

Solar Probe Plus

A NASA Mission to Touch the Sun



Integrated Science Investigation of the Sun Energetic Particles

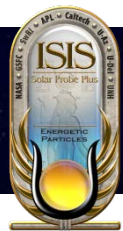
Preliminary Design Review

05 – 06 NOV 2013

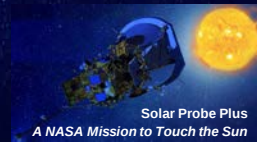
EPI-Lo Sensor

Prepared by: Matt Hill

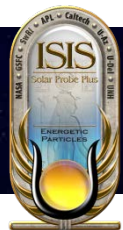




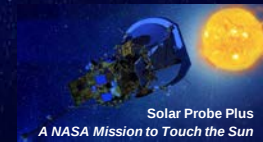
Outline EPI-Lo Sensor Design



- ISIS Science Requirements Relevant for EPI-Lo
- EPI-Lo Instrument
- Block Diagrams
- Principles of Operation Overview
- Electrostatic Optics
- Collimators and Start Foils
- Solid State Detectors & Stop Foils
 - Anti-coincidence System
- Microchannel Plate (MCP)
- Mass Resolution (??)
- Follow-up from peer reviews
- Summary

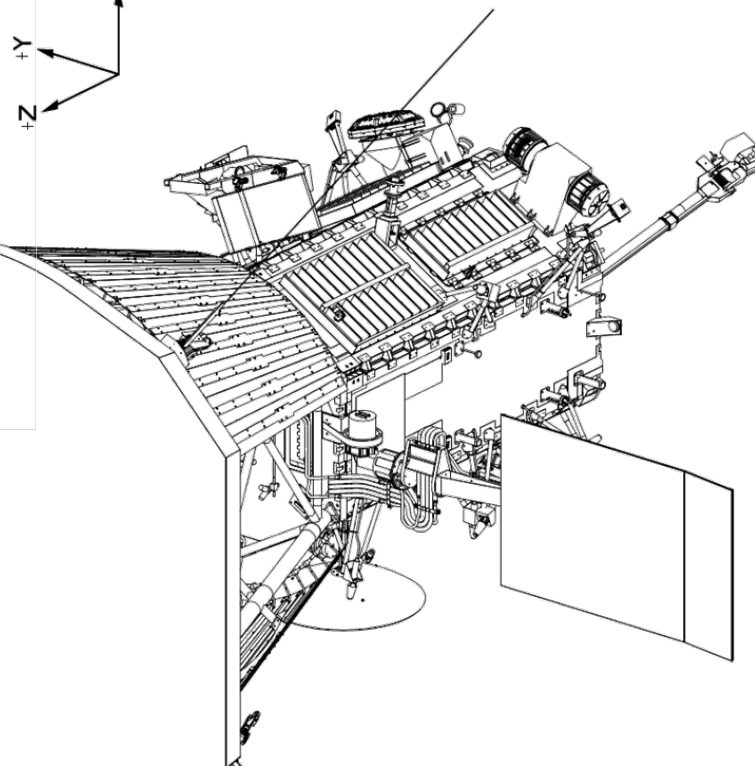
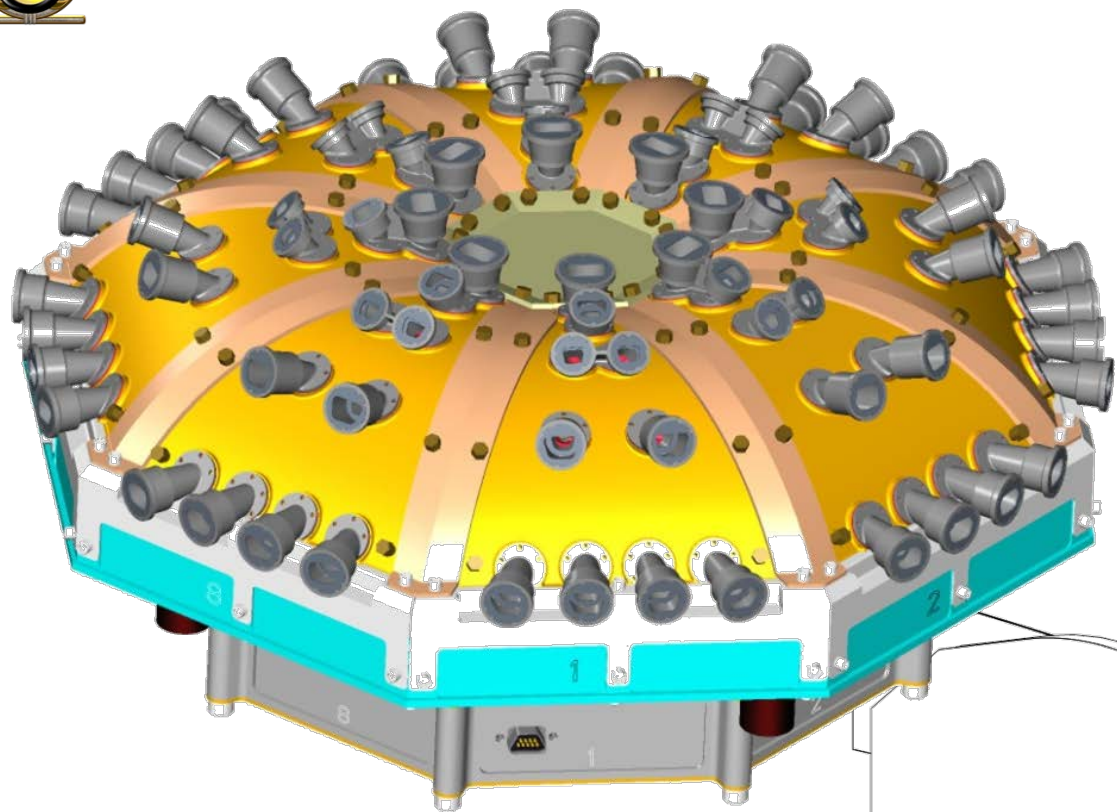


EPI-Lo Focused Science Requirements

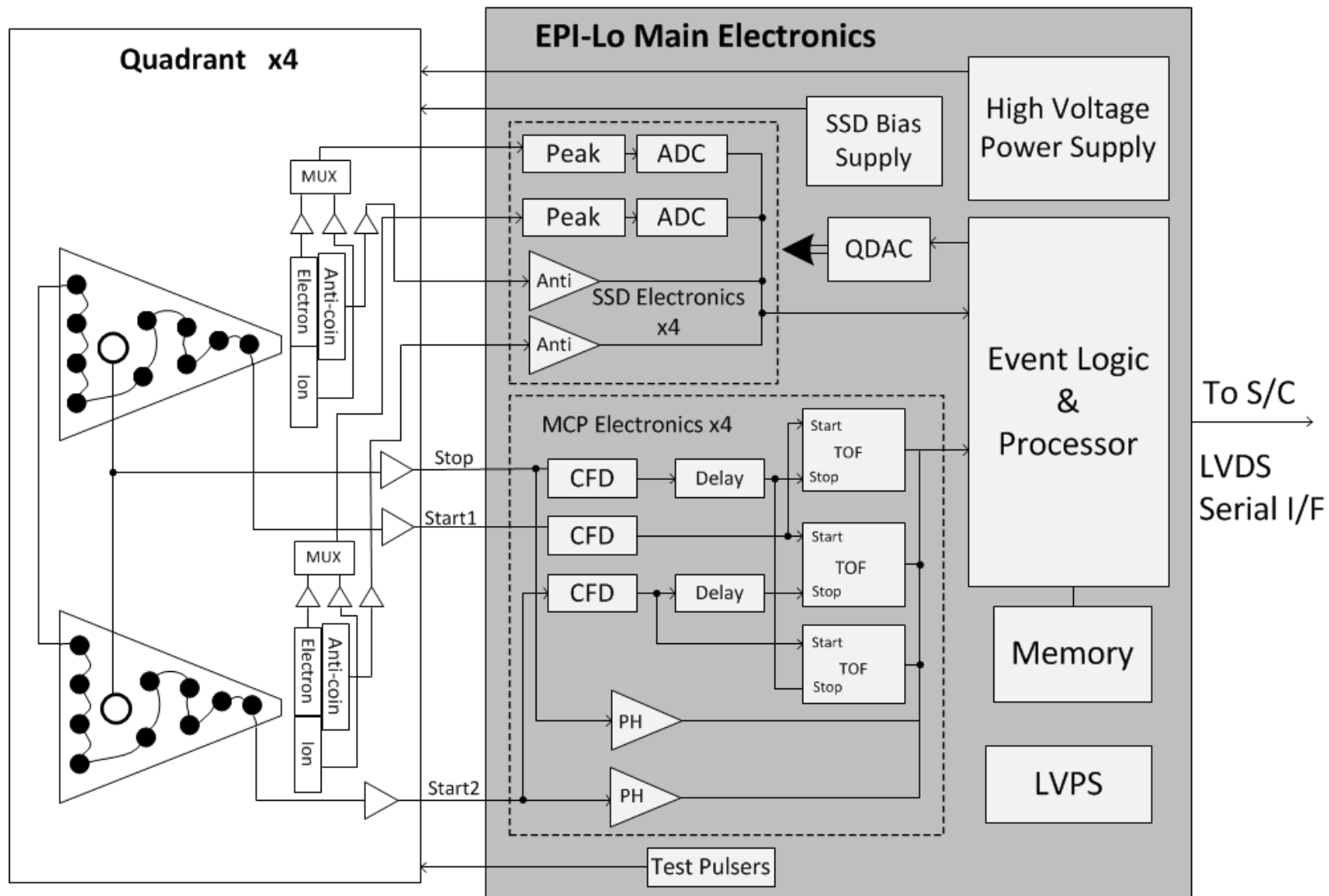


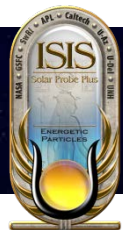
	Intensity	FOV	etc.	
Ions				
Electrons				
etc.				

The EPI-Lo Instrument

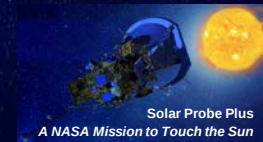


EPI-Lo Block Diagram

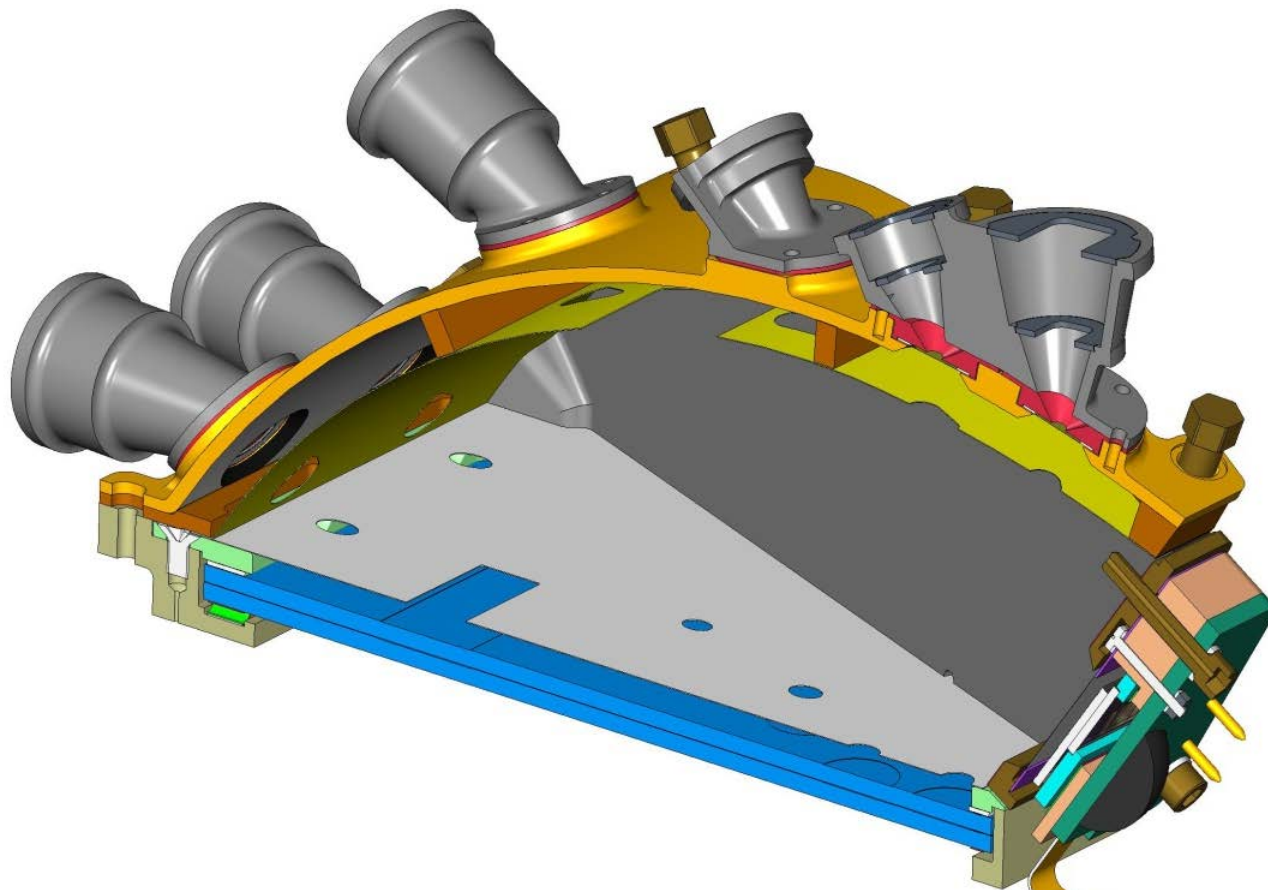


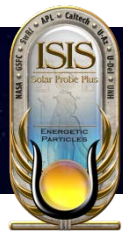


Principles of Operation

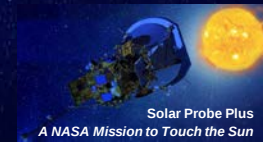


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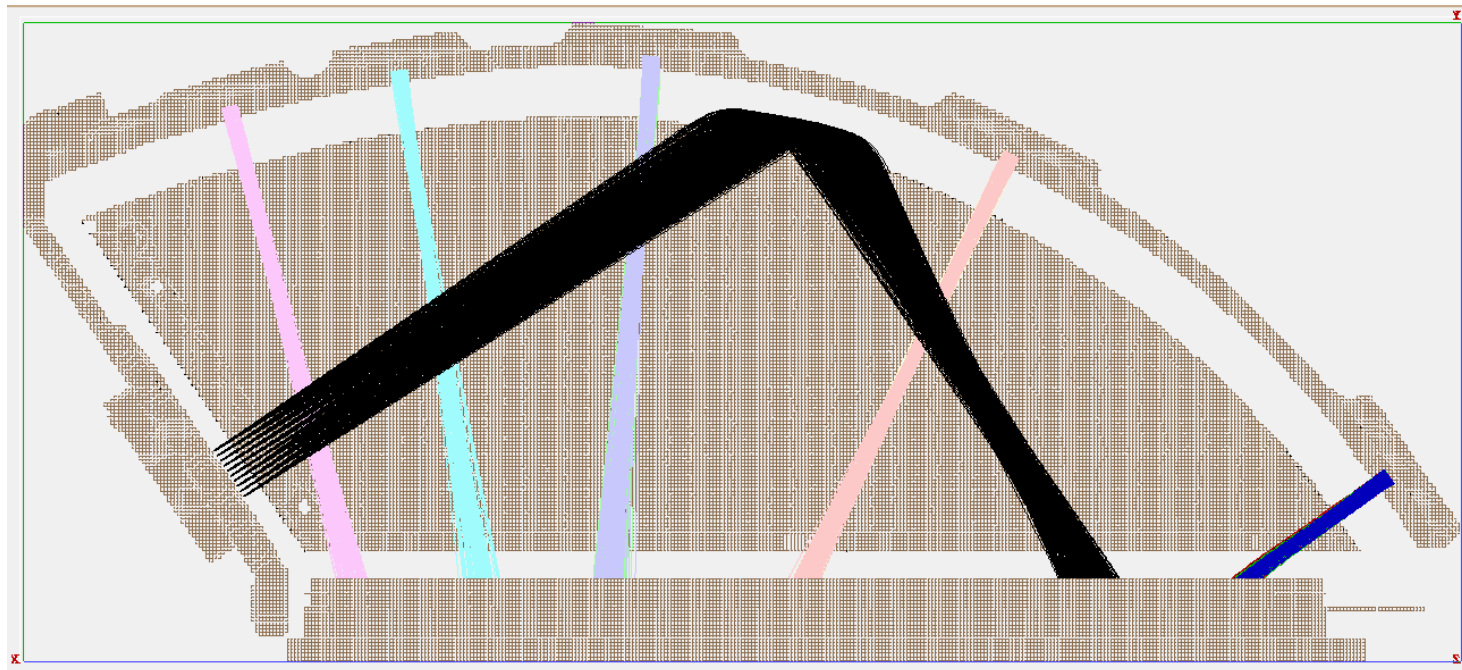


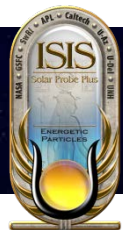


Electrostatic Optics

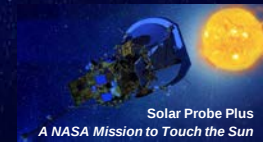


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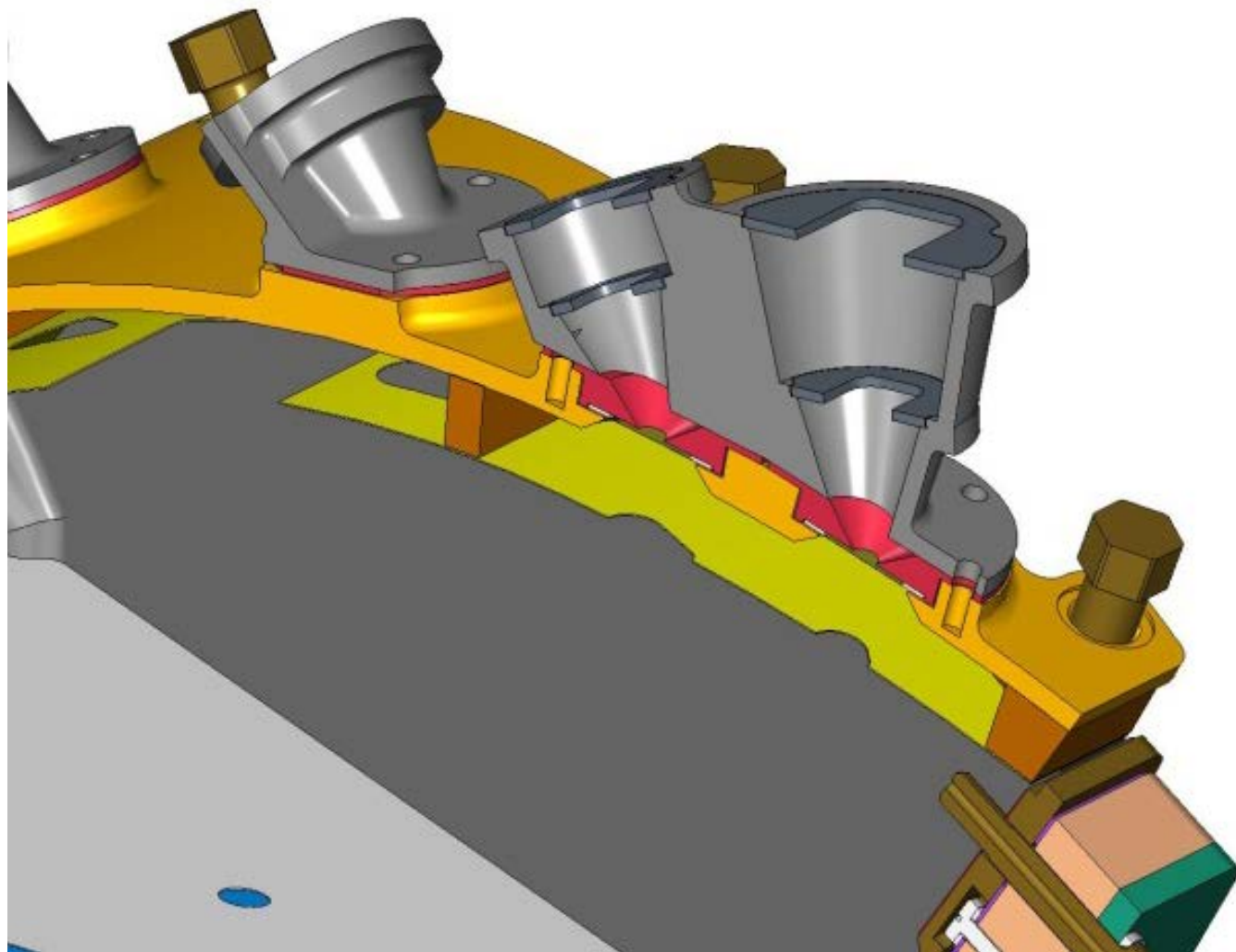


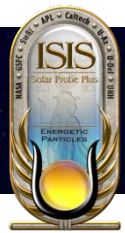


Collimators and Start Foils

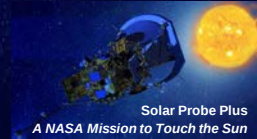


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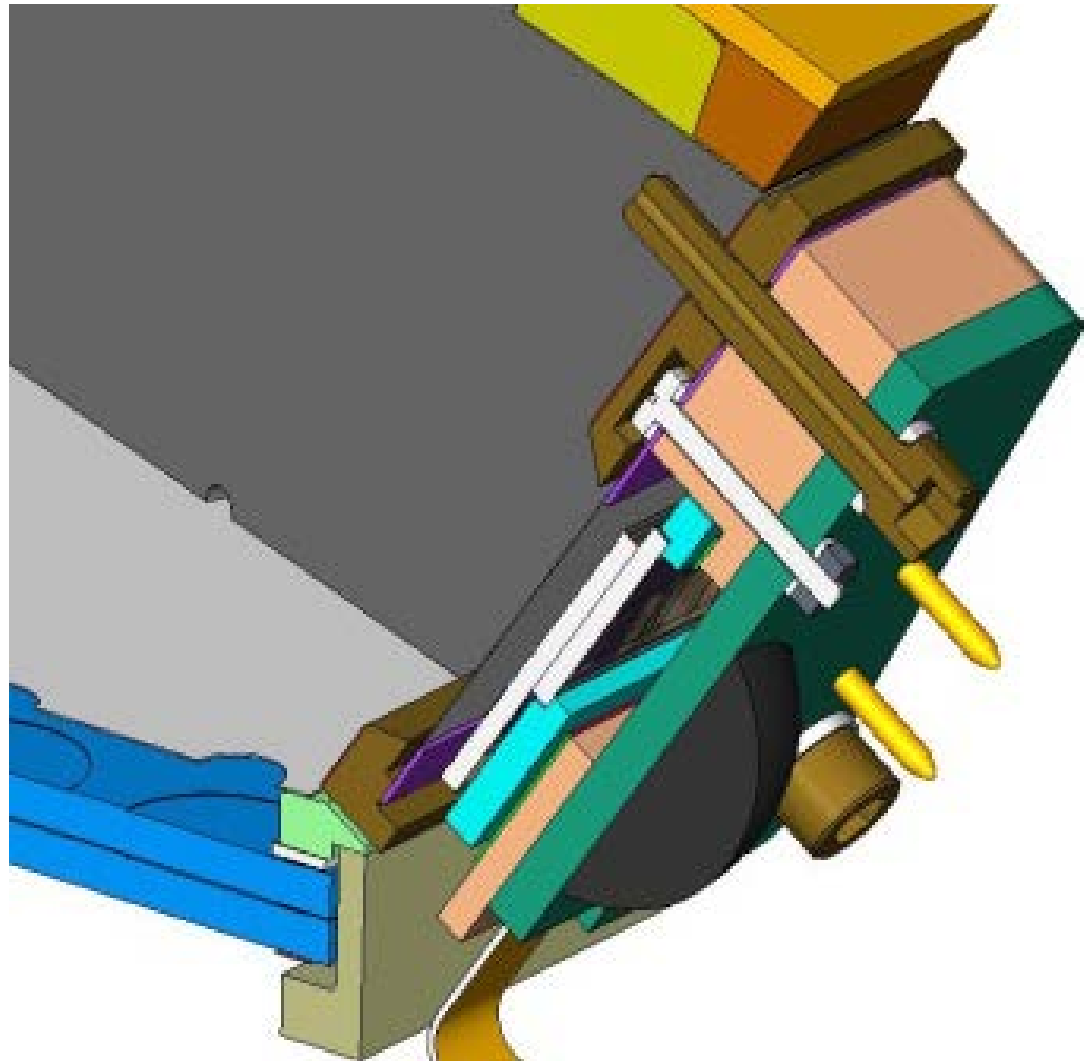


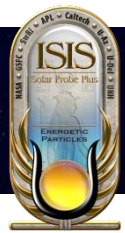


Solid State Detector and Stop Foils

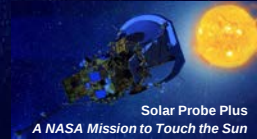


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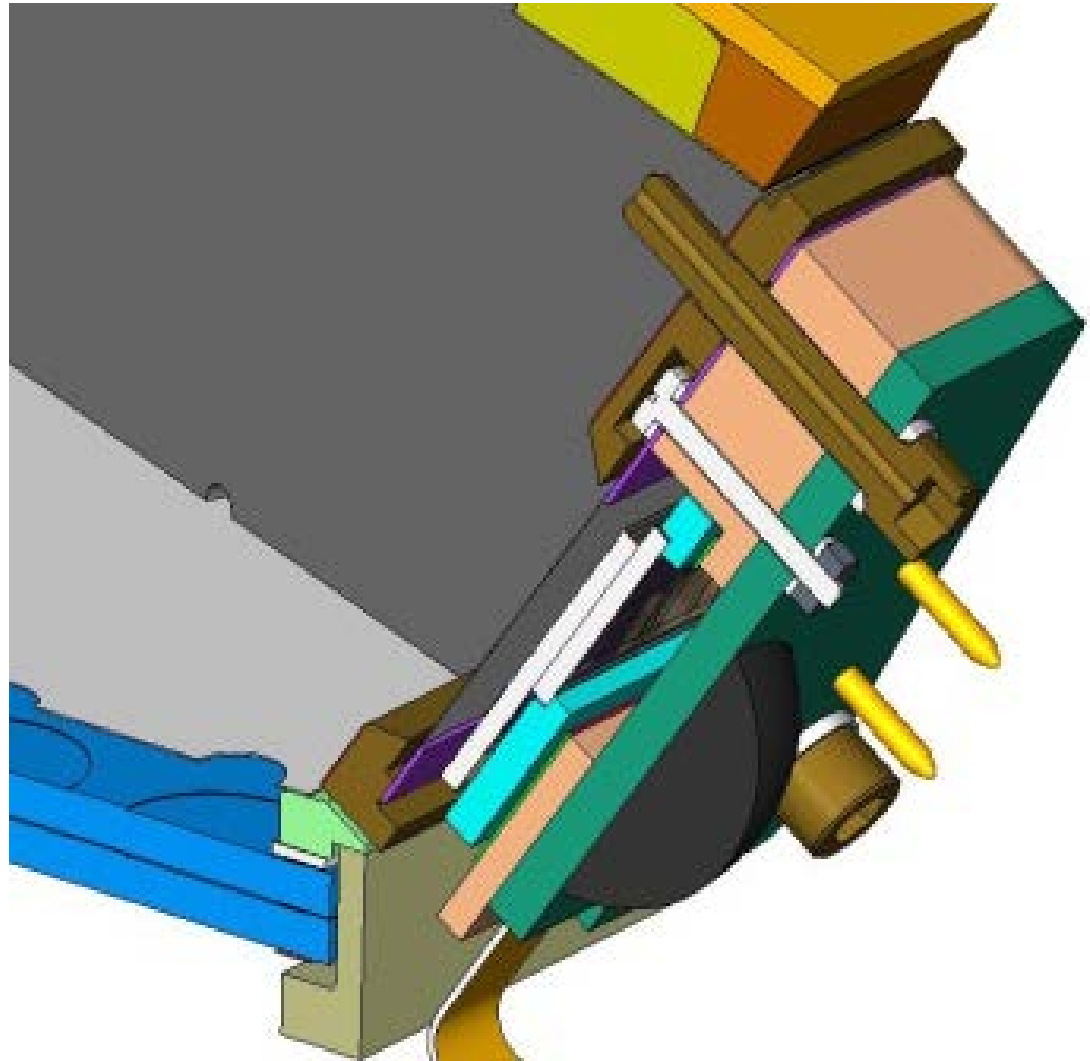


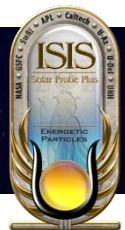


Anti-coincidence System

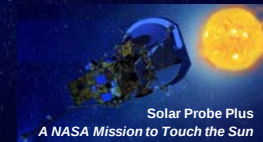


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Microchannel Plate (MCP)



- First

- xxxxxx

- xxxxxxxx

- Second

- Third

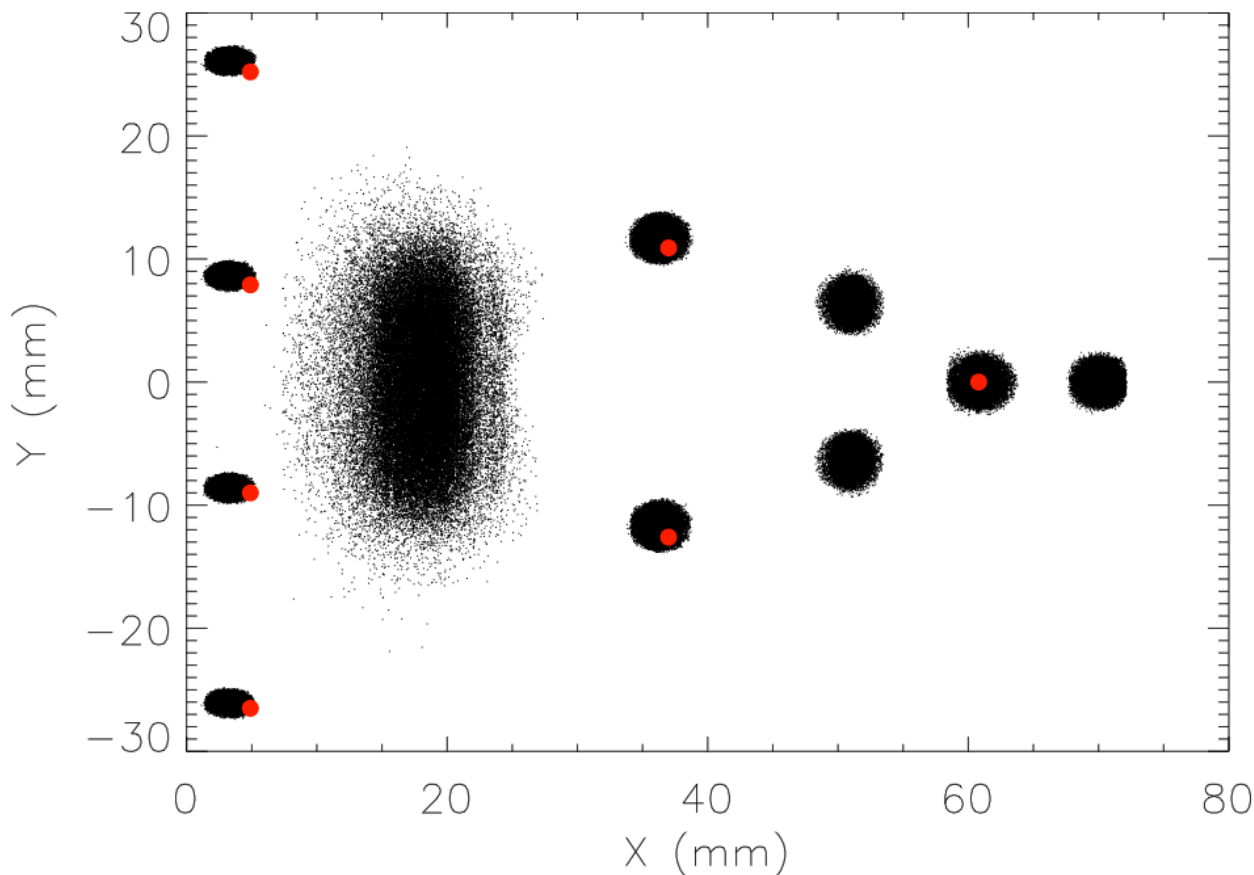
- xxxxxxxx

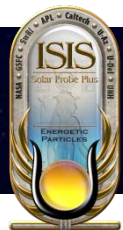
- xxxx

- Forth

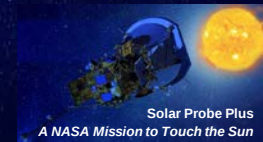
- xxxxxxxx

- xxxxxxxx





Mass Resolution



■ First

■ XXXXXX

■ XXXXXXX

■ Second

■ Third

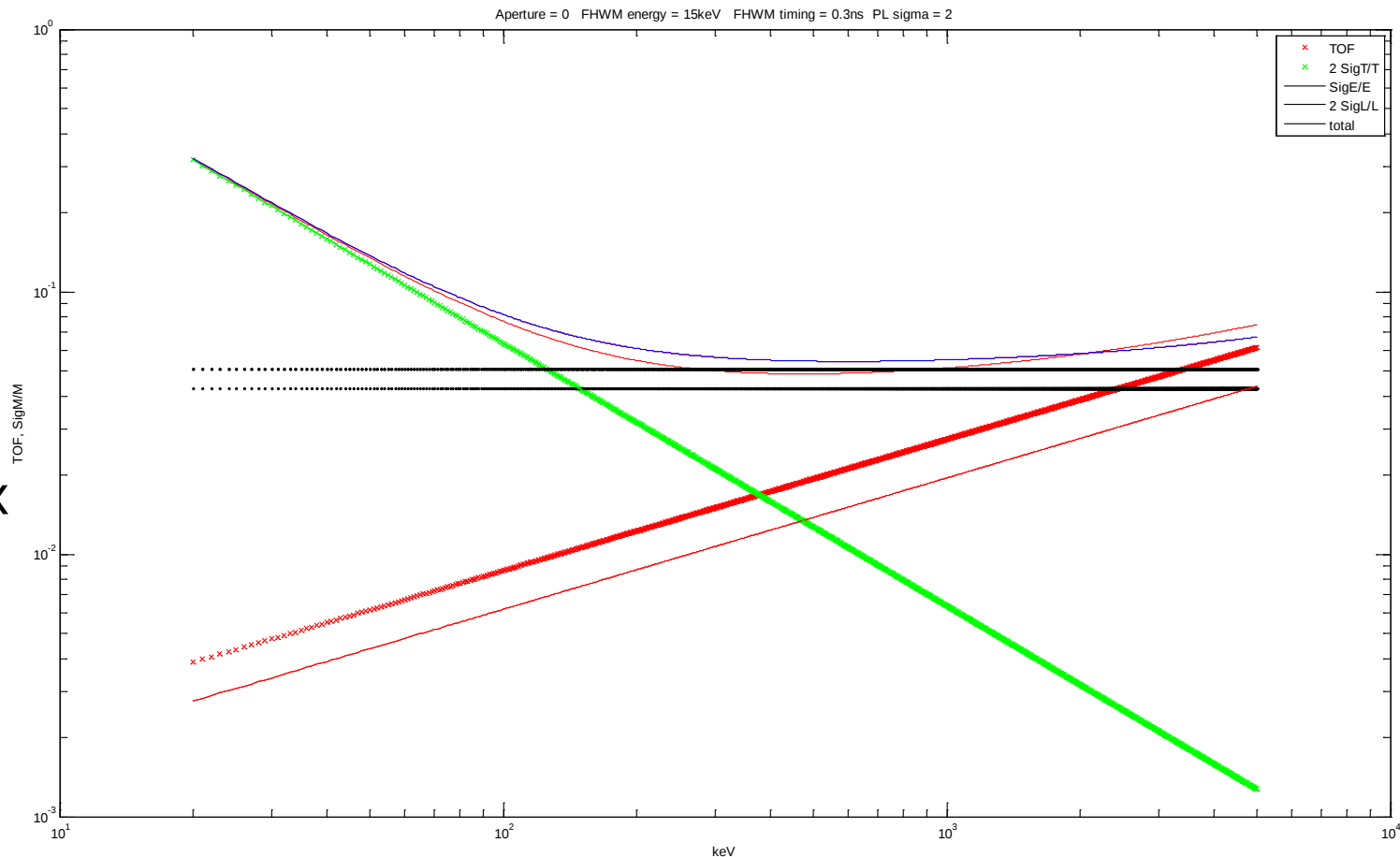
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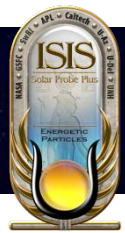
■ XXXX

■ Forth

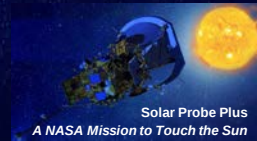
■ XXXXXXXXX

■ XXXXXXX

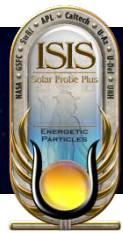




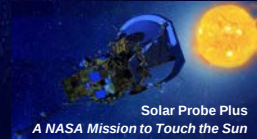
Follow Up from Peer Reviews



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- Second
- Third
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- Forth
 - xxxxxxxx
 - xxxxxxx



Summary



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- Second
- Third
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- Forth
 - xxxxxxxx
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