

# 34<sup>èmes</sup> Journées des Actinides

*Heidelberg, 17 – 20 April 2004*



preceded by the

5<sup>th</sup> School on Physics and Chemistry of Actinides

*Karlsruhe, 15 – 17 April 2004*

**Programme and Abstracts**



Programme of the 5th School on the Physics and Chemistry of Actinides  
34èmes Journées des Actinides

Thu. 15 April		Fri. 16 April		Sat. 17 April	
		8h15	SCHOOL BUS HOTEL RITTER-ITU		
		9h00	LECTURES SESSION III ITU	9h00	LECTURES SESSION VI Hotel Ritter
		10h30	COFFEE BREAK	10h30	COFFEE BREAK
		10h45	LECTURES SESSION IV ITU	10h45	LECTURES SESSION VII Hotel Ritter
		12h15	LUNCH ITU	12h15	LUNCH Hotel Ritter
		13h30	LECTURES SESSION V ITU	13h30	Conference Bus Hotel Ritter-Heidelberg via KA-HBF
13h30	SCHOOL BUS Karlsruhe/HbF-ITU	15h00	COFFEE BREAK	14h00	
15h00	Welcome Address	15h15	LABORATORY TOUR		
15h15	LECTURES SESSION I ITU				
16h45	COFFEE BREAK				
17h00	LECTURES SESSION II ITU	17h00			
18h30	SCHOOL BUS ITU-HOTEL RITTER, BÜCHENAU	17h45	SCHOOL BUS ITU-HOTEL RITTER, BÜCHENAU		
18h45					

Programme of the 34èmes Journées des Actinides

Sat. 17 April		Sun. 18 April		Mon. 19 April		Tue. 20 April	
		9h00	Opening Address	9h00	ORAL SESSION D Kurpfalz 1+2	9h00	ORAL SESSION H Kurpfalz 1+2
		9h10	ORAL SESSION A Kurpfalz 1+2		COFFEE BREAK	10h20	COFFEE BREAK
		10h30	COFFEE BREAK	10h20	COFFEE BREAK	10h50	ORAL SESSION I Kurpfalz 1+2
		10h50	ORAL SESSION B Kurpfalz 1+2	10h50	ORAL SESSION E Kurpfalz 1+2	12h10	LUNCH
		12h10	LUNCH	12h10	LUNCH	13h40	ORAL SESSION J Kurpfalz 1+2
		13h40	ORAL SESSION C Kurpfalz 1+2	13h40	ORAL SESSION F Kurpfalz 1+2	14h40	CONFERENCE SUMMARY CONCLUSIONS
		15h20	COFFEE BREAK	15h20	COFFEE BREAK	15h10	GOOD BYE & COFFEE
15h00	Registration	15h50	POSTER SESSION Palatina 1	15h50	ORAL SESSION G Kurpfalz 1+2	16h00	
		18h00		17h10			
19h30	Welcome Party Palatina 1+2	18h30	DINER	18h40	GET TOGETHER WALK TO "GULDENES SCHAF"		
20h00		20h30	EVENING SESSION ROUND-TABLE DISCUSSIONS Kurpfalz 1+2	19h00	BANQUET "GULDENES SCHAF"		
20h30		22h00					

**34<sup>èmes</sup> Journées des Actinides, 17 – 20 April 2004, Heidelberg**

## **CONFERENCE ORGANIZATION**

The conference "34<sup>èmes</sup> Journées des Actinides" is organized by the  
*European Commission, Joint Research Centre,  
Institute for Transuranium Elements in Karlsruhe.*

It is supported by the EU project HPCF-00320 within the program  
High Level Scientific Congresses.

### **ORGANIZING COMMITTEE**

G. H. Lander  
F. Wastin  
S. Yael  
S. Linert  
M. Rödder  
J. Ribeiro

### **SCIENTIFIC COMMITTEE**

M. Almeida (Lisboa)  
M. Genet (Orsay)  
G. H. Lander (Karlsruhe)  
H. Noël (Rennes)  
P. Oppeneer (Uppsala)  
V. Sechovský (Prague)  
R. Troć (Wroclaw)

### **LOCAL ORGANIZATION**

School at ITU and Journées in Heidelberg

E. Bednarczyk	G. Janssen
E. Blackburn	R. Jardin
D. Bouëxière	A. Jimenez
P. Boulet	F. Jutier
E. Colineau	F. Kinnart
R. Eloirdi	F. Merrill
M. Eckle	J. Rebizant
S. Fourcaudot	E. Robyns
T. Gouder	U. Weber
JC. Griveau	W. Weber
S. Heathman	G. Wiltgen
P. Lefèbvre	

5<sup>th</sup> School on the Physics and Chemistry of Actinides  
Karlsruhe, ITU, April 15-17, 2004

34<sup>èmes</sup> Journées des Actinides  
Heidelberg, April 17-20, 2004

Dear Participants,

It is our great pleasure to welcome you at both ITU-Karlsruhe, for those attending the 5<sup>th</sup> School on the Physics and Chemistry of Actinides, and Heidelberg.

With more than 50 participants registered for the school and more than 110 for the Journées, you have been particularly enthusiastic to answer our announcement of these events and we thank you.

Following the 10 years tradition of the Journées, the 2004 edition is preceded by a school on the physics and chemistry of actinides, the 5<sup>th</sup> of the sort. This year, the school is taking place at the Institute for Transuranium Elements-Karlsruhe, a member of the European Commission-Joint Research Centre. On behalf of the whole staff of ITU, we would like to wish you a warm welcome. The programme of the school is given in this booklet. We are particularly grateful to the lecturers for having accepted to share in a more didactic way the results of their research. We hope you will find in these lectures the material necessary to a better understanding of the Journées' contributions, but also some elements useful in your present and future occupation. Notes of the lectures will be made available to the participants after the school. A key event in this school will be the laboratory tour that we hope will give you the opportunity to have an overview of the activities carried out in our Institute, the variety of the research programmes conducted and also stimulate new collaborations.

A special thank you is addressed to the technical staff of ITU and the Local Organisation including our Safety and Security Officers who mobilised themselves to make this school possible.

The Journées are taking place at the Crowne-Plaza Hotel in Heidelberg, one of the most interesting historical cities in Germany. The scientific programme, time schedule, and abstracts are given in this booklet.

Some organisational information is given below.

Finally, we would like to acknowledge the financial supports of the European Commission, FP5' High-Level Scientific Conferences programme under the contract HPCF-00320, the JRC-PECO programme, the Actinide User Laboratory Programme supported by the European Community-Access to Research Infrastructures action of the Improving Human Potential Programme (IHP), contract HPRI-CT-2001-00118 and the JRC-ITU Karlsruhe.

We wish you a pleasant stay in Karlsruhe and Heidelberg and a scientifically successful meeting.

**The Organising Committee**

## Organisational Information:

**Oral Presentation:** The duration of an oral presentation is 20 minutes, including approximately 3-5 minutes discussion. We kindly ask you to keep the allocated time, because of the tight time schedule.

**Posters:** There will be only one poster session that will take place in the Palatina Room on Sunday afternoon. Poster boards will be accessible from Sunday morning on and posters can be mounted during the session breaks. Posters should be removed at the end of the poster session. Local staff is at your disposal to help you in the mounting and dismounting processes.

**Evening Session:** The Evening Session on Sunday evening will be organised as a Round Table discussion. It will be divided into three parts. The first one intends to address the Actinide User Laboratory programme (announcement of the future programme, comments from users, facilities proposed in the programme, ...). The second part will be dedicated to scientific interests (hot topics in the physics and chemistry of actinides, are those addressed at the JdAs?, highlights of contributions, open questions or comments,...) to stimulate discussions. The final part will address JdAs (participation, length, ...). We hope a lively input from the attendees.

**Social Programme:** Two social events are scheduled. However their organisation will depend on the number of participants. Please make enquiries to the Conference Secretary.

**Social Events:** The welcome party on Saturday, The Caribbean-buffet on Sunday and the conference banquet on Monday are the social events organised for you. The banquet will take place at the "Guldenes Schaff" a typical local restaurant located in Heidelberg old town at a reasonable walk distance from the hotel. We will join the restaurant after an appetising walk together. Meeting point: the hotel lobby at 18h40. We should join the restaurant by 19h00 as the dinner will last at least 3 hours. Please be on time.

**Conference Secretary:** A secretary board will be available during the whole conference nearby the Oral Sessions room.

**Registration Fees:** Full registration fees allow the participation to all social events, accommodation, dinners, banquet and drinks. On lunchtime, only water and 1 soft drink per person is included. The dinner drinks are an all-in deal (for 2 hours) agreement with the hotel. Note that no hard alcohol is included. Extra-drinks as well as extra-services should be paid directly at the hotel.

Reduced registration fees (local participants) offer the same services, including banquet, except accommodation and dinners.

**5SPCA**  
**PROGRAMME**

# Programme of the 5<sup>th</sup> School on the Physics and Chemistry of Actinides

Thursday, 15 April 2004 (ITU-Karlsruhe)

**15h00 Welcome address** G.H. Lander (Director of ITU-Karlsruhe)

## LECTURES SESSION I

- 15h15-16h00** *XAFS in Actinide Science*  
**Melissa Denecke**, INE-FZK, Karlsruhe, Germany
- 16h00-16h45** *Actinide thin films: Electronic structure and surface reactivity*  
**Thomas Gouder**, ITU, Karlsruhe, Germany
- 16h45-17h00** COFFEE BREAK

## LECTURES SESSION II

- 17h00-17h45** *Advanced fuel cycles for new generation reactors*  
**Jean-Paul Glatz**, ITU, Karlsruhe, Germany
- 17h45-18h30** *Crystallochemistry of the actinides binary systems*  
**Pascal Boulet**, ITU, Karlsruhe, Germany
- 18h45** **SCHOOL BUS ITU-HOTEL RITTER, BÜCHENAU**

Friday, 16 April 2004 (ITU-Karlsruhe)

**8h15** **SCHOOL BUS HOTEL RITTER, BÜCHENAU-ITU**

## LECTURES SESSION III

- 09h00-09h45** *Actinides - a challenge for nuclear forensics*  
**Klaus Lützenkirchen**, ITU, Karlsruhe, Germany
- 09h45-10h30** *X-ray magnetic circular dichroism and Compton Scattering: Application to 5f electron systems*  
**Jean-Pierre Sanchez**, CEA-Centre de Grenoble, France
- 10h30-10h45** COFFEE BREAK

## LECTURES SESSION IV

- 10h45-11h30** *Aging of Plutonium alloys: characterisations and modelling*  
**Nathalie Baclet**, CEA-Centre de Valduc, Is-sur-Tille, France
- 11h30-12h15** *Structural behavior of actinide metals under high pressure*  
**Tristan Le Bihan**, ESRF, Grenoble, France

# Programme of the 5<sup>th</sup> School on the Physics and Chemistry of Actinides

12h30-13h30 LUNCH AT ITU

## LECTURES SESSION V

13h30-14h15 *Survey of theoretical approaches to the electronic structure of actinide materials*  
**Peter M. Oppeneer**, IFW, Dresden, Germany

14h15-15h00 *Optical techniques for the study of the actinides*  
**Joachim Schoenes**, University of Braunschweig, Braunschweig, Germany

15h00-15h15 COFFEE BREAK

15h15-17h00 LABORATORY TOUR

17h45 SCHOOL BUS ITU-HOTEL RITTER, BÜCHENAU

Saturday, 17 April 2004 (Hotel Ritter, Büchenau)

## LECTURES SESSION VI

09h00-09h45 *Neutron and Synchrotron X-ray scattering*  
**Nick Bernhoft**, CEA-Centre de Grenoble, Grenoble, France

09h45-10h30 *Organoactinide complexes as catalysts in demanding chemical transformations*  
**Moris S. Eisen**, Technion University, Haifa, Israel

10h30-10h45 COFFEE BREAK

## LECTURES SESSION VII

10h45-11h30 *Issues of quantum criticality in actinides and related materials*  
**Joe D. Thompson**, LANL, Los Alamos NM, USA

11h30-12h15 *Electronic structure and magnetism in actinide compounds*  
**Vladimir Sechovsky**, Charles University, Prague, The Czech Republic

12h30-13h30 LUNCH AT HOTEL RITTER

14h00 CONFERENCE BUS HOTEL RITTER-HEIDELBERG

# **34èmes Journées des Actinides**

## **PROGRAMME**

# Programme of the 34<sup>èmes</sup> Journées des Actinides

Saturday, 17 April 2004


15h00-20h00 REGISTRATION  
18H30-20H30 WELCOME PARTY

Sunday, 18 April 2004

**09h00 Welcome address** G.H. Lander

## SESSION A

Chairman **Jean-Pierre Sanchez**

- 09h10** **A-01:** *The Antiferromagnetic State of UPd<sub>2</sub>Al<sub>3</sub>*  
**Elisabeth Blackburn**, N. Bernhoeft, A. Hiess and G.H. Lander
- 09h30** **A-02:** *Kondo effect derived from structural two-level systems in ThAsSe*  
**Tomasz Cichorek**, A. Sanchez, H. Aoki, F. Weickert, S. Paschen, P. Gegenwart, F. Steglich and Z. Henkie
- 09h50** **A-03:** *Magnetic Versus Electric-Quadrupole Order in the Mixed Actinide Oxides*  
**Stuart B. Wilkins**, J. A. Paixão, R. Caciuffo, P. Javorsky, F. Wastin, J. Rebizant, C. Detlefs, N. Bernhoeft and G. H. Lander
-  **10h10** **A-04:** *Crystallographic and physical properties of the AnFe<sub>4</sub>Al<sub>8</sub> (An = U, Np, Pu) compounds*  
**Antonio Pereira Gonçalves**, F. Wastin, E. Colineau, P. Boulet, P. Javorský, M. Almeida and J. Rebizant

**10h30-10h50** COFFEE BREAK

## SESSION B

Chairman **Thomas Fanghänel**

- 10h50** **B-05:** *Inclusion Complexes of Organoactinides in Boron Containing Macrocycles*  
**Eyal Barnea**, T. Andrea, M. Kapon, I. Goldberg and M. S. Eisen
- 11h10** **B-06:** *Coupling of Terminal Alkynes and Isocyanide Promoted by Organoactinide Complexes*  
E. Barnea, T. Andrea, J.-C. Berthet, M. Ephritikhine and **Morris S. Eisen**
- 11h30** **B-07:** *Advanced actinide separation schemes*  
**J.-P. Glatz**, S. Abousahl, B. Christiansen, R. Malmbeck, M. Ougier, H. Ottmar, J. Serp, D. Serrano-Purroy, T. Inoue, M. Iizuka and M. Kurata
- 11h50** **B-08:** *Uranium Redox Flow Battery*  
K. Shirasaki, T. Yamamura and **Yoshinobu Shiokawa**

**12h10-13h40** LUNCH

# Programme of the 34<sup>èmes</sup> Journées des Actinides

## SESSION C

Chairman **Joe D. Thompson**

- 2 13h40 **C-09:** *Magnetic phase diagram of single crystalline NpCoGa<sub>5</sub>*  
**Eric Colineau**, P. Javorský, P. Boulet, F. Wastin and J. Rebizant
- 2 14h00 **C-10:** *Neutron scattering study of UTGa<sub>5</sub> and NpTGa<sub>5</sub>*  
**Koji Kaneko**, N. Metoki, S. Ikeda, D. Aoki, Y. Haga, Y. Homma, E. Yamamoto, Y. Shiokawa, Y. Onuki, N. Bernhoeft, E. Colineau and G.H. Lander
- 2 14h20 **C-11:** *Magnetic behavior of NpRhGa<sub>5</sub>*  
E. Colineau, **Pascal Boulet**, F. Wastin, P. Javorský, J. Rebizant, J.P. Sanchez
- 14h40 **C-12:** *Electronic structure investigations of PuCoGa<sub>5</sub> and of related compounds*  
**Ingo Opahle**, S. Elgazzar and P.M. Oppeneer
- 2 15h00 **C-13:** *Ageing effects on the critical parameters of superconducting Pu-based compounds*  
**Frédéric Jutier**, J.-C. Griveau, E. Colineau, J. Rebizant, P. Boulet, F. Wastin and E. Simoni

15h20-18h00 **COFFEE AND POSTER SESSION**  
Chairmen **Karel Prokeš, Nicolas Dacheux**

18h30-20h30 **DINNER**

## EVENING SESSION

20h30-22h00 **Round table discussions**  
**Actinide User Laboratory General Assembly**  
**Hot Topics Actinide Physics**  
**Hot Topics Actinide Chemistry**

**Moderators:** P.M. Oppeneer (Theory)  
J.D. Thompson (Experimental Physics)  
M. Genet (Chemistry)  
G.H. Lander (Userlab)

# Programme of the 34<sup>èmes</sup> Journées des Actinides

Monday, 19 April 2004

## SESSION D

Chairman **Klaus Lützenkirchen**

- 09h00**      **D-14:** *Nuclear magnetic relaxation dispersion of the actinide ions*  
**Jean François Desreux**, G. Vaast, A. Joassin and G. Gridelet
- 09h20**      **D-15:** *Method for the determination of actinide in water samples by alpha liquid scintillation*  
**Jean Aupiais**
- 09h40**      **D-16:** *TRLFS and EXAFS Investigation of the Cm<sup>3+</sup> Aqua Ion from 20 to 200 °C*  
**P. Lindqvist-Reis**, R. Klenze, Th. Fanghänel and M. A. Denecke
- 10h00**      **D-17:** *Characterization of molecular scale sorption mechanisms of trivalent actinides in the ultra trace concentration range with time resolved laser fluorescence spectroscopy (TRLFS).*  
**Thorsten Stumpf**, Th. Fanghänel and A. Bauer
- 10h20-10h50**      COFFEE BREAK

## SESSION E

Chairman **Dariusz Kaczorowski**

- 10h50**      **E-18:** *Dilute Moment Ferromagnetism in U<sub>1-x</sub>Y<sub>x</sub>CoAl at low Y Concentrations*  
**G. Michael Kalvius**, D.R. Noakes, E.J. Ansaldo, A.V. Andreev and H. Nakotte
- 11h10**      **E-19:** *Melting of the AF structure in UNiAl near T<sub>N</sub>*  
**Karel Prokeš**, E. Brück and V. Sechovský
- 11h30**      **E-20:** *UCoAl: Pressure variations of the non-Fermi liquid character*  
**Ladislav Havela**, F. Honda, J.-C. Griveau, A.V. Andreev, A.V. Kolomiets and V. Sechovský
- 11h50**      **E21:** *Magnetism in UIrGe under high pressure*  
**Vladimir Sechovský**, F. Honda, A.V. Andreev and K. Prokeš

*JC Griveau*

**12h10-13h40**      LUNCH

# Programme of the 34<sup>èmes</sup> Journées des Actinides

## SESSION F

Chairman **James Ibers**

- 13h40 **F-22:** *Crystal structure and some magnetic properties of new compounds in the U-Pt-Si ternary system.*  
J.N. Chotard, **Olivier Tougait**, H. Noël, P. Rogl, A. Zelinskiy and O.I. Bodak
- 14h00 **F-23:** *Structure and Physical Properties of (Np, Pu)B<sub>2</sub>C with ThB<sub>2</sub>C-type*  
P. Boulet, E. Colineau, J. Rebizant, **Peter Rogl** and F. Wastin
- 14h20 **F-24:** *High Pressure Studies Of the Tetragonal to Orthorhombic structure UFe<sub>5</sub>Al<sub>7</sub>, UFe<sub>7</sub>Al<sub>5</sub> and UFe<sub>2</sub>Al<sub>10</sub> Actinide Compounds*  
**Itzhak Halevy**, V.Y. Zenou, S. Salhov, I. Yaar and W. Schäfer
- 14h40 **F-25:** *Meta-stable structural and magnetic ground states in Np and Pu heavy fermion and Kondo systems*  
**Joe Gal**, I. Halevy, J. Jove, M.Pagès, L.Asch, G.M. Kalvius, W. Potzel and J.Litterst
- 15h00 **F-26:** *Magnetostriction study of a U<sub>0.8</sub>Lu<sub>0.2</sub>Fe<sub>2</sub> single crystal*  
**Alexander V. Andreev**, N.V. Mushnikov, R.Z. Levitin and T. Goto

15h20-15h50 COFFEE BREAK

## SESSION G

Chairman **David Geeson**

- 15h50 **G-27:** *Computational Actinide Chemistry: Approach and Recent Applications*  
**Bernd Schimmelpfennig** and Th. Fanghänel
- 16h10 **G-28:** *Speciation and Redox behavior of Plutonium*  
**Jong Il Yun**, H.-R. Cho, Ch. Marquardt, A. Seibert, C. Walther, Th. Fanghänel
- 16h30 **G-29:** *Electronic structure of U<sub>x</sub>Au<sub>100-x</sub> films studied by photoemission*  
**Rachel Eloirdi**, T. Gouder, F. Huber, F. Wastin and J. Rebizant
- 16h50 **G-30:** *Photoemission study of the electronic structure of Am, AmN, AmSb, and Am<sub>2</sub>O<sub>3</sub> films*  
T. Gouder, **Peter M. Oppeneer**, F. Huber, F. Wastin and J. Rebizant
- 19H00 BANQUET "GÜLDENES SCHAF"

# Programme of the 34<sup>èmes</sup> Journées des Actinides

Tuesday, 20 April 2004

## SESSION H

Chairman **Ladislav Havela**

- 09h00**      **H-31:** *Specific heat and isothermal magnetocaloric effect in  $UNi_{0.5}Sb_2$*   
**Dariusz Kaczorowski**, T. Plackowski and Z. Bukowski
- 09h20**      **H-32:** *Anisotropic magnetic and electron transport properties of a Kondo ferromagnet  $UCo_{0.5}Sb_2$*   
**Vinh-Hung Tran**, R. Troć, Z. Bukowski, D. Badurski and C. Sułkowski
- 09h40**      **H-33:** *Specific Heat under Pressure of the Ferromagnetic Superconductor  $UGe_2$*   
**Niels Oeschler**, R. A. Fisher, N. E. Phillips, F. Bouquet, J. C. Lashley, A. D. Huxley and J. Flouquet
- 10h00**      **H-34:** *On the phenomenon of the characteristic temperature  $T^*$  in the ferromagnetic superconductor  $UGe_2$*   
**Robert Troć**, A. Czopnik, C. Sułkowski, H. Misiorek and J. Mucha

**10h20-10h50**      COFFEE BREAK

## SESSION I

Chairman **Reinhardt Klenze**

- 10h50**      **I-35:** *Comparison of Rare-Earth and actinide behaviour in materials: stability and electronic properties of Ce and U-bearing britholites*  
**M. Bertolus** and M. Defranceschi
- 11h10**      **I-36:** *Thorium - Uranium (IV) Phosphate - Diphosphate: from sintering to leaching tests*  
**Nicolas Dacheux**, N. Clavier, R. Podor, E. Colineau, J. Rebizant
- 11h30**      **I-37:** *Immobilization of tetravalent actinides in several phosphate matrices: Thorium Phosphate Diphosphate (TPD), britholites and monazites-brabantites.*  
**Olivier Terra**, N. Dacheux, F. Audubert, C. Guy, R. Podor, E. Colineau, J. Rebizant
- 11h50**      **I-38:** *Polymetallic oxalate : synthesis and structural characterization*  
**Bénédicte Arab-Chapelet**, S. Grandjean, G. Nowogrocki, F. Abraham

**12h10-13h40**      LUNCH

# Programme of the 34<sup>èmes</sup> Journées des Actinides

## SESSION J

Chairman **Peter Wachter**

- 13h40**      **J-39:** *Spin gap formation in uranium and cerium Kondo semiconductors*  
**Keith A McEwen**, D T Adroja and J-G Park
- 14h00**      **J-40:** *Applicability of the spin-orbit sum rule in the actinide 5f states*  
**Kevin T. Moore**, B.C. Chung, G.J. Tobin, M.A. Wall, A.J. Schwartz, G.  
van der Laan
- 14h20**      **J-41:** *Theory of delocalisation and phase transitions in americium under  
pressure*  
**Michel Pénicaud**

## CONFERENCE SUMMARY & CONCLUSIONS

Chairman **Peter Rogl**

- 14h40**      **A- Chemistry:**      **Jean-François Desreux**  
**14h55**      **B- Physics:**        **Roberto Caciuffo**

**15h15**      **GOOD BYE & COFFEE**

# Programme of the 34<sup>èmes</sup> Journées des Actinides

## POSTERS

- P-01** *Magnetoelasticity of  $R_2T_{13.6}Si_{3.4}$  ( $R = U, Lu$ ;  $T = Fe, Co$ )*  
**A.V. Andreev**, A.V. Kolomiets, S. Daniš, T. Goto
- P-02** *Magnetic anisotropy in the  $(U_{1-x}Lu_x)_2Fe_{15}Ge_2$  solid solutions*  
N. Tomizawa, Y. Homma, **A.V. Andreev**, T. Komatsubara, Y. Shiokawa
- P-03** *Influence of isoelectronic substitutions on magnetism of  $UCoAl$*   
**A.V. Andreev**, N.V. Mushnikov, M. Diviš, F. Honda, V. Sechovský, T. Goto
- P-04** *XMCD Study of  $UCo_{1-x}T_xAl$  ( $T = Fe, Ni$ ) Compounds*  
**B. Janoušová**, F. Wilhelm, A. V. Andreev, A. Rogalev, S. Daniš, V. Sechovský
- P-05** *Development of electronic properties of  $UPtAl$  under ultra high pressure*  
F. Honda, **K. Prokeš**, J.-C. Griveau, V. Sechovský, F. Wastin, A.V. Andreev, G. Oomi and N. Môri
- P-06** *Competition of two AF structures in  $UNiAl$  single crystal*  
**K. Prokeš**, E. Brück and V. Sechovský
- P-07** *ThAsSe diamagnet: Anisotropy in the system with Kondo effect derived from structural defects*  
**D. Gnida**, Z. Henkie, R. Wawryk, A. Wojakowski, Cz. Marucha, P. Wiśniewski
- P-08** *Electrical transport properties of  $USbSe$  and  $UsbTe$*   
D. Kaczorowski, **A. P. Pikul** and A. Zygmunt
- P-09** *Resonant x-ray scattering investigation of the  $NpAs_{1-x}Se_x$  phase diagram*  
**V.H.N. Rodrigues**, J.A. Paixão, M.M.R. Costa, A. Bombardi, S. Wilkins, D. Mannix, J. Rebizant, G.H. Lander
- P-10** *Electronic structure studies of  $USb$*   
**J. Rusz**, M. Biasimi
- P-11** *Growth, crystal structure, magnetic and transport properties of  $UTSb_2$  single crystals*  
Z. Bukowski, **V. H. Tran**, D. Badurski, J. Stepien-Damm C. Sulkowski and R. Troc
- P-12** *Constitution and physical properties of  $NpPd_2Sn$*   
D. Kaczorowski, **K. Gofryk**, P. Boulet, J. Rebizant, P. Javorský, F. Wastin and G. H. Lander
- P-13** *Intermediate valence properties of  $U_2RuGa_8$*   
**R. Troć**, Z. Bukowski, C. Sulkowski
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**A. Laref**, E. Sasioglu, L. Sandratskii, and P. Bruno

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- P-16** *Magnetic and thermodynamic properties of the  $UCu_6Al_6$  derivatives*  
W. Suski, **M. Solyga**, A. Czopnik, K. Wochowski, T. Mydlarz
- P-17** *Comparing the magnetic properties of the itinerant antiferromagnet  $UGa_3$  and the heavy fermion superconductor  $UPd_2Al_3$*   
**A. Hiess**, E. Blackburn, N. Bernhoeft, G.H. Lander
- P-18** *Crystal Field Excitations in  $PrInNi_4$*   
**H.C. Walker**, K.A. McEwen, J.G. Park, D.T. Adroja
- L* **P-19** *High-pressure resistance of  $AmCoGa_5$*   
**J.-C. Griveau**, P. Boulet, E. Colineau, P. Javorsky, F. Jutier, F. Wastin, and J. Rebizant
- P-20** *Optical and Magneto-optical Properties of Uraniumnitride*  
**M. Marutzky**, U. Barkow, H. Schroeter, R. Troć, J. Schoenes
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**L. Havela**, D. Rafaja, K. Miliyanchuk, F. Wastin, T. Gouder
- P-22** *Magnetic Properties of Uranium Iron Multilayers*  
**R.Springell**, S.Zochowski, A. M. Beesley, S. D. Brown, A. D. F. Herring, M. F. Thomas, G. H. Lander, S. Langridge, W. G. Stirling, R. C. C. Ward, M. R. Wells
- P-23** *Magnetic and Magneto-Optical Properties of  $UH_x$  Thin Films*  
**D. Kolberg**, A. Navratil, T. Gouder, F. Wastin, and J. Schoenes
- P-24** *Novel hydrides of  $U_2T_2Sn$  ternaries*  
**K. Miliyanchuk**, L. Havela, A.V. Kolomiets, A.V. Andreev
- P-25** *Determination of boron content in ternary uranium intermetallic borides*  
A.P. Gonçalves, **M. Almeida**, P.S. Salamakha, O.L. Sologub, L.C. Alves, A.S. Cascais, P.A. Carvalho
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A. Perricone, T. Roisnel, **H. Noël**
- P-27** *Structural and Electrical Investigations of Two New Lithium Uranyl Tungstates  $Li_2(UO_2)(WO_4)_2$  and  $Li_2(UO_2)_4(WO_4)_4O$  with Framework Based on the Uranophane Sheet Anion Topology*  
**S. Obbade**, S. Yagoubi, C. Dion, M. Saadi and F. Abraham
- P-28** *High Ionic Conductivity in the Uranyl Vanadates  $A(UO_2)_4(VO_4)_3$  ( $A = Li, Na$ ) with a Novel Open-Framework with Non-Crossing Channels*  
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G. Heisbourg, J. Purans, **N. Dacheux**, Ph. Moisy, S. Hubert
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