8. Professional Activities (Progammatic):

8a. Mission Planning

Einstein (1980-1981): Investigated observing efficiency; rebuilt (with C. Briggs, programmer) planning software for utility including changing observing constraints; initiated semi-automated scheduling.

8b. Production Processing

Einstein (1981-1985): (with G. Fabbiano) Initiated standard procedure for processing, software problem cycle, inventory control; supervised team of ∼12 data processing aides including personnel actions, hirings and dismissals.

8c. Catalog Production

Einstein HRI (1990): Created source catalog in ∼ 3 months, including visual check of all sources;
Einstein IPC Slew Survey (1988-1991): created concept (with G. Fabbiano), demonstrated feasibility of gyro aspect solution; created Slew Survey with staff of one (D. Plummer); checked reliability; identified sources (with J. Schachter) published on paper and CD-ROM.

8d. Contract Renewal

Einstein (1984): Wrote five year *Einstein* (HEAO-2) contract proposal (with G. Fabbiano) for 1984-1989, successfully extending the program life with level funding and leading to the creation of innovative products.

8e. User Support

Einstein (198_-198_): Created and edited "HEAO Newsletter" (with G. Fabbiano); organized (with G. Fabbiano) 'Einstein to AXAF' Conference.
AXAF: Organized 'Rates, Codes, and Astrophysics' Workshop.
Series editor ASC User Guides.

8f. Software for Astronomy Data Analysis

Einstein (1980,1986): Wrote parts of IPC processing software; chose IRAF for PROS development.

AXAF (1993-): ASC group leader of 10 member team responsible for all standard processing (including aspect solution) and scientific data analysis.

Devised solutions for problems of joint spatial/spectral analysis and generalized these to arbitrary dimensions, and to 'stacks' of data by means of an object oriented 'data model'. Generalized data filtering, modelling and fitting are supported by this data model. Resulting system builds on IRAF and FTOOLS, is back compatible with them, but is much more powerful. Allows user to concentrate on scientific tasks and algorithms and minimizes 'black box' impenetability of system.