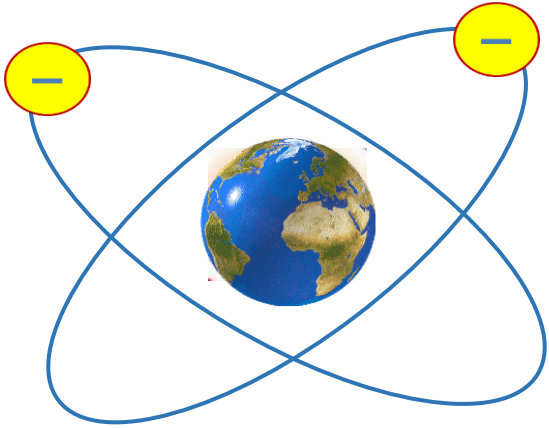


# 7th International symposium NIBS'20 Online

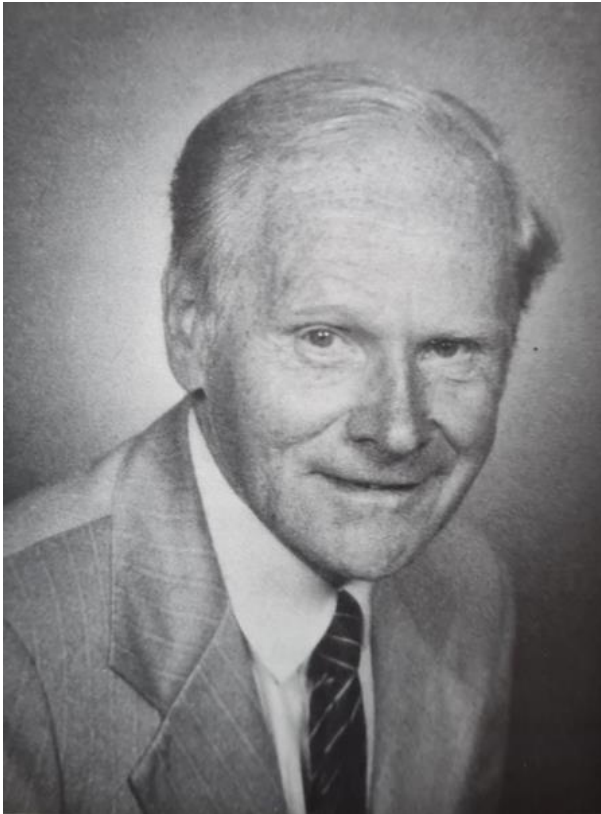


Joint event: **BINP**, UKRI-STFC, **Doshisha University**, NIFS, **QST**, D-Pace, **IPP**, SNS, **LANL**,  
LAPLACE, **IPR**, University of Auckland

**168 delegates from 16 countries, 64 reports**

# NIBS Hystory

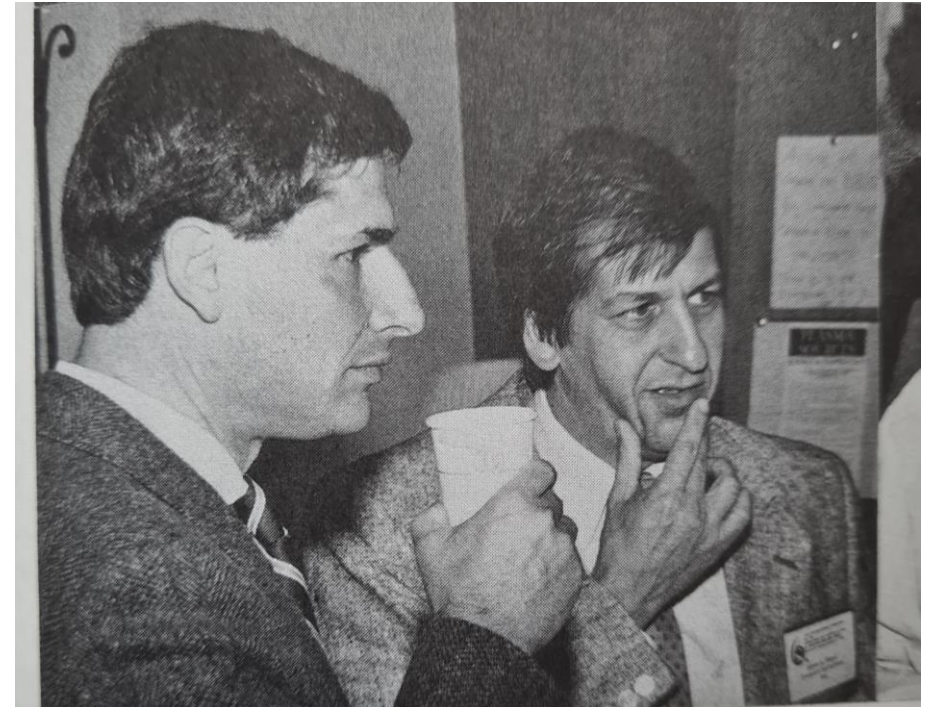
**First** International Symposium on the **P**roduction and **N**eutralization of **N**egative **I**ons and **B**eams (**PNNIB**),  
Brookhaven National Laboratory, Upton, NY, September 1977 (50 participants, 42 papers)



**Teodorus J. Sluyters**  
First Chairman  
of PNNIB Symposiums



**Krsto Prelec**  
First Co-Chairman  
of PNNIB Symposiums



**Ady Hershcovitch**

**James Alessi**

**BNL Team for first PNNIB Symposiums**

# NIBS Hystory

1st **PNNIB**, Brookhaven, Upton, NY, September 1977

2nd **PNNIB**, Brookhaven, Upton, NY, October 1980

3rd **PNNIB**, Brookhaven, Upton, NY, September 1983

4th **PNNIB**, Brookhaven, Upton, NY, October 1986

5th **PNNIB**, Brookhaven, Upton, NY, November 1989

6th **PNNIB**, Brookhaven, Upton, NY, November 1992

7th **PNNIB** + 6th **Eu Workshop**, Brookhaven, October 1995

8th **PNNIB** + 6th **Eu Workshop** Joint meeting , Brookhaven, 1997

9th **PNNIB**, Gif-sur-Ivette, France, May 2002

10th **PNNIB**, Kiev, Ukraine, September 2004

11th **PNNIB**, Brookhaven, Santa-Fe, NM, September 2006



“The SDI (Strategic Defense Initiative - "Star Wars") was interested in intense long-pulse H<sub>-</sub> sources...” (by C.Schmidt, FNAL).



# The world-wide known researchers made the essential Income to NIBS science

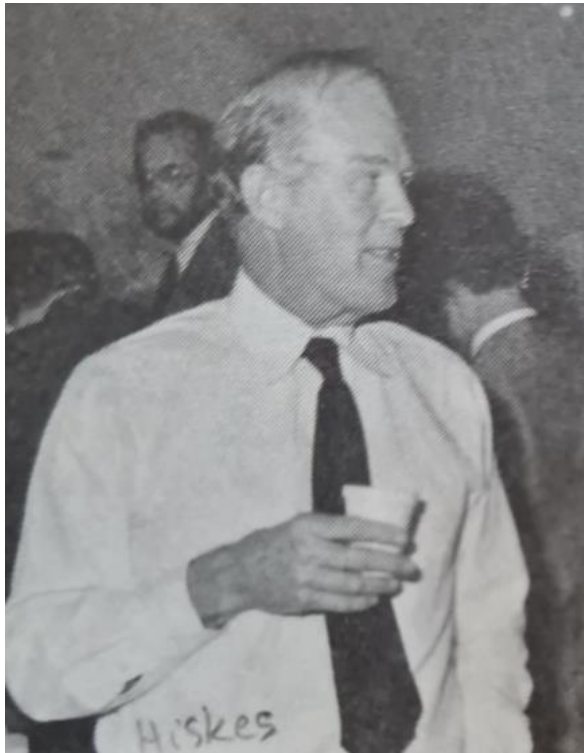
Allison, P....171,178,184,373

Bacal, M....90,95,270,365

Ehlers, K.W....65,198,207,373,385

Hiskes, J.R....15,74,365

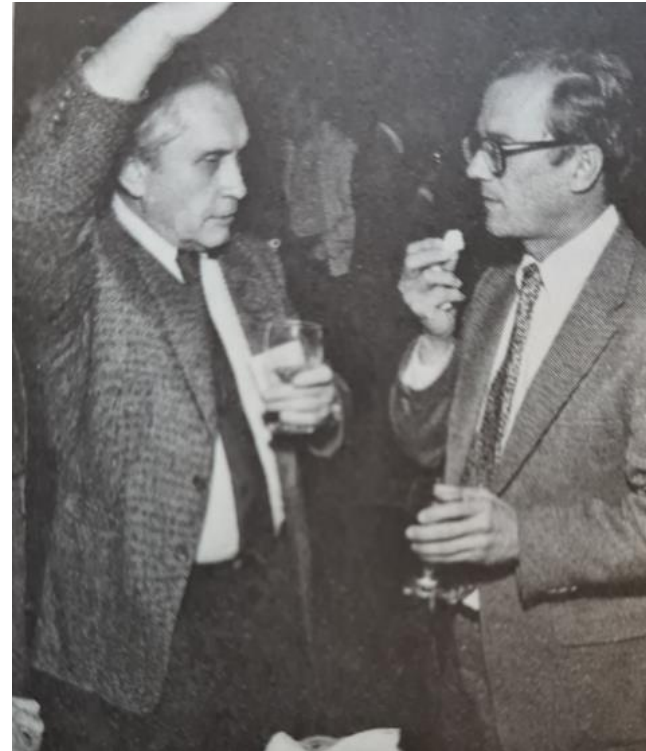
Leung, K.N....65,198,207



**John Hiskes**



**Ken Ehlers**



**Milos Seidl and Paul Allison**



**Marthe Bacal**

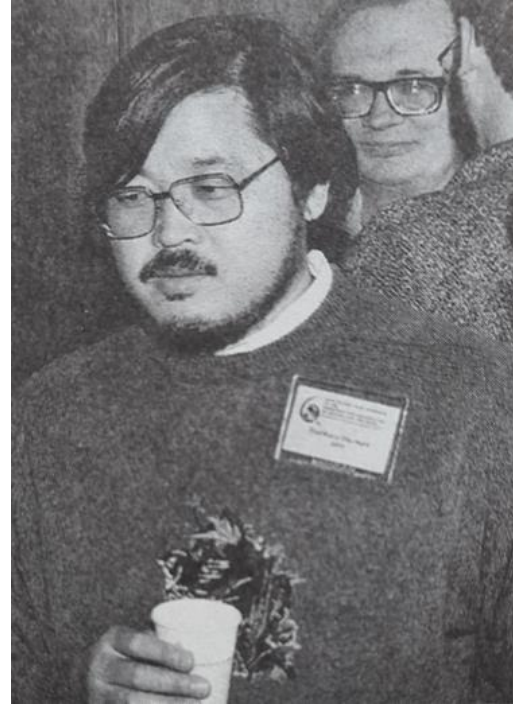
# The world-wide known researchers made the essential Income to NIBS science and technology



**Gennady I. Dimov**



**Ka-Ngo Leung**



**Yoshikazu Okumura**



**Vadim Dudnikov**



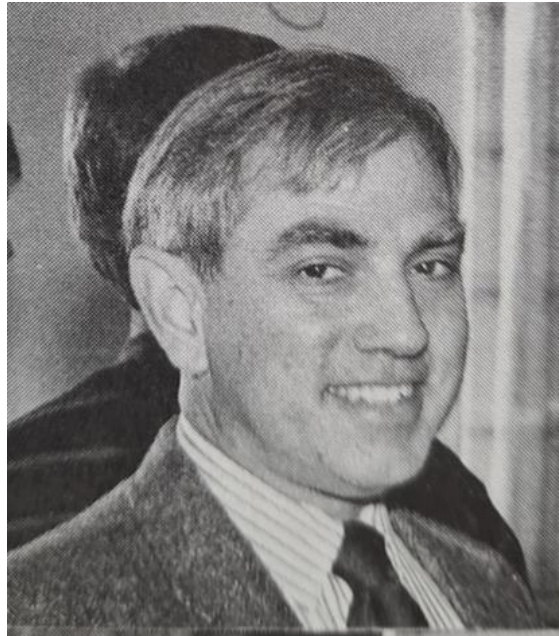
# The world-wide known researchers made the essential Income to NIBS and PNNIB science and technology



**Andrew Holmes**



**Igor Soloshenko**



**Chuck Schmidt**



**Jens Peters**



**Motoi Wada**

**You may add more to the NIBS Honour List !!**



# Modern Era of NIBS Symposiums

Japan and Europe builds up  
the Giant N-NBI sources for fusion



**2008 - NIBS at Aix-en Provence, France** 66 oral reports

**1st NIBS Chairs**



**R. Hemsworth (ITER)**



**A. Simonin (CEA)**





# Modern Era of NIBS Symposiums

2008 1st NIBS Aix-en Provence, France	2010 2nd NIBS, Takayama City, Japan	2012 3rd NIBS, Jyväskylä, Finland
2014 4th NIBS, IPP Garching, Germany	2016 5th NIBS Oxford, UK	2018 6th NIBS Novosibirsk, RF

## Modern Era NIBS Chairs:



**Yasuhiko Takeiri**



**Olli Tarvainen**



**Werner Klaus**

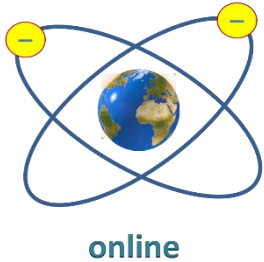


**Dan Faircloth**



# NIBS'20 Online Timetable

NIBS 2020



**The event NIBS2020 Timezone at Indico is Universal (UTC)**  
**You can tie the Indico Timetable with your local time**

## Sessions Timezones:

- Asia + NZ (7 sessions in day and evening time) – **90** registered participants
- Europe (6 sessions in day and evening time) – **56** registered participants
- America (4 sessions in day and evening time) – **23** registered participants

- **Presentations and posters** will be posted to the NIBS2020 site
- **Posters discussions** will be performed at new platform developed by UKRI-STFC to replicate a normal real poster session. Please upload your posters to the Poster session site
- **All oral sessions** will be recorded and will be available at the Google Disk
- **Links to ALL NIBS'20 sessions** will be available at NIBS2020 site and doubled by e-mails
- **The Contributions** will be published at AIP Conference proceedings. **Be ready to be a peer-reviewer!**

**All the best for NIBS'20 Online !**

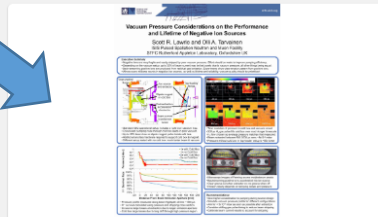
# Poster session page



GALLERY

+ UPLOAD

Posters



UKRI/STFC/RAL/ISIS

Networking

Network with the delegates by joining the room

JOIN

Technical Assistance

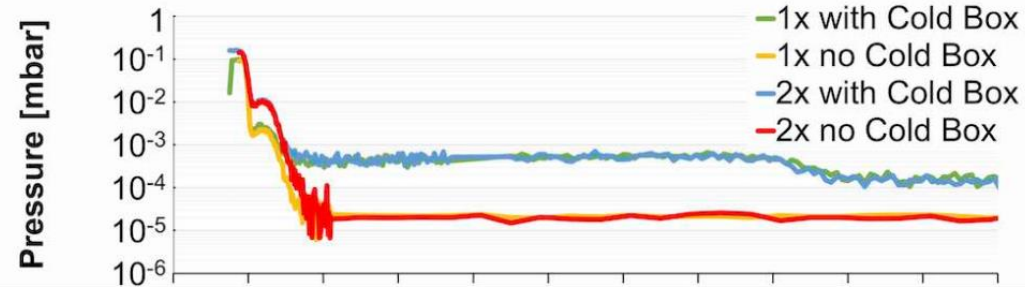
If you need any technical assistance please get in touch or visit our help centre.

? HELP CENTRE

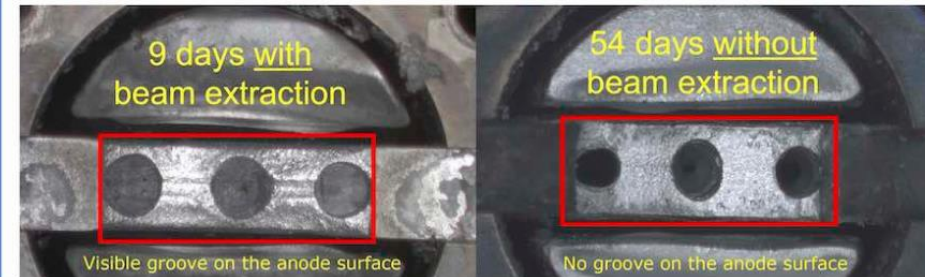


# Poster session page

- Up to 40% beam loss on dipole magnet poles inside cold box.
- Additional ancillary hardware required to support cold box & magnet.
- Different setup tested with no cold box: much better beam & vacuum.



- $H_2$  flow chosen so average pressure matches that measured
- Beam extracted between 500-2000  $\mu s$  sees  $\sim 5 \times 10^{-4}$  mbar
- Pressure without cold box in 'top-loader' setup is  $\sim 50\times$  lower



Ask

Ask a question



Name

Optional

Submit

Q&A

Dear Scott, Did you take into account the effect of gas flow blocking by dense plasma during the pulse? We measured this exactly, so the real pressure DURING the plasma and negative ion extraction could be several times lower than without plasma.

Excellent point Yuri! No we had not considered the plasma influence on the pressure yet. In the past, we have measured the temporal pressure evolution with a fast gauge, but not with plasma enabled. Based on your advice, I will repeat the pressure measurement with plasma active. Thanks for the advice!

Yuri Belchenko

