



## TIMETABLE

### Monday, 29 October 2001

08:00	Registration	
09:30–10:00	Opening of Symposium	
10:00–11:00	Session 1	Grand Plenary IAEA Boardroom and UNIDO Boardroom (via CCTV)
11:00–11:30	Coffee Break	
11:30–12:30	Session 1	Grand Plenary (continued)
12:30–14:30	Lunch Break	
14:30–16:00	Session 2	Evolution of IAEA Safeguards IAEA Boardroom and UNIDO Boardroom (via CCTV)
16:00–16:30	Coffee Break	
16:30–18:00	Session 2	Evolution of IAEA Safeguards (continued)
18:30–20:00	Reception at the VIC Restaurant	

### Tuesday, 30 October 2001

09:30–11:00	Session 3	Integrated Safeguards – 1 IAEA Boardroom
	Session 4	Physical Protection and Illicit Trafficking UNIDO Boardroom
	Session 5	Destructive Analysis for Safeguards Meeting Room I
11:00–11:30	Coffee Break	
11:30–13:00	Session 3	Integrated Safeguards – 1 IAEA Boardroom (continued)
	Session 4	Physical Protection and Illicit Trafficking UNIDO Boardroom (continued)
	Session 5	Destructive Analysis for Safeguards Meeting Room I (continued)
13:00–14:30	Lunch Break	

14:30–16:00	Session 6	The Additional Protocol IAEA Boardroom
	Session 7	Safeguards Equipment – 1 UNIDO Boardroom
	Session 8	Innovative Safeguards Approaches Meeting Room I
16:00–16:30	Coffee Break	
16:30–18:00	Session 6	The Additional Protocol IAEA Boardroom (continued)
	Session 7	Safeguards Equipment – 1 UNIDO Boardroom (continued)
	Session 8	Innovative Safeguards Approaches Meeting Room I (continued)

**Poster Session A will be attended during the coffee breaks and the lunch break**

**Wednesday, 31 October 2001**

09:30–11:00	Session 9	IAEA Verification and Nuclear Disarmament IAEA Boardroom
	Session 10	Environmental Sampling UNIDO Boardroom
	Session 11	Safeguards Experience Meeting Room I
11:00–11:30	Coffee Break	
11:30–13:00	Session 9	IAEA Verification and Nuclear Disarmament IAEA Boardroom (continued)
	Session 10	Environmental Sampling UNIDO Boardroom (continued)
	Session 11	Safeguards Experience Meeting Room I (continued)
13:00–14:30	Lunch Break	
14:30–16:00	Session 12A	Integrated Safeguards – 2 IAEA Boardroom
	Session 13	Information Analysis in the Strengthened Safeguards System UNIDO Boardroom
	Session 14	Safeguards Equipment – 2 Meeting Room I
16:00–16:30	Coffee Break	

16:30–18:00	Session 12B	Development of State Systems of Accountancy and Control (Panel Discussion) IAEA Boardroom (continued)
	Session 13	Information Analysis in the Strengthened Safeguards System UNIDO Boardroom (continued)
	Session 14	Safeguards Equipment – 2 Meeting Room I (continued)

**Poster Session B will be attended during the coffee breaks and the lunch break**

**Thursday, 1 November**

09:30–11:00	Session 15	Emerging IAEA Safeguards Issues IAEA Boardroom
	Session 16	Satellite Imagery and Remote Monitoring UNIDO Boardroom
	Session 17	Verification Technology for Nuclear Disarmament Meeting Room I
11:00–11:30	Coffee Break	
11:30–13:00	Session 15	Emerging IAEA Safeguards Issues IAEA Boardroom (continued)
	Session 16	Satellite Imagery and Remote Monitoring UNIDO Boardroom (continued)
	Session 17	Verification Technology for Nuclear Disarmament Meeting Room I (continued)
13:00–14:30	Lunch Break	
14:30–16:00	Session 18	The IAEA and the Future of Nuclear Verification and Security IAEA Boardroom and UNIDO Boardroom (via CCTV)
16:00–16:30	Coffee Break	
16:30–18:00		The IAEA and the Future of Nuclear Verification and Security (continued)

**Friday, 2 November 2001**

09:00–10:30	Session 19	Combating Nuclear Terrorism IAEA Boardroom and UNIDO Boardroom (via CCTV)
10:30–11:00	Coffee Break	
11:00–12:30	Session 19	Combating Nuclear Terrorism (continued)
12:30–14:00	Lunch	
14:00–15:30	Session 19	Combating Nuclear Terrorism (continued)
15:30–16:00	Coffee Break	
16:00–17:30	Session 19	Combating Nuclear Terrorism (continued)
17:30	Closing of the Symposium	

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**Commercial exhibits will be shown in the common area on the 4th floor of the C tower from Tuesday, 30 October, to Friday, 2 November 2001.**

# MONDAY, 29 OCTOBER 2001

08:00 REGISTRATION  
09:30 OPENING OF THE SYMPOSIUM

10:00–12:30 SESSION 1:  
GRAND PLENARY

IAEA Boardroom and UNIDO Boardroom  
(via CCTV)

Session Chairs: P. Goldschmidt, IAEA  
R. Weh, ESARDA  
J.D. Williams, INMM

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<i>No. of Paper</i> <i>IAEA-SM-367/1</i>	<i>Name(s)</i>	<i>Designating Member</i> <i>State/Organization</i>
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01	<b>M. ElBaradei</b>	IAEA
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02	<b>J. Dhanapala</b>	UN
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<i>11:00–11:30</i>	<i>Coffee Break</i>	
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03	<b>R. Loosch</b>	Germany
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04	<b>C. Curtis</b>	USA
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<i>12:30–14:30</i>	<i>Lunch Break</i>	
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*Title of Paper*

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Verification and nuclear material security

The NPT regime: progress and promises

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The Additional Protocol as an important tool for the strengthening of the safeguards system

The nuclear threat and the Nuclear Threat Initiative

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# MONDAY, 29 OCTOBER 2001

**14:30–18:00**      **SESSION 2:  
EVOLUTION OF IAEA SAFEGUARDS  
(Plenary Session)**

**IAEA Boardroom and UNIDO Boardroom  
(via CCTV)**

**Session Chairs:**   **H. Kurihara, Japan  
P. de Klerk, IAEA**

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<i>No. of Paper IAEA-SM-367/2</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
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01	<b>P. Goldschmidt</b>	IAEA
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02	<b>O. Heinonen</b>	IAEA
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03	<b>K. Murakami</b>	IAEA
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<i>16:00–16:30</i>	<i>Coffee Break</i>	
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04	<b>A. Nilsson</b>	IAEA
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05	<b>J. Baute</b>	IAEA
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06	<b>D. Schriefer</b>	IAEA
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<i>18:30–20:00</i>	<i>Reception at the VIC Restaurant</i>	
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*Title of Paper*

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Strengthened Safeguards: present and future challenges

Verification of correctness and completeness of initial declarations

Implementation of the Additional Protocol: progress and experience

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Security of material

Nuclear disarmament and ongoing monitoring and verification in Iraq

Evolution of IAEA verification in relation to nuclear disarmament

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## TUESDAY, 30 OCTOBER 2001

**09:30–13:00**      **SESSION 3:  
INTEGRATED SAFEGUARDS – 1  
(Parallel Session)**

**IAEA Boardroom**

**Session Chairs:**   **R. Keeffe, Canada  
D. Hurt, IAEA**

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<i>No. of Paper</i> <i>IAEA-SM-367/3</i>	<i>Name(s)</i>	<i>Designating Member</i> <i>State/Organization</i>
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01 Keynote	<b>J.N. Cooley</b>	IAEA
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02 Keynote	<b>J. Carlson</b> V. Bragin R. Leslie	Australia
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03 Keynote	H. Terada S. Kakumi T. Osabe K. Koyama Presented by <b>H. Kurihara</b>	Japan
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<i>11:00–11:30</i>	<i>Coffee Break</i>
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*Title of Paper*

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Integrated Safeguards - current status of development and plans for implementation

Integrated Safeguards: Australian views and experience

Development of Integrated Safeguards: proposals for each type of nuclear facility in Japan

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11:30–13:00

**SESSION 3:  
INTEGRATED SAFEGUARDS – 1  
(continued)**

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<i>No. of Paper IAEA-SM-367/3</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
04	G. Andrew <b>M. Beaman</b> T. Barrett	UK/IAEA UK
05	<b>E. D'Amato</b> C. Llacer H. Vicens	Argentina
06	<b>J.F. Pilat</b> K.W. Budlong Sylvester	USA
07	<b>M.G. Albert</b>	France

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<i>13:00–14:30</i>	<i>Lunch Break</i>
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*Title of Paper*

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Safeguards-related consideration of the conversion of unirradiated plutonium to metallic form

A model to improve efficiency and effectiveness of safeguards measures

Beyond Integrated Safeguards: performance-based assessments for future nuclear controls

Optimising the Integrated Safeguards System: pragmatism and fresh views are the keys to a viable system

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## TUESDAY, 30 OCTOBER 2001

**09:30–13:00**      **SESSION 4:  
PHYSICAL PROTECTION AND ILLICIT  
TRAFFICKING  
(Parallel Session)**

**UNIDO Boardroom**

**Session Chairs:**   **M. Gregoric, Slovenia**  
                              **M. Soo Hoo, IAEA**

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<i>No. of Paper IAEA-SM-367/4</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
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01 Keynote	<b>M.B. Maerli</b> R.G. Johnston	Norway
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02	R. Rödén L. Strandberg <b>S.G. Isaksson</b>	Sweden
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03	<b>A. Štefulová</b>	Slovakia
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04	<b>M. G. Pinchuk</b>	Ukraine
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<i>11:00–11:30</i>	<i>Coffee Break</i>	
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05	<b>N.E. Kravchenko</b>	Russian Federation
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06	<b>I. Ray</b> A. Schubert R. Schenkel	EC
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07	<b>R. Ramirez Guerrero</b>	Mexico
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08 Keynote	<b>M. Bunn</b> G. Bunn	USA
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<i>13:00–14:30</i>	<i>Lunch Break</i>	
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*Title of Paper*

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Nuclear husbandry functions

Revising the security organisation at Forsmark NPP - A case study from the point of view of the operator and the regulatory and supervisory authority

The Convention on Physical Protection of Nuclear Material – Approach of the Slovak Republic

Peculiarities of physical protection assurance of the nuclear materials at nuclear installation decommissioning stage

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Prevention of illicit trafficking of nuclear material and radioactive sources

Recent advances in nuclear forensic science - the identification of unknown nuclear materials and co-operation with the legal authorities

Measures adopted in Mexico to avoid the illicit trafficking of nuclear materials

Reducing the threat of nuclear theft and sabotage

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## TUESDAY, 30 OCTOBER 2001

**RELATED POSTERS:  
POSTER SESSION A  
(Physical Protection and Illicit Trafficking)**

**Posters will be attended during the coffee breaks and the lunch break**

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<i>No. of Poster IAEA-SM-367/A/4</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
01/P	<b>M.H. Garnier-Gratia</b> A. Jorda	France
02/P	<b>R. Kumar</b>	India
03/P	<b>R. Seymour</b> C.D. Hull T. Crawford M. Bliss R.A. Craig	USA
04/P	<b>V.A. Mykhaylov</b> V.E. Tovkanetz M.P. Odeychuk V. Lapshyn J. Leicman K. Thompson	Ukraine  IAEA USA
05/P	<b>D. Ek</b>	USA
06/P	W. Janssens P. Daures O. Cromboom K. Mayer L. Koch Presented by <b>I. Ray</b>	EC
07/P	<b>A.S. Podchishaev</b>	Russian Federation

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*Title of Poster*

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Physical protection of nuclear materials and facilities in CEA

An integrated system for physical protection

A "Tubeless" Portable Radiation Search Tool (PRST) for special nuclear materials

Use of AWCC in evaluation of unknown fissile materials

Criteria for prioritization of sites and determining upgrades

Supporting PECO countries in combating illicit trafficking of nuclear materials - status of ongoing projects

The experience of the Russian Federation in organization of customs control of fissionable and other radioactive materials

## TUESDAY, 30 OCTOBER 2001

**09:30–13:00**      **SESSION 5:  
DESTRUCTIVE ANALYSIS FOR  
SAFEGUARDS  
(Parallel Session)**

**Meeting Room I**

**Session Chairs:**   **S. Deron, France  
Y. Kuno, IAEA**

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<i>No. of Paper</i> <i>IAEA-SM-3367/5/</i>	<i>Name(s)</i>	<i>Designating Member</i> <i>State/Organization</i>
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01 Keynote	H. Aigner <b>R. Binner</b> E. Kuhn	IAEA
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02 Keynote	<b>K. Mayer</b> L. Duinslaeger O. Cromboom H. Ottmar D. Wojnowski H. Van der Vagt	EC
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03	L. Duinslaeger <b>E. Zuleger</b> K. Mayer	EC
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04	<b>M. Yoshida</b> T. Suzuki H. Kobayashi T. Ohtani	Japan
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<i>11:00–11:30</i>	<i>Coffee Break</i>
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*Title of Paper*

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International target values 2000 for measurement uncertainties  
in safeguarding nuclear materials

Analytical quality control concept in the EURATOM  
on-site laboratories

Evaluation of uncertainties for Pu and U measurements achieved  
in an on-site laboratory by thermal ionisation mass spectrometry  
during two years of operation

Experience of determination of plutonium and uranium contents  
in MOX fuel by IDMS

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11:30–13:00

**SESSION 5:  
DESTRUCTIVE ANALYSIS FOR  
SAFEGUARDS (continued)**

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<i>No. of Paper IAEA-SM-3367/5/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
05	<b>J.H.B. Bezerra</b> R.M.S. Araújo J.C.A. Pereira	Brazil
06 Keynote	<b>Y. Kuno</b> P. Doherty D. Donohue R. Lafolie M. Kohl	IAEA
07	<b>M. Wallenius</b> C. Apostolidis A. Morgenstern A. Nicholl K. Mayer	EC
08	<b>V. Maiorov</b> M. Ryjinski V. Bragin	IAEA Australia

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<i>13:00–14:30</i>	<i>Lunch Break</i>
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*Title of Paper*

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Experience of Brazilian Safeguards Analytical Laboratory in  
DA analysis

Development and improvement of analytical techniques for  
Pu/U/Np/Am/Cm at the IAEA Safeguards Analytical Laboratory

Age determination of Highly Enriched Uranium

Detection of uranium mining activities

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## TUESDAY, 30 OCTOBER 2001

**RELATED POSTERS:  
POSTER SESSION A  
(Destructive Analysis for Safeguards)**

**Posters will be attended during the coffee  
breaks and the lunch break**

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<i>No. of Poster IAEA-SM-367/A/5/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
01/P	<b>S.A. Goldberg</b> J. Cappis S. Clarke R. Whitesel	USA
02/P	<b>H. Aigner</b> P. Doherty D. Donohue Y. Kuno	IAEA
03/P	<b>P. Doherty</b> A. Zoigner K. Sirisena E. Kuhn	IAEA
04/P	<b>S. Abousahl</b> P. van Belle H. Eberle H. Ottmar	EC
05/P	<b>P. Doherty</b> A. Zoigner C. Hoffmann S. de Almeida	IAEA

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*Title of Poster*

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Efforts to save  $^{244}\text{Pu}$  in mark 18A targets for use in International Safeguards measurements

Quality management at the Safeguards Analytical Laboratory of IAEA

NWAL Support to IAEA safeguards analysis

Performance of isotope correlations for the estimate of  $^{242}\text{Pu}$

Performance of analytical services of IAEA-SAL in 1995—2000

## TUESDAY, 30 OCTOBER 2001

**14:30–18:00**      **SESSION 6:  
THE ADDITIONAL PROTOCOL  
(Parallel Session)**

**IAEA Boardroom**

**Session Chairs:**    **J. Carlson, Australia  
G. Zuccaro-Labelarte, IAEA**

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<i>No. of Paper IAEA-SM-367/6/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
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01 Keynote	<b>P. de Klerk</b>	IAEA
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02	<b>J.K. Cameron</b> R. Benjamin A. Ghosh	Canada
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03 Keynote	<b>T. Renis</b>	IAEA
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<i>16:00–16:30</i>	<i>Coffee Break</i>	
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04	V. Bytchkov D. Hurt <b>J. Vallejo Luna</b> O. Kraynov K. Murakami R. Saidov Kh. Yunusov Kh. Khalilov	IAEA     Uzbekistan
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05	<b>B.T. Jonter</b>	Sweden
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06	<b>T. Ogawa</b>	Japan
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*Title of Paper*

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Promoting wider adherence to Additional Protocols

Making sense of site declarations: Canadian Declarations under article 2.a.(iii) of the Additional Protocol

The challenges of Additional Protocol implementation

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Implementation of the Additional Protocol in Uzbekistan

To make a national based historical survey of non-proliferation of nuclear weapons: experiences from the example of Sweden

Implementation of the Additional Protocol in Japan

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**TUESDAY, 30 OCTOBER 2001**

**RELATED POSTERS:  
POSTER SESSION A  
(The Additional Protocol)**

**Posters will be attended during the coffee  
breaks and the lunch break**

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<i>No. of Poster</i> <i>IAEA-SM-367/A/6/</i>	<i>Name(s)</i>	<i>Designating Member</i> <i>State/Organization</i>
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01/P	<b>V. Bragin</b> J. Carlson R. Leslie	Australia
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02/P	<b>R. Ramirez</b>	Peru
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*Title of Poster*

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Implementation of the Additional Protocol:  
verification activities at uranium mines and mills

Approach to integrate current safeguards measures with  
Additional Protocol requirements at national level

## TUESDAY, 30 OCTOBER 2001

**14:30–18:00**      **SESSION 7:  
SAFEGUARDS EQUIPMENT – 1  
(Parallel Session)**

**UNIDO Boardroom**

**Session Chairs:**    **K.R. Alvar, USA  
J. Whichello, IAEA**

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<i>No. of Paper IAEA-SM-367/7/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
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01 Keynote	<b>N. Khlebnikov</b>	IAEA
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02	<b>L. Desonier</b>	USA
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03	<b>S. Pepper</b> M. Farnitano J. Carelli	USA
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04	<b>P. Schwalbach</b> L. Holzleitner S. Jung P. Chare A. Smejkal M. Swinhoe W. Kloeckner	EC
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<i>16:00–16:30</i>	<i>Coffee Break</i>	
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05	<b>V. Standley</b> H. Boeck M. Villa	Austria/IAEA Austria
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06	<b>J.G.M. Gonçalves</b> V. Sequeira J. Whichello	EC IAEA
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07	<b>R. Tzolov</b> M. Goldfarb L. Penot	IAEA
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*Title of Paper*

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Strategic plan for the development of IAEA safeguards equipment

SNL Material Monitoring System, the T-1 RF Seal, and the IAEA & KAMS

Lessons learned in testing of safeguards equipment

"RADAR": EURATOM's standard unattended data acquisition system

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Validation of safeguards monitoring systems and their simulations

Laser technologies for on-site surveillance

Development and evaluation of new electronic seals at the IAEA

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## TUESDAY, 30 OCTOBER 2001

**RELATED POSTERS:  
POSTER SESSION A  
(Safeguards Equipment – 1)**

**Posters will be attended during the coffee  
breaks and the lunch break**

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<i>No. of Poster IAEA-SM-367/A/7/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
01/P	<b>J.C. Matter</b> D. Mangan R. Kinzel S. Blankenau L. Desonier K. Tolk D. Glidewell R. Tzolov T. Shea J.Aragon	USA      IAEA
02/P	C. Neufing <b>C. Tschritter</b> P. Meylemans R. Vandaele M. Heppelston P. Chare W. Kloeckner	Germany EC
03/P	<b>I. Ahmed</b> R.D. Arlt A. Hiermann V. Ivanov K.G. Qasim	Pakistan IAEA  Latvia Pakistan
06/P	<b>D. Glidewell</b>	USA

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*Title of Poster*

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The Two-way Radio-Frequency Seal (TRFS) and acceptance testing for IAEA routine use

Commercial-off-the-shelf digital surveillance systems for safeguards

Safeguards verification of short cooling time KANUPP irradiated fuel bundles using room temperature semiconductor detectors

Leveraging physical protection technology for International Safeguards applications

**RELATED POSTERS:  
POSTER SESSION A  
(Safeguards Equipment – 1)  
(continued)**

<i>No. of Poster IAEA-SM-367/A/7/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
07/P	<b>J.K. Sprinkle, Jr.</b> M. Abhold S.F. Klosterbuer K. Alvar J.K. Halbig R.F. Parker, et al	USA
08/P	V. Mykhaylov V. Tovkanetz N. Odeychuk <b>V. Lapshyn</b> T. Ewing	Ukraine   USA
09/P	<b>D.L. Tillwick</b> J.S. Maritz C.B. de Wit D. Schriefer A. Pietruszewski C. Gazze	South Africa   IAEA
10/P	R. Arlt <b>G. Bosler</b> M. Goldfarb M. Schanfein J. Whichello	IAEA

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*Title of Poster*

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UNARM (Unattended And Remote Monitoring) overview

Use of bar-code technology in an MC and A system

Strengthening of safeguards - remote monitoring in South Africa

Equipment support for the implementation of safeguards

## TUESDAY, 30 OCTOBER 2001

**14:30–18:00**      **SESSION 8:  
INNOVATIVE SAFEGUARDS  
APPROACHES  
(Parallel Session)**

**Meeting Room I**

**Session Chairs:**   **B.-K. Kim, Republic of Korea  
V. Bytchkov, IAEA**

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<i>No. of Paper IAEA-SM-367/8/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
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01 Keynote	<b>S. Johnson</b> , et al H. Higuchi S. Takeda K. Kaieda S. Okazaki T. Yagi S. Uchikoshi S. Masuda, et al	IAEA Japan
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02 Keynote	<b>A. Panasyuk</b> A. Vlasov S. Koshelev D. Yang S. Chen T. Shea D. Perricos	Russian Federation  China  IAEA IAEA / UN
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03	<b>C. Norman</b> W. Kahnmeyer K. Martin J. Patten S. Chater B. Jones J. Wark J. Wharrier	EC    UK
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<i>16:00–16:30</i>	<i>Coffee Break</i>
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*Title of Paper*

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Development of safeguards approach for the Rokkasho reprocessing plant

Tripartite Enrichment Project: safeguards at enrichment plants equipped with Russian centrifuges

NRTMA: common purpose; complementary approaches

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16:30–18:00

**SESSION 8:  
INNOVATIVE SAFEGUARDS  
APPROACHES (continued)**

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<i>No. of Paper IAEA-SM-367/8/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
04	M. Beaman J. Beckers M. Boella B. Burrows A. Colin <b>M.A. Crousilles, et al</b>	UK Belgium EC UK France
05	<b>I. Tsvetkov</b> J. Huenefeld P. Durst E. Haas H. Higuchi H. Yoshida K. Ikeda	IAEA    Japan
06	E. Palacios M. Marzo P.M. Orpet <b>L. Valentino</b> H.E. Vicens	ABACC Brazil ABACC Argentina
07	<b>R. Benjamin</b> Q.S.B. Truong R. Keeffe N. Whiting B. Green	Canada   IAEA Canada

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*Title of Paper*

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Control of nuclear material hold-up: the key factors for design and operation of MOX fuel fabrication plants in Europe

Implementation of Short Notice Random Inspection (SNRI) at Japanese Low Enriched Uranium (LEU) bulk facilities – the experience gained and an inspectorate perspective

Alternatives to reach safeguards goals at Atucha I Nuclear Power Plant

Designing a safeguards approach for the transfer and storage of used fuel

## TUESDAY, 30 OCTOBER 2001

**RELATED POSTERS:  
POSTER SESSION A  
(Innovative Safeguards Approaches)**

**Posters will be attended during the coffee breaks and the lunch break**

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<i>No. of Poster IAEA-SM-367/A/8/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
01/P	<b>R. Thiele</b> B. Horn C. W. Coates J. R. Stainback	IAEA USA
02/P	H. Higuchi S. Takeda S. Uchikoshi Y. Watanabe K. Kaieda D. Sellinschegg <b>R. Binner</b>	Japan     IAEA
03/P	S. A. Erickson	USA
04/P	S.P. Chater <b>B.J. Jones</b> R.F. Jones L.N. Westwood J.A. Wharrier	UK
05/P	<b>C. Norman</b> K. Martin W. Kahnmeyer	EC
06/P	<b>J. Howell</b> E.C. Miller	UK
07/P	N. Khlebnikov <b>A. Hamilton</b>	IAEA

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*Title of Poster*

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The Sapphire and 50 MT projects at BWXT, Lynchburg, VA

High quality tank calibration study

Nuclear proliferation using laser isotope separation - verification options

The commercial application of near real time materials accountancy

The EURATOM interim verification system of NRTMA declarations

Estimation of gross systematic multiplicative biases in reprocessing plant in-process tanks

Changes to the way Support Programme tasks are managed in the IAEA's Department of Safeguards

**RELATED POSTERS:  
POSTER SESSION A  
(Innovative Safeguards Approaches)  
(continued)**

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<i>No. of Poster IAEA-SM-367/A/8/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
08/P	Q.S.B. Truong R. Keeffe K. Desson <b>N. Herber</b> T. Ellacott	Canada    IAEA

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*Title of Poster*

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Inspector training for VIFM equipment - an integrated approach

## WEDNESDAY, 31 OCTOBER 2001

**09:30–13:00**      **SESSION 9:  
IAEA VERIFICATION AND NUCLEAR  
DISARMAMENT  
(Parallel Session)**

**IAEA Boardroom**

**Session Chairs:** **A. Schaper, Germany**  
**T. Shea, IAEA**

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<i>No. of Paper IAEA-SM-367/9/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
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01 Keynote	<b>T. Shea</b>	IAEA
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02	<b>Z. Hu</b>	China
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03 Keynote	<b>R. Lüdeking</b>	Germany
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<i>11:00–11:30</i>	<i>Coffee Break</i>	
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04	<b>H. Zhang</b>	USA
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05	<b>M. Goodman</b>	USA
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06	<b>N. Zarimpas</b>	SIPRI
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07	<b>F.H. Hammad A.M. Ali</b>	Egypt
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<i>13:00–14:30</i>	<i>Lunch Break</i>	
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*Title of Paper*

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The Trilateral Initiative: IAEA verification of weapon-origin fissile material

Non-proliferation of nuclear weapons and IAEA safeguards - a Chinese perspective

Prospects for a Fissile Material Production Cut-off Treaty

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FMCT verification: case studies

Scope of IAEA verification of a Fissile Material Cut-off Treaty: the focused approach

Building transparency in nuclear-weapon states: the political and technical dimensions

Principles of establishing a Middle East Weapons of Mass Destruction Free Zone (MEW MDFZ)

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## WEDNESDAY, 31 OCTOBER 2001

**09:30–13:00**      **SESSION 10:  
ENVIRONMENTAL SAMPLING  
(Parallel Session)**

**UNIDO Boardroom**

**Session Chairs:**    **D.W. Swindle, Jr., USA  
D. Donohue, IAEA**

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<i>No. of Paper IAEA-SM-367/10/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
01	<b>D. Fischer</b> M. Ryjinski E. Kuhn	IAEA
02	<b>T. Adachi</b> S. Usuda K. Watanabe S. Sakurai, et al	Japan
03 Keynote	<b>D.W. Swindle, Jr.</b> P.W. Krey R.E. Perrin S.A. Goldberg J. Cappis	USA

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*11:00–11:30*      *Coffee Break*

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*Title of Paper*

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Environmental sampling for IAEA safeguards: a five year review

Current status of JAERI program on development of ultra-trace-analytical Technology for safeguards environmental samples

World-wide capabilities and applications for high-sensitivity environmental sampling and analyses in international safeguards and nuclear material security

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11:30–13:00

**SESSION 10:  
ENVIRONMENTAL SAMPLING  
(continued)**

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<i>No. of Paper IAEA-SM-367/10/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
04	G. af Ekenstam <b>W. Bush</b> J. Janov E. Kuhn M. Ryjinski	IAEA
05	<b>S. Baude</b> R. Chiappini	France
06	<b>S. Vogt</b> P. Zahradnik H. Swietly	IAEA
07	<b>D. Donohue</b> S. Vogt A. Ciurapinski F. Ruedenauer M. Hedberg	IAEA

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<i>13:00–14:30</i>	<i>Lunch Break</i>
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*Title of Paper*

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Experience with environmental sampling at gas centrifuge enrichment plants

Isotopic measurements on micrometric particles: the French experience to detect fissile material

Bulk analysis of environmental swipe samples

Particle analysis of environmental swipe samples

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## WEDNESDAY, 31 OCTOBER 2001

### RELATED POSTERS: POSTER SESSION B (Environmental Sampling)

Posters will be attended during the coffee breaks and the lunch break

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<i>No. of Poster</i> <i>IAEA-SM-367/B/10/</i>	<i>Name(s)</i>	<i>Designating Member</i> <i>State/Organization</i>
01/P	K. Ingeneri <b>L. Riciputi</b>	USA
02/P	<b>G.P. Russ</b> R. Williams	USA
03/P	<b>M. Ryjinski</b> D. Donohue	IAEA
04/P	<b>V. Maiorov</b> A. Ciurapinski W. Raab V. Jansta	IAEA
05/P	G. Kaurov <b>V. Stebelkov</b> O. Kolesnikov D. Frolov	Russian Federation
06/P	<b>D.M. Hembree, Jr.</b> J.A. Carter G.L. Devault J.M. Whitaker D. Glasgow	USA
07/P	<b>A.A. Marchetti</b> T.A. Brown T.F. Hamilton J.P. Knezovich	USA

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*Title of Poster*

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Improved analytical sensitivity for Uranium and Plutonium in environmental samples: cavity ion source thermal ionization mass spectrometry

Use of plasma-source multicollector Magnetic-Sector Mass Spectrometry for uranium and plutonium analysis in environmental samples

IDMS analysis of blank swipe samples for uranium quantity and isotopic composition

Screening and radiometric measurement of environmental swipe samples

Physicochemical characteristics of uranium microparticles collected at nuclear fuel cycle plants

Screening of IAEA environmental samples for fissile material content

Plutonium determination by accelerator mass spectrometry

## WEDNESDAY, 31 OCTOBER 2001

09:30–13:00      **SESSION 11:  
SAFEGUARDS EXPERIENCE  
(Parallel Session)**

**Meeting Room I**

**Session Chairs: W. Kloeckner, EC  
C. Charlier, IAEA**

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<i>No. of Paper</i> <i>IAEA-SM-367/11/</i>	<i>Name(s)</i>	<i>Designating Member</i> <i>State/Organization</i>
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01	K. Murakami <b>R. Olsen</b> V. Bytchkov J. Leicman M. Hosoya J. Vallejo Luna	IAEA
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02	M. Tarvainen T. Honkamaa <b>E. H. Martikka</b> T. Varjoranta J. Hautamäki A. Tiitta	Finland
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03	<b>C.A. Feu Alvim da Silva</b> J.M. Esteves dos Santos A. Oliveira E. Palacios	ABACC Brazil Argentina ABACC
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04	<b>C. Xerri</b>	France
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<i>11:00–11:30</i>	<i>Coffee Break</i>
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*Title of Paper*

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Ten years experience in the implementation of safeguards in NIS and assistance to SSACs

Getting ready for final disposal in Finland - independent verification of spent fuel

The experience of ABACC after ten years applying safeguards

Drawing from experience of safeguarding French Pu-handling facilities

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11:30–13:00

**SESSION 11:  
SAFEGUARDS EXPERIENCE  
(continued)**

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<i>No. of Paper IAEA-SM-367/11/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
05	<b>T. Elenkov</b>	Bulgaria
06	<b>W.S. Park</b> B-K. Kim S.S. Yim	Republic of Korea
07	K. Murakami <b>G. Zuccaro- Labellarte</b> L. Bevaart A. Tolba	IAEA

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<i>13:00–14:30</i>	<i>Lunch Break</i>
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*Title of Paper*

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Safeguards at Kozloduy NPP – experience and expectations

Enhanced cooperation between IAEA and Republic of Korea on  
safeguards implementation at Light Water Reactors

Beyond NPA and toward an integrated safeguards system in  
countries of the European Union

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## WEDNESDAY, 31 OCTOBER 2001

**RELATED POSTERS:  
POSTER SESSION B  
(Safeguards Experience)**

**Posters will be attended during the coffee  
breaks and the lunch break**

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<i>No. of Poster IAEA-SM-367/11/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
01/P	<b>D.S. So</b> B.D. Lee D.Y. Song	Republic of Korea
02/P	R. Keeffe <b>Q.S.B. Truong</b>	Canada
03/P	<b>Y.A. Koushnir</b> M. Bonner L. Wangen	Russian Federation/ USA
06/P	<b>S. Pepper</b> M. Farnitano L. Epel J. Carelli	USA
07/P	<b>P. Palafox-Garcia</b>	Mexico

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*Title of Poster*

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Development of safeguards information treatment system at facility level in Korea

The Canadian Safeguards Support Program - a future outlook

Evaluation of nuclear material balance uncertainty during fabrication of BOR-60 fuel pins and assemblies

U.S. Support Programm - The first 25 years

Updating Design Information Questionnaire (DIQ) experiences

## WEDNESDAY, 31 OCTOBER 2001

**14:30–16:00**      **SESSION 12A:  
INTEGRATED SAFEGUARDS – 2  
(Parallel Session)**

**IAEA Boardroom**

**Session Chairs:**    **R. Hooper, USA  
G. Moussalli, IAEA**

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<i>No. of Paper</i> <i>IAEA-SM-367/12/</i>	<i>Name(s)</i>	<i>Designating Member</i> <i>State/Organization</i>
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01	<b>B. Richter</b> G. Stein	Germany
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02	<b>V. Bragin</b> J. Carlson R. Leslie	Australia
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03	<b>M.J. Canty</b> R. Avenhaus	Germany
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04	<b>J. Sanborn</b>	USA
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<i>16:00–16:30</i>	<i>Coffee Break</i>
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*Title of Paper*

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Integration of safeguards: the technological dimension

Integrated Safeguards: how much flexibility is possible and acceptable?

Unannounced inspection for Integrated Safeguards: a theoretical perspective

Consideration regarding the scheduling of unannounced or randomized inspections

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## WEDNESDAY, 31 OCTOBER 2001

**16:30–18:00**      **SESSION 12B:**  
**DEVELOPMENT OF STATE SYSTEMS OF**  
**ACCOUNTANCY AND CONTROL –**  
**(Panel Discussion) (Parallel Session)**

**IAEA Boardroom**

**Session Chairs:** **R. Hooper, USA**  
**G. Moussalli, IAEA**

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<i>No. of Paper</i> <i>IAEA-SM-367/12/</i>	<i>Name(s)</i>	<i>Designating Member</i> <i>State/Organization</i>
05	<b>A. Broodryk</b>	South Africa
06	<b>I. Sudakou</b> O. Piotukh	Belarus
07	<b>O. Peixoto</b> H. L. Gonzales E. Palacios	ABACC
08	<b>M. Davainis</b>	Lithuania
09	<b>O. Galasun</b>	Ukraine
10	<b>J.E. Seguis</b>	Philippines
11	L. Biro <b>V. Grama</b>	Romania
12	<b>A. Mahamane</b>	Niger
13	<b>A. Bencová</b>	Slovakia
14	A. Dmitriev <b>Y. Volodin</b> B. Krupchatnikov A. Sanin	Russian Federation

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*Title of Paper*

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Non-proliferation and safeguards in South Africa

Safeguards implementation and strengthening in Belarus

Coordination improvement on the safeguards application between ABACC and IAEA

The Lithuanian state system of accounting for and control of nuclear materials

IAEA safeguards implementation in Ukraine: current state, problems, prospects

Current status of the system of accounting for and control of nuclear materials in the Philippines

Romania non-proliferation policy

Safeguards agreement's project between the Republic of Niger and the International Atomic Energy Agency according to the Treaty on the Non-proliferation of Nuclear Weapons (NPT)

State system of accounting for a control of nuclear material and Additional Protocol in the Slovak Republic

Efforts in strengthening accounting for and control of nuclear materials in Russia

## WEDNESDAY, 31 OCTOBER 2001

**RELATED POSTERS:  
POSTER SESSION B  
(Development of State Systems of  
Accountancy and Control)**

**Posters will be attended during the coffee  
breaks and the lunch break**

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<i>No. of Poster</i> <i>IAEA-SM-367/B/12/</i>	<i>Name(s)</i>	<i>Designating Member</i> <i>State/Organization</i>
01/P	R.J. Rosenberg <b>R. Zilliacus</b> M. Tarvainen L. Blomqvist R. Pöllänen J. Lehto, et al	Finland
02/P	<b>G.Zh. Yeligbayeva</b>	Kazakhstan
03/P	<b>Z. Ilyas</b>	Indonesia
04/P	<b>M. Solichah</b> A.S. Zarkasi	Indonesia
05/P	K. Yunusov <b>Halilov Holbay</b>	Uzbekistan
06/P	<b>J. Caravelli</b> C. Behan L. Fishbone	USA
07/P	<b>Q. Yang</b>	China
08/P	<b>A.A. Khachatryan</b>	Armenia

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*Title of Poster*

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Finnish Nuclear Verification (FINUVE) in support of IAEA safeguards

The system of nuclear material control of Kazakhstan

Nuclear material safeguards technology development in the new structure of BATAN organization

Legal frame work and implementation of the Strengthened Safeguards System in Indonesia

State systems of accounting for and control of nuclear materials in the Republic of Uzbekistan

Upgrading nuclear material protection, control and accounting in Russia

Safeguards technology research and development at CIAE

State System Accounting and Control (SSAC) of the Republic of Armenia

## WEDNESDAY, 31 OCTOBER 2001

**14:30–18:00**      **SESSION 13:  
INFORMATION ANALYSIS IN THE  
STRENGTHENED SAFEGUARDS SYSTEM  
(Parallel Session)**

**UNIDO Boardroom**

**Session Chairs:** **R. Schenkel, EC**  
**R. Hoskins, IAEA**

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<i>No. of Paper</i> <i>IAEA-SM-367/13/</i>	<i>Name(s)</i>	<i>Designating Member</i> <i>State/Organization</i>
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01 Keynote	<b>K. Chitumbo</b>	IAEA
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02	A. Poucet <b>S. Contini</b> F. Bellezza	EC
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03	D. Novatchev <b>P. Titov</b> B. Siradjov I. Vlad X. Wang	IAEA
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*16:00–16:30*      *Coffee Break*

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04	<b>A. Belenki</b> Y. Nishiwaki H. Matsuoka I. Fediseeva	Russian Federation Austria Japan Russian Federation
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05	<b>L. Costantini</b> J. Hill	IAEA Australia
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06	<b>R. Carchon</b> J. Liu D. Ruan	Belgium
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07	<b>Z. Liu</b> S. Morsy	IAEA
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*Title of Paper*

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Information analysis in the Strengthened Safeguards System

A GIS Support System for declaration and verification

In-field inspection support software: a status report on the  
Common Inspection On-Site Software Package (CIOSP) project

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Some technological aspects of an evaluation and visualisation  
component for the safeguard integrated information system

Information collection strategies to support strengthened  
safeguards

Safeguards information handling and treatment

Development of the Physical Model

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## WEDNESDAY, 31 OCTOBER 2001

**RELATED POSTERS:  
POSTER SESSION B  
(Information Analysis in the Strengthened  
Safeguards System)**

**Posters will be attended during the coffee  
breaks and the lunch break**

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<i>No. of Poster</i> <i>IAEA-SM-367/B/13/</i>	<i>Name(s)</i>	<i>Designating Member</i> <i>State/Organization</i>
01/P	<b>L. Denizot</b>	France
02/P	<b>H.A. Smartt</b>	USA
04/P	A.F. de Chassy <b>L. Denizot</b>	France
05/P	<b>M. Frankl</b>	IAEA
06/P	<b>G. Whitaker</b> M. Aoun	IAEA

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*Title of Poster*

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Mobile Geonet: anywhere, global and secure access to your geographic oriented information

The emergence of internet-based virtual private networks in international safeguards

Image Intelligence Online Consulting: a flexible and remote access to strategic information applied to verification of declaration

The use of overhead imagery in support of the IAEA mandate in Iraq

The Action Team Integrated Information System (ATIIS)

## WEDNESDAY, 31 OCTOBER 2001

**14:30–18:00**      **SESSION 14:  
SAFEGUARDS EQUIPMENT – 2  
(Parallel Session)**

**Meeting Room I**

**Session Chairs:**    **M. Tarvainen, Finland  
R. Abedin-Zadeh, IAEA**

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<i>No. of Paper IAEA-SM-367/14/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
01	<b>I. Ahmed</b> K.G. Qasim R.D. Arlt V. Ivanov	Pakistan  IAEA Latvia
02	<b>A. Tiitta</b> J. Hautamäki M. Tarvainen P. Jansson A. Håkansson K. Jansson	Finland   Sweden
03	<b>A. Lebrun</b> M. Merelli J-L. Szabo M. Huver J. Arenas-Carrasco	France   IAEA
04	V. Bytchkov <b>C. Lavender</b> M. Aparo I. Koulikov J. Vallejo Luna A. Koudriachov K. Murakami	IAEA

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*16:00–16:30*      *Coffee Break*

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*Title of Paper*

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Utilization of fluorescent uranium x-rays as verification tool for irradiated CANDU fuel bundles

Enhanced fork detector for partial defect verification of BWR fuel assemblies

SMOPY: a new NDA tool for safeguards of LEU and MOX spent fuel

Project "Almaz" Phase I: verification of spent fuel canning at fast breeder reactor BN-350

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16:30–18:00

**SESSION 14:  
SAFEGUARDS EQUIPMENT – 2  
(continued)**

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<i>No. of Paper IAEA-SM-367/14/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
05	<b>I. Koulikov</b> J. Fager Y-G. Lee G. Eccleston H. Menlove	IAEA  USA
06	<b>F. Lévai</b> T. Honkamaa M. Tarvainen M. Larsson S. Jacobsson A. Rialhe	Hungary Finland  Sweden  IAEA
07	<b>J.D. Chen</b> A.F. Gerwing P.D. Lewis M. Larsson K. Jansson, et al	Canada   Sweden
08	<b>H. Tanaka</b> N. Nakamura T. Hosoma	Japan

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*Title of Paper*

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Impact of neutron absorbers on underwater coincidence counter performance

An exercise for partial defect testing of a PWR assembly by underwater tomography

Long-cooled spent fuel verification using a digital Cerenkov viewing device

Design of geometrical detector arrangement for extensive holdup measurement

## WEDNESDAY, 31 OCTOBER 2001

**RELATED POSTERS:  
POSTER SESSION B  
(Safeguards Equipment – 2)**

**Posters will be attended during the coffee breaks and the lunch break**

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<i>No. of Poster</i> <i>IAEA-SM-367/B/14/</i>	<i>Name(s)</i>	<i>Designating Member</i> <i>State/Organization</i>
01/P	B. Autrusson <b>D. Brochard</b> J.F. Moreau J.C. Martin	France
02/P	<b>N.M. Ibrahim</b> W. El-Gammal A.A. Hamed	Egypt
03/P	V. Bytchkov J. Harizanov A. Koudriachov <b>I. Koulikov</b> Y. Makovetsky	IAEA
04/P	<b>P. Staples</b> D. Beddingfield J. Lestone, et al, V. Bytchkov, I. Harisanov J. Vallejo-Luna, et al	USA  IAEA
05/P	A.N. Berlizov V.V. Tryshyn	Ukraine
06/P	<b>I. Badawy</b> W.A. El-Gammal	Egypt
07/P	<b>H. Ottmar</b> K. Mayer A. Morgenstern S. Abousah	EC

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*Title of Poster*

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The IRES Electronic Seal

A Semi-absolute passive non-destructive assay technique for the verification of uranium oxide powder cans using a miniature CdZnTe detector

Test verification of spent fuel for partial defect during the Canning Campaign at the Armenian NPP

Software to improve spent fuel measurements using the FDET

Study of the MGAU applicability to accurate isotopic characterization of uranium samples

Estimation of the self-attenuation correction factor for gamma rays emission from nuclear materials

Demonstration of measurement technologies for Neptunium and Americium verification in reprocessing

**RELATED POSTERS:  
POSTER SESSION B  
(Safeguards Equipment – 2)  
(continued)**

<i>No. of Poster IAEA-SM-367/B/14/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
08/P	<b>S. Abousahl</b> H. Ottmar P. Matussek	EC  Germany
09/P	<b>W.D. Ruhter</b> R.G. Lanier C.F. Hayden	USA
10/P	<b>J. Feichtinger</b> M. Schwaiger C. Schmitzer P. Kindl	Austria

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*Title of Poster*

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Matrix effect corrections for the uranium assay with a  
 $^{57}\text{Co}$  –  $^{153}\text{Gd}$  isotopic source-based K-Edge densitometer

Uranium enrichment measurements without calibration using  
gamma rays above 100 keV

Criteria for a comparative assessment on handheld gamma-ray  
measurement tools

## THURSDAY, 1 NOVEMBER

**09:30–13:00**      **SESSION 15:  
EMERGING IAEA SAFEGUARDS ISSUES  
(Parallel Session)**

**IAEA Boardroom**

**Session Chairs:**   **G. Stein, Germany  
L. Rockwood, IAEA**

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<i>No. of Paper IAEA-SM-367/15/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
02 Keynote	<b>S. Guardini</b> G. Stein	EC Germany
03 Keynote	<b>R. Schenkel</b> J-P. Glatz J. Magill K. Mayer	EC
04	<b>S.P. Kadner</b> E. Turpen	USA
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<i>11:00–11:30</i>	<i>Coffee Break</i>	
<hr/>		
05	<b>M. Richard</b>	France
06	<b>T. Findlay</b> O. Meier	VERTIC
07	<b>V. Bragin</b> J. Carlson R. Leslie R. Schenkel J. Magill K. Mayer	Australia  EC
08	<b>Y. Abushady</b>	IAEA
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<i>13:00–14:30</i>	<i>Lunch Break</i>	
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*Title of Paper*

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An ESARDA view of future implementation of science and modern technology for safeguards following recent ESARDA and INMM initiatives

Partitioning and transmutation - technical feasibility, proliferation resistance and safeguardability

Synergies across verification regimes: nuclear safeguards and chemical weapons convention compliance

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Non-proliferation regimes undertakings: benefits and limits of synergies in verification technologies and procedures

Synergies between nonproliferation regimes: a pragmatic approach

Proliferation resistance and safeguardability of innovative nuclear cycles

Can Light Water Reactors be proliferation resistant?

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## THURSDAY, 1 NOVEMBER

09:30–13:00

**SESSION 16:  
SATELLITE IMAGERY AND REMOTE  
MONITORING  
(Parallel Session)**

**UNIDO Boardroom**

**Session Chairs: B. Jasani, UK  
J. Hilliard, IAEA**

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<i>No. of Paper IAEA-SM-367/16/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
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01	<b>H. Zhang</b>	USA
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02 Keynote	<b>M.J. Canty</b> B. Jasani J. Schlittenhardt	Germany UK Germany
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03	<b>C. Jönsson</b> C. Andersson	Sweden
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04	<b>W.K. Yoon</b> J.S. Kim J.S. An E.H. Kwack	Republic of Korea
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11:00–11:30	<i>Coffee Break</i>
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*Title of Paper*

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Strengthening IAEA safeguards using high-resolution commercial satellite imagery

Wide area change detection with satellite imagery for locating underground nuclear testing

Commercial satellite data as support to the additional protocol declarations

Remote monitoring and its implication in Korea

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11:30–13:00

**SESSION 16:  
SATELLITE IMAGERY AND REMOTE  
MONITORING  
(continued)**

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<i>No. of Paper</i> <i>IAEA-SM-367/16/</i>	<i>Name(s)</i>	<i>Designating Member</i> <i>State/Organization</i>
05	<b>U. Meyer</b> B. Wieland	Switzerland
06	G.E. Davis G.L. Johnson <b>F.D. Schrader</b> M.A. Stone E.F. Wilson	USA
07	<b>G.A. Borstad</b> Q.S.B. Truong R. Keeffe P. Baines K. Staenz R. Neville	Canada
08	K. Chitumbo J. Bunney G. Levé <b>S. Robb</b>	IAEA

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<i>13:00–14:30</i>	<i>Lunch Break</i>
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*Title of Paper*

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Practical aspects of implementing RMS at Swiss facilities

Designing remote monitoring systems for long term  
maintenance and reliability

Using limnological and optical knowledge to detect discharges  
from nuclear facilities - potential application of satellite imagery  
for International Safeguards

Satellite imagery and the Department of Safeguards

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## THURSDAY, 1 NOVEMBER

**09:30–13:00**      **SESSION 17:  
VERIFICATION TECHNOLOGY FOR  
NUCLEAR DISARMAMENT  
(Parallel Session)**

**Meeting Room I**

**Session Chairs:**    **J. Tape, USA  
M. Aparo, IAEA**

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<i>No. of Paper IAEA-SM-367/17/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
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01	<b>J.L. Fuller</b> J. Wolford	USA
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02	<b>D.G. Langner</b> , et al J. Puckett, et al S. Razinkov, et al	USA IAEA Russian Federation
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03	D. Mangan J. Matter I. Waddoups M. Abhold G. Pshakin <b>I. Kuleshov</b>	USA    Russian Federation IAEA
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04	<b>E. Haas</b> A. Sukhanov J. Murphy	IAEA Russian Federation USA
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<i>11:00–11:30</i>	<i>Coffee Break</i>
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*Title of Paper*

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Information barriers

Attribute verification equipment for the verification of plutonium in classified forms for the Trilateral Initiative

Trilateral Initiative: Inventory Monitoring systems for facilities storing classified forms of fissile material

Trilateral Initiative: IAEA authentication and national certification of verification equipment for facilities with classified forms of fissile material

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11:30–13:00

**SESSION 17:  
VERIFICATION TECHNOLOGY FOR  
NUCLEAR DISARMAMENT  
(continued)**

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<i>No. of Paper IAEA-SM-367/17/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
05	J.L. Fuller <b>R.T. Kouzes</b>	USA
06	<b>C.L. Hollas</b> C.A. Goulding W.L. Myers	USA
07	J.L. Fuller <b>R.L. Hockey</b>	USA
08	<b>S.J. Luke</b> G.K. White D.E. Archer J.K. Wolford T.B. Gosnell	USA

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<i>13:00–14:30</i>	<i>Lunch Break</i>
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*Title of Paper*

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Authentication of monitoring systems for non-proliferation and arms control

Non destructive analysis of shielded highly enriched uranium

Electromagnetic-Coil (EM-Coil) measurement technique to verify presence of metal/absence of oxide attribute

Verification of the presence of weapons-quality plutonium in sealed storage containers for the Trilateral Initiative demonstration

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## THURSDAY, 1 NOVEMBER

**14:30–18:00**      **SESSION 18:  
THE IAEA AND THE FUTURE OF  
NUCLEAR VERIFICATION AND SECURITY  
(Plenary Session)**

**IAEA Boardroom and UNIDO Boardroom  
(via CCTV)**

**Session Chairs: D. Mangan, USA  
G. Andrew, IAEA**

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<i>No. of Paper</i> <i>IAEA-SM-367/18/</i>	<i>Name(s)</i>	<i>Designating Member</i> <i>State/Organization</i>
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01	<b>J.B. Ritch III</b>	World Nuclear Association
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02	<b>R. Howsley</b>	UK
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03	<b>V. Mourogov</b>	IAEA
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<i>16:00–16:30</i>	<i>Coffee Break</i>	
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04	<b>G. Frank</b>	Israel
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05	<b>D. Perricos</b>	UN
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	<b>L. Scheinman</b>	USA
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*Title of Paper*

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The future of nuclear power

A view from the nuclear industry

Proliferation-resistance and innovative reactors and fuel cycles

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IAEA safeguards and international security

Verification and the safeguards legacy

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Rapporteur's overview of the IAEA Safeguards Symposium 2001  
and the challenges ahead

## FRIDAY, 2 NOVEMBER 2001

09.00–12.30

**SESSION 19:  
COMBATING NUCLEAR TERRORISM  
(Plenary Session)**

**IAEA Boardroom and UNIDO Boardroom  
(via CCTV)**

**Session Chairs: S. Fernandez Moreno, Argentina  
P. Goldschmidt, IAEA**

**Opening Remarks: M. ElBaradei, IAEA**

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<i>No. of Paper IAEA-SM-367/19/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
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01	<b>J. Post</b>	USA
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02	<b>A. Nikitin</b>	Russian Federation
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03	<b>G. Bunn</b> F. Steinhäusler	USA Austria
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<i>10:30–11:00</i>	<i>Coffee Break</i>	
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04	<b>M. B. Maerli</b>	Norway
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05	<b>G. Cameron</b>	UK
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06	<b>S. Fernandez de Gurmendi</b>	Argentina
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<i>12:30–14:00</i>	<i>Lunch Break</i>	
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*Title of Paper*

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Differentiating the threat of nuclear terrorism: motivations and constraints

Intelligence, police and border protection: current capabilities and future directions

Guarding nuclear reactors and material from terrorists and thieves

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The threat of nuclear terrorism: Nuclear weapons or other nuclear explosive devices

The threat of nuclear terrorism: Intentional dispersal of radioactive material - sabotage of fixed installations or transport systems.

The legal framework: treaties and conventions, laws, regulations and codes of practice

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## FRIDAY, 2 NOVEMBER 2001

**14:00–17:30**      **SESSION 19:  
COMBATING NUCLEAR TERRORISM  
(Plenary Session continued)**

**IAEA Boardroom and UNIDO Boardroom  
(via CCTV)**

**Session Chairs:**    **C. Curtis, USA  
P. de Klerk, IAEA**

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<i>No. of Paper IAEA-SM-367/</i>	<i>Name(s)</i>	<i>Designating Member State/Organization</i>
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07	<b>M. Gregoric</b>	Slovenia
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08	<b>A. Nilsson R. Hoskins G. Anzelon M. Soo Hoo R. Abedin-Zadeh</b>	IAEA
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<i>15:30–16:00</i>	<i>Coffee Break</i>	
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09	<b>K. Murakami</b>	IAEA
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10	<b>A. Carnino</b>	IAEA
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11	<b>A. Gonzalez</b>	IAEA
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**Questions and Comments**

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<b>17:30</b>	<b>CLOSING OF THE SYMPOSIUM</b>	
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*Title of Paper*

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The Physical Protection Convention, security fundamentals and INFCIRC/225

IAEA Material Security Programme: overview

- Threat assessments
  - Knowledge base
  - Physical protection
  - Technology
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Experience in building national nuclear material control capabilities

Nuclear safety and security of nuclear installations

Security of radioactive sources

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## **PARTICIPATION IN IAEA SCIENTIFIC MEETINGS**

Governments of Member States and certain organizations are invited to designate participants in IAEA scientific conferences, symposia and seminars. In addition, the IAEA itself may invite a limited number of scientists as invited speakers. Only participants designated or invited in this way are entitled to present papers and take part in the discussions.

Scientists interested in participating in any of the Agency's meetings should request information from the Government authorities of their own countries, in most cases the Ministry of Foreign Affairs or the national atomic energy authority.

## **PUBLICATIONS**

### **Proceedings**

The proceedings will be published by the Agency in unedited form as a CD ROM. They will include all papers presented at the Symposium, printed in full together with abstracts and the extended synopses of the submitted posters. A CD ROM will be sent to each participant present at the meeting as soon as possible after the Symposium.

### **Other IAEA Publications**

All IAEA publications may be ordered at the Conference Desk or in the IAEA Documents Distribution Unit in Building F, FM152. A 25% reduction will be granted on any order placed and paid for during the meeting. In addition, they may be ordered directly from the Sales and Promotion Unit, International Atomic Energy Agency, P.O. Box 100, A-1400 Vienna, Austria.

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Email: [sales.publications@iaea.org](mailto:sales.publications@iaea.org)

Internet: <http://www.iaea.org/worldatom/books>

## AGENCY PUBLICATIONS RELATING TO THE SUBJECT OF THE SYMPOSIUM

	IAEA Annual Report	2000
CD-ROM STI/DAT/3	Proceedings of the Symposium on International Safeguards, Vienna, Austria, 13-17 October 1997	1999
IAEA Bulletin	Safeguards and Non-Proliferation (Volume 41, Number 4)	1999
INFCIRC/225/Rev.4 (Corrected)	The Physical Protection of Nuclear Material and Nuclear Facilities	1999
INFCIRC/540 (Corrected)	Model Protocol Additional to the Agreement(s) between State(s) and the International Atomic Energy Agency for the Application of Safeguards	1997
INFCIRC/274/Rev.1	The Convention on the Physical Protection of Nuclear Material	1980
INFCIRC/153 (Corrected)	The Structure and Content of Agreements between the Agency and States Required in Connection with the Treaty on the Non-Proliferation of Nuclear Weapons	1972
INFCIRC/66/Rev.2	The Agency's Safeguards System (1965, as Provisionally Extended in 1966 and 1968)	1968

## **FORTHCOMING SCIENTIFIC MEETINGS SCHEDULED BY THE IAEA FOR 2002:**

Conference on Cardiovascular Nuclear Medicine  
(Beijing, China, 27–31 May)

IAEA/FAO Symposium on the Use of Mutated Genes in Crop  
Improvement and Functional Genomics  
(Vienna, Austria, 3–7 June)

International Conference on Occupational Radiation Protection:  
Protecting Workers against Exposure to Ionizing Radiation  
(Geneva, Switzerland, 26–30 August)

International Conference on Safe Decommissioning for Nuclear  
Activities: Assuring the Safe Termination of Practices Involving  
Radioactive Materials  
(Berlin, Germany, 14–18 October)

19th IAEA Fusion Energy Conference  
(Lyon, France, 14–19 October)

International Symposium on NPP Life Management  
(Budapest, Hungary, 4–8 November)

International Symposium on Standards and Codes of Practice in  
Medical Radiation Dosimetry  
(Vienna, Austria, 25–29 November)

Conference on Safety Culture in Nuclear Installations  
(Brazil, 2–6 December)

Conference on Issues and Trends in Radioactive Waste  
Management  
(Vienna, Austria, 9–13 December)

Conference on Advances in Destructive and Non-destructive  
Analysis for Environmental Monitoring and Nuclear Forensics  
(USA, second half of 2002)

On future IAEA meetings please consult the IAEA's home page  
on Internet at: <http://www.iaea.org/worldatom>