

粒狀污染物控制實驗室

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一、實驗室簡介

本實驗室主要是提供學生參與專題研究與實驗和教師進行研究及計畫執行之場所，期使學生熟習粒狀污染物控制技術及採樣分析等觀念和相關儀器操作所須技能。

二、儀器設備

本實驗室主要儀器包括：微粒計數器、微粒粒徑偵測儀、微粒產生器、環境氣膠採樣器、微粒量測系統、抽氣式藥品櫃、超音波洗淨器、多階均勻衝擊器、調理箱、微波反應系統、數位空氣採樣器、超細微粒偵測器、抽氣排煙櫃、流量校正器、水霧噴頭產生器、泡棉個人採樣器、個人旋風器、採樣幫浦等。

三、研究主題

本實驗室研究主題包括：重力機制與衝擊器之粒狀物收集效率研究、針尖充電電極粒狀物帶電及靜電附著、作業環境奈米微粒及可呼吸性粉塵量測、文氏洗滌器核凝技術與微粒控制效率模式、旋風器入口參數與微粒控制效率研究、粒狀污染物自動監測與採樣技術、粒狀物高效率過濾技術及濕式噴霧技術除酸鹼理論等。

四、研究成果

NUMERICAL INVESTIGATION OF ULTRAFINE AEROSOL DEPOSITION INSIDE A NEEDLE CHARGER WITHOUT APPLIED VOLTAGE

PENETRATION EFFICIENCY AND CONCENTRATION DISTRIBUTION OF NANOPARTICLES IN A HOLLOW TAPERED CYLINDER

STUDY ON PARTICULATE COLLECTING EFFICIENCY AND JET TO SINTERING FILTER DISTANCE OF INERTIAL IMPACTOR

INVESTIGATION ON $PM_{2.5}$ CONCENTRATION COLLECTING EFFECTIVENESS OF FILTER IMPACT SEPARATOR AND AUTOMATIC AEROSOL DETECTOR

REMOVAL OF PARTICULATE MATTER FROM AN AIR STREAM BY A PACKED DIELECTRIC BARRIER DISCHARGE

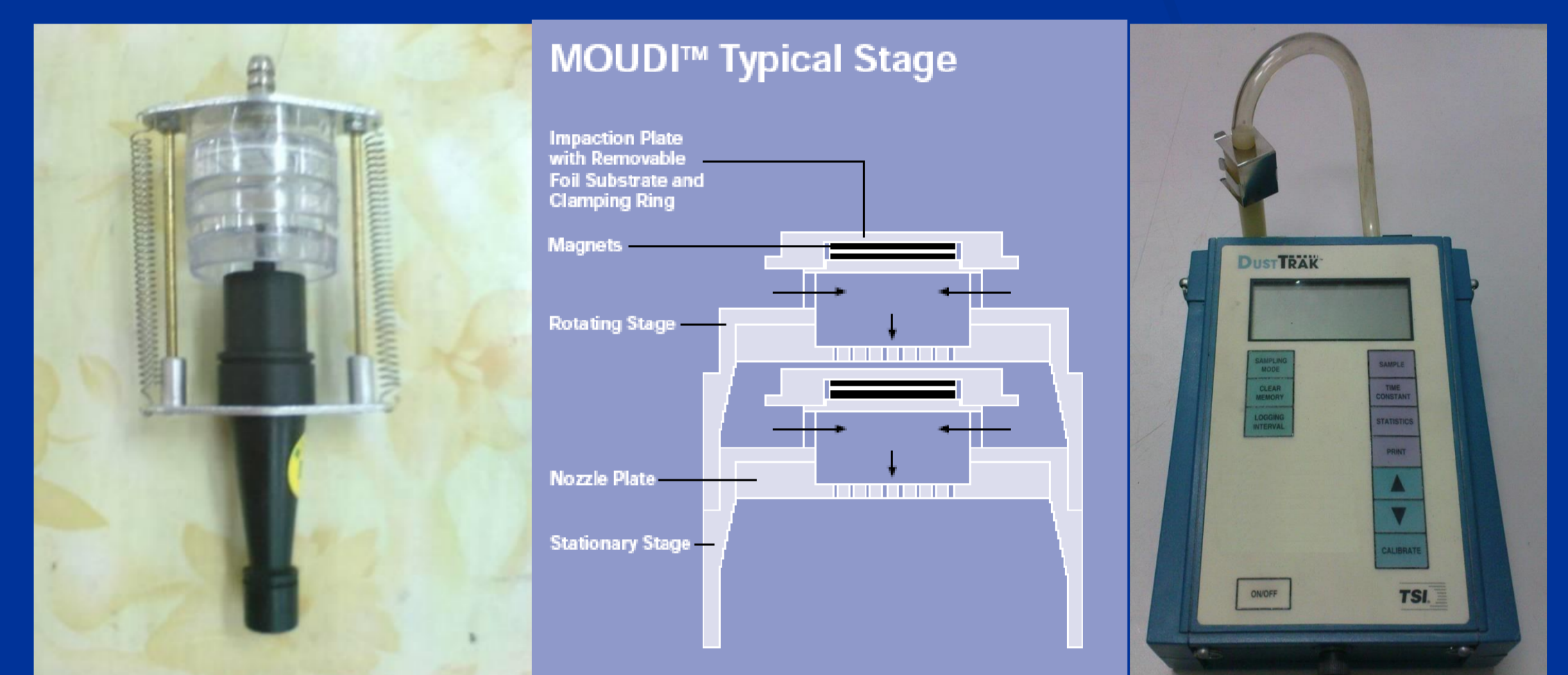
INVESTIGATION ON THE USE OF A NON-THERMAL PLASMA FOR THE PARTICLE REMOVAL FROM AIR STREAM

PARTICULATE MATTER REMOVAL FROM A GAS STREAM USING HIGH-VOLTAGE DISCHARGE PLASMA

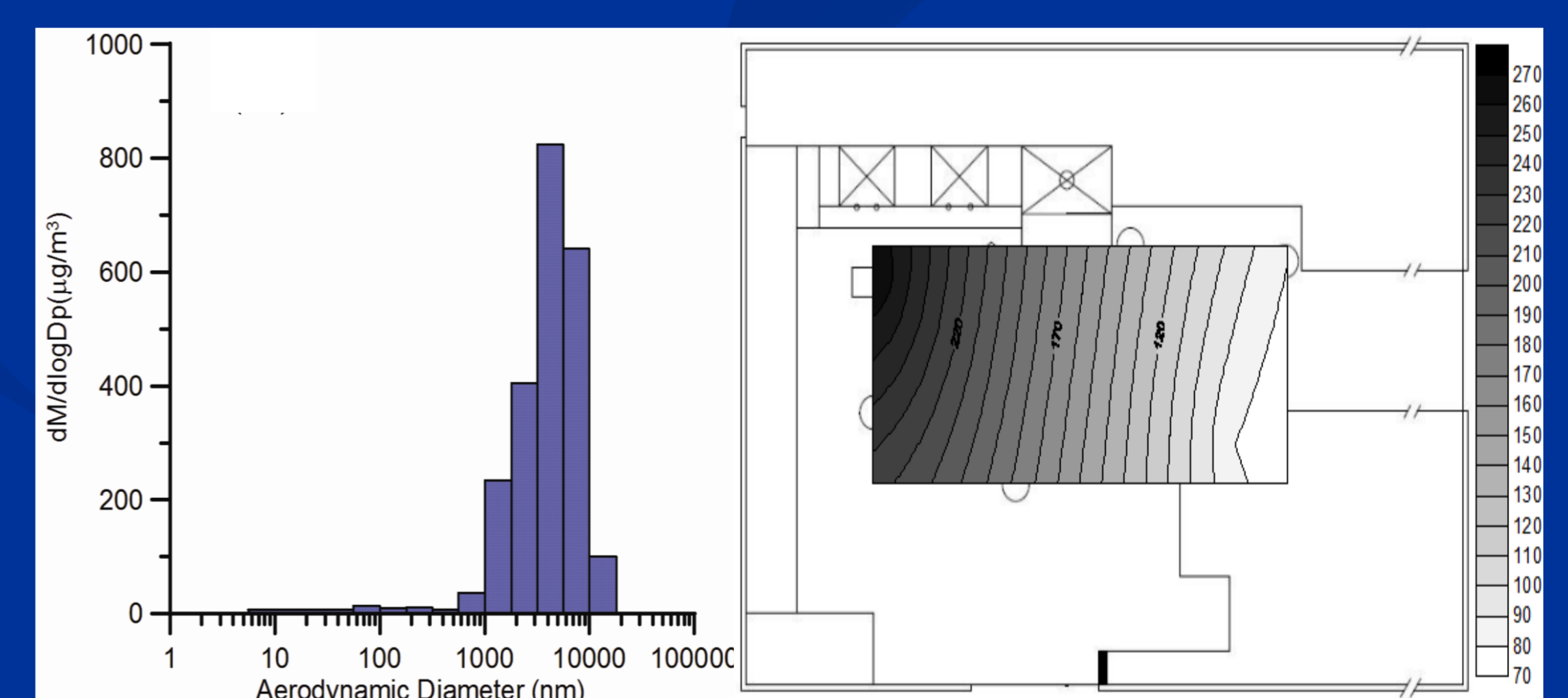
FIELD COMPARISON OF REAL-TIME $PM_{2.5}$ READINGS FROM A BETA GAUGE MONITOR AND A LIGHT SCATTERING METHOD

CONTROL EFFICIENCY OF SUBMICRON PARTICLES BY AN EFFICIENT VENTURI SCRUBBER SYSTEM

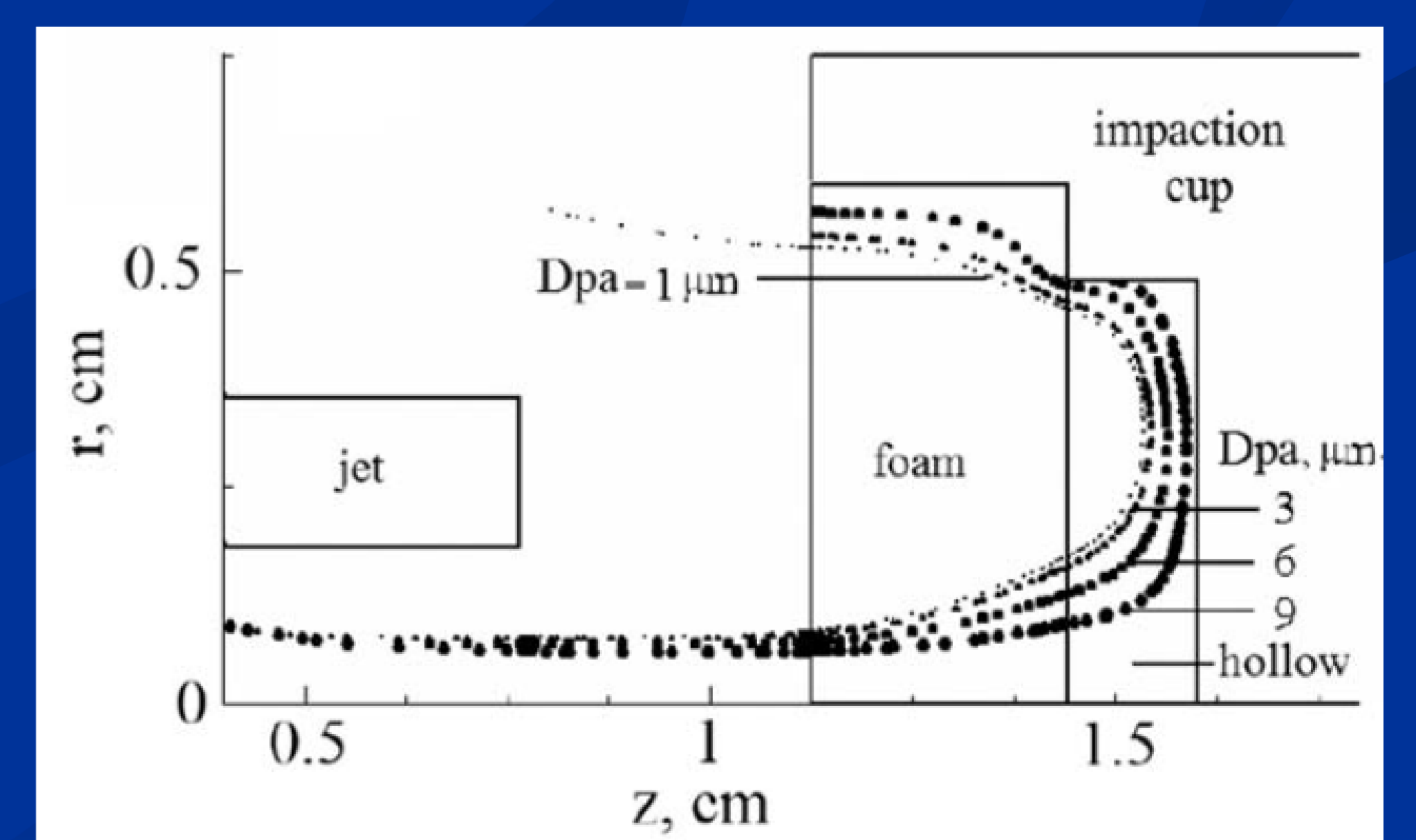
ENHANCEMENT OF EXTRINSIC CHARGING EFFICIENCY OF A NANOPARTICLE CHARGER WITH MULTIPLE DISCHARGING WIRES



CYCLONE, MOUDI, DUST TRAK



粒狀物粒徑分布與等濃度圖



重力機制衝擊器微粒軌跡