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Mango is an online tool based on *QTango* that allows easy development of graphical panels ready to run without need to be compiled. Developing with Mango is easy and fast because widgets are dragged from a widget catalogue and dropped into the *Mango* container. Widgets are then connected to the control system variables by choosing them from a *Tango* device list or by dragging them from any other running application built with the *QTango* library. Mango has also been successfully used during the FERMI@Elettra commissioning both by machine physicists and technicians.

What Mango is

Mango is a simple tool to generate online *QTango* panels, that are ready to run without need to be compiled. The interfaces generated with mango are made up of the simple *QTango* and *Qt* widgets, and all the logic of the components and their interaction with each other relies on the intrinsic logic of the widgets themselves.

Whom Mango is addressed to

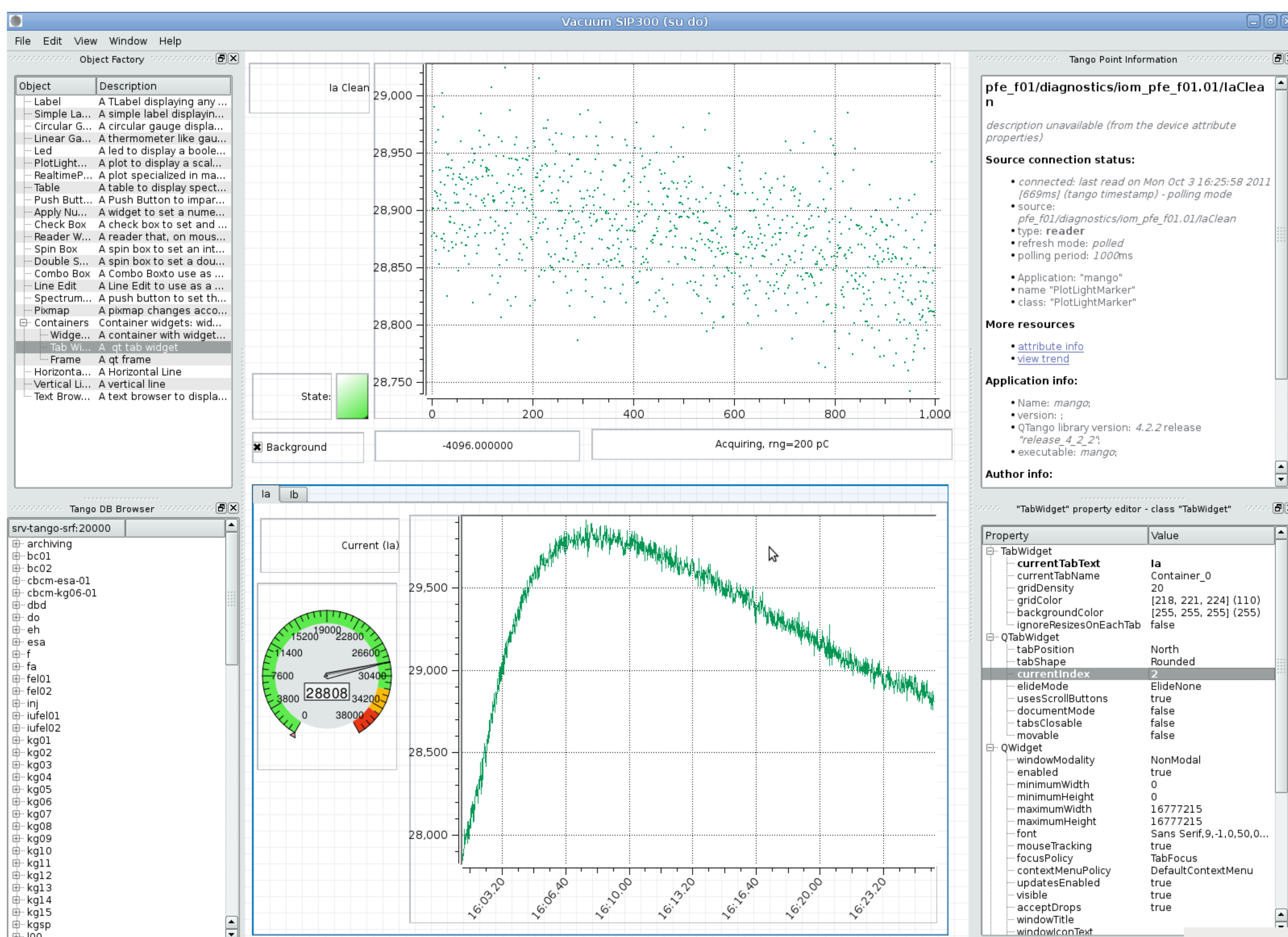
- The Tango device server programmer, who wants to design a *Tango* device fully compatible with the *QTango* library and wants to immediately test his work in progress.
- The GUI developer who wants to rapidly create an interface to a *Tango* device server whose commands and attributes fully support the *QTango* widgets, without needing any additional logic.
- The end user of the graphical interface, who can outline a draw of the desired panel, to discuss with GUI developer.
- The control room operator. He might use Mango to create on the fly panels, in order to create a summarizing graphical interface gathering *QTango* objects from other real *QTango* executable applications running on the desktop. Actually, the powerful drag and drop system exported by the *QTango* library allows dragging a *QTango* widget from an application and dropping it into any Mango container.
- The hardware referent, who commissions the desired control panel to the GUI developer. He may draw a draft of the application containing the relevant controls and widgets and discuss every aspect with the application programmer.

Design mode

Composing a graphical control panel with Mango is as easy as dragging an object from the *Object Factory* component and dropping it into the *main Mango widget area*. Once a widget becomes part of the *main Mango widget area*, it can be configured through its properties.

Simple widgets and containers

Mango widgets can be divided into *simple widgets* and *containers*. Containers are special widgets that can contain both simple widgets and other containers. They propagate the resize events to their children save their properties by means of a *Dom document* format.

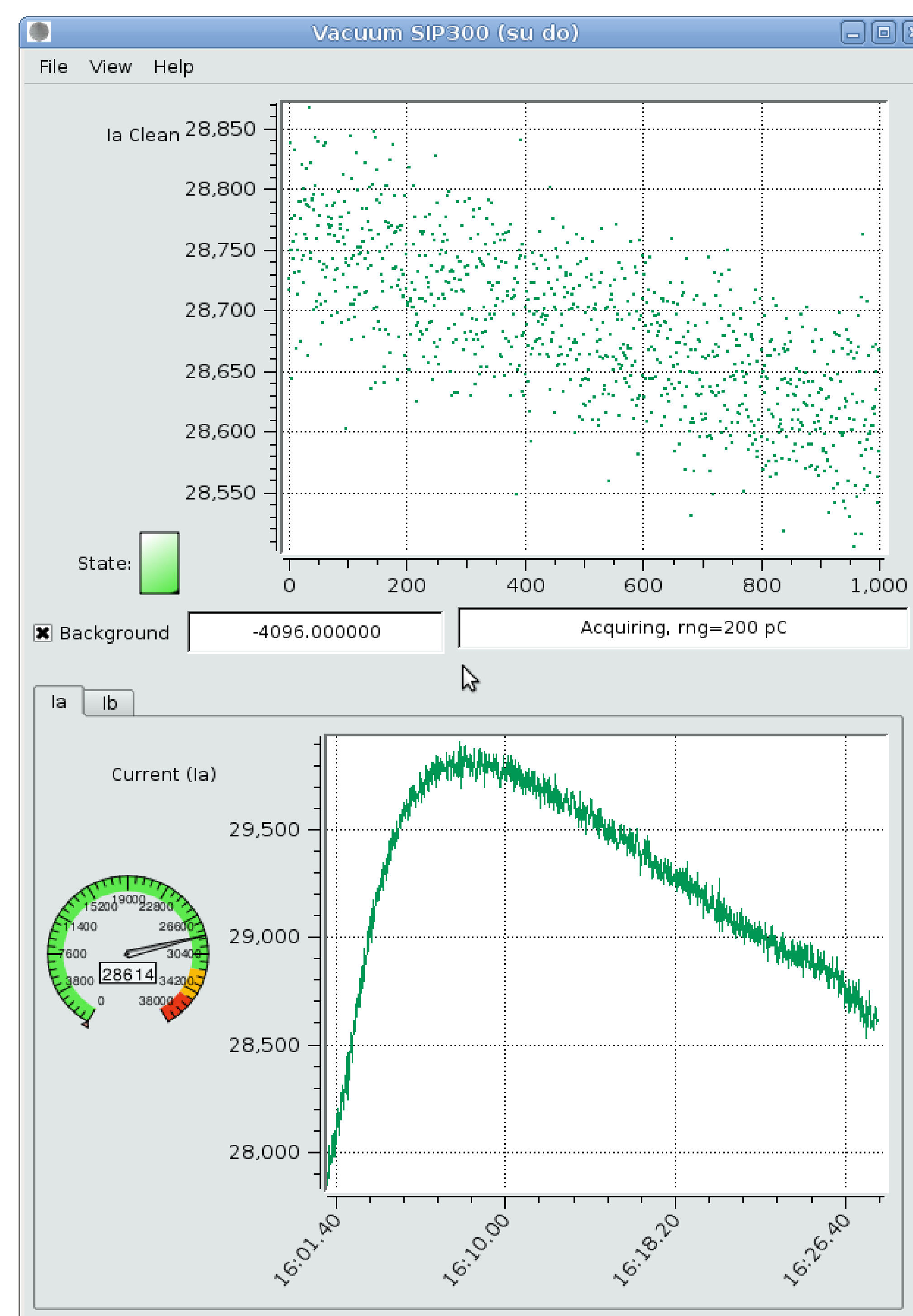


Gui components

- An **Object Factory**: a list of *QTango* and *Qt* widgets ready to be used in the main Mango widget area by dragging and dropping them from the Object Factory widget.
- A **Tango DB Browser**: a tree widget representing the *Tango* devices exported to the Tango database. Attributes and commands of each exported device can be dragged and dropped into the *QTango* widgets populating the main Mango widget area component.
- The **main Mango widget area**: a container where *Qt* and *QTango* widgets can be dropped either from the Object Factory component or from other *QTango* panels on the desktop. Once the widgets are dropped into this area, they can be selected, moved and resized with the mouse, and their properties can be personalized through the Object Properties component on the left.
- The **Tango Point Information** component: *QTango* widgets use this object to display useful information about their state.
- The **Object Properties** component: allows to click on a property and change its value by either directly editing the property on the tree widget item or by clicking on the custom button that might appear according to the property type. Custom editing dialogues are provided for complex properties like fonts and colours.

Execution mode

- A Mango project saved as a profile can be loaded in two different ways:
- via the command line;
 - launching the Mango application normally, then switching off *design mode* via the *View* menu and loading a profile by triggering the action *Profile Manager...* from the *File* menu.



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