

# KYUNGYUK CHAE

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Department of Physics  
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last updated on  
March 13, 2018

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## EXPERIENCE

- **Guest Associate Professor**, Department of Physics, University of Notre Dame Jan. 2018-Present
- **Associate Professor**, Department of Physics, Sungkyunkwan University Mar. 2016-Present
- **Assistant Professor**, Department of Physics, Sungkyunkwan University Mar. 2012-Feb. 2016
- **Research Scientist**, Oak Ridge National Laboratory Jan. 2011-Dec. 2011
- **Postdoctoral Research Associate**, Oak Ridge National Laboratory Sep. 2009-Dec. 2010
- **Postdoctoral Research Associate**, University of Tennessee at Knoxville Jan. 2007-Aug. 2009
- **Research Assistant**, Oak Ridge National Laboratory Aug. 2003-Dec. 2006
- **Research Assistant**, University of Tennessee at Knoxville Jan. 2002-Jul. 2003
- **Military Service**, Ministry of National Defense, Republic of Korea Jan. 1996-Mar. 1998

## EDUCATION

- **University of Tennessee at Knoxville**, TN 37996, USA Aug. 2001-Dec. 2006  
**Ph.D. in Physics**, December 2006 GPA: 3.77  
Dissertation: “Interference effects among  $J^\pi=3/2^+$  resonances in  $^{19}\text{Ne}$  system & Searching for resonances in the unbound  $^6\text{Be}$  nucleus”  
Advisor: Prof. Michael Guidry
- **Sogang University**, Seoul, South Korea Mar. 1994-Feb. 2000  
**B.S. in Physics (major), Mathematics (minor)**, February 2000

## GRANTS

- **PI**, LG Yonam Foundation, 40,000 USD Jan. 2018-Present  
“Developing transfer reaction measurement technique using heavy ion beams”
- **PI**, Ministry of Science, 100,000,000 KRW Jan. 2017-Present  
“Detailed design and commissioning of KOBRA detector systems”

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- **Participating Researcher**, Ministry of Science, 8,600,000,000 KRW July. 2016-Present  
“Center for High Energy Astrophysics”
- **PI**, Ministry of Science, 90,000,000 KRW Mar. 2016-Present  
“Study of the  $\alpha$ -cluster structure of radionuclide  $^{22}\text{Mg}$ ”
- **PI**, Ministry of Education, 154,440,000 KRW Nov. 2015-Present  
“Nuclear astrophysics study using position sensitive ionization chamber”
- **Participating Researcher**, Ministry of Science, 25,000,000 KRW Dec. 2016-Sep. 2017  
“Study of identifying topics in nuclear astrophysics using KOBRA”
- **PI**, Ministry of Science, 150,000,000 KRW Jan. 2016-Dec. 2016  
“Designing and constructing detector systems for KOBRA”
- **PI**, Ministry of Education, 396,000,000 KRW Sep. 2014-Aug. 2017  
“Study of astrophysically important energy levels in Mg isotopes”
- **PI**, Ministry of Science, 30,000,000 KRW June 2014-May 2015  
“Commissioning of portable ion counter using MC-50 proton beams”
- **PI**, Ministry of Science, 100,000,000 KRW Aug. 2013-Feb. 2014  
“Detailed design of focal plane detection system and Gamma-array for Recoil spectrometer”
- **Participating Researcher**, Ministry of Education, 60,000,000 KRW Oct. 2012-Apr. 2013  
“Research on the Creation of New National Industry Using High Energy Particle Accelerator Technology”
- **Participating Researcher**, IBS, 550,000,000 KRW Oct. 2012-Apr. 2013  
“Detailed Design of Sub-system for Detectors and Experimental Equipments”
- **PI**, Ministry of Education, 153,270,000 KRW Sep. 2012-Aug. 2015  
“Research on Nuclear Astrophysics and Structure using Heavy Ion Beams”
- **PI**, Sungkyunkwan University, 15,000,000 KRW July 2012-June 2013  
“Nuclear reaction evaluation for astrophysical phenomenon”
- **PI**, Ministry of Education, 60,000,000 KRW June 2012-May 2014  
“Developing portable fast ionization chamber”

## AWARDS

- Best Presentation Award  
“Constraining the spins of energy levels in  $^{21}\text{Na}$  nucleus through the  $^{24}\text{Mg}(p,\alpha)^{21}\text{Na}$  reaction”  
Korean Physical Society (2015).
- Director’s award for outstanding team accomplishment in Science and Technology,  
Oak Ridge National Laboratory (2010).
- Outstanding team accomplishment in Scientific Research, Oak Ridge National Laboratory (2010).

## TEACHING EXPERIENCE

- **Associate Professor**, Sungkyunkwan University Mar. 2016-Present  
Nuclear Physics: Fall 2016, Fall 2017  
General Physics I: Spring 2016, Spring 2017

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Graduate students mentored: Minsik Kwag, Soomi Cha, Eunji Lee, Jaeha Lee, Minju Kim, Duhyun Kim, Kim Uyen Nguyen

Undergraduage students mentored: Duhyun Kim, Minhyeok Kang

Post-scholars mentored: Aram Kim, Nguyen Ngoc Duy, Sangin Bak

- **Assistant Professor**, Sungkyunkwan University Mar. 2012-Feb. 2016  
Nuclear Astrophysics I: Spring 2015  
Nuclear Astrophysics II: Fall 2015  
Nuclear Physics: Fall 2012, Fall 2013, Fall 2014, Fall 2015  
General Physics I: Spring 2012, Spring 2013, Spring 2014, Spring 2015  
Graduate students mentored: Minsik Kwag, Soomi Cha, Eunji Lee, Jaeha Lee  
Undergraduage students mentored: Minsik Kwag, Soomi Cha, Eunji Lee, Jaeha Lee, Minju Kim, Duhyun Kim  
Post-scholars mentored: Aram Kim

## WORKSHOPS

- Origin of Matter and Evolution of Galaxies (OMEG 2017) June 2017  
Daejeon, Korea  
Organizing Committee
- SKKU mini workshop Oct. 11, 2016  
Suwon, Korea  
Chair
- The 2nd Sicily-East Asia Workshop on Low-energy Nuclear Physics June 2016  
the University of Tokyo, Japan  
Chair
- SKKU International Symposium on Recent Progress in Physics Novemver 2014  
Suwon, Korea  
Scientific Secretary
- SKKU Symposium on Astrophysics and Cosmology: from Particle to Universe December 2013  
Suwon, Korea  
Organizing Committee
- Workshop on experimental nuclear studies using RIBs October 2013  
Suwon, Korea  
Organizing Committee
- SKKU Symposium on Astrophysics and Cosmology: from Particle to Universe August 2012  
Suwon, Korea  
Organizing Committee

## LANGUAGES

- Korean: native language
- English: fluent

## CITIZENSHIP: REPUBLIC OF KOREA (SOUTH KOREA)

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## INVITED TALKS

- “Nuclear Astrophysics Experiments using KOBRA”  
**K.Y. Chae**  
Accelerator Science Department Seminar  
Korea University, Sejong, Korea, December 13, 2017
- “Understanding Explosive Stellar Events using Rare Isotope Beams: Experimental Nuclear Astrophysics”  
**K.Y. Chae**  
2017 Korean Astronomical Society Fall Meeting  
Expo Convention Center, Yeosu, Korea, October 13, 2017
- “The  $^{26g}\text{Al}(p,\gamma)^{27}\text{Si}$  reaction rate for astrophysical implication”  
**K.Y. Chae**  
2017 2nd CHEA Workshop  
UNIST, Ulsan, Korea, April 7, 2017
- “The  $^{18}\text{Ne}(\alpha,\alpha)^{18}\text{Ne}$  reaction measurement for the astrophysical  $^{18}\text{Ne}(\alpha,p)^{21}\text{Na}$  reaction rate”  
**K.Y. Chae**  
2017 1st CHEA Workshop  
Haeundae Grand Hotel, Busan, Korea, January 17, 2017
- “Nuclear astrophysics: the origin of chemical elements”  
**K.Y. Chae**  
Physics Department Colloquium  
UNIST, Ulsan, Korea, November 23, 2016
- “Measurement of the  $^{18}\text{Ne}+\alpha$  system for the  $\alpha$ -cluster structure in  $^{22}\text{Mg}$ ”  
**K.Y. Chae**  
2016 IBS Annual Meeting (2016)  
Daejeon, Korea, November 17-18, 2016
- “Low-energy nuclear physics measurements at KOBRA”  
**K.Y. Chae**  
2nd Sicily-East Asia Workshop (2016)  
RIKEN, Japan, June 26-29, 2016
- “Study of a cluster structure in  $^{22}\text{Mg}$ : Actually, the  $^{22}\text{Ne}+\alpha$  system!”  
**K.Y. Chae**  
2nd Studies on Rare Isotope based Nuclear Physics (2016)  
Korea Aerospace University, Goyang, Korea, April 8, 2016
- “Proposals of the day-1 experiments at KOBRA”  
**K.Y. Chae**  
Japan-Korea Joint Session of the 71th JPS Annual Meeting  
Tohoku Gakuin University, Sendai, Japan, March 19-22, 2016
- “The Separator for Capture Reaction, SECAR”  
**K.Y. Chae**  
1st Studies on Rare Isotope based Nuclear Physics (2016)  
Ewha Womans University, Seoul, Korea, January 7, 2016
- “The astrophysical  $^{26g}\text{Al}(p,\gamma)^{27}\text{Si}$  destruction rate”  
**K.Y. Chae**

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Frontiers of Physics

The Ocean Resort, Yeosu, Korea, December 20-23, 2015

- “Supersonic gas jet target system for low energy nuclear physics experiments”  
**K.Y. Chae**  
KOBRA workshop  
RISP, Daejeon, Korea, November 21, 2015
- “The greatest alchemist in the Universe”  
**K.Y. Chae**  
Physics Department Colloquium  
Korea University, Seoul, Korea, November 3, 2015
- “Explosive Stars: the Alchemist”  
**K.Y. Chae**  
Physics Department Colloquium  
Kyungpook National University, Daegu, Korea, October 15, 2015
- “Possible day-1 experiment at KOBRA”  
**K.Y. Chae**  
KOBRA workshop  
RISP, Daejeon, Korea, August 13-14, 2015
- “Constraint of the astrophysical  $^{26g}\text{Al}(p,\gamma)^{27}\text{Si}$  destruction rate”  
**K.Y. Chae**  
Nuclear-Astrophysics: Theory and Experiments  
APCTP, Pohang, Korea, July 17-18, 2015
- “Low energy facility of RAON and supersonic gas jet target”  
**K.Y. Chae**  
Joint US-Korea Exploratory Workshop on Opportunities for Collaboration in Nuclear Science  
Facility for Rare Isotope Beams, East Lansing, USA, May 14-15, 2015
- “Instruments for scientific researches at NSCL”  
**K.Y. Chae**  
2nd Studies on Rare Isotope based Nuclear Physics (2015)  
Chung-Ang University, Seoul, Korea, February 26, 2015
- “International Collaborations for Low Energy Experiments at RAON”  
**K.Y. Chae**  
1st Studies on Rare Isotope based Nuclear Physics (2015)  
Yonsei University, Seoul, Korea, January 9, 2015
- “Transfer reaction studies on  $^{24}\text{Mg}$  for astrophysical implications”  
**K.Y. Chae**  
Korean Physical Society 2014 Fall Meeting, Pioneering Symposium  
Kim Dae Jung Convention Center, Gwangju, Korea, October 22-24, 2014
- “Transfer reaction studies on  $^{24}\text{Mg}$ ”  
**K.Y. Chae**  
18th Workshop on Astro-Nuclear Physics  
Soongsil University, Seoul, Korea, August 18-20, 2014
- “Radioactive Ion Beam Facility in Korea, RAON”  
**K.Y. Chae**

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1st Sicily-East Asia Workshop

Sala Consiglio, SDS Architettura, Ortigia, Italy, July 28-31, 2014

- “Experimental Nuclear Astrophysics”  
**K.Y. Chae**  
3rd Studies on Rare Isotope based Nuclear Physics  
Korea Aerospace University, Goyang, Korea, April 11, 2014
- “Target and detector systems for KOBRA”  
**K.Y. Chae**  
1st RIBF-RISP Joint Workshop,  
RISP, Daejeon, Korea, November 7-8, 2013
- “Connection between CNO cycle and  $rp$ -process”  
**K.Y. Chae**  
Rare Isotopes and Nuclear Astrophysics with related topics Workshop,  
APCTP, Pohang, Korea, September 25-27, 2013
- “Thinking Star Dust: Experimental Nuclear Astrophysics”  
**K.Y. Chae**  
Physics Department Colloquium,  
Sogang University, Seoul, Korea, June 4, 2013
- “Gas Jet Target for Astrophysically Important Nuclear Reaction Studies using Radioactive Ion Beams”  
**K.Y. Chae**  
Korean Physical Society 2013 Spring Meeting, Pioneering Symposium,  
Daejeon Convention Center, Daejeon, Korea, April 24-26, 2013
- “New Era of Experimental Nuclear Astrophysics”  
**K.Y. Chae**  
Physics Department Colloquium,  
Chung Ang University, Seoul, Korea, April 1, 2013
- “Nuclear Astrophysics Experiments using Radioactive Ion Beams”  
**K.Y. Chae**  
2012 Nuclear Physics School,  
Asia Pacific Center for Theoretical Physics, Pohang, Korea, June 25-29, 2012
- “Study of  $^{18}\text{F} + p$  Resonances Relevant for Novae”  
**K.Y. Chae**  
Korean Physical Society 2012 Spring Meeting,  
Daejeon Convention Center, Daejeon, Korea, April 25-27, 2012
- “Cooking up elements in the universe: Nuclear astrophysics with exotic ion beams”  
**K.Y. Chae**  
Physics Department Colloquium,  
Sungkyunkwan University, Suwon, Korea, April 4, 2012
- “Bringing stellar reactions to earth”  
**K.Y. Chae**  
Sungkyunkwan University, Suwon, Korea, June 17, 2011
- “Overview of Nuclear Reaction Measurements for Basic Nuclear Science and Astrophysics”  
**K.Y. Chae**

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Stockpile Stewardship Academic Alliance Meeting,  
Lawrence Livermore National Laboratory, Livermore, California, USA, May 23-24, 2011

- “Cooking up elements in the universe: Recent activities at HRIBF”  
**K.Y. Chae**  
Nuclear Physics Group Seminar,  
Sungkyunkwan University, Suwon, Korea, August 11, 2009
- “We are stardust: Recent activities in nuclear astrophysics at ORNL”  
**K.Y. Chae**  
Nuclear Physics Group Seminar,  
Chung Ang University, Seoul, Korea, August 10, 2009
- “Cooking up elements in explosive stars”  
**K.Y. Chae**  
Nuclear Physics Group Seminar,  
Pusan National University, Pusan, Korea, May 16, 2008
- “Spin assignments of  $^{22}\text{Mg}$  through a  $^{24}\text{Mg}(p, t)^{22}\text{Mg}$  measurement”  
**K.Y. Chae**  
Nuclear Physics Group Seminar,  
University of Tennessee, Knoxville, USA, April 21, 2008
- “Interference effects among  $J^\pi=3/2^+$  resonances in  $^{19}\text{Ne}$  system”  
**K.Y. Chae**  
Nuclear Physics Group Seminar,  
University of Tennessee, Knoxville, USA, February 19, 2007
- “First experimental constraints on the interference of  $3/2^+$  resonances in the  $^{18}\text{F}(p, \alpha)^{15}\text{O}$  reaction”  
**K.Y. Chae**, D.W. Bardayan, J.C. Blackmon, D. Gregory, M.W. Guidry, M.S. Johnson, R.L. Kozub, R.J. Livesay, Z. Ma, C.D. Nesaraja, S.D. Pain, S. Paulaskas, M. Porter-Peden, J.F. Shriner Jr., N. Smith, M.S. Smith, J.S. Thomas  
HRIBF workshop on nuclear measurements for astrophysics,  
Oak Ridge, Tennessee, USA, October 23-24, 2006

## PRESENTATIONS

- “Study of the  $^2\text{H}(^7\text{Be}, p+^3\text{He}+^4\text{He})n$  reaction for resonances in  $^8\text{B}$ ”  
**K.Y. Chae**  
The 21th International Conference on Accelerators and Beam Utilizations,  
Hwabaek International Convention Center, Gyeongju, Korea, November 15-17, 2017
- “Spectroscopic study of radionuclide  $^{21}\text{Na}$  for the astrophysical  $^{17}\text{F}(\alpha, p)^{20}\text{Ne}$  reaction rate”  
**K.Y. Chae**  
Korean Physical Society 2017 Fall Meeting,  
Hwabaek International Convention Center, Gyeongju, Korea, October 25-27, 2017
- “Construction and Commissioning of a Position-Sensitive Ionization Chamber”  
**K.Y. Chae**  
Korean Physical Society 2016 Spring Meeting,  
Daejeon Convention Center, Daejeon, Korea, April 20-22, 2016
- “Study of the  $^{26}\text{Al}(d, p)^{27}\text{Al}$  reaction for the astrophysical  $^{26g}\text{Al}(p, \gamma)^{27}\text{Si}$  reaction rate”  
**K.Y. Chae**, M.S. Gwak, S.M. Cha, S.W. Jo

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Korean Physical Society 2015 Fall Meeting,  
Hwabaek Center, Gyeongju, Korea, October 21-23, 2015

- “Developing portable fast ionization chamber”  
**K.Y. Chae**, M.S. Gwak, S.M. Cha, S.W. Jo  
Korean Physical Society 2013 Spring Meeting,  
Daejeon Convention Center, Daejeon, Korea, April 24-26, 2013
- “Searching for resonances in the unbound  ${}^6\text{Be}$  nucleus”  
**K.Y. Chae**, D.W. Bardayan, J.C. Blackmon, Z. Ma, C.D. Nesaraja, M.S. Smith, A.E. Champagne, R.P. Fitzgerald, D.W. Visser, J.J. Das, V. Guimaraes, K.L. Jones, S.D. Pain, J.S. Thomas, M.S. Johnson, R.L. Kozub, R.J. Livesay  
Korean Physical Society 2012 Fall Meeting,  
Phoenix Park, Pyeongchang, Korea, October 24-26, 2012
- “Developing a fast ionization chamber for transfer reaction studies”  
**K.Y. Chae**, S.H. Ahn, D.W. Bardayan, B. Manning, S.D. Pain, W.A. Peters, K.T. Schmitt, M.S. Smith, S. Strauss  
The Annual Meeting of the Division of Nuclear Physics of the American Physics Society,  
East Lansing, Michigan, USA, October 26-29, 2011.
- “Study of the  ${}^{19}\text{F}(\alpha,p){}^{22}\text{Ne}$  reaction with an extended gas target”  
**K.Y. Chae**, S.H. Ahn, A. Ayres, D.W. Bardayan, A. Bey, M.E. Howard, K.L. Jones, R.L. Kozub, M. Matos, B.H. Moazen, C.D. Nesaraja, P.D. O’Malley, W.A. Peters, S.T. Pittman, M.S. Smith  
The Annual Meeting of the Division of Nuclear Physics of the American Physics Society,  
Santa Fe, New Mexico, USA, November 2-6, 2010.
- “A new technique for measuring astrophysically important  $(\alpha,p)$  reactions”  
**K.Y. Chae**, S.H. Ahn, A. Ayres, D.W. Bardayan, A. Bey, M.E. Howard, K.L. Jones, R.L. Kozub, M. Matos, B.H. Moazen, C.D. Nesaraja, P.D. O’Malley, W.A. Peters, S.T. Pittman, M.S. Smith  
Nuclei in the Cosmos XI,  
Heidelberg, Germany, July 19-23, 2010.
- “Spin assignments to excited states in  ${}^{22}\text{Na}$  through a  ${}^{24}\text{Mg}(p,{}^3\text{He}){}^{22}\text{Na}$  reaction measurement”  
**K.Y. Chae**, D.W. Bardayan, J.C. Blackmon, B.H. Moazen, K.A. Chipps, R. Hatarik, K.L. Jones, R.L. Kozub, J.F. Liang, C.D. Nesaraja, P.D. O’Malley, C. Matei, S.D. Pain, S.T. Pittman, M.S. Smith  
The April Meeting 2010 of the American Physical Society,  
Washington D.C., USA, February 13-17, 2010.
- “Spin assignments of  ${}^{22}\text{Mg}$  levels through a  ${}^{24}\text{Mg}(p,t){}^{22}\text{Mg}$  measurement”  
**K.Y. Chae**, D.W. Bardayan, J.C. Blackmon, B.H. Moazen, K.A. Chipps, R. Hatarik, K.L. Jones, R.L. Kozub, J.F. Liang, C.D. Nesaraja, P.D. O’Malley, C. Matei, S.D. Pain, S.T. Pittman, M.S. Smith  
The April Meeting 2009 of the American Physical Society,  
Denver, Colorado, USA, May 2-5, 2009.
- “Searching for resonances in the unbound  ${}^6\text{Be}$  nucleus”  
**K.Y. Chae**, D.W. Bardayan, J.C. Blackmon, J.J. Das, M.W. Guidry, V. Guimarães, K.L. Jones, M.S. Johnson, R.L. Kozub, R.J. Livesay, Z. Ma, C.D. Nesaraja, S.D. Pain, M.S. Smith, J.S. Thomas, D.W. Visser  
20th International Conference on the Application of Accelerators in Research and Industry,  
Fort Worth, Texas, USA, August 10-15, 2008.
- “Spin assignments of  ${}^{22}\text{Mg}$  through a  ${}^{24}\text{Mg}(p,t){}^{22}\text{Mg}$  measurement”  
**K.Y. Chae**, D.W. Bardayan, J.C. Blackmon, B.H. Moazen, K. Chipps, R. Hatarik, K.L. Jones, R.L. Kozub, J.F. Liang, C.D. Nesaraja, P.D. O’Malley, C. Matei, S.D. Pain, S.T. Pittman, M.S. Smith



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Nuclei in the Cosmos X,  
Mackinac Island, Michigan, USA, July 27-August 1, 2008.

- “Spin assignments of  $^{22}\text{Mg}$  through  $^{24}\text{Mg}(p,t)^{22}\text{Mg}$  reaction measurement”  
**K.Y. Chae**, D.W. Bardayan, J.C. Blackmon, B.H. Moazen, K.A. Chipps, R. Hatarik, K.L. Jones, R.L. Kozub, J.F. Liang, C.D. Nesaraja, P.D. O’Malley, C. Matei, S.D. Pain, S.T. Pittman, M.S. Smith  
The April Meeting 2008 of the American Physical Society,  
St. Louis, Missouri, USA, April 12-15, 2008.
- “Searching for resonances in the unbound  $^6\text{Be}$  nucleus”  
**K.Y. Chae**, D.W. Bardayan, J.C. Blackmon, J.J. Das, M.W. Guidry, V. Guimarães, K.L. Jones, M.S. Johnson, R.L. Kozub, R.J. Livesay, Z. Ma, C.D. Nesaraja, S.D. Pain, M.S. Smith, J.S. Thomas, D.W. Visser  
The Annual Meeting of the Division of Nuclear Physics of the American Physics Society,  
Newport News, Virginia, USA, October 10-13, 2007.
- “Searching for resonances in the unbound  $^6\text{Be}$  nucleus”  
**K.Y. Chae**, D.W. Bardayan, J.C. Blackmon, J.J. Das, M.W. Guidry, V. Guimarães, K.L. Jones, M.S. Johnson, R.L. Kozub, R.J. Livesay, Z. Ma, C.D. Nesaraja, S.D. Pain, M.S. Smith, J.S. Thomas, D.W. Visser  
Frontiers 2007,  
University of Notre Dame, Indiana, USA, August 19-21, 2007.
- “Searching for resonances in the unbound  $^6\text{Be}$  nucleus”  
**K.Y. Chae**, D.W. Bardayan, J.C. Blackmon, J.J. Das, M.W. Guidry, V. Guimarães, K.L. Jones, M.S. Johnson, R.L. Kozub, R.J. Livesay, Z. Ma, C.D. Nesaraja, S.D. Pain, M.S. Smith, J.S. Thomas, D.W. Visser  
Stewardship Science Academic Alliance 2007 Program Symposium,  
Washington DC, USA, February 5-7, 2007.
- “First experimental constraints on the interference of  $3/2^+$  resonances in the  $^{18}\text{F}(p,\alpha)^{15}\text{O}$  reaction”  
**K.Y. Chae**, D.W. Bardayan, J.C. Blackmon, D. Gregory, M.W. Guidry, M.S. Johnson, R.L. Kozub, R.J. Livesay, Z. Ma, C.D. Nesaraja, S.D. Pain, S. Paulaskas, M. Porter-Peden, J.F. Shriner Jr., N. Smith, M.S. Smith, J.S. Thomas  
The Annual Meeting of the Division of Nuclear Physics of the American Physics Society,  
Nashville, Tennessee, USA, October 25-28, 2006.
- “First experimental constraints on the interference of  $3/2^+$  resonances in the  $^{18}\text{F}(p,\alpha)^{15}\text{O}$  reaction”  
**K.Y. Chae**, D.W. Bardayan, J.C. Blackmon, D. Gregory, M.W. Guidry, M.S. Johnson, R.L. Kozub, R.J. Livesay, Z. Ma, C.D. Nesaraja, S.D. Pain, S. Paulaskas, M. Porter-Peden, J.F. Shriner Jr., N. Smith, M.S. Smith, J.S. Thomas  
HRIBF workshop on nuclear measurements for astrophysics,  
Oak Ridge, Tennessee, USA, October 23-24, 2006
- “First experimental constraints on the interference of  $3/2^+$  resonances in the  $^{18}\text{F}(p,\alpha)^{15}\text{O}$  reaction”  
**K.Y. Chae**, D.W. Bardayan, J.C. Blackmon, D. Gregory, M.W. Guidry, M.S. Johnson, R.L. Kozub, R.J. Livesay, Z. Ma, C.D. Nesaraja, S.D. Pain, S. Paulaskas, M. Porter-Peden, J.F. Shriner Jr., N. Smith, M.S. Smith, J.S. Thomas  
Nuclei in the Cosmos IX,  
Geneva, Switzerland, June 25-30, 2006.
- “Java 3D Interactive Visualization for Astrophysics”  
**K.Y. Chae**, D. Edirisinghe, E.J. Lingerfelt, M.W. Guidry  
American Astronomical Society 202nd meeting,  
Nashville, Tennessee, USA, May 25-29, 2003.

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## PUBLICATIONS

- “Monte Carlo Simulation Study for Fast Neutron Measurement by using a Proton Recoil Telescope”  
C. Ham, V.R. Chavan, S.I. Bak, C. Shim, D. Moon, **K.Y. Chae**, T.S. Park, S.W. Hong, H. Joo, H. Park  
submitted to J. Korean Phys. Soc. (2018)
- “Measuring low-energy ( $\alpha, p$ ) reaction cross sections using an extended gas target and gas recirculator”  
**K.Y. Chae**, S. Ahn, A. Ayres, D.W. Bardayan, A. Bey, U. Greife, M.E. Howard, K.L. Jones, R.L. Kozub,  
M. Matos, B.H. Moazen, C.D. Nesajara, P.D. O’Malley, W.A. Peters, S.T. Pittman, M.S. Smith  
submitted to Nucl. Instrum. Methods A (2018)
- “Heating factor of an intense beam in gas targets”  
N.N. Duy, **K.Y. Chae**, Vinh N.T. Pham, T.V. Nhan Hao  
submitted to Radiat. Phys. Chem. (2018)
- “Beam Production of  $^{18}\text{Ne}$  with In-flight Method for Alpha Scattering at CRIB”  
N.N. Duy, **K.Y. Chae**, S.M. Cha, H. Yamaguchi, K. Abe, S.H. Bae, D.N. Binh, S.H. Choi, K.I. Hahn, S.  
Hayakawa, B. Hong, N. Iwasa, D. Kahl, L.H. Khiem, A. Kim, D.H. Kim, E.J. Kim, G.W. Kim, M.J. Kim,  
K. Kwag, M.S. Kwag, E.J. Lee, S.I. Lim, B. Moon, J.Y. Moon, S.Y. Park, V.H. Phong, H. Shimizu, L. Yang,  
Z. Ge, T.V. Nhan Hao  
submitted to Nucl. Instrum. Methods A (2018)
- “Spin assignments for  $^{23}\text{Mg}$  levels and the astrophysical  $^{22}\text{Na}(p, \gamma)^{23}\text{Mg}$  reaction”  
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## PROCEEDINGS

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- “Measurements of the Neutron-Induced Reactions on  $^7\text{Be}$  with CRIB by the Trojan Horse Method”  
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