

# KYUNGYUK CHAE

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Department of Physics  
Sungkyunkwan University  
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last updated on  
October 19, 2020

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## EXPERIENCE

- **Associate Professor**, Department of Physics, Sungkyunkwan University Mar. 2016 - Present
- **Guest Associate Professor**, Department of Physics, University of Notre Dame Jan. 2018 - Feb. 2019
- **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  
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**, National Research Foundation of Korea, 400,000,000 KRW Mar. 2020 - Present  
“Measuring  $(\alpha,p)$  reactions by using solenoid-based detector system”
- **PI**, National Research Foundation of Korea, 350,000,000 KRW Aug. 2019 - Present  
“Reaction dynamics towards the limits of nuclear and elemental existences”

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- **Participating Researcher**, Ministry of Science, 4,000,000,000 KRW Jun. 2018 - Present  
“Project for International Collaboration Research of Utilizing RAON”
- **Participating Researcher**, Ministry of Science, 8,600,000,000 KRW Jul. 2016 - Present  
“Center for High Energy Astrophysics”
- **PI**, Ministry of Science, 50,000,000 KRW Jun. 2019 - May 2020  
“Nuclear astrophysics study using particle decay”
- **PI**, LG Yonam Foundation, 40,000 USD Jan. 2018 - Dec. 2018  
“Developing transfer reaction measurement technique using heavy ion beams”
- **PI**, Ministry of Science, 100,000,000 KRW Jan. 2017 - Dec. 2017  
“Detailed design and commissioning of KOBRA detector systems”
- **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, 80,000,000 KRW Mar. 2016 - Sep. 2019  
“Study of the  $\alpha$ -cluster structure of radionuclide  $^{22}\text{Mg}$ ”
- **PI**, Ministry of Science, 150,000,000 KRW Jan. 2016 - Dec. 2016  
“Designing and constructing detector systems for KOBRA”
- **PI**, Ministry of Education, 154,440,000 KRW Nov. 2015 - Oct. 2018  
“Nuclear astrophysics study using position sensitive ionization chamber”
- **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 Jun. 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 Jul. 2012 - June 2013  
“Nuclear reaction evaluation for astrophysical phenomenon”
- **PI**, Ministry of Education, 60,000,000 KRW Jun. 2012 - May 2014  
“Developing portable fast ionization chamber”

## AWARDS

- 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).

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## TEACHING EXPERIENCE

- **Associate Professor**, Sungkyunkwan University Mar. 2016 - Present  
Nuclear Astrophysics I: Spring 2019  
Nuclear Astrophysics II: Fall 2019  
Astrophysics: Spring 2019  
Nuclear Physics: Fall 2016, Fall 2017, Fall 2019, Fall 2020  
General Physics I: Spring 2016, Spring 2017, Spring 2020, Fall 2020  
Graduate students mentored: Minsik Kwag, Soomi Cha, Eunji Lee, Jaeha Lee, Minju Kim, Duhyun Kim, Kim Uyen Nguyen, Gyoungmo Gu, Chanhee Kim  
Undergraduate students mentored: Duhyun Kim, Minhyeok Kang, Gyoungmo Gu, Sohyun Kim, Eunjin Ko  
Post-scholars mentored: Aram Kim, Nguyen Ngoc Duy, Sangin Bak, Soomi Cha, Minsik Kwag
- **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  
Undergraduate students mentored: Minsik Kwag, Soomi Cha, Eunji Lee, Jaeha Lee, Minju Kim, Duhyun Kim  
Post-scholars mentored: Aram Kim

## WORKSHOPS

- CENuM-RULiC Joint Workshop on Extreme Nuclear States and Reactions October 2019  
Daejeon, Korea  
Organizing Committee
- 1st RAON Users Workshop April 2019  
Daejeon, Korea  
Scientific Secretary
- Origin of Matter and Evolution of Galaxies (OMEG 2017) June 2017  
Daejeon, Korea  
Organizing Committee
- SKKU mini workshop October 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 November 2014  
Suwon, Korea  
Scientific Secretary
- SKKU Symposium on Astrophysics and Cosmology: from Particle to Universe December 2013  
Suwon, Korea  
Organizing Committee

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- 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

- “Measuring the  $\alpha p$ -process reactions using solenoid-based detector system”  
**K.Y. Chae**  
A3 Foresight Program Kickoff Meeting  
RIKEN, Kobe, Japan, December 7, 2019
- “Measuring compound nucleus reaction using solenoid-based detector system”  
**K.Y. Chae**  
CENuM-RULiC Joint Workshop  
Daejeon, Korea, November 1, 2019
- “Understanding the Universe using Radioactive Ion Beams”  
**K.Y. Chae**  
Physics Department Colloquium  
Gwangju Institute of Science and Technology, Gwangju, Korea, October 30, 2019
- “Nuclear Astrophysics Studies using Radioactive Ion Beams”  
**K.Y. Chae**  
Physics Department Colloquium  
Yonsei University, Seoul, Korea, September 11, 2019
- “Nuclear reaction measurements using solenoid”  
**K.Y. Chae**  
2019 1st CHEA Workshop  
UNIST, Ulsan, Korea, April 19, 2019
- “KoBRA”  
**K.Y. Chae**  
4th RISP SPAC meeting  
Daejeon, Korea, April 2, 2019
- “Transfer reaction studies using solenoid”  
**K.Y. Chae**  
Korea-Japan symposium on unstable nuclei and nuclear astrophysics  
Kyushu University, Japan, March 14, 2019
- “Detector and target systems for nuclear astrophysics”  
**K.Y. Chae**  
2019 RAON School  
Daejeon, Korea, February 12 - 14, 2019
- “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**

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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**

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**

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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**  
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**

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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**  
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**

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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

- “The Astrophysical  $^{24}\text{Mg}(\alpha, p)^{27}\text{Al}$  Reaction Study”  
**K.Y. Chae**  
14th Asia-Pacific Physics Conference  
Kuching, Sarawak, Malaysia, November 19, 2019
- “Astrophysical  $(\alpha, p)$  reaction measurements using solenoid”  
**K.Y. Chae**  
Korean Physical Society 2019 Spring Meeting  
Daejeon, Korea, April 24, 2019
- “New method of measuring low-energy  $(\alpha, p)$  reactions in inverse kinematics”  
**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  
2018 JINA-CEE Frontiers in Nuclear Astrophysics,  
University of Notre Dame, Notre Dame, Indiana, USA, May 21 - 25, 2018
- “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

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- “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  
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.

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- “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  
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,  
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- “Isomers in  $^{126}\text{Pd}$  and  $^{128}\text{Pd}$ : Evidence for a Robust Shell Closure at the Neutron Magic Number 82 in Exotic Palladium Isotopes”  
H. Watanabe, G. Lorusso, S. Nishimura, Z.Y. Xu, T. Sumikama, P.-A. Söderström, P. Doornenbal, F. Browne, G. Gey, H.S. Jung, J. Taprogge, Zs. Vajta, J. Wu, A. Yagi, H. Baba, G. Benzoni, **K.Y. Chae**, F.C.L. Crespi, N. Fukuda, R. Gernhäuser, N. Inabe, T. Isobe, A. Jungclaus, D. Kameda, I. Kojouharov, F.G. Kondev, T. Kubo, N. Kurz, Y.K. Kwon, G.J. Lane, Z. Li, C.-B. Moon, A. Montaner-Piza, K. Moschner, F. Naqvi, M. Niikura, H. Nishibata, D. Nishimura, A. Odahara, R. Orlandi, Z. Patel, Zs. Podolyak, H. Sakurai, H. Schaffner, G.S. Simpson, K. Steiger, H. Suzuki, H. Takeda, K. Yoshinaga  
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- “Shape evolution in  $^{116,118}\text{Ru}$ : Triaxiality and transition between the O(6)-U(5) dynamical symmetries”  
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- “Construction and commissioning of the SuperORRUBA Detector”  
D.W. Bardayan, S. Ahn, J.C. Blackmon, **K.Y. Chae**, J.A. Cizewski, J. Elson, S. Hardy, L. Linhardt, B. Manning, M. Matos, S.D. Pain, L.G. Sobotka, M.S. Smith  
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**K.Y. Chae**, D.W. Bardayan, J.C. Blackmon, A.E. Champagne, J.J. Das, R.P. Fitzgerald, 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  
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- “Neutron single particle structure in  $^{131}\text{Sn}$  and direct neutron capture cross sections”  
R.L. Kozub, G. Arbanas, A.S. Adekola, D.W. Bardayan, J.C. Blackmon, **K.Y. Chae**, K.A. Chipps, J.A. Cizewski, L. Erikson, R. Hatarik, W.R. Hix, K.L. Jones, W. Krolas, J.F. Liang, Z. Ma, C. Matei, B.H. Moazen, C.D. Nesaraja, S.D. Pain, D. Shapira, J.F. Shriner, Jr., M.S. Smith, T.P. Swan  
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- “ $^{26}\text{Al}+p$  elastic and inelastic scattering reactions and Galactic abundances of  $^{26}\text{Al}$ ”  
S.T. Pittman, D.W. Bardayan, **K.Y. Chae**, K.A. Chipps, K.L. Jones, R.L. Kozub, C. Matei, M. Matos, B.H. Moazen, C.D. Nesaraja, P.D. O’Malley, S.D. Pain, P.D. Parker, W.A. Peters, J.F. Shriner, Jr., M.S. Smith  
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- “Halo nucleus  $^{11}\text{Be}$ : a spectroscopic study via neutron transfer”  
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K.A. Chipps, D.W. Bardayan, **K.Y. Chae**, J.A. Cizewski, R.L. Kozub, J.F. Liang, C. Matei, P.D. O’Malley, S.D. Pain, W.A. Peters, S.T. Pittman, M.S. Smith  
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P.D. O’Malley, D.W. Bardayan, A.S. Adekola, S. Ahn, **K.Y. Chae**, J.A. Cizewski, S. Graves, M.E. Howard, K.L. Jones, R.L. Kozub, L. Lindgardt, M. Matos, B.H. Moazen, C.D. Nesaraja, S.D. Pain, W.A. Peters, S.T. Pittman, K.T. Schmitt, J.F. Shriner, Jr., M.S. Smith, I. Spassova, S.Y. Strauss, J.L. Wheeler  
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A.S. Adekola, D.W. Bardayan, J.C. Blackmon, C.R. Brune, **K.Y. Chae**, A.E. Champagne, C. Domizioli, U. Greife, Z. Heinen, M.J. Hornish, M. Johnson, K.L. Jones, R.L. Kozub, R.J. Livesay, Z. Ma, T.N. Massey, B. Moazen, C.D. Nesaraja, S.D. Pain, J.F. Shriner, Jr., N.D. Smith, M.S. Smith, J.S. Thomas, D.W. Visser, A.V. Voinov  
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- “Neutron spectroscopic factors of  $^{34}\text{Ar}$  and  $^{46}\text{Ar}$  from  $(p, d)$  transfer reactions”  
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D.W. Bardayan, J.C. Blackmon, **K.Y. Chae**, M. Howard, C. Matei, W. Martin, M. Matos, B.H. Moazen, C.D. Nesaraja, W.A. Peters, S.T. Pittman, M.S. Smith, I. Spassova  
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D.W. Bardayan, J.A. Howard, J.C. Blackmon, C.R. Brune, **K.Y. Chae**, W.R. Hix, M.S. Johnson, K.L. Jones, R.L. Kozub, J.F. Liang, E.J. Lingerfelt, R.J. Livesay, S.D. Pain, J.P. Scott, M.S. Smith, J.S. Thomas, D.W. Visser  
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- “Study of energy levels in radionuclide  $^{23}\text{Mg}$  using proton beams and  $^{24}\text{Mg}$  target”  
**Kyung Yuk Chae**, Min Sik Kwag, Eun Ji Lee, Kyujin Kwak  
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- “Effects of Rare Isotope Reaction Rates on the Light Curve of X-ray Burst”  
Byeongchan Park, Kyujin Kwak, **Kyung Yuk Chae**, Aram Kim  
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## PROCEEDINGS

- “Determination of beta-delayed neutron emission probability limits of rhodium isotopes by gamma-ray spectroscopy”  
R. Shearman, G. Lorusso, A. Boso, P.H. Regan, S. Nishimura, Z.Y. Xu, A. Jungclaus, Y. Shimizu, G.S. Simpson, P.-A. Soderstrom, H. Watanabe, F. Browne, P. Doornenbal, G. Gey, H.S. Jung, B. Meyer, T. Sumikama, J. Taprogge, Zs. Vajta, J. Wu, H. Baba, G. Benzoni, **K.Y. Chae**, F.C.L. Crespi, N. Fukuda, R. Gernhauser, N. Inabe, T. Isobe, T. Kajino, D. Kameda, G.D. Kim, Y.-Y. Kim, I. Kajouharov, F.G. Kondev, T. Kubo, N. Kurz, Y.K. Kwon, G.J. Lane, Z. Li, A. Montaner-Piza, K. Moschner, F. Naqvi, M. Niikura, H. Nishibata, A. Odahara, R. Orlandi, Z. Patel, Zs. Podolyak, H. Sakurai, H. Schaffner, P. Schury, S. Shibagaki, K. Steiger, H. Suzuki, H. Takeda, A. Wendt, A. Yagi, K. Yoshinaga  
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- “Measurements of the  ${}^7\text{Be}+n$  Big-Bang nucleosynthesis reactions at CRIB by the Trojan Horse method”  
S. Hayakawa, K. Abe, O. Beliuskina, S.M. Cha, **K.Y. Chae**, S. Cherubini, P. Figuera, Z. Ge, M. Gulino, J. Hu, A. Inoue, N. Iwasa, D. Kahl, A. Kim, D.H. Kim, G. Kiss, S. Kubono, M. La Cognata, M. La Commara, L. Lamia, M. Lattuada, E.J. Lee, J.Y. Moon, S. Palmerini, C. Parascandolo, S.Y. Park, D. Pierrousakou, R.G. Pizzone, G.G. Rapisarda, S. Romano, H. Shimizu, C. Spitaleri, X.D. Tang, O. Trippella, A. Tumino, P. Vi, H. Yamaguchi, L. Yang, N.T. Zhang  
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- “Studies on Nuclear Astrophysics and Nuclear Clustering with Low-energy RI Beams at CRIB”  
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A.I. Chilug, V. Panin, D. Tudor, L. Trache, I.C. Stefanescu, A.E. Spiridon, A. Saastamoinen, H. Baba, Y. Togano, L. Stuhl, T. Kobayashi, H. Otsu, K. Yoneda, Y. Kubota, D.S. Ahn, N. Fukuda, H. Takeda, H. Suzuki, Y. Shimizu, T. Motobayashi, T. Uesaka, Z. Halasz, Z. Elekes, S. Ota, M. Sasano, H.N. Liu, Y.L. Sun, T. Isobe, P.J. Li, J. Gibelin, F.M. Marques, J. Zenihiro, G. Kiss, N. Zhang, M.N. Harakeh, H. Murakami, D. Kim, A. Kurihara, M. Yasuda, T. Nakamura, S. Park, Z. Yang, T. Harada, M. Nishimura, H. Sato, I.S. Hahn, **K.Y. Chae**, F. Carstoiu, A.N. Petrovici  
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