

Classical Novae in the Cosmos program

Saturday, July 5th

9:00-9:35am Chris Wrede, MSU/NSCL, Welcome, and Introduction to classical novae

9:35-10:10am Alex Murphy, University of Edinburgh, Overview of ^{18}F production in novae

10:10-10:45am Antonino Di Leva, Universita di Napoli/INFN, Underground study of the $^{17}\text{O}(p, \gamma)^{18}\text{F}$ reaction relevant for explosive hydrogen burning

10:45-11:00am COFFEE

11:00-11:35am Alan Chen, McMaster University, Overview of recent work on the $^{25}\text{Al}(p, \gamma)^{26}\text{Si}$ reaction rate

11:35am-12:05pm Sutirtha Sengupta, Argelander Institute fur Astronomie, A nova re-accretion model for J-type stars

12:05-1:00pm LUNCH @ ATOMKI

1:00-2:00pm Tour of ATOMKI

2:00-2:30pm Chris Wrede, MSU/NSCL, Overview of the $^{30}\text{P}(p, \gamma)^{31}\text{S}$ reaction in novae

2:30-3:00pm Dan Doherty, University of Edinburgh, Gamma-ray spectroscopy measurements of ^{31}S for the $^{30}\text{P}(p, \gamma)^{31}\text{S}$ reaction in ONe novae

3:00-3:30pm Anu Kankainen, University of Edinburgh, $^{30}\text{P}(d, n)^{31}\text{S}$ as a surrogate for key astrophysical resonances in nova nucleosynthesis

3:30-3:45pm COFFEE

3:45-4:15pm Chris Wrede, MSU/NSCL, Re-examination of Yale $^{31}\text{P}(^3\text{He}, t)^{31}\text{S}$ spectra in light of new data and relation to the $^{30}\text{P}(p, \gamma)^{31}\text{S}$ reaction in novae

4:15-4:45pm Alan Chen, McMaster University, Level structure of ^{31}S from (d, t) and (p, d) transfer reactions

4:45-5:15pm Antti Saastamoinen, TAMU, Studies of excited states of ^{31}S via beta-decay of ^{31}Cl for $^{30}\text{P}(p, \gamma)^{31}\text{S}$ in ONe novae

5:15-5:45pm Michael Bennett, MSU/NSCL, ^{31}Cl Beta Decay and the $^{30}\text{P}(p, \gamma)^{31}\text{S}$ Reaction Rate

5:45-8:00pm DINNER & World Cup game @ local restaurant

Sunday, July 6th

9:00-9:30am Werner Richter, iThemba, Shell-model studies of the astrophysical rp-reaction $^{30}\text{P}(p, \gamma)^{31}\text{S}$

9:30-10:00am Mouna Bouhelal, University of Tebessa, Shell-model study of ^{31}S at excitations of interest for the thermonuclear $^{30}\text{P}(p, \gamma)^{31}\text{S}$ reaction rate

10:00-10:30am Richard Longland, NCSU, Monte Carlo Uncertainty Estimates for Reaction Rates

10:30-10:45am COFFEE

10:45-Noon Group discussion of $^{30}\text{P}(p, \gamma)^{31}\text{S}$ reaction-rate parameters and uncertainties

Noon-1:00pm LUNCH @ ATOMKI

END

Practical details:

Information about the venue, ATOMKI, can be found at the following URL:

<http://www.atomki.hu/nic2014school/venue.html>

(The link is to the NIC School website, describing a separate event on different dates, but most of the details are identical for our workshop.)

Please try to arrive early on Saturday morning so we can start on time.

Allotted time for talks about $^{30}\text{P}(p, \gamma)^{31}\text{S}$ includes 10 minutes for questions and discussion. Allotted time for other talks includes 5 minutes for questions and discussion.

Lunches and coffee breaks will be provided by ATOMKI. Dinner on Saturday will likely have to be covered by the individual participants (~10 Euros), but a group reservation will be made by the local organizing committee.

$^{30}\text{P}(p, \gamma)^{31}\text{S}$ reaction-rate evaluation in EPJ Plus:

Results of our group $^{30}\text{P}(p, \gamma)^{31}\text{S}$ reaction-rate evaluation will be published in a special issue of European Physical Journal Plus containing 5 articles. Proposed working groups include: in-beam gamma-ray spectroscopy experiments, charged-particle reaction experiments, ^{31}Cl beta-decay experiments, nuclear theory, and overall evaluation of the $^{30}\text{P}(p, \gamma)^{31}\text{S}$ reaction rate and uncertainty. Interested participants are encouraged to self-organize into working groups and also to include those who were not able attend the workshop. The deadline for submissions will be in November 2014.

Organizing Committee:

Zoltan Halasz (ATOMKI, local committee)

Robert Hohol (Diamond Congress Ltd., local committee)

Jordi Jose (Barcelona, scientific committee)

Fred Walter (Stony Brook, scientific committee)

Phil Woods (Edinburgh, scientific committee)

Chris Wrede (MSU/NSCL, chair)

Participants:

Alexander Arzhanov (TU Darmstadt)

Chiara Battistini (Lund)

Michael Bennett (MSU/NSCL)

Andreas Best (INFN, LNGS)

Matthew Buckner (UNC)

Mouna Bouhelal (University of Tebessa)

Alan Chen (McMaster University)

Alain Coc (Orsay)

Antonino Di Leva (Napoli/INFN)

Dan Doherty (Edinburgh)

Jennifer Fallis (TRIUMF)

Samuel Giuliani (TU Darmstadt)

Anu Kankainen (Edinburgh)

Richard Longland (NCSU)

Elvijs Matrozis (Bonn)

Brad Meyer (Clemson)

Alex Murphy (Edinburgh)

Jonas Refsgaard (Aarhus)

Werner Richter (iThemba)

Francois de Oliveira (GANIL)

Antti Saastamoinen (TAMU)

Sutirtha Sengupta (Argelander Institute fur Astronomie)

Andre Sieverding (TU Darmstadt)

Phil Woods (Edinburgh)

Chris Wrede (MSU/NSCL)

Yu Yamamoto (Waseda)