors)</li> <li>9:00-9:40 (invited) #135 The Closed On-Site</li> <li>Fuel Cycle of the Brest Reactors,</li> <li>A. G. Glazov (FSUE RDIPE)</li> <li>9:40-10:20 #59 Pb-Bi Cooled Direct Contact</li> <li>Boiling Water Small Reactor,</li> <li>M. Takahashi (Tokyo Tech)</li> </ul>	3B1: Innovative Partitioning and Separation 1 (Application of micro/nano technologies) 9:00-9:40 (invited) #82 Micro Chemical Processes on Chip, T. Kitamori (U. of Tokyo) 9:40-10:00 #33 Continuous Flow Chemical Processing on a Microchip Using Microunit Operations and a Microphase Flow Network, M. Tokeshi (Kanagawa Academy of Sci. and Technol.) 10:00-10:20 #36 Physicochemical Study on Fluids Confined in Nanochannels, T. Tsukahara (U. of Tokyo)	
10:20	Coffee Break		
10:40	3A2: Innovative Reactor Concept 2 (Pb and Pb-Bi Cooled Reactors) 10:40-11:20 (invited) #54 Power Flatenning Options for the ENHS Core, S. Hong (UCB) 11:20-11:40 #21 Design Study of Pb-Bi- and NaK-Cooled Small Deep Sea Fast Reactor, A. Otsubo (Tokyo Tech) 11:40-12:00 #90 The Prospect of MOX Fuel Based Pb-Bi cooled Small Fast reactors, Zaki Su'ud (Bandung Institute of Technol.)	3B2: Innovative Partitioning and Separation 1 (Application of micro/nano technologies) 10:40-11:00 #45 Development of the Innovative Nuclide Separation System for High-level Radioactive Waste Using Microchip - Extraction behavior of Metal Ions from Aqueous Phase to Organic Phase in Microchannel -, H. Hotokezaka (Tokyo Tech) 11:00-11:20 #53 An Extreme Disposition Method for Low-level Radioactive Wastes Using Supercrtical Water(3), W. Sugiyama (Chubu Electric Power Co.) 11:20-11:40 #10 A Novel Chlomatographic Separation Technique Using Tertiary Pyridine resin for the Partitioning of Trivalent Actinides form Lanthanides, A. Ikeda (Tokyo Tech) 11:40-12:00 #12 Separation of Rare Metal Fission Products in Radioactive Wastes in New Directions of their Utilization, M. Ozawa (JNC)	
12:00	Lunch		
13:30			

# (Tuesday 2<sup>nd</sup> November 2004)

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10.00	A (Akebono)	B (Aozora)
13:30	3A3: Innovative Reactor Concept 3	3B3: Innovative Partitioning and Separation 2
	(Liquid Metal Cooled Reactors)	13:30-14:10 (invited) #104 21 <sup>st</sup> Century
	13:30-13:50 #23 Sodium Cooled Small Fast	Approaches to Actinide Partitioning,
	Long-Life Reactor "4S", N. Ueda (CRIEPI)	K. L. Nash (WSU)
	13:50-14:10 #11 Core Concept of Compound	14:10-14:50 (invited) #99 Recent Research and
	Process Fuel Cycle, T. Ikegami (JNC)	Development on Innovative Separation
	14:10-14:30 #64 System Analysis of Pb-Bi	Technology Conducted by Japan Atomic Energy
	Cooled Fast Reactor PEACER, K. Y. Suh	Research Institute (JAERI), Z. Yoshida (IAERI)
	(SNU)	14:50-15:05 #83 Research and Development for
	14:30-14:50 #24 A 3D Virtual Realization of a	Innovative Partitioning System in COE, Y. Ikeda
	Nuclear Transmutation Reactor-Peacer, H. W.	(Tokyo Tech)
	Lee (SNU)	
15:00		
	Coffee Break	
15:20	3A4: Innovative Reactor Concept 3	3B4: Innovative Partitioning and Separation 2
	(Transmutation 1)	15:20-15:40 #29 FLUOREX reprocessing system for the
	15:20-16:00 (invited) #96 Current Status of the	thermal reactors cycle and future thermal/fast reactors
	Feasibility Study on Commercialized Fast	(coexistence) cycle, A. Sasahira (Hitachi Ltd.)
	Reactor Cycle Systems and Reactor Core	15:40-16:00 #13 Studies of Laser Induced Cesium and
	Performance on the Promising Fast Reactors,	Rubidium Hydride Formation in Vapor Cells and their
	S. Kotake (JNC)	Application for Isotope Separation, V. Chaltykyan
	16:00-16:40 (invited) #97 Research Activities	(Institute for Physical Research, National Academy of
	for Accelerator-driven Transmutation System at	Sciences)
	JAERI,	16:00-16:20 #41 Seperation of Actinides from HLW by
	T. Sasa (JAERI)	Thiacalix[4]arene Compound Impregnated Silica
	16:40-17:20 #98 Multi-Component	Ion-exchanger, T. Kikuchi (Institute of Research and
	Self-Consistent Nuclear Energy System	Innovation)
	-For Peace and Sustainable Prosperity-,	16:20-16:40 #30 Development of a Simple Reprocessing
	M. Saito (Tokyo Tech)	Process Using Selective Precipitant for Uranyl Ions (-
	17:20-18:00 (invited) #95 Challenge of	Fundamental studeis for evaluating the precipitant
	Transmutation of Long-lived Nuclides,	performance -), N. Koshino (Tokyo Tech)
	V. Artisyuk (Obninsk State Technical U. for	16:40-17:00 #31 Development of a Simple Reprocessing
	Nuclear Power Engineering)	Process Using Selective Precipitant for Uranyl Ions (-
		Engineering studies on systems for precipitating and
		seperating -), K. Yamazaki (Mitsubishi Materials Co.)
		17:00-17:40 #88 (invited) A Perspective on Fast Reactor
		Fuel Cycle in India, B. Raj (Indira Gandhi Center for
		Atomic Research)
10.00		
18:00		

# (Tuesday 2<sup>nd</sup> November 2004)

	A (Akebono)	B (Aozora)
09:00	<ul> <li>4A1: Innovative Reactor Concept 4</li> <li>(Gas Cooled Reactors)</li> <li>9:00-9:40 #87 Reactor Technology</li> <li>Development under the HTTR project,</li> <li>T. Takizuka (Tokyo Tech)</li> <li>9:40-10:20 (invited) #78The High Temperature</li> <li>Reactor Development in China, Xu Yuanhui</li> <li>(Tsinghua U.)</li> </ul>	<ul> <li>4B1: Heat Transfer/Materials (Pb-Bi)</li> <li>9:00-9:20 #60 Study on Pb-Bi Natural Circulation Phenomena, H. Sofue (Tokyo Tech)</li> <li>9:20-9:40 #109 Study on Pb-Bi-Water Direct Contact Two-Phase Flow and Heat Transfer, Novitrian (Tokyo Tech)</li> <li>9:40-10:00 #46 Candidate Materials and Coolant Technology for Lead-Alloy Cooled Nuclear Systems-Metallic Alloys, Ceramics and Composites, N. Li (LANL)</li> <li>10:00-10:20 #19 Corrosion Studies in Support of Lead-Bismuth Cooled FBRs, E. P. Loewen (INEEL)</li> </ul>
10:20	Coffee Break	
10:40	<ul> <li>4A2: Innovative Reactor Concept 4 (Gas Cooled Reactors)</li> <li>10:40-11:20 #65 (invited) Gas Cooled Fast Reactor for Generation IV Service,</li> <li>P. Hejzlar (MIT)</li> <li>11:20-12:00 #66 Super Critical Carbon Dioxide Gas Turbine FBRs,</li> <li>Yasuyoshi Kato (Tokyo Tech)</li> <li>12:00-12:20 #4 Simulation Study on CANDLE</li> <li>Burnup Applied to Block-type High Temperature Gas Cooled Reactor,</li> <li>Y. Ohoka (Tokyo Tech)</li> </ul>	<ul> <li>4B2: Heat Transfer/Materials (Po/Pb-Bi/GCR)</li> <li>10:40-11:00 #17 Polonium Measure in Lead-Bismuth Eutectic Coolant,</li> <li>T. Obara (Tokyo Tech)</li> <li>11:00-11:20 #20 Investigation of Polonium</li> <li>Removal Systems for Lead-Bismuth Cooled FBRs,</li> <li>E. P. Loewen (INEEL)</li> <li>11:20-11:40 #101 Experimental Studies on Steel</li> <li>Corrosion in Pb-Bi with Steam Injection,</li> <li>K. Hata (NDC)</li> <li>11:40-12:00 #102 Water and Hydrogen in Heavy</li> <li>Liquid Metal Coolant Technology,</li> <li>A. V. Gulevich (IPPE)</li> <li>12:00-12:20 #103 Thermal-Hydraulic Performance</li> <li>of Printed Circuit Heat Exchanger</li> <li>in Supercritical CO<sub>2</sub> Cycle,</li> <li>K. Nikitin (Tokyo Tech)</li> </ul>
12:20	Lunch	Setting of Poster Panels
13:30		

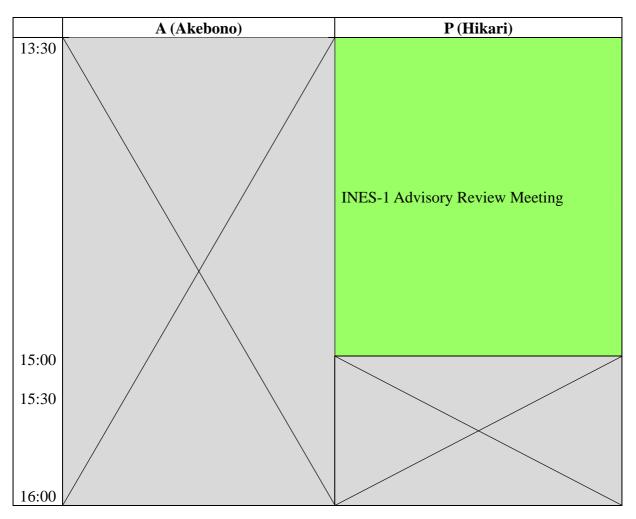
# (Wednesday 3<sup>rd</sup> November 2004)

	A (Akebono)	B (Aozora)
13:30	4A3: Students' Session / Panel Discussion	Setting of Poster Panels (cont.)
14:00	Chair: Ismail (COE-Dr. RA, Tokyo Tech) M. S. Kazimi (MIT) N. Li (LANL) G. Kashino (Nagasaki U.) H. Murakawa (COE-Dr.RA, Tokyo Tech) H. Sagara (COE-Dr.RA, Tokyo Tech)	
		Preparation of Posters by Authors
15:30	Coffee Break	
15:45		Poster Session, PB1
17:30		Removal of Posters by Authors
18:30	Banquet	Removal of Poster Panels
20:30		

# (Wednesday 3<sup>rd</sup> November 2004)

	A (Akebono)	B (Aozora)
09:00	<ul> <li>5A1: Innovative Reactor Concept 5 (Transmutation 2)</li> <li>9:00-9:20 #86 Study on Spallation Yields</li> <li>Predictions in a ADS Target System,</li> <li>H. Kobayashi (Tokyo Tech)</li> <li>9:20-9:40 #6 Nuclear Waste Burner for Minor</li> <li>Actinides Elimination, A. V. Gulevich (IPPE)</li> <li>9:40-10:00 #8 Project SPHINX-SPent Hot fuel</li> <li>Incinerator by Neutron fluX, M. Hron, Nuclear</li> <li>Research Institute Rez plc (Czech)</li> <li>10:00-10:20 #107 Fusion-Driven Transmutation</li> <li>for Selected Long-Lived Fission Products,</li> <li>A. Takibayev (Tokyo Tech)</li> </ul>	<ul> <li>5B1: Non-Proliferation</li> <li>9:00-9:20 #32 Denaturation of Plutonium by</li> <li>Transmutation of Minor Actinides, H. Sagara</li> <li>(Tokyo Tech)</li> <li>9:20-9:40 #42 An Analysis of Nuclear</li> <li>Proliferation Resistance: Country Specifics,</li> <li>J. Kang (SNU)</li> <li>9:40-10:00 #85 Proliferation Resistance - Issues</li> <li>from Technological and Institutional Viewpoints -,</li> <li>T. Sawada (Tokyo Tech)</li> <li>10:00-10:20 #40 Radiation Protection Potential of</li> <li>MOX-Fuel Doped with <sup>231</sup>Pa and Cs-radioisotopes,</li> <li>E. Kryuchkov (MEPhI)</li> </ul>
10:20 10:40	Coffee Break	N 7
12:00	<ul> <li>Plenary Session 2 / Closing Session</li> <li>10:40-11:20 (invited) #69 Toward to the 21<sup>st</sup> century nuclear-science technology,</li> <li>H. Takahashi (BNL)</li> <li>11:20-12:00 (invited) #71The Advanced</li> <li>High-Temperature Reactor High-Temperature</li> <li>Fuel, Molten Salt Coolant and Liquid-Metal</li> <li>Plant, C.W. Forsberg (ORNL)</li> <li>12:00-12:30 (invited) #7 Renewed Interest in</li> <li>Lead Cooled Fast Reactors,</li> <li>E. P. Loewen (INEEL)</li> </ul>	
13:00		

## (Thursday 4<sup>th</sup> November 2004)



COE-INES International Symposium, INES-1 Schedule of the Sessions (Thursday 4<sup>th</sup> November 2004)