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Development of a Photon Strength Function Database

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The "Photon Strength Function (PSF) Interface" stands as a robust web application explicitly crafted for the extraction, management, and presentation of PSF data from currently available here. This interface centralizes data primarily sourced from .dat and .readme files available on the IAEA's Photon Strength Function (PSF) webpage.

The highlight of this project is its enhanced query and visualization capabilities, features notably absent from the original webpage. The system is designed to first upload data into a structured database, organizing information derived from both .dat files and associated README files. In doing so, the application ensures that every .dat file is paired with its corresponding .readme, melding the primary data, and metadata with its contextual backdrop.

Offering users an interactive platform, the interface facilitates database searches using specific fields like A(mass number), Z(proton number), Multipolarity, and method. Such queries give detailed visual representations, ranging from expansive data overviews to details on individual records. These visualizations, in the manner of graphs, present the data in an intuitive and comprehensible manner.

Once a query is executed, users are presented with a dynamic table that encapsulates their search results. This table, augmented with column-specific search functionalities, provides users with the flexibility to refine and reorder their results, ensuring a streamlined browsing experience.

In conclusion, the "Photon Strength Function Interface" is an integral component of a larger initiative. While the current focus is on experimental data, future phases of the project will encompass theoretical data as well in addition to other enhancements. In this demonstration, I will elaborate on the progress made thus far.

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