

WSO-UV

World Space Observatory – Ultraviolet



# Field Camera Unit

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# From Spanish ISIS to Russian-Spanish-Mexican FCU



The Field Camera Unit (FCU) is one of the main scientific instruments of the WSO-UV mission. FCU will be the first UV-imager to be flown to a geosynchronous orbit (above the geocorona).

The main task of the FCU is to obtain high resolution images and low resolution spectra in Far- and Near- Ultraviolet bands.

The cooperation on FCU developments:

- INASAN and UCM — scientific supervisors;
- IKI RAS — prime contractor for FCU;
- Spain — FUV detector supplier;
- Mexico — optical elements (TBD).
- Japan — coronagraph (TBD).

# Russian-Spanish FCU



The preliminary design of FCU includes two channels.

1. FUV channel with MCP detector, **115-176 nm**:

- Solar blind detector;
- Diffraction-limited imaging in FUV;
- High sensitivity in photon-counting mode;
- High time resolution;
- Low resolution field spectroscopy.

2. NUV channel with CCD detector, **174-310nm**:

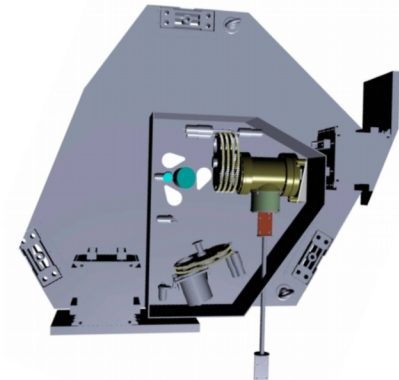
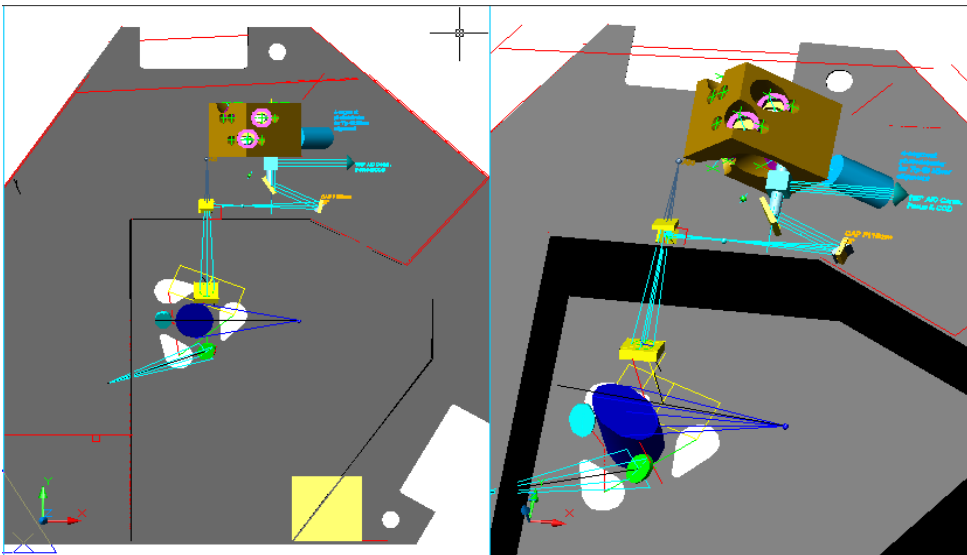
- Wide field of view;
- High dynamic range;
- High angular resolution;
- Low resolution field spectroscopy;
- Possibility for extended spectral range: 115-1000 nm.

# Russian-Spanish FCU



Now IKI RAS (Russia) and NAOJ (Japan) are looking for a possibility to realize the third channel with a coronagraph mode.

More details about the coronagraph mode will be presented by Alexander Tavrov (IKI).



# Russian-Spanish FCU



## Main features of FCU

Parameters	ISSIS	Far-UV	Near-UV
<b>Detector</b>	MCP, analogue of UVIT (Spain)	MCP type detector	CCD
<b>Spectral range, nm</b>	115-310	115-176	174-310 (115-1000)
<b>Effective area, M<sup>2</sup></b>	0.054	0.068	0.27
<b>Field of view, arcsec×arcsec</b>	70×75	121×121	597×451
<b>Angular resolution, arcsec</b>	0.03	0.08	0.146
<b>Detector size, mm</b>	40	30	49×37
<b>Number of filters</b>	2 x (5+2 neutral)	Up to 10	Up to 15