

气溶胶粒子计数效率校准系统

一、产品概述

本系统计算机软件通过 MOXA 串口服务器和网线交换机与各个仪器进行通讯，来实时控制、检测以计算粒子各个计数器（GRIM CPC 和 TSI CPC）对不同粒径粒子的计数效率。

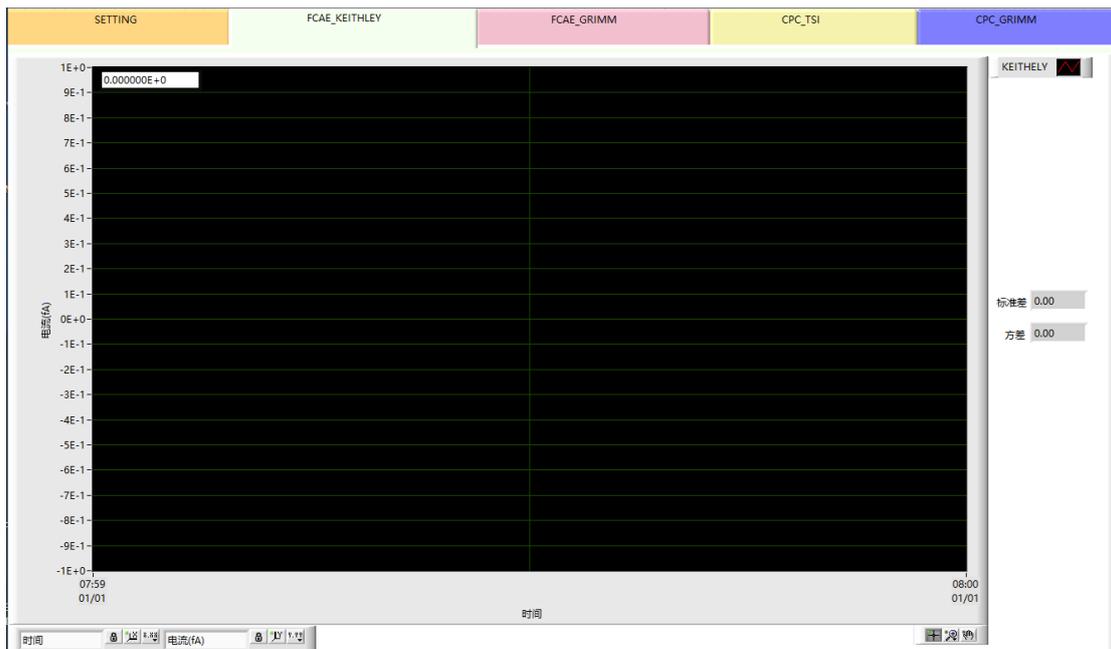
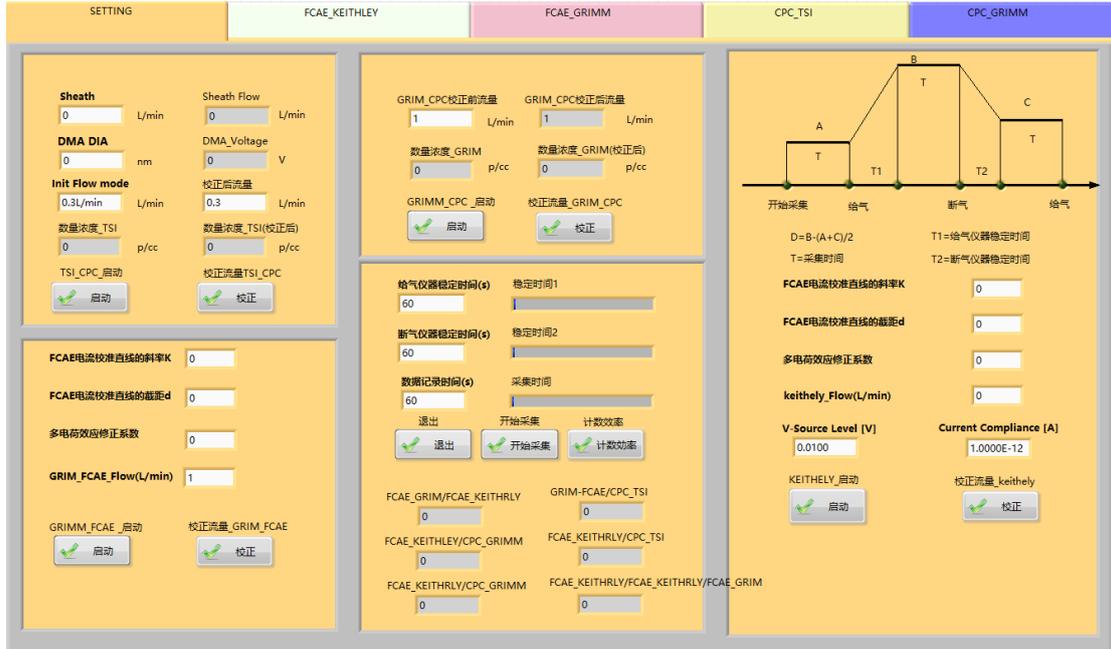
二、硬件环境

- ◆ TSI 3082 带电粒子分类器（Model 3080 Electrostatic Classifier）
- ◆ 带电粒子迁移率分析器（Differential Mobility Analyzer）
- ◆ TSI 3775 Condensation Particle Counter（粒子计数器）
- ◆ TSI 4100（流量计）
- ◆ GRIM FCAE（静电计）
- ◆ GRIM CPC(计数器)
- ◆ Keithely 6430 电流表



三、软件

通过设置 3082 的参数得到指定粒径（1~1000 nm）的气溶胶粒子，开始采样后，让粒子经过静电计后通向计数器。软件将记录仪器实时数据到 excel 表格文件，并根据给定的参数计算各个计数器的计数效率。



The screenshot displays the ACCU flow control software interface. At the top, there are tabs for different instrument types: SETTING, FCAE_KEITHLEY, FCAE_GRIMM, CPC_TSI, and CPC_GRIMM. The main window shows a graph with the y-axis labeled '流量 (L/mine)' ranging from -1.0 to 1.0 and the x-axis labeled '时间' with values 07:59 and 01/01. A '校正时间' (Calibration Time) dialog box is open in the center, prompting the user to '请输入校准时间' (Please enter calibration time) with a dropdown menu showing '0' and a '确定' (OK) button. On the right side, there is a 'TSI 4100' panel with '平均流量' (Average Flow) set to 0.00. At the bottom, there are several control panels with '启动' (Start) and '校正' (Calibrate) buttons, including labels like 'GRIMM_FCAE_启动', '校正流量_GRIM_FCAE', and various combinations of instrument names.