

# Almost Two Decades of Teaching Astronomy and Astrophysics, and Providing Educational Resources, to Chicago Public School Students and Teachers

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Over two decades, I have been actively involved in teaching astronomy and astrophysics to Chicago Public School (CPS) students and their teachers. This work was mainly in collaboration with Don York and the CUIP group. Don is now retired, but I am carrying on doing E/PO. Valuable resources that we have created for schools include the Multiwavelength Astronomy Website, with modules for infrared, optical, ultraviolet, X-Ray and Gamma-Ray Astronomy. The content of each lesson is derived from interviews with scientists, archived oral histories, and/or memoirs. Lessons were evaluated by a science educator and at least one subject matter expert before being produced for the web. They are supplemented by NASA media; archival material from the University of Chicago Library and other archives; and participant contributed photographs, light curves, and spectra. Summer programs provided training to CPS teachers to use the resource in their classroom. I have given several talks to CPS teachers, mainly on X-ray astronomy. Currently I am leading the CHARM (Chicago Area Research Mentoring) initiative. I am working with a class of 17 diverse 11th grade honors students at the UC Charter School, Woodlawn. Through frequent lectures (~ every 3-4 weeks), these students are exposed to astrophysical topics and concepts not normally not covered in a school curriculum (such as particle acceleration at shocks), to be followed by research projects in areas including high-energy astrophysics. The aim is to develop their critical thinking, and introduce them to research methods and techniques. This will prepare them for a STEM career, particularly one that prioritizes research. In this talk I will highlight the various projects, educational resources and results achieved.

## Keywords

school projects, under-represented students, educational resources, teacher training, outreach

## Collaboration

## other Collaboration

## Subcategory

Outreach and Education

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