

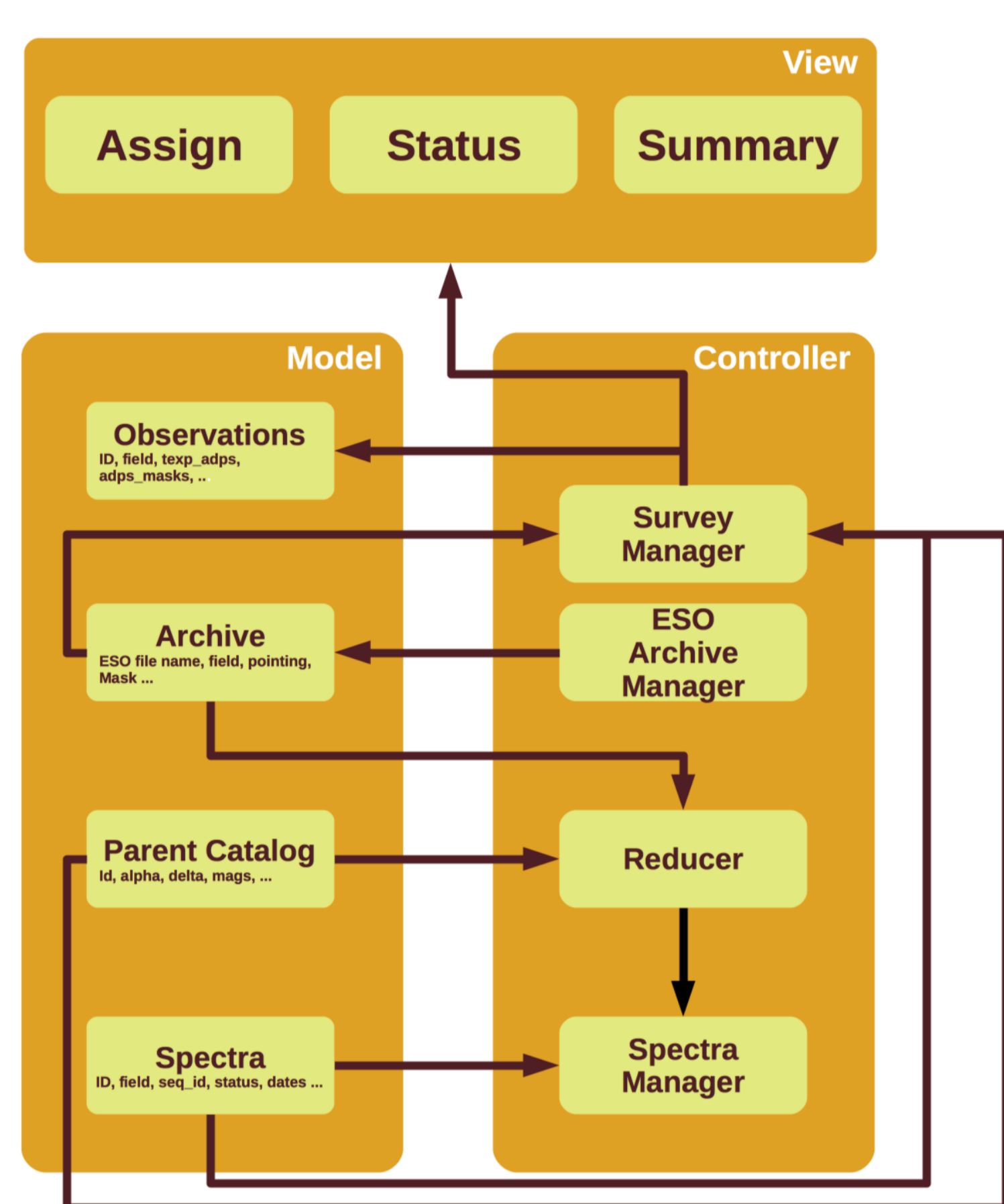
EASYLIFE 2.0

A Conceptual Framework for Semi-automatic Survey Management



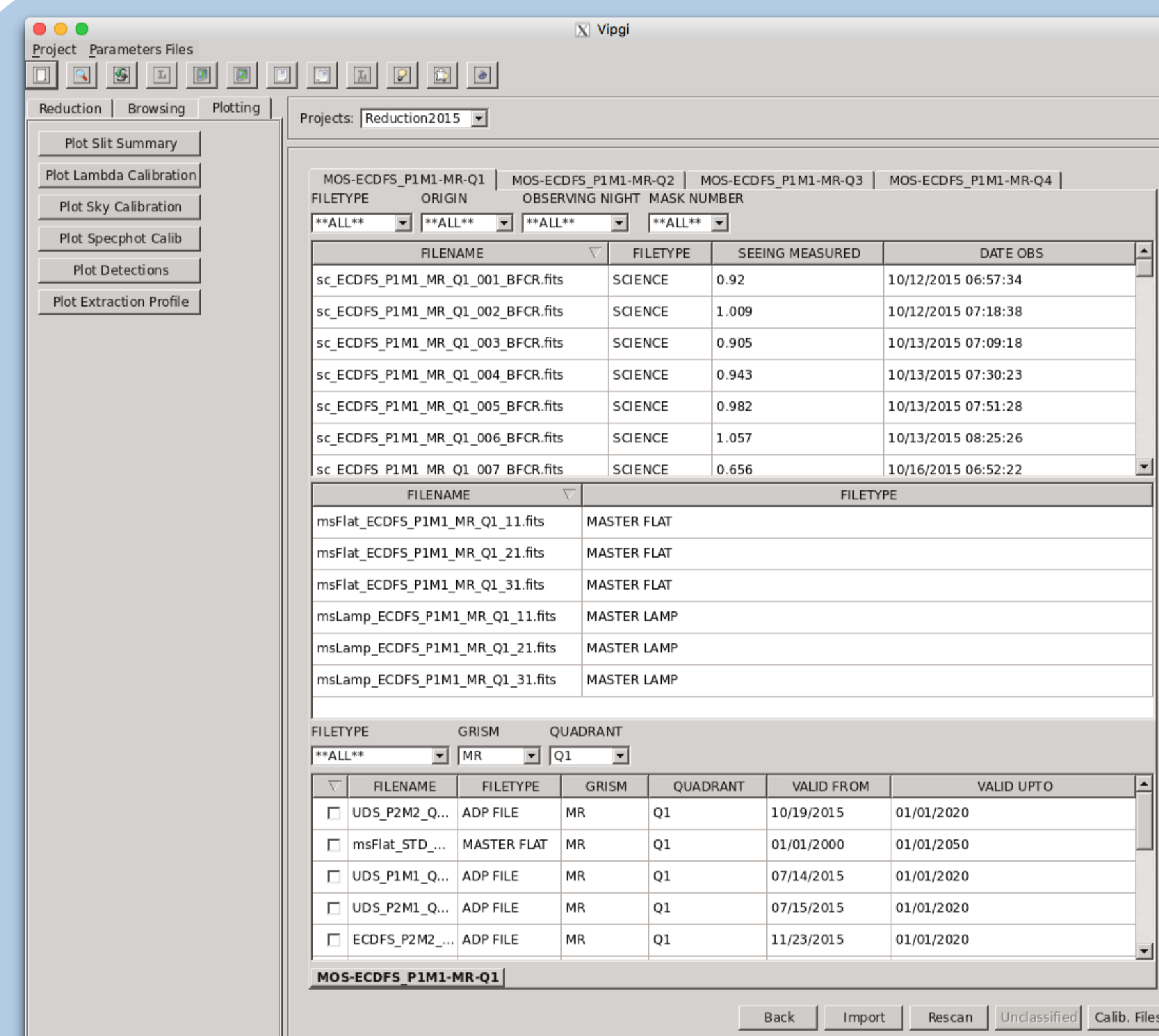
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EasyLife is a conceptual framework aimed at the semi-automatic management of spectroscopic surveys. Conceived in 2012 as a tool to manage the VIPERS¹ spectroscopic survey and based on a prototype version of the FASE framework², it has evolved into a survey-independent generalised framework following the MVC (Model-View-Controller) paradigm (1). EasyLife 2.0 has been modified to exploit PNGS (Pandora Next Generation Software) APIs³ and FASE stable version. EasyLife is currently used to manage the ongoing VANDELS⁴ ESO public spectroscopic survey carried out using the VIMOS@VLT spectrograph.



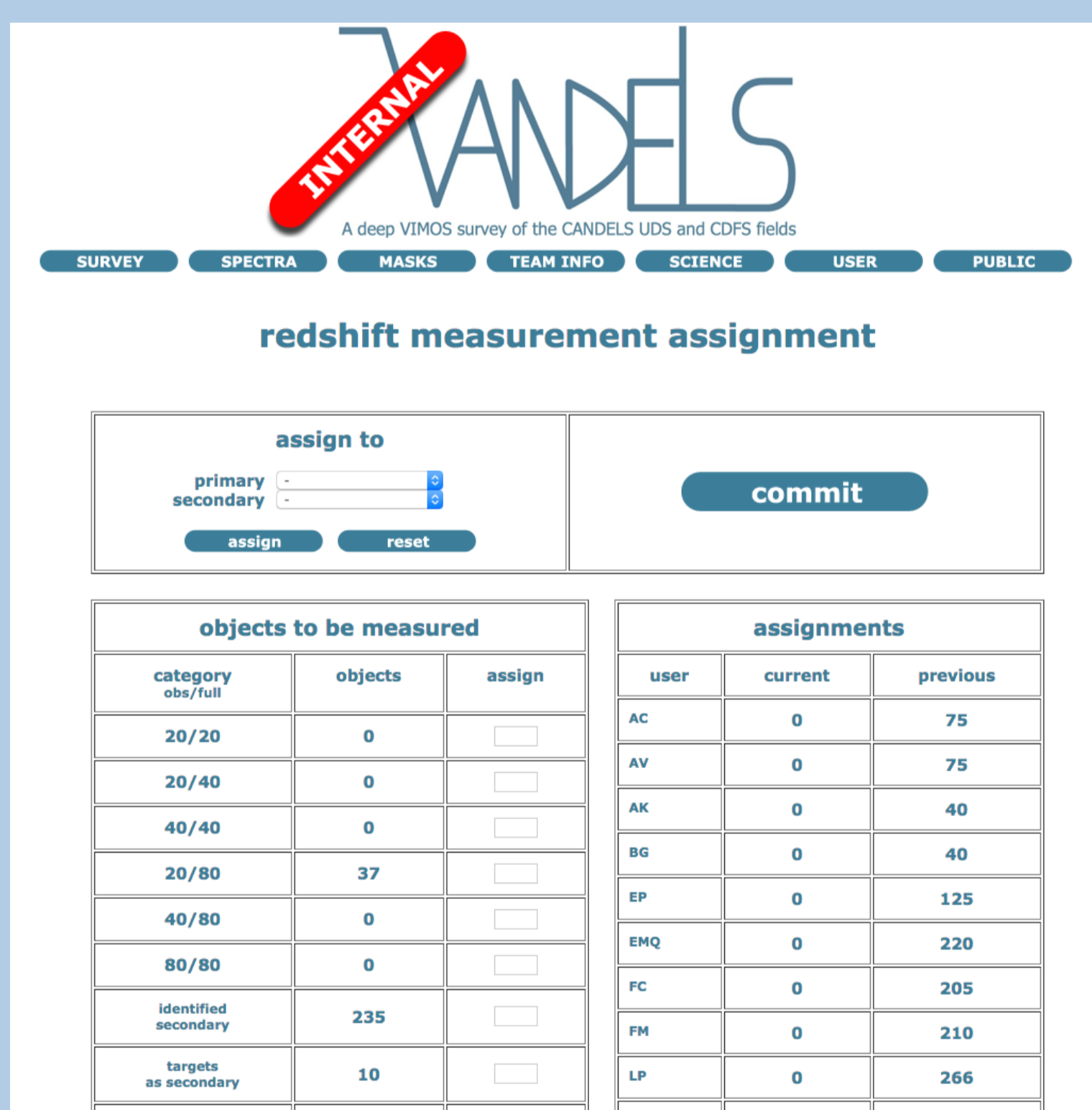
1

By means of a Web-based Interface, users interact with information stored in different pre-configured SQL-like database tables, representing the framework data model; actions performed through the interface are executed by software elements whose output is then stored back in the database or rendered through the interface



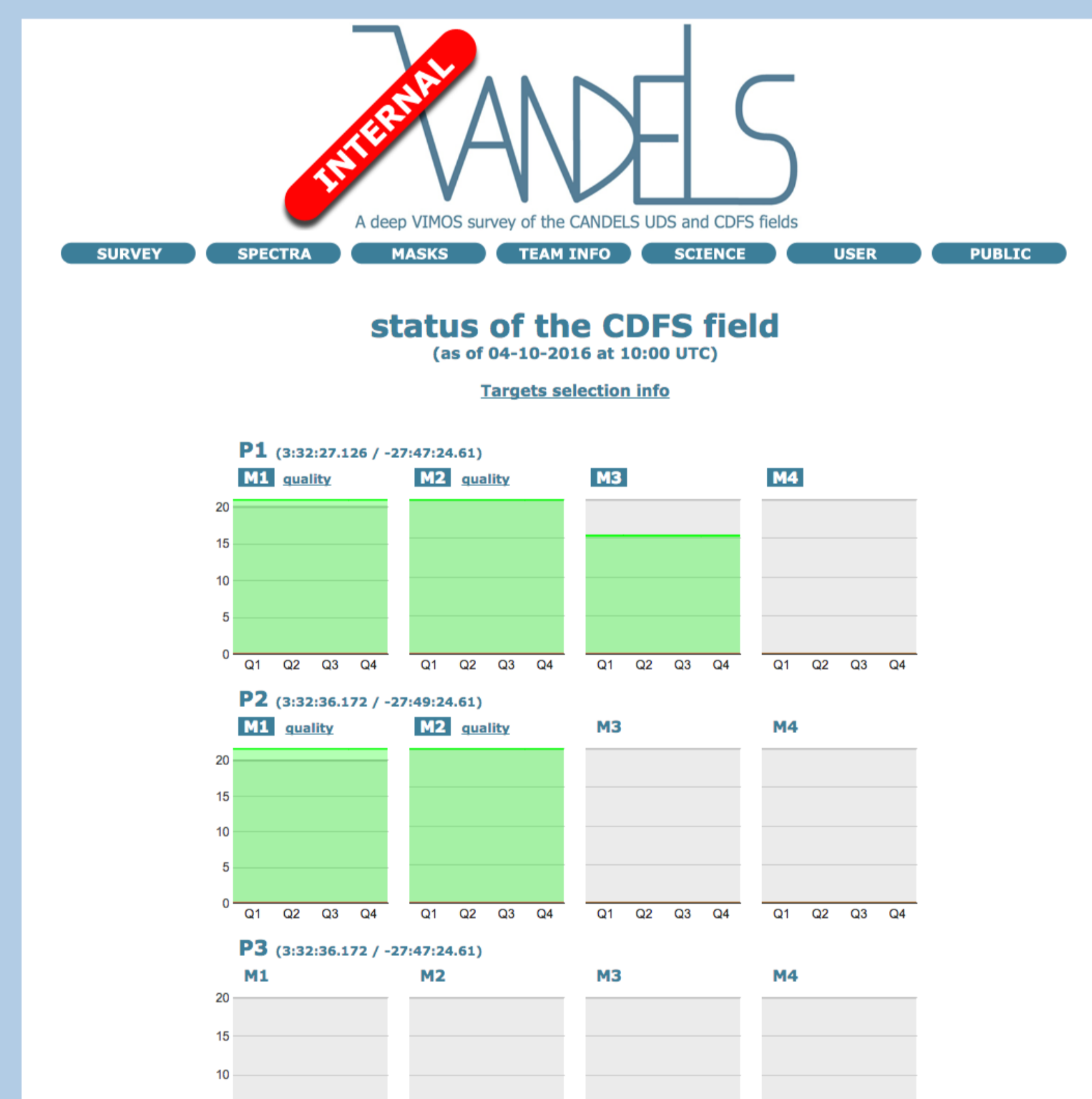
2

An ad-hoc configured version of Pandora Vippi³ (an application designed to simplify the task of reducing astronomical data obtained with VIMOS)⁵ is the main interface for spectroscopical data management and classification: the main area shows, together with the raw and reduced data, the calibration data needed for the processing organized in so-called "reduction unit". The left vertical menu offers functionalities to reduce, browse and plot spectroscopical data, the upper horizontal menu collects general functionalities such as saving or refreshing the view



3

Through this page, the PI chooses the number and the category of the spectra to assign to team members for redshift measurement; it shows how many spectra have been measured by each member and the category of the spectra to be assigned



4

For each survey pointing it is possible to visualize the observations already performed (green blocks) and the missing ones (grey blocks)

EasyLife 2.0 comprises a graphical user interface (2) to organise, reduce and automatically classify survey data, a Web-based interface to monitor the survey by retrieving the survey status in terms of observed, to be reduced, and already reduced pointings (4) and to manage the team members workload (3). User interfaces (both GUI and command-line) are developed in Python, while the computational core is implemented in C to boost performances and to allow reuse of stable and thoroughly tested legacy code.

1. Guzzo et al. 2014, A&A, 566, 1A08
 2. Paoro et al. 2010, ASPC, 434, 349
 3. Fumana et al. 2016, PNGS: an API ecosystem for Astronomical Applications Development, ADASS 2016
 4. McLure, Pentericci et al., in preparation
 5. Scoddeggio et al., 2005, PASP, 117, 1284