

**HIGH STATISTICS EXPERIMENTS:
THE LASS EXPERIENCE***

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ABSTRACT

This paper summarizes the main data processing and analysis procedures employed by the LASS collaboration in the course of a Kp experiment involving 138 million triggers at an incident momentum of 11 GeV/c. The role of multi-vertex kinematic fitting at the coordinate level is described, and the importance of the $\sim 4\pi$ acceptance for both large and small statistics exclusive channels is discussed. The evolution in understanding of the amplitude structure of mesonic states which has resulted from the acquisition and analysis of large data samples is illustrated using the $K\pi$ S -wave and the partial wave decomposition of the low-mass $K\pi\pi$ system. Implications for future studies of $s\bar{s}$ spectroscopy at the KAON factory, and for amplitude analyses of meson systems produced in J/ψ decay at a Tau-Charm factory are considered.

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