

**Curriculum Vitae for Academic Promotion
The Johns Hopkins University School of Medicine**

ERIK TRYGGESTAD, PH.D.

DEMOGRAPHIC INFORMATION

Current Appointment

Instructor

Department of Radiation Oncology and Molecular Radiation Sciences
Johns Hopkins University, School of Medicine

Personal Data

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Education, Training

Degrees/Year	Institution	Discipline
Undergraduate B.A., 1996 (summa cum laude)	Wittenberg University Springfield, Ohio	Physics
Doctoral/Graduate Ph.D., 2001	Michigan State University East Lansing, Michigan	Nuclear Physics

Postdoctoral

Postdoctoral (visiting) Research Fellow in experimental nuclear physics, The National Superconducting Cyclotron Laboratory, Michigan State University, October 2001 - August 2002.

Postdoctoral Research Fellow in experimental nuclear physics, Nuclear Structure and Reactions group (NESTER), Institut de Physique Nucléaire (IPN) d'Orsay, Orsay Cedex, France, September 2002 – August 2004.

Postdoctoral Fellowship in Medical Physics, Department of Radiation Oncology and Molecular Radiation Sciences, Johns Hopkins School of Medicine, December 2004 – July 2006.

Internships

Research Experience for Undergraduates (National Science Foundation), The National Superconducting Cyclotron Laboratory, Michigan State University. June 1995 - August 1995.

Science and Engineering Research Semester (U.S. Department of Energy), Argonne National Laboratory, Argonne, IL. August 1995 - December 1995.

RESEARCH ACTIVITIES

Publications -- Peer-Reviewed Scientific Journals

Zecher P, Galonsky A, Gaff S, Kruse J, Kunde G, Tryggestad E, Wang J, Warner R, Morrissey D, Ieki K, Iwata Y, Deak F, Horvath A, Kiss A, Seres Z, Kolata J, Schwarzenberg J, Schelin H. Measurement of the ${}^8\text{Li}(n,\gamma){}^9\text{Li}$ cross section at astrophysical energies by reverse kinematics.. *Phys. Rev. C* 1998; 57: 959.

Markenroth K, Axelsson L, Baxter S, Borge M, Donzaud C, Fayans S, Fynbo H, Goldberg H, Grevy S, Guillemaud-Mueller D, Jonson B, Kallman K, Leenhardt S, Lewitowicz M, Lonnroth T, Manngard P, Martel I, Mueller A, Mukha I, Nilsson T, Nyman G, Orr N, Riisager K, Rogachev G, Saint-Laurent M, Serikov I, Shulgina N, Sorlin O, Steiner M, Tengblad O, Thoennessen M, Tryggestad E, Trzaska W, Wenander F, Winfield J, Wolski R. Crossing the Dripline to ${}^{11}\text{N}$ using Elastic Resonance Scattering. *Phys. Rev. C* 2000; 62: 034308.

Iwata Y, Ieki K, Galonsky A, Kruse J, Wang J, White-Stevens R, Tryggestad E, Zecher P, Deak F, Horvath A, Kiss A, Seres Z, Kolata J, Schwarzenberg J, Warner R, Schelin H. Dissociation of ${}^8\text{He}$. *Phys. Rev. C* 2000; 62: 064311.

Wang J, Galonsky A, Kruse J, Morrissey D, Steiner M, Tryggestad E, White-Stevens R, Zecher P, Deak F, Horvath A, Kiss A, Seres Z, Ando Y, Ieki K, Iwata Y, Kolata J, Schwarzenberg J, Warner R. Dissociation of ${}^6\text{He}$. *Phys. Rev. C* 2002; 65: 034306.

Kruse J, Galonsky A, Snow C, Tryggestad E, Wang J, Ieki K, Iwata Y, Zecher P. Fragment detection system for studies of exotic, neutron-rich nuclei. *Nucl. Inst. and Meth. A* 2002; 480: 598.

Chromik M, Thirolf P, Thoennessen M, Brown B, Davinson T, Gassmann D, Heckman P, Prisciandaro J, Reiter P, Tryggestad E, Woods P. Two proton spectroscopy of low-lying states in ${}^{17}\text{Ne}$. *Phys. Rev. C* 2002; 66: 024313.

Tryggestad E, Aumann T, Baumann T, Bazin D, Beene J, Blumenfeld Y, Brown B, Chartier M, Halbert M, Heckman P, Liang J, Radford D, Shapira D, Thoennessen M, Varner R. Low-lying dipole strength in ^{20}O . *Phys. Lett. B* 2002; 541: 52.

Heckman P, Bazin D, Beene J, Blumenfeld Y, Chromik M, Halbert M, Liang J, Mohrmann E, Nakamura T, Navin A, Sherrill B, Snover K, Thoennessen M, Tryggestad E, Varner R. Low-temperature measurement of the giant dipole resonance width. *Phys. Lett. B* 2003; 555: 43.

Enders J, Baumann T, Brown B, Frank N, Hansen P, Heckman P, Sherrill B, Stolz A, Thoennessen M, Tostevin J, Tryggestad E, Typel S, Wallace M. Spectroscopic factors measured in inclusive proton-knockout reactions on ^8B and ^9C at intermediate energies. *Phys. Rev. C* 2003; 67: 064301.

Tryggestad E, Baumann T, Heckman P, Thoennessen M, Aumann T, Bazin D, Blumenfeld Y, Beene J, Lewis T, Radford D, Shapira D, Varner R, Chartier M, Halbert M, Liang J. Low-lying E1 strength in ^{20}O . *Phys. Rev. C* 2003; 67: 064309.

Peters W, Baumann T, Bazin D, Brown B, Clement R, Frank N, Heckman P, Luther B, Nunes F, Seitz J, Stolz A, Thoennessen M, Tryggestad E. First two energy levels in ^{15}F . *Phys. Rev. C* 2003; 68: 034607.

Thoennessen M, Baumann T, Brown B, Enders J, Frank N, Hansen P, Heckman P, Luther B, Seitz J, Stolz A, Tryggestad E. Single proton knock-out reactions from $^{24,25,26}\text{F}$. *Phys. Rev. C* 2003; 68: 044318.

Shrivastava A, Blumenfeld Y, Keeley N, Zerguerras T, Aumann T, Bazin D, Chromik M, Crawley G, Glasmacher T, Kemper K, Marechal F, Morrissey D, Nakamura T, Navin A, Pollacco E, Santonocito D, Sherrill B, Suomijarvi T, Thoennessen M, Tryggestad E, Varner R. ^{11}Be continuum studied through proton scattering. *Phys. Lett. B* 2004; 596: 54.

Publications -- Conference Proceedings

Tryggestad E, Aumann T, Bazin D, Beene J, Blumenfeld Y, Chartier M, Halbert M, Heckman P, Liang J, Radford D, Shapira D, Sherrill B, Thoennessen M. Dipole Strength Function in ^{20}O . *Nucl. Phys. A* 2001; 687: 231c.

Heckman P, Bazin D, Beene J, Blumenfeld Y, Chromik M, Halbert M, Liang J, Mohrmann E, Nakamura T, Navin A, Sherrill B, Snover K, Thoennessen M, Tryggestad E, Varner R. Temperature dependence of the GDR width in ^{120}Sn . *Nucl. Phys. A* 2001; 687: 225c.

Baumann T, Chromik M, Clement R, Freigang C, Heckman P, Seitz J, Sherrill B, Thoennessen M, Tryggestad E. Stopping energetic beams in gas. *Nucl. Phys. A* 2002; 701: 282c.

Tryggestad E, Aumann T, Baumann T, Bazin D, Beene J, Blumenfeld Y, Brown B, Chartier M, Halbert M, Heckman P, Liang J, Radford D, Shapira D, Thoennessen M, Varner R. Low-lying dipole strength in ^{20}O . *Proceedings of the Frontiers of Nuclear Structure 2002 conference, AIP Conference Proceedings*.

Tryggestad E, Aumann T, Baumann T, Bazin D, Beene J, Blumenfeld Y, Brown B, Chartier M, Halbert M, Heckman P, Liang J, Radford D, Shapira D, Thoennessen M, Varner R. Low-lying dipole strength in ^{20}O . *Proceedings of the XLI International Nuclear Physics Winter Meetings, Bormio, ITALY, 2003, Ricerca Scientifica ed Educazione Permanente, Supplemento N. 120, 2003*.

Thoennessen M, Baumann T, Enders J, Frank N, Heckman P, Seitz J, Stolz A, Tryggestad E. Investigation of neutron-rich oxygen and fluorine isotopes. *Nucl. Phys. A* 2003; 722: 61c.

EDUCATIONAL ACTIVITIES

Teaching

Classroom instruction for undergraduate physics labs as Graduate Teaching Assistant, Department of Physics and Astronomy, Michigan State University, East Lansing, MI. August 1996 – December 1997.

CME course instruction for radiation therapy technology and radiation dosimetry staff. November 2005 – present.

CLINICAL ACTIVITIES

Certification

Completed Leksell Gamma Knife certification course, Department of Neurological Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA. March 2006.

Service Responsibilities (Approximately 60% of Role)

Provide non-specific quality assurance coverage, involving routine patient chart review, patient-specific dosimetric measurements and periodic evaluation of radiation devices used in the clinic.

Provide quality assurance coverage for radiosurgical procedures, involving both Leksell Gamma Knife (^{60}C) and linac-based treatments. Familiar with aspects of care including MR and CT-based treatment simulation, radiation treatment planning, treatment delivery, and machine and patient-specific quality assurance assessments.

Provide support for respiratory gating RT program, which employs the active breathing control technique using Elekta's Active Breathing Coordinator (ABC). Was responsible for introduction of the ABC technology into clinical practice and currently manage the service. Duties include the training physics and therapy staff for radiation therapy delivery, coaching patients in the use of the device, conceptualizing and implementing

design improvements to ABC systems and attending to maintenance and quality assurance issues that arise.

Provide coverage for total body irradiation (TBI) service, involving all aspects from patient simulation and dose planning to constructing patient-specific compensators and performing calculations for quality assurance.

Provide support for external beam radiation therapy treatment planning, as needed.

ORGANIZATIONAL ACTIVITIES

Professional Societies

Student Member, American Physical Society (APS). 1996-2001.

Junior Member, American Association of Physicists in Medicine (AAPM). January 2005 – present.

RECOGNITION

Awards, Honors (title, date, description, sponsor)

Lutheran Scholar Award, Wittenberg University. September 1992 - May 1996.

Weaver Physics Prize, Wittenberg University (recognizes undergraduate junior physics major most likely to succeed in pursuing graduate degree). 1995.

Graduate Fellowship Award, The National Superconducting Cyclotron Laboratory, Michigan State University. May 1996 – October 2001.

Sherwood K. Haynes Graduate Physics Award (outstanding graduate student award), Michigan State University. Academic Year 2000 - 2001 (awarded April, 2002).

Invited Talks, Panels

Invited seminar at the Kernfysisch Versneller Instituut (KVI), Groningen, Holland: *Low-lying dipole strength in ^{20}O* . December 10, 2002.

Invited contribution to the Young Investigator Competition at the Annual AAPM Mid-Atlantic Chapter Meeting, Saint Agnes Hospital, Baltimore MD: *The Small Animal Radiation Research Platform (SARRP): Small Field Dosimetry and Commissioning*. August 25, 2006.