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## 微通道板选通分幅相机

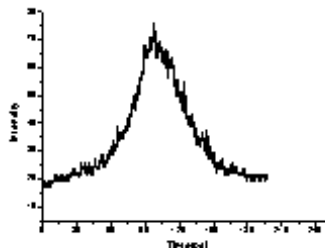
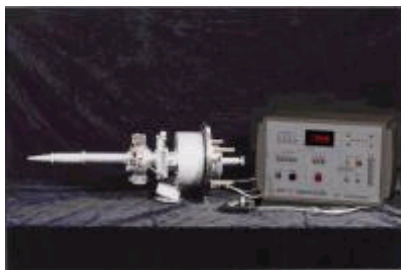
### 一、简介

分幅相机是利用行波选通微通道板（MCP）近贴聚焦变像管的方法而研制的具有一维皮秒时间分辨以及二位空间分辨的高时间空间分辨诊断设备。它在惯性约束聚变、X射线激光、等离子体物理、强场物理、光生物学等研究中具有广阔的应用前景。

目前上用这种方法曝光时间已经做到了80ps ~ 100ps ，

### 二、主要指标

- 1、能谱响应：0.1~10Kev
- 2、微带：4条；宽度6mm/条；长25mm/条
- 3、曝光时间：60ps~100ps
- 4、触发晃动：≤±50ps
- 5、空间分辨率：25对线/毫米
- 6、均匀性：<±5%



### 三、技术特点

利用现有的常规微通道板研制的分幅相机时间分辨率约60ps，其最快曝光时间为60~80ps，但该相机的最大优点就是曝光时间可根据用户要求进行设计，只要调节快门选通时间，相机的曝光时间可在皮秒、纳秒或微秒的宽时间范围内调节。

利用针孔成像分幅，最大画幅数可达16幅

### 四、最新研究

- 1、利用双MCP结构研制分辨率30~40ps时间的分幅相机，目前已进行了时间分辨标定实验。
- 2、大面积、多画幅分幅相机。利用大面积的微通道板，可根据用户要求，；或涉及每个画幅的尺寸以及画幅数。

### 五、联系方式

中国科学院西安光学精密机械研究所  
瞬态光学与光子技术国家重点实验室  
Tel: 862988887616  
E-mail: liubaiyu@opt.ac.cn

## Introduction

Framing camera is based on traveling wave gated Microchannel Plate (MCP) and proximately focusing imager. This camera can achieve one dimensional picosecond time resolution and 2 dimensional spatial resolution so that it can be used as an instrument in detecting ultrafast phenomena. It has further application potential in several research area such as ICF, X-ray Laser, Plasma Physics, intense field physics and optical biology.

Now, the exposure time of framing camera can reach 80ps-100ps.

## Main features

energy spectrum response 0.1-10keV

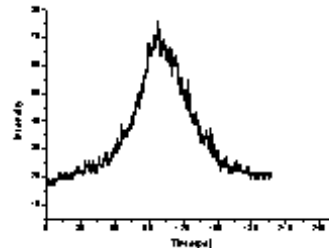
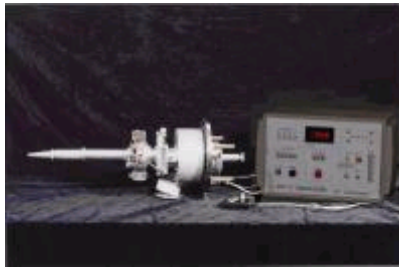
Number of Stripline: 4    Width 6mm    length: 25mm

Exposure time :60ps-100ps

Trigger jitter:  $\leq \pm 50$ ps

spatial resolution: 25lp/mm

consistency:  $< \pm 5\%$



## Technical characteristic

Framing camera based on normal size MCP can reach the exposure time of 60ps, Its exposure time ranges from 60ps to 80ps which can be adjusted from picosecond, nanosecond to microsecond by choosing the shutter time.

Utilized with pinhole, the maximum frames can reach 16 at all.

## recent research

Novel Framing camera based on two MCP has accomplished time resolution testing. The result shows it can reach the exposure time of 30-40ps

Large format, multiframe framing camera

## Contact

Liubaiyu

Xi'an Institute of Optics and Precision Mechanics, Chinese Academy of Sciences

Xi'an, Shaanxi, 710068, P. R. China

Tel +86 29 88887616

[Liubaiyu@opt.ac.cn](mailto:Liubaiyu@opt.ac.cn)