

## Zachary M. Byko

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### QUALIFICATIONS SUMMARY

Meteorologist with a core competency in the interplay between weather/climate and commodity markets. Able to effectively put into context weather's impact on commodity supply and demand for a multi-national group of internal clients at a prolific global food company. Communicates to general public as a freelance meteorologist, delivering television, radio, internet and print media weather forecasts.

### PROFESSIONAL EXPERIENCE

#### **Commodity Research Manager, Mars Snackfood U.S., LLC, Hackettstown, NJ**

July 2007-present

- Lead meteorologist, responsible for providing proprietary weather and climate forecasts relevant to more than 10 commodities in more than 25 different countries, to achieve competitive advantage in supply and price risk management activities.
- Achieved key performance objectives in predicting the supply of peanuts and almonds (2008/09 crops) by synthesizing statistical crop models with seasonal climate forecasts as input.
- Voluntarily assumed research responsibilities for dairy market analysis, and implemented highest-priority research deliverables from 20% to more than 80% complete in 90 days.
- Supports U.S. energy price and supply risk management team by issuing temperature and hurricane forecasts when such weather events threaten to alter the supply and/or demand for energy commodities.
- Edits, focuses content, and delivers an internal newsletter on global commodity markets to more than 250 associates in 30 business units globally, including senior leaders.
- Makes buying decisions, negotiates with suppliers, and creates contracts for organic and sugar-free chocolate raw materials.
- Represents the cocoa team's interests on several internal, cross-functional teams that plan the creation and release of future Mars chocolate products.
- Drives strategic university recruiting strategy and gives back to students by leading case studies on the wheat and soybean markets in the weather risk management program at Penn State University.

#### **Freelance Meteorologist, WYOU-TV, Wilkes-Barre, PA (Market No. 54)**

October 2007-present

- Television meteorologist on weeknights, weekends, and holidays on an as-needed basis.
- Prepares weather forecasts and creates weather graphics using AccuWeather Galileo and SelectWarn Radar system.
- Radio broadcasts heard on WSJR (JR 93.7) and WBHT (97 BHT) in Wilkes-Barre.
- Composes "Weatherwise Column" published in the *Scranton Times Tribune*.

#### **Research Assistant, Meteorology Department, Pennsylvania State University, University Park, PA**

May 2006-May 2007

- Performed research on the formation and evolution of rear-flank appendages in supercell thunderstorms under Drs. Paul Markowski and Yvette Richardson.
- Lead author of "Descending reflectivity cores in supercell thunderstorms observed by mobile radars and in a high-resolution numerical simulation," to be published in Volume 24 of *Weather Forecasting*.
- Presented preliminary results in a paper at the American Meteorological Society's 23<sup>rd</sup> *Severe Local Storms Conference* entitled "Radar reflectivity 'blobs' observed by the Doppler on Wheels."

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### PROFESSIONAL EXPERIENCE (CONTINUED)

#### **Broadcast Meteorologist**, Pennsylvania Cable Network, University Park, PA

January 2006-May 2007

- Delivered a five-minute long, short-term forecast to a statewide audience on Weather World, a magazine-style show airing live each weeknight on PCN.
- Responsible for generating weather forecasts and supervising graphic production.

#### **Instructor**, Meteorology Department, Pennsylvania State University, University Park, PA

January 2006-May 2006

- Taught introductory course in meteorology designed for non-meteorology students.
- Developed and delivered four lectures per week, created and administered exams, and coordinated laboratory activities with two teaching assistants.

#### **Teaching Assistant**, Meteorology Department, Pennsylvania State University, University Park, PA

September 2004-December 2005

- Administered laboratory for introductory courses in meteorology and weather analysis.
- Duties included presenting weekly lectures, holding office hours, and grading activities.

#### **Undergraduate Researcher**, National Weather Center, Norman, OK

May 2004-July 2004

- Performed an independent research project and wrote my findings in a paper entitled "Tornado Probabilities Derived from Rapid Update Cycle Forecast Soundings."
- Poster presented at 4th Annual American Meteorological Society Student Conference.

### EDUCATION

#### Pennsylvania State University, University Park, PA

- Master of Science in Meteorology (May 2007)
- Bachelor of Science in Meteorology, Graduated with Highest Distinction (May 2007)
- Thesis: "Examining Descending Reflectivity Cores Using High-Resolution Radar Data and a Numerical Simulation."
- Weather Forecasting and Communications Option
- Schreyer Honors Scholar
- College of Earth and Mineral Sciences Student Marshall, Spring 2007

### SELECTED AWARDS, ACTIVITIES, AND INTERNATIONAL TRAVEL

- Meteorology Alumni of Penn State (MAPS) Steering Committee (2008-present)
- Penn State Chapter of Chi Epsilon Pi (2004-present), President (2006-07)
- Travel to France, Germany, and Belgium (2008)
- 6<sup>th</sup> American Meteorological Society Student Conference Planning Committee (2006-07)
- American Meteorological Society/Industry/Government Graduate Fellowship (2006-07)
- President, Penn State Branch of the American Meteorological Society (2005-06)
- Arthur C. Pike Scholarship in Meteorology, National Weather Association (2005-06)
- Richard & Helen Hagemeyer Scholarship, American Meteorological Society (2005-06)
- American Meteorological Society/Industry Undergraduate Scholarship (2004-06)
- Hans Neuberger Award for excellent teaching of introductory meteorology, Penn State (2005)
- Penn State representative at NCAR Undergraduate Leadership Workshop (2005)
- President, Campus Weather Service (2004-05)