

P.I.: Curtis J. Struck (formerly Struck-Marcell)

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(curt@iastate.edu)

a) Professional Preparation

University of Minnesota	Physics	B. S. 1976
University of Minnesota	Math	B. S. 1976
Yale University	Astronomy	M. Phil. 1979
Yale University	Astronomy	Ph.D. 1981
University of Texas McDonald Observatory Postdoctoral Fellow 1981-1983		

b) Appointments

1998 – present	Professor	Iowa State University
1989	Associate Professor	Iowa State University
1983	Assistant Professor	Iowa State University

c) Selected Recent Publications (all available on NASA ADS or astro-ph databases)

i) Relevant to proposed project

- C. Struck 1997, “Simulations of Collisions Between Two Gas Rich Galaxy Disks with Heating and Cooling,” *Astrophys. J. Suppl.*, 113, 269.
- C. Struck and B. J. Smith 2003, “Models of the Morphology, Kinematics, and Star Formation History of the Prototypical Collisional Starburst System NGC 7714/15=Arp 284,” *Astrophys. J.*, 589, 157.
- C. Struck 2004, “The Recurrent Nature of Central Starbursts,” in “Starbursts: from 30 Doradus to Lyman Break Galaxies,” eds. R. de Grijs and R. M. Gonzalez Delgado, Cambridge University Press, pg. 163.
- C. Struck, M. Kaufman, E. Brinks, M. Thomasson, B. G. Elmegreen, and D. M. Elmegreen 2005, “The grazing encounter between IC 2163 and NGC 2207: Pushing the limits of observational modeling,” *Mon. Not. RAS*, in press.
- B. J. Smith, C. Struck, P. N. Appleton, V. Charmandaris, W. Reach, and J. J. Eitter 2005, “Using Spitzer Colors as Diagnostics of Star Formation Regions: The Interacting Galaxy Arp 107,” *Astron. J.*, in press.

ii) Other significant publications

- B. J. Smith, C. Struck, and M. A. Nowak 2005, “Chandra X-Ray Imaging of the Interacting Starburst Galaxy System NGC 7714/5: Tidal ULXs, Emergent Wind, and Resolved HII Regions,” *Astron. J.*, 129, 1350.
- C. Struck, B. E. Cohanin, and L. A. Willson 2004, “Continuous and Burst-like Accretion on to Substellar Companions in Mira Winds,” *Mon. Not. RAS*, 347, 173.
- S. Schultz, and C. Struck 2001, “Multi-stage Three-dimensional Sweeping and Annealing of Disc Galaxies in Clusters,” *Mon. Not. RAS*, 328, 185.
- C. Struck 1999, “Galaxy Collisions,” (a review article available on NED Level 5), *Phys. Reports* 321, 1.
- C. Struck and D. C. Smith 1999, “Simple Models for Turbulent Self-Regulation in Galaxy Disks,” *Astrophysics J.*, 527, 673.

d) Synergistic Activities

Instructional development

- Pedagogical review article: my 1999 review article on colliding galaxies was written at a level to make it useful as a teaching resource, and I have heard that it has been used as such at several other institutions.
- Development of curricular materials: developed an extended group project to enhance learning in my junior/senior solar system course. Entitled “Build your own solar system,” it has inspired a lot of student enthusiasm, and improved performance. Simplified versions have also been used by my colleagues in our first 100-level course.

Service to scientific and engineering community:

- Keynote speaker at the annual banquet of the Quad Cities Science and Engineering Council (on colliding galaxies and HST) Feb., 2001.
- Organized the symposium: “Rebuilding the Galactic Neighborhood: Galaxy Collisions in Local Groups” for the afternoon of Feb. 17, at the 2001 Annual Meeting of the AAAS in San Francisco.
- Periodic speaker at local amateur astronomy societies.

e) Collaborators and Other Affiliations

Collaborators:

P. N. Appleton (SSC/Caltech), K. D. Borne (George Mason), E. Brinks (U. Hertfordshire), G. H. Bowen (Iowa State), V. Charmandaris (Univ. of Crete/Cornell), E. A. Corbett (Anglo-Australian Obs.), M. A. Dopita (Australia Nat. Univ.), B. G. Elmegreen (IBM Watson), D. M. Elmegreen (Vassar), M. L. Giroux (East Tenn.), M. Kaufman (Ohio State), W. C. Keel (Alabama), L. J. Kewley (Harvard CfA), R. A. Lucas (STScI), A. P. Marston (ESTEC/SCI-SA), T. Murphy (Univ. Edinburgh), R. P. Norris (ATNF), M. Nowak (MIT), W. Reach (SSC/Caltech), A. B. Schultz (STScI), Kartik Sheth (SSC/Caltech), B. J. Smith (East Tenn.), D. C. Smith (Johns Hopkins APL), M. Thomasson (Onsala Space Obs.), Gary Turner (Morningside College), L. A. Willson (Iowa State), A. L. Zezas (SAO)

Graduate and Postdoctoral Advisors

Graduate: Beatrice M. Tinsley (deceased) and Richard B. Larson, Yale University
Postdoctoral: John M. Scalo, Paul R. Shapiro, and J. Craig Wheeler, all of Univ. of Texas at Austin.

Thesis Advisor and Postgraduate-Scholar Sponsor

Thesis students (5 Ph.D. + 5 M.S.):

Ph.D. students: Pnina Luban, Joyce Guzik, John F. Wallin, Vassilios Charmandaris, Daniel C. Smith

M. S. students: Christopher Anderson, Ilias Fernini, Timothy Titus, Steven Schulz, Jason R. Brown