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## Developing a Data Analysis Software for Lab Lepton's VUV Monochromator Setup

This work presents the development of a data analysis software aimed at optimizing data acquisition from the VUV Monochromator setup at the Leptons Laboratory, Universidade Estadual de Campinas (UNICAMP). The setup is designed to investigate the light conversion efficiency of para-Terphenyl (PTP) as a function of its morphological and structural properties, such as film surface density, roughness, and adhesion. A monochromator directs light from a Deuterium lamp, operating in the vacuum ultraviolet (VUV) range (120–400 nm), onto PTP-coated samples placed inside a vacuum chamber. Measurements are taken relative to a reference sample, allowing for data normalization.

The efficiency of each sample is determined through a chi-squared minimization method, enabling relative comparisons between samples. To streamline this process, a Python-based software tool was developed to automate the analysis workflow using the Tkinter package. In addition to reducing analysis time and ensuring reproducibility across experimental runs, the tool enforces visual uniformity and mathematical consistency, making the process user-independent. The software is currently under development, but a beta version is already functional and available for use.

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