



# Centre for Energy Research

## Fusion Plasma Physics Department



## EDICAM activities in 2021

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Please note:

The Hungarian fusion team is **not Wigner** anymore.

We belong to **Centre for Energy Research** ("EK" for short, [www.ek-cer.hu/en](http://www.ek-cer.hu/en)).

**EK** is also the EUROfusion beneficiary from FP9 onwards.

EK is made up of the *Atomic Energy Research Institute (AEKI)*, the *Institute of Technical Physics and Materials Science* and the *Institute for Energy Security and Environmental Safety*.

Our team is the **Fusion Plasma Physics Laboratory** (department) in AEKI.



## Operation / Campaign participation – if any

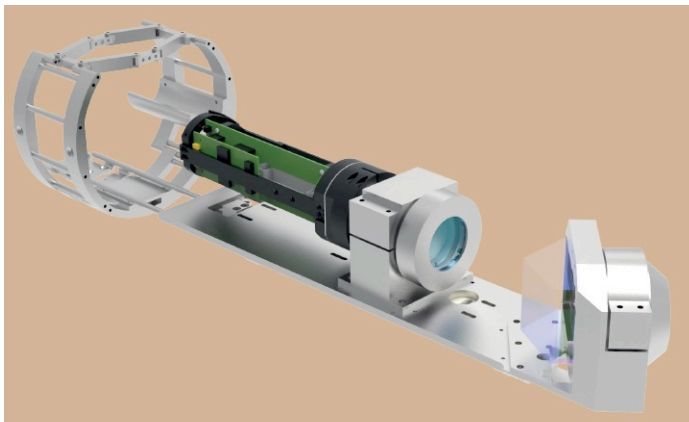
- camera operation
- data processing, evaluation, studies (publications)

## Code development

- develop a GUI-based software package for camera data visualization
- include FLAP (Fusion Library of Analysis Programs) package support, developed by EK

## Hardware

- spare optics
- new camera receiver card



## Code development

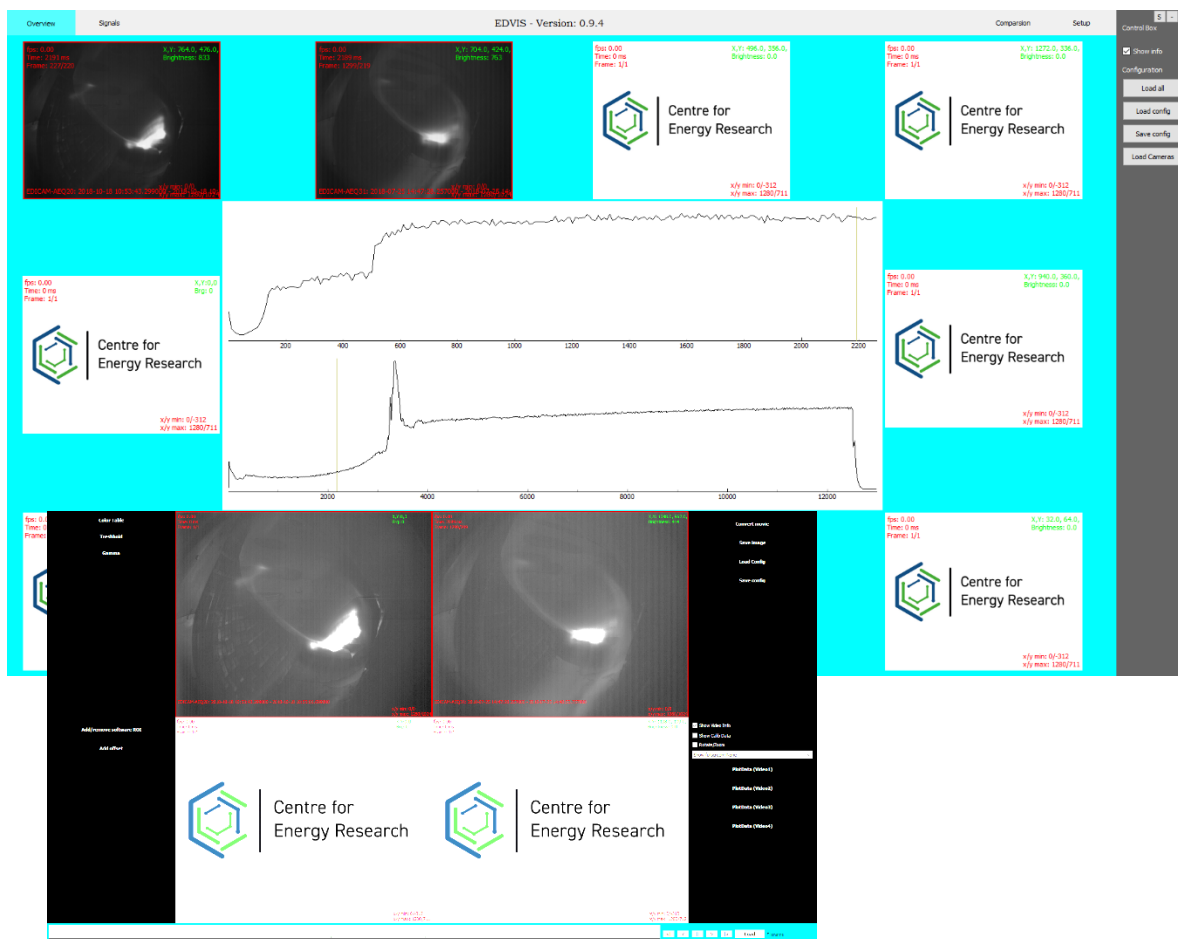
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## EDVIS: EDICAM Data Visualization Software

- display up to 10 movies, time-synchronized
- several playback options
- display other diagnostic data\*
- basic image manipulation
- export to several movie/image formats

## New features / enhancements

- adapt layout to JT-60SA (e.g. portrait orientation)
- develop data input/output for JT-60SA data





## Code development

- develop a GUI-based software package for camera data visualization
- include FLAP (Fusion Library of Analysis Programs) package support, developed by EK

### FLAP: Fusion Library of Analysis Programs

- a program suite for processing large multidimensional datasets
- developed by our laboratory (EK), Python 3.7 + numpy + matplotlib
- core FLAP and data access methods are separate
- filter, slicing, APSD, CPSD, CCF, conditional averaging, ...
- plots for 1D, 2D, 3D data objects, slices of objects
- available on GitHub: <https://github.com/fusion-flap>

The logo for FLAP (Fusion Library of Analysis Programs) consists of the letters 'F', 'L', 'A', and 'P' in a large, bold, sans-serif font. Each letter is a different color: 'F' is red, 'L' is blue, 'A' is purple, and 'P' is green.

### New features / enhancements

- handle/display field line tracing and magnetic surfaces



Thank you for your  
attention!