

THE 14<sup>TH</sup> ADAS WORKSHOP  
4-7 October 2009  
Ringberg Castle

AGENDA

*Adjustments may be made to the agenda at the commencement of the meeting*

Sun. 4 Oct.

19.30 Evening meal

Mon 5. Oct.

08.50-09.00 Adjustments and ratification of the agenda

*1st session:* Updates from across the world  
09.00-10.30 Chairman: K-D Zastrow

Y. Zou (20min)	SuperEBIT studies at Fudan University, China
Z. Rudzikas (20min)	Complex many-electron highly charged ions studies at ITPA, Vilnius, Lithuania
N. Brooks (20min)	Charge exchange spectroscopy in the EUV using digital lock-in techniques
K. Ikeda (20 min)	Beam emission measurements of hydrogen discharge with carbon pellet injection in LHD
B. Braams (10min)	News from the A&M Data Unit, IAEA, Vienna

*Discussion:*

10.30 Coffee

*2nd session:* Lifting the fundamental atomic database I (ions and molecules)  
11.00-12.15 Chairman: K. H. Behringer

L. Errea (15 mins)	Methods and calculations of single electron capture and nuclear exchange in $H^+ + H_2$ collisions from high to low energies
K. Igenbergs (15min)	Atomic orbital close-coupling calculations of CXRS relevant cross-sections
L. Mendez (15 min)	Low energy charge exchange of hydrogen with partially stripped ions
I. Schneider (15min)	Dissociative recombination and competitive processes: application to $NO^+$ , $CO^+$ and $H_2^+$ and isotopes
F. Guzman (15min)	Charge exchange cross-sections for H with $B^{+5}$ and other fully stripped ions and applications

*Discussion:*

12.30 Lunch

*3rd session:* Atomic physics and fusion plasma models  
13.45-14.35 Chairman: J. Stober

D. Reiter (15min)	Atomic data and computational models of fusion plasma
M. Kraus (15min)	Interfacing ADAS data to NUBEAM and TRANSP
D. Tskhakaya (10min)	Need for atomic and molecular data for kinetic modelling of the plasma edge

D. Borodin (10min) Simulation of Be light emission at PISCES B:  
tracking of metastable states

*Discussion:*

*4th session:* Atomic physics and astrophysical studies  
14.45-15.30 Chairman: E. Biémont

R. Smith (15min) High-resolution X-ray calorimetric detection  
G. Doyle (15min) Spectral signatures of dynamical plasmas  
A. Giunta (15min) Generalised CR modelling, contribution  
functions and solar spectra

*Discussion:*

15.30 Coffee

*5th session:* Reports from the Laboratories  
16.00-17.10 Chairman: A. Pospieszczyk

A. Kukushkin (15min) ITER update on atomic data and model  
requirements  
A. Kendl(15min) Electron-molecule and ion-surface experiments  
at the University of Innsbruck  
D. Kilbane (10min) Development of EUV lithographic sources at UCD  
M. Song (10min) A review of the atomic and molecular research at  
the National Fusion Research Institute, Korea  
B. den Hartog (10min) CHERS and MSE at Madison, Wisconsin  
J. Wyart (10min) Atomic data for plasma modelling at Aimé  
Cotton Laboratory

*Discussion:*

17.15-18.15 ADAS Steering Committee Meeting

18.30 Evening meal

Tue. 6 Oct.

*1st session:* Lifting the fundamental atomic database II (electron data)  
8.55-10.30 Chairman: Y Zou

A. Mueller (15min) Reference ionization and recombination cross-  
section measurements  
E. Biémont (15min) Atomic structure investigations of heavy atoms  
and ions  
C. Biedermann (15 min) Spectroscopy of highly charge ions with EBIT  
N. Badnell (15 min) Electron impact cross-section calculation update  
C. Ramsbottom (15min) Cross-section calculations with R-matrix II  
V. Stancalie (10 min) Progress report on atomic data calculations at  
INFLPR, Romania  
R. Kisielius (10 min) Modified relativistic approach for atomic data  
calculation

*Discussion*

10.30 Coffee

2nd session: Atomic physics and fusion plasma diagnostics  
11.00-12.15 Chairman: M von Hellermann

D. Dodt (15 mins)	Status of lithium beam analysis at JET and AUG
A. Pospieszczyk (15 mins)	Determination of Tungsten Fluxes from W I- and W II-lines
D. Wunderlich/U. Fantz (15 mins)	Progress of CR modelling for molecules relevant to fusion
N. Conway (15 mins)	CXRS and MSE update from MAST
M. Reinke (15min)	Spectroscopy, transport and radiation modelling at Alcator C-mod

*Discussion:*

12.30 Lunch

3rd session In the ADAS and ADAS-EU pipelines  
14.00 – 15.15 Chairman: N. Badnell

H. Summers (15 min)	Some scientific issues in ADAS developments
C. Ballance (15 min)	Relativistic electron impact cross-section calculations
A. Foster (15min)	Completing the heavy species modelling - ionisation
C. Nicholas (15 min)	Integrated spectral analysis and fitting
F. Guzman (15min)	Molecular data and ADAS

*Discussion:*

15.30 Coffee

4th session: ADAS summary and status report  
16.00-17.00 Chairman: R. Guirlet

A. Whiteford (20 min)	ADAS operation, visits, current release, corrections & recommendations
M. G. O'Mullane (20 min)	Critical review of ADAS
Summers/O'Mullane/Whiteford (20 min)	General discussion*, summary and closing

*\*General Discussion to include:* grumbles, complaints & wish lists reasonable & unreasonable, forward plans for 2010, joint work, publications- fielded by Martin O'Mullane, Allan Whiteford and Hugh Summers.

17.15-18.15 ADAS-EU Governance Committee Meeting

18.30 Evening meal

Wed. 7 Oct. (am) Departure

Hugh Summers / Thomas Puetterich  
1 Oct 2009