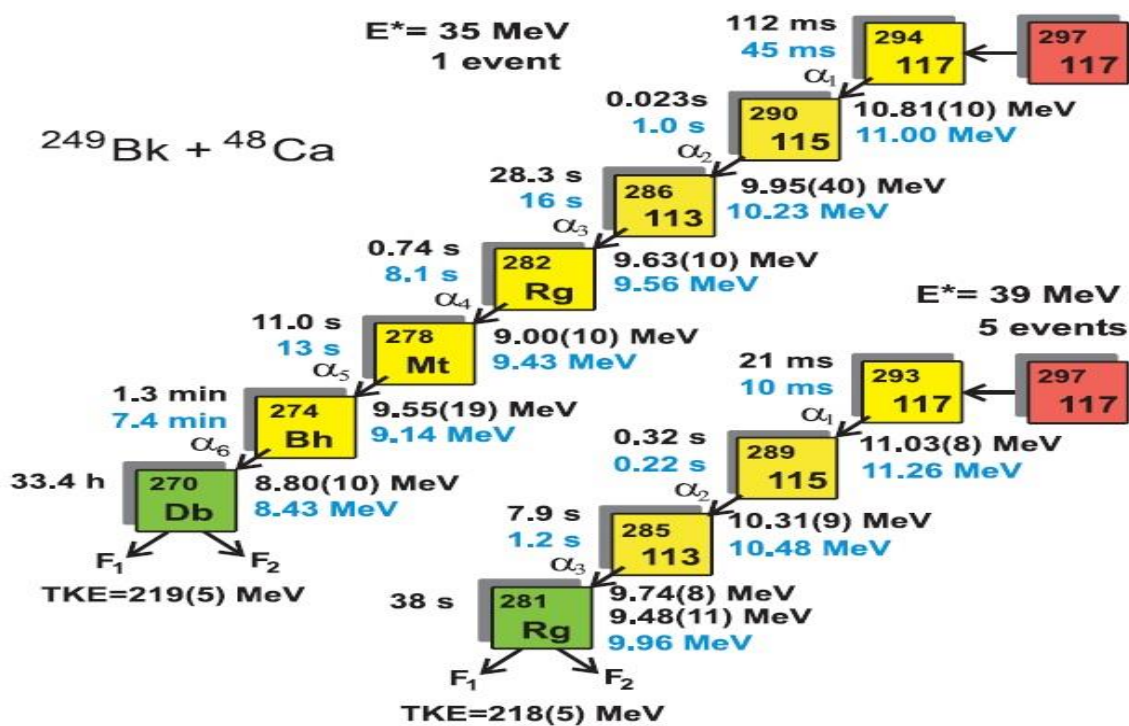


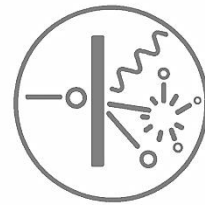
# INTDS NEWSLETTER



July 2017  
Volume 41  
Number 1



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www.intds.org

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## COVER PHOTO

Observed decay chain in Tennessine (Element 117) together with previously observed chains (see next page).

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## **Element 117**

*Physical Review Letters* 104, 142502 (2010)

### **Abstract:**

The discovery of a new chemical element with atomic number  $Z = 117$  is reported. The isotopes  $^{293}117$  and  $^{294}117$  were produced in fusion reactions between  $^{48}\text{Ca}$  and  $^{249}\text{Bk}$ . Decay chains involving 11 new nuclei were identified by means of the Dubna gas-filled recoil separator. The measured decay properties show a strong rise of stability for heavier isotopes with  $Z = 111$ , validating the concept of the long sought island of enhanced stability for superheavy nuclei.

### **Figure Caption:**

FIG. 1 (color). Observed decay chains interpreted as originating from the isotopes  $^{294}117$  (single event) and  $^{293}117$  (average of five events) of the new element  $Z = 117$ . The deduced and predicted [9] lifetimes ( $T_{1/2} = \ln 2 / \lambda$ ) and  $\alpha$ -particle energies are shown in black and blue, respectively.

### **Comments from IUPAC Report:**

JWP ASSESSMENT: A convincing case in cross reaction producing  $^{289}115$  and  $^{285}113$  from both  $^{48}\text{Ca} + ^{249}\text{Bk}$  and  $^{48}\text{Ca} + ^{243}\text{Am}$  is demonstrated in the top of the previous table. Thus, the 2010 [17, 18], 2012 [19] and 2013 [39] jointly with 2013 [21] collaborations of Oganessian et al. have met the Criteria for discovery of the elements with atomic numbers  $Z = 115$  and  $Z = 117$ .

# NEWS OF THE INTDS

Electronic (Email) INTDS 2015 Board meeting,  
1 October, 2015

## Invited:

Klaus Eberhardt, [klaus.eberhardt@uni-mainz.de](mailto:klaus.eberhardt@uni-mainz.de) (O: 2012 - 2016) Vice President  
David Gilliam, [david.gilliam@nist.gov](mailto:david.gilliam@nist.gov) (O: 2008 - ) Corresponding Secretary/Treasurer  
John Greene, [greeneg@anl.gov](mailto:greeneg@anl.gov) (O: 2012 - 2016) President/ Newsletter Editor  
Hiroo Hasebe, [hasebe@riken.jp](mailto:hasebe@riken.jp) (ED: 2012-2016)  
Ntombi Kheswa, [kheswa@tlabs.ac.za](mailto:kheswa@tlabs.ac.za) (ED: 2012-2016) INTDS16  
Birgit Kindler, [b.kindler@gsi.de](mailto:b.kindler@gsi.de) (O: 2010 - ) Recording Secretary  
Hironori Kuboki, [kuboki@post.j-parc.jp](mailto:kuboki@post.j-parc.jp) (ED: 2014-2018)  
Bettina Lommel, [b.lommel@gsi.de](mailto:b.lommel@gsi.de) (ED: 2014-2018)  
Rudolph Nchodu, [nchodu@tlabs.ac.za](mailto:nchodu@tlabs.ac.za) (INTDS16)  
Hiroki Okuno, [okuno@riken.jp](mailto:okuno@riken.jp) (INTDS14 Chair)  
Dannie Steski, [steski@bnl.gov](mailto:steski@bnl.gov) (ED: 2012-2016) (Assistant Treasurer)  
Anna Stolarz, [anna@slcj.uw.edu.pl](mailto:anna@slcj.uw.edu.pl) Past President / INTDS DataBase  
Stefan Zeisler, [zeisler@triumf.ca](mailto:zeisler@triumf.ca), (ED: 2014 - 2018)

*ED: elected director, O: officer*

## AGENDA

1. Changes/additions to the Agenda (John)
2. Minutes of the 2014 INTDS Pre-Conference Board Meeting (Birgit)
3. Minutes of the 2014 INTDS Membership Meeting (Birgit)
4. INTDS Financial and Membership Status Report (David)
5. Conferences  
Status of the 2016 Conference (Chair?), (Ntombi, Rudolph)
  - a. 1<sup>st</sup> Circular (Ntombi's email requests)
  - b. Proceedings
  - c. Financial support of attendees
  - d. Problems, and/or other issuesReport of the 2014 Conference, (Hiroki)
  - e. Proceedings/Perpetual access
  - f. Closing financial reportGeneral,
  - g. Publishing (this & future proceedings)  
Ad Hoc Comm.: Eberhardt, Okuno, Stolarz (Chair)
  - h. Updating the conference host guidelines  
Ad Hoc Comm.: Hasebe, Kindler (Chair), Kheswa
  - i. Host and site of the INTDS Conference 2018
  - j. Future Conference site suggestions
6. Review/Update INTDS By-Laws  
Ad Hoc Comm. Gilliam, Greene, Steski (Chair)
7. Election 2016 (Nom. Comm.: Kuboki, Lommel (Chair), Ziesler)
8. Status of the INTDS Newsletter (John)
9. Status of the web site (Anna)
10. INTDS Database (Anna)
11. Awards?
12. Other business
13. Closing

**The INTDS (off-Conference year) Electronic Board Meeting will commence  
October 1, 2015**

**Welcome to the Board new member(s) Hironori Kuboki and Rudolph Nchodu!**

**I want to extend a hearty Congratulation to Dr. Okuno and all the hard work  
from everyone for the successful publication of the INTDS14 Conference  
Proceedings – Well Done!**

**Here I present the Agenda.**

**Also, we will need Reports from Birgit and David, ASAP, thank you.**

**We have a lot to cover, especially for next year's Conference INTDS16 in South  
Africa and a wrap-up of last year's Conference INTDS14 in Japan.**

**In addition, you will see within the agenda the establishment of four committees,  
The Nominating Committee and three others which were briefly covered at our  
last Board Meeting in Tokyo.**

**These Committees will require extra work, and is distributed equally across the  
Board membership. The member make-up of these committees should not  
necessarily be fixed and the committees should feel free to include the Board in  
all discussions. Other members may also be sought from the INTDS general  
membership as well. Hopefully we can expect progress reports on each at the  
next Board Meeting.**

**I hope to address each of these committees individually and respectfully in  
additional further emails.**

**Questions/Comments and any changes to the Agenda should be addressed to me  
immediately! Thanks**

**John**

---

**Board Meeting joined by (ordered by date and time of email):  
John Greene, Birgit Kindler, Dannie Steski, David Gilliam, Klaus Eberhardt, Hiroki  
Okuno, Bettina Lommel, Anna Stolarz, Stefan Zeisler, Hiroo Hasebe, Hironori Kuboki,  
Ntombizonke Kheswa**

---

- 1. Changes/additions to the Agenda** (John)  
No changes or additions to the Agenda.
- 2. Minutes of the 2014 INTDS Pre-Conference Board Meeting** (Birgit)  
The minutes were presented and approved.
- 3. Minutes of the 2014 INTDS Membership Meeting** (Birgit)  
The minutes were presented and approved.
- 4. INTDS Financial and Membership Status Report** (David)  
The reports were presented and approved.

**5. Conferences**

**Status of the 2016 Conference (Chair?)** (Ntombi, Rudolph)

**a. 1st Circular (Ntombi's email requests)**

Klaus commented:

- Membership fee / budget: In 2012 we included the membership fee in the registration fee. After the conference we then transferred the money to David. This was some additional work for us but made life much easier for the treasurer and money transfer much safer since you need not carry cash back home or pay multiple transfer charges when each individual member transfers the membership fee to the INTDS account separately. You need to make a list of all participant and their corresponding payments, anyhow. We could then easily provide David also with the current listing. We collected a total of € 6.000 from sponsors and about € 22.140 as conference fee (including about € 2.400 INTDS membership fee that we transferred to the INTDS account)
- Sponsors: We approached our sponsors (private companies) and offered them acknowledgement in a way that their logo is shown e.g. in the book of abstracts, that their contribution is indicated during the opening ceremony of the conference and send them the book of abstracts free of charge. They could also provide some promotion material we packed in the conference bag. In one case a sponsor paid the registration fee and wanted only the book of abstracts but did not participate in the conference.
- 1<sup>st</sup> Circular was distributed on 23<sup>rd</sup> of December , the 2<sup>nd</sup> Circular on 19<sup>th</sup> of February 2016!

**b. Proceedings**

The local organization committee (LOC) together with the INTDS board decided end of last year to continue with the JRNC for the publication of the conference proceedings. They started the negotiations with the publishers but got an immediate refusal by JRNC.

Different possibilities were discussed within the board but Dannie summarized the dilemma.

Dannie: Given that the conference is rapidly approaching, we will have to make a decision fairly quickly.

I think that Physics Procedia by Elsevier may be a better fit for our conference.

According to their website <http://www.journals.elsevier.com/physics-procedia> "In addition to the online version there is the possibility to purchase paper copies, CD-ROMs and USB sticks."

Most Board members supported this statement so the LOC already contacted Elsevier and the matter is under review!

**c. Financial support of attendees**

- d. Problems, and/or other issues

**Report of the 2014 Conference**

(Hiroki)

**e. Proceedings/Perpetual access**

Hiroki: We will purchase 55 perpetual accesses from JRNC. The following persons will have them.

- a) Participants who cannot access to JRNC articles: 37 persons
  - b) Reviewers who cannot access to JRNC articles: 18 persons
- Nikoletta Schalbert from Akademiai Kiado Hungary will help us.

**f. Closing financial report**

Hiroki: The financial forecast was presented. Surplus of about 1,000,000 JPY will be used for making of private version of the proceeding in CD and booklet.

**Comment from Dannie:** Your closing financial report states that the Surplus of 1,000,000 YPY will be used to make private version of the proceedings. I agree that this is a good use of the surplus and would support that action. My concern is that it would violate JRNC's copyright and do we need permission from JRNC to reproduce the proceedings?

**General**

**g. Publishing (this & future proceedings)**

Ad Hoc Comm.: Eberhardt, Okuno, Stolarz (Chair). Established and currently working on these issues.

**h. Updating the conference host guidelines**

Ad Hoc Comm.: Hasebe, Kindler (Chair), Kheswa. Established and currently working on these issues.

**i. Host and site of the INTDS Conference 2018 and  
Conference site suggestions**

**j. Future**

As a possible conference site for either 2018 or 2020 Dannie proposed to approach his supervisor with the possibility for Brookhaven as a host. Additionally, the board was already approached by Abilash in Tokyo with the possibility for the IUAC for hosting the conference in New Delhi, India, in near future was discussed. From the board's records and the memories of the board's members it is not clear if already a commitment for 2018 was made.

Both possible options were discussed very lively in this board meeting and only the major points are summarized here:

In the past the INTDS tried to host the conference alternately in Europe and in the US. Since many years people from Japan and now also from India joined our conference and so Asia was added to our site continents, as is Africa this year. So from the point of alternating continents it would be about time for a conference in North America. Admittedly, the number of US members in the INTDS is dwindling but still or more than ever a conference in North America, best in the US, in near future is important.

Though several members of the board have different contacts to institutions in India it was decided that John in his function as president of the INTDS will at first contact the IUAC again asking for their intentions. If they are interested in hosting the INTDS 2018 they should present a Letter of Intent on the Board meeting in South Africa. If this is the case, Dannie will try fix hosting the INTDS conference in Brookhaven in 2020.

**6. Review/Update INTDS By-Laws**



Ad Hoc Comm. Gilliam, Greene, Steski (Chair). Established and currently working on these issues.

**7. Election 2016 (Nom. Comm.: Kuboki, Lommel (Chair), Zeisler)**

Bettina: The nomination committee finished its task to find candidates for the election 2016. We collected eleven names; we asked all at the same time by mail and waited three weeks for an answer. We re-asked all who did not answer in this time frame personally or by phone.

So, we propose Sthuthikkatt Reghu Abilash, Ntombizonke Kheswa, Paul Morral, Goedele Sibbens, Dannie Steski, Christelle Stodel and Yoshio Yamazaki as candidates for the election!

Additionally we asked Rose Boll, Hiroo Hasebe, Dominik Seiler and Anna Stolarz, all of them declined to be a candidate in 2016!

**8. Status of the INTDS Newsletter** (John)

John: I hope to be able to compile a Newsletter Edition for the end of 2015. I will do my best to get this done by the end of the year (or early into next).

**9. Status of the web site and 10. INTDS Database** (Anna)

John: The web page is run as usual; the bibliography is updated with the 27th Conference proceedings.

11. Awards?
12. Other business
13. Closing

## I.N.T.D.S. MEMBERSHIP REPORT 1 October 2015

	31 Aug. 2014	1 Oct. 2015
Regular Members	89	134
Emeritus	<u>13</u>	<u>13</u>
Total	102	147

(74 regular members have paid their dues through 2016; many who did not attend the Tokyo Conference or submit dues otherwise have been retained on the active member list; there are a large number of new members from Asia, especially from Japan.)

### Regular Membership by Continent:

East and West Europe	56	64
North American	17	19
Asian	12	45
African	1	2
Australian	2	2
South American	0	0
Middle East	1	2

Respectively submitted,

David M. Gilliam  
INTDS Corresponding Secretary/Treasurer

## **INTDS Board Elections 2018**

Dear INTDS Member,

The three positions on the INTDS Board of Directors currently held by Bettina Lommel, Hironori Kuboki and Stefan Zeisler are expiring in October 2018. The Nominating Committee Ntombizonke Kheswa, Yoshio Yamazaki and Goedele Sibbens appointed by the president of the INTDS, has the pleasure of presenting a selection of candidates to INTDS members for their consideration. The newly elected Directors will serve on the Board for a period of four years, starting October 2018.

The Nominating Committee presents the names of seven candidates (listed below), however, members are free to vote for any other INTDS Member, if the candidate agrees and can comply with the obligations of a Board Member (see by-laws at [www.intds.org](http://www.intds.org)). The written agreement signed by the candidate has to be submitted to Goedele Sibbens - chair of the nominating committee - together with the ballot. Additional candidates may also be nominated at the 2018 INTDS conference.

### **You may vote for up to three (3) candidates.**

Ballots with 'Yes' marks for **more than three names will be disregarded.**

Please bring your ballot to this year's conference in East Lansing.

If you are unable to attend the conference in East Lansing or if you prefer to submit the ballot earlier, please email your completed ballot - **arriving no later than the 4<sup>th</sup> of October 2018** - to the chairperson of the Nominating Committee (Goedele Sibbens, JRC-Geel, Retieseweg 111, B-2440 Geel, Belgium; [goedele.sibbens@ec.europa.eu](mailto:goedele.sibbens@ec.europa.eu)). If you prefer to vote by e-mail, your signature is not required. Your identification is presented by your e-mail address although a scan of the signed ballot will also be accepted.

Thank you.

Ntombizonke Kheswa, Yoshio Yamazaki and Goedele Sibbens (Chair)  
*Nominating Committee INTDS Board Elections 2018*

## **2018 INTDS Board of Directors Election Ballot**

Candidates are listed in alphabetical order (by last name).

Please mark '**Yes**' or '**No**' for each candidate. **You have up to three (3) votes**

Name (Institution, Country)	Yes	No
Nicoleta-Mihaela <b>Florea</b> (Horia Hulubei National Institute, Bucharest - Magurele, Romania)	<input type="checkbox"/>	<input type="checkbox"/>
Hironori <b>Kuboki</b> (J-PARC Center, KEK, Japan)	<input type="checkbox"/>	<input type="checkbox"/>
Bettina <b>Lommel</b> (Helmholtzzentrum für Schwerionenforschung, Darmstadt, Germany)	<input type="checkbox"/>	<input type="checkbox"/>
Paul <b>Morrall</b> (Daresbury Laboratory, United Kingdom)	<input type="checkbox"/>	<input type="checkbox"/>
Gabriel <b>Schaumann</b> (Institute for Nuclear Physics, Darmstadt, Germany)	<input type="checkbox"/>	<input type="checkbox"/>
Dorothea <b>Schumann</b> (Paul Scherrer Institute, Villigen, Switzerland)	<input type="checkbox"/>	<input type="checkbox"/>
Dannie <b>Steski</b> (Brookhaven National Laboratory, USA)	<input type="checkbox"/>	<input type="checkbox"/>
Stefan <b>Zeisler</b> (TRIUMF, Vancouver, Canada)	<input type="checkbox"/>	<input type="checkbox"/>

If you wish to vote for candidates other than those listed above,  
please write them in the table below:

**Please remember that the total number of candidates you may vote for is three (3)**

Name (Institution, Country)

**Please sign and print your name on the ballot and bring** it to the INTDS2018 at FRIB in East Lansing **or send** it by email before the 4th of October 2018 to:  
Goedele Sibbens, [goedele.sibbens@ec.europa.eu](mailto:goedele.sibbens@ec.europa.eu)

-----  
*Date, Signature*

-----  
*Name (capital letters, please)*



**Michigan State University - Facility for Rare Isotope Beams, East Lansing, USA  
2nd Announcement**

Dear Colleagues,

We are pleased to provide you more detailed information about the 29<sup>th</sup> International Conference on Nuclear Target Development, which will be hosted by and will take place at the Facility for Rare Isotope Beams, East Lansing, USA, from October 8<sup>th</sup> to October 12<sup>th</sup>, 2018.

The INTDS Conference covers the research and challenges of target development and application, being focused on the recent progress in the area

**Scientific program:**

Themes for the Conference include:

- Thin films and foils preparation techniques
- Beam charge strippers (foil, liquid, gas, plasma)
- Isotopically enriched and radioactive targets
- Liquid and gas targets
- Cryogenic and polarized targets
- Targets for high intensity beams
- Target characterization
- Targets for special applications (medical, industrial, controlled fusion)

**Conference Webpage:**

You are invited to visit the conference webpage for more detailed information:

<http://indico.fnal.gov/e/intds2018>

Feel free to contact us at [intds2018@frib.msu.edu](mailto:intds2018@frib.msu.edu) if you have any questions

**Conference Registration:**

The registration is open. Please visit <https://indico.fnal.gov/event/15835/registration> to register for the INTDS-2018.

**Conference Venue:**

The conference will be held at the [Facility for Rare Isotope Beams](#) (FRIB) located on campus of Michigan State University, East Lansing, Michigan, United States of America. FRIB is a next generation facility for rare isotope science that produces radioactive isotopes for studies in nuclear structure, fundamental interactions, nuclear astrophysics and for many other application.

**Travel to East Lansing:**

Please visit <https://indico.fnal.gov/event/15835/page/3> for detailed traveller information.

Those who need visa to arrive to the US please contact us as soon as possible at [intds2018@frib.msu.edu](mailto:intds2018@frib.msu.edu)

#### **Lodging:**

INTDS Conference 2018 offers special conference rates at the following hotels:

Kellogg Hotel and Conference Center - \$110USD/night + taxes  
219 S. Harrison Rd, East Lansing, MI 48824, USA

Residence Inn East Lansing - \$134USD/night + taxes  
2841 Hannah Blvd., East Lansing, MI 48823, USA

Price includes complimentary full hot breakfast, fitness, internet, coffee, business center, parking, evening mixer with hors d'oeuvres, beer & wine Mon-Wed, pool, grocery shopping service, electric car charging station. This hotel is also within walking distance of the laboratory.

Please visit <https://indico.fnal.gov/event/15835/page/4> to book your accommodation. This page also contains information about nearby hotels. Those who plan to arrive on Saturday, October 6<sup>th</sup> are strongly advised to make the hotel reservation in advance, since MSU has a football game that day and nearby hotels may be fully booked.

#### **Social event program/Facility tour:**

The welcome reception will be held at Wharton Centre, Sunday, October 7<sup>th</sup>, 2018. The FRIB facility tour is planning on Tuesday, October 9<sup>th</sup>, 2018. The conference dinner will take place in Detroit on the board of Detroit Princess Cruise Ship, on Wednesday, October 10<sup>th</sup>, 2018. Social event program includes visiting Henry Ford Museum or Greenfield Village at Dearborn, Michigan. Both excursion are planned on Wednesday, October 10<sup>th</sup>, 2018, prior to the conference dinner.

#### **Opportunities for Sponsors and Exhibitors**

The conference offers great opportunity for the sponsor companies to advertise and exhibit their production. Three levels of sponsorship are available: Promoter level, Distributor level and Exhibitor level  
Please visit <https://indico.fnal.gov/event/15835/page/12> for details.

#### **Financial support**

Limited financial support is available from the INTDS to persons attending the conference. A supported person must give a presentation and submit a contribution to the conference proceedings. Please be noted that:

1. Membership of INTDS is not required;
2. The selection will be made by the INTDS Board;
3. The support will not exceed \$1,200 per person and will include the registration fee.

Applicants should complete the application form available at <https://indico.fnal.gov/event/15835/page/13> and submit it to [intds2018@frib.msu.edu](mailto:intds2018@frib.msu.edu) at their earliest convenience. Please be noted that application submission deadline is July 31<sup>st</sup>, 2018

**Conference Fee:**

The registration fee for participants is \$600 for early registration and \$650 after early registration deadline. This fee includes welcome reception, conference dinner, excursion, lunch and coffee breaks served at FRIB, conference proceedings and 2-year INTDS membership

**Important Dates:**

Financial Support Application Deadline	31 July 2018
Financial Support Decision Made by INTDS Board	Mid-August 2018
Abstract Submission Deadline	30 August 2018
Author Notification Deadline	12 September 2018
Early Registration Deadline	21 September 2018
Hotel Reservation Deadline	07 September 2018
Registration Deadline	03 October 2018

**Instructions for Authors and Speakers:**

The conference format includes general talks and oral contributions selected from the abstracts submitted to the scientific committee. The abstract submission deadline is August 30<sup>th</sup>, 2018. To submit the abstract please follow the link below:

<https://indico.fnal.gov/event/15835/call-for-abstracts/>

Speakers are kindly requested to limit their talks to 15 minutes. Additional 5 minutes will be provided for questions/answers.

The manuscript must be submitted at the beginning of the conference.

**Scientific Program Committee:**

K. Eberhardt (Germany)	G. Sibbens (Belgium)
D. Giliam (USA)	D. Steski (USA)
J. Greene (USA)	C. Stodel (France)
N. Kheswa (South Africa)	A. Stolarz (Poland)
B. Kindler (Germany)	Y. Yamazaki (Japan)
H. Kuboki (Japan)	S. Zeisler (Canada)
B. Lommel (Germany)	

**Local Organizing Committee:**

F. Pellemoine (Chair)  
W. Mittig (Co-chair)  
M. Avilov  
A. McCausey  
A. Lesage

We look forward to seeing you in East Lansing!

# INTDS ELECTRONIC MAILING LIST

Powell Barber

*Florida State University, Tallahassee, USA*

*(originally submitted 24 January 2003)*

## Introduction

An electronic mailing list has been established for use by all members of the INTDS. The list allows any member to contact all subscribers using a single e-mail address - ***intds@lists.fsu.edu*** - facilitating discussion among members. Subscription is limited to INTDS members and select others with board approval. The list is served by Florida State University Information Technology Services and administered by Powell Barber.

## Privacy Issues

Subscription to the list requires administrator approval. All INTDS members listed in the conference materials will be automatically approved upon receipt of a subscription request. Subscription requests from those unknown to the administrator will be submitted to the board for approval. Only subscribers may post to the list.

Messages of the list are archived and available for viewing by any html client software. The archives are not restricted to INTDS members and may be viewed by anyone. The mailing list software strips e-mail addresses from header information prior to posting to the archives. However, e-mail addresses imbedded in the text are not stripped. Those concerned about this should avoid using signature files or including e-mail address information in the body of the message.

## How to Subscribe

Subscription and account management may be accomplished through either web or e-mail interfaces, or by contacting the administrator directly. For the web interface, simply access ***http://lists.fsu.edu/mailman/listinfo/intds*** with any forms capable web browser. A link from the INTDS home page, ***http://www.intds.org*** is available. Simple instructions are given that allow one to access the archives, subscribe, unsubscribe, and edit account options.

Alternatively, one may request information on the e-mail interface by sending e-mail to ***intds-request@lists.fsu.edu*** and including the word ***help*** in the subject line. This may be done prior to subscription.

While the web interface is certainly the easiest way to subscribe and manage your account, any request may also be processed through the administrator by sending e-mail to ***pbarber@fsu.edu***

## Technical Details

The mailing list server is maintained by Florida State University's Information Technology Services, which are located in Innovation Park, Tallahassee, FL, USA. The server software is Mailman, the GNU Mailing List Manager. Additional information on this software is available from ***http://www.list.org/***.



# OTHER TARGET NEWS

## THE FRANK KARASEK MEMORIAL SCHOLARSHIP

John P. Greene

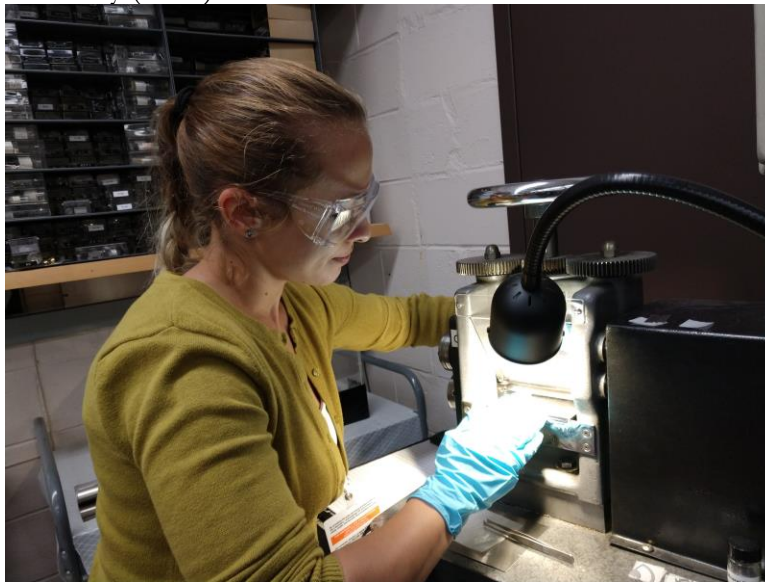
*Argonne National Laboratory, 9700 S. Cass Ave., Argonne, IL 60439 USA*

Andreea Mitu

*Horia Hulubei National Institute for Physics and Nuclear Engineering, Romania*

The Frank Karasek Memorial Scholarship Fund was established by the International Nuclear Target Development Society (INTDS) in 1996 in recognition of Frank's enormous contributions to the production of thin metal foils by the method of rolling. This fund is designated for the support of researchers engaged in target foil rolling.

Frank's prodigious work is well known throughout the world [1, 2]. The large rolling mills he used at Argonne National Laboratory (ANL) are still in use in the Material Science Division.



*Photograph of Andreea Mitu at the rolling Zr-96 at ANL.*

As stated, the disbursement of these funds was to further the art of rolling foil targets by instructing colleagues who might not otherwise have the opportunity to experience the techniques employed. The scholarships are awarded to researchers from other laboratories involved in target making for nuclear physics research [see 3, 4]. This support to researchers engaged in foil rolling for target preparation should be continued and encouraged wherever and whenever possible.

- [1] Frank J. Karasek, Proc. Of the Seminar on the Preparation and Standardisation of Isotopic Targets and Foils, Harwell, England, **AERE-R 5097** (1965) p.111
- [2] F. J. Karasek, Nucl. Instr. and Meth. **102** (1972) 457-458
- [3] John P. Greene, George E. Thomas and Massimo Loriggiola, INTDS Newsletter **Vol. 27, No. 1** (2000) p.3
- [4] John P. Greene and Janette Campbell, INTDS Newsletter **Vol. 31, No. 2** (2004) p.9