

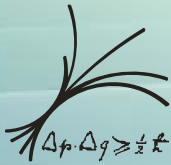
GERDA Collaboration-Meeting

Padua, ITALIEN 11.03.09 – 13.03.09



Status of the PLC

temporary and final lock



Outline

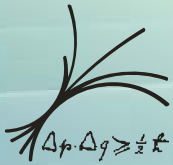
PLC Software (temp. lock)

- ***Status - where we are at present***
- ***PLC overview***
- ***Let's insert a string***
- ***PLC handbook***

PLC Software (final lock)

- ***Status***

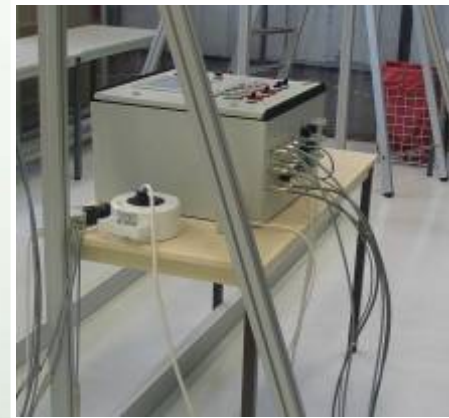
Summary

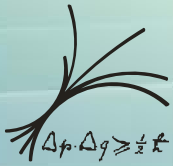


Status

PLC Software (temp. lock)

- **Software is finished (Markus Kästle)**
- **Integration and first tests have started**
 - **default values, thresholds for motor current**
 - **ind. sensores will be replaced by cameras**
 - **reproducibility is < 1mm (preliminary)**
- **Definition of motor programs**
 - **a bank of 14 programs**
 - **1 program -> 10 pos / 10 vel**
 - **7/14 programs are used already**



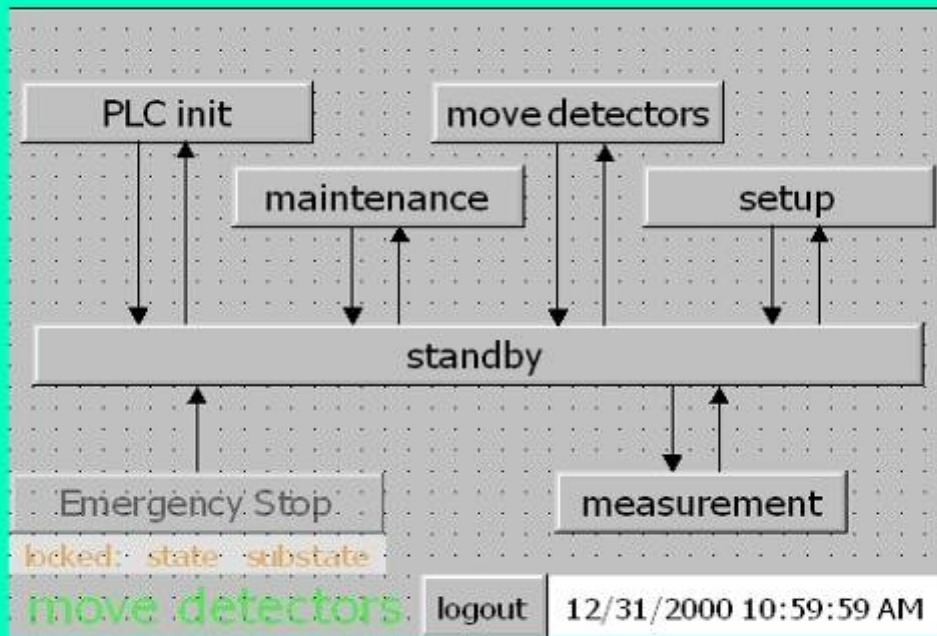


PLC Overview

SIEMENS

SIMATIC PANEL

TOUCH



Admin

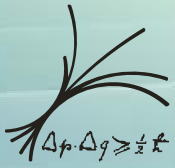
- **all functions**

Maintain

- **measurement**
- **move detector**
- **maintenance**

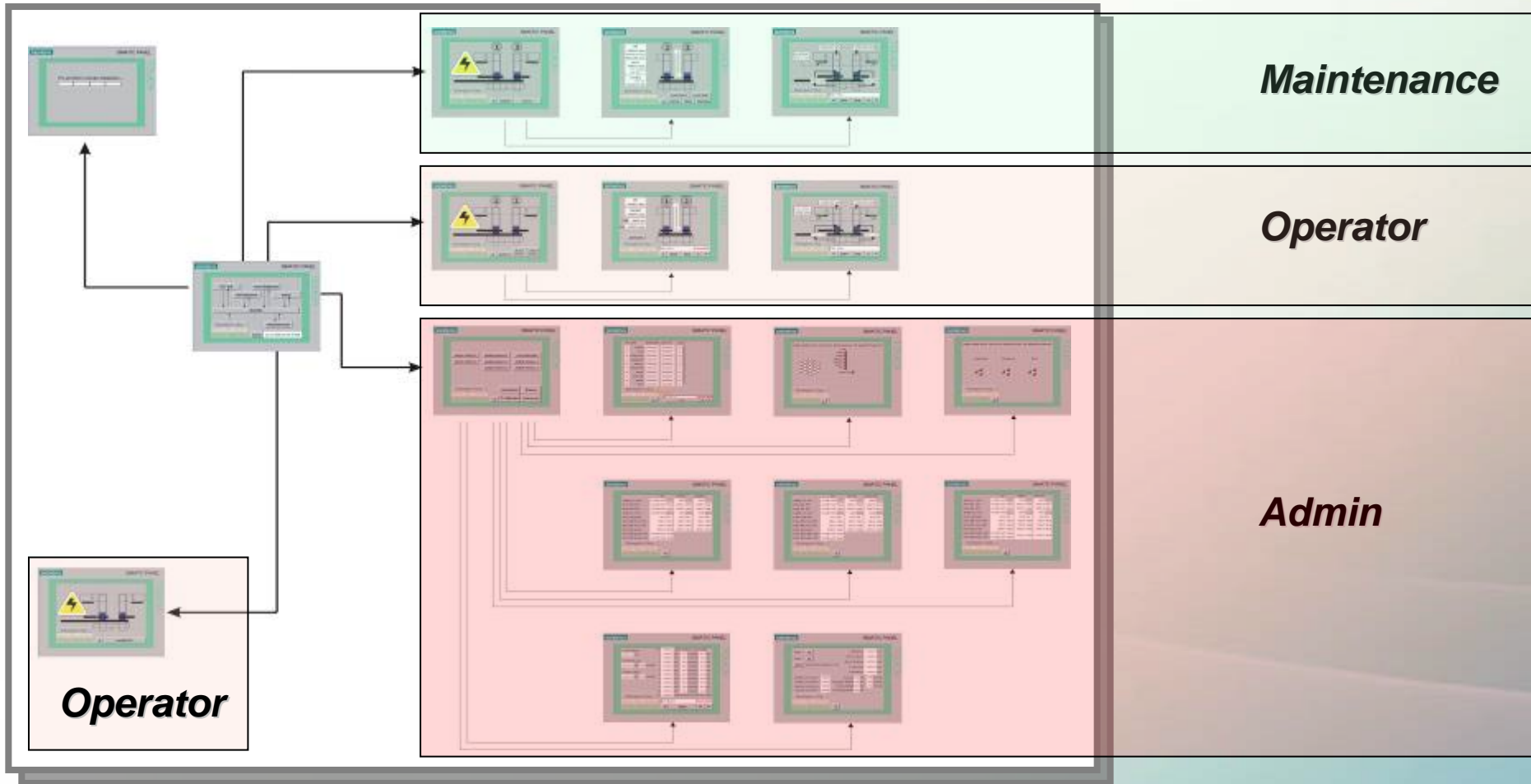
Operator

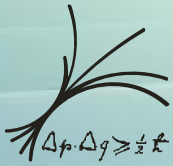
- **measurement**
- **move detector**



PLC Overview

Max-Planck-Institut für Physik
(Werner-Heisenberg-Institut)





PLC Overview

Max-Planck-Institut für Physik
(Werner-Heisenberg-Institut)

SIEMENS SIMATIC PANEL

String selector (points to the top bar with '1' and '2')

Current position display (points to '+0000.0 mm')

Target position display (points to 'target +0000.0 mm')

Precondition (points to 'pre +0000.0 mm')

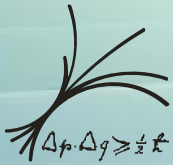
Scroll u/d motor programs (points to the up/down arrow buttons at the bottom right)

Other visible elements: 'wait 0000 sec', 'automatic', 'Emergency Stop', 'Main Menu', 'start', 'stop', 'locked: state <substate>', 'move detectors', 'DBnotavailable', 'TOUCH' (vertical text on the right).

Motor program syntax e.g. +900 – GoTo MTRailSys

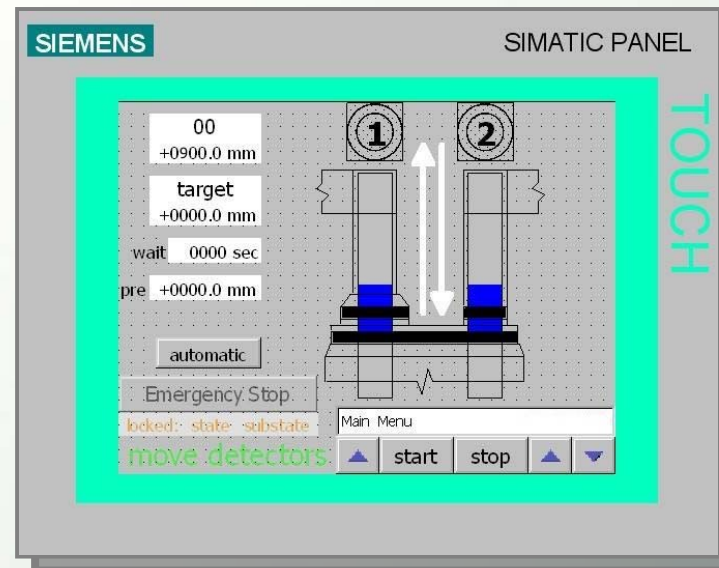
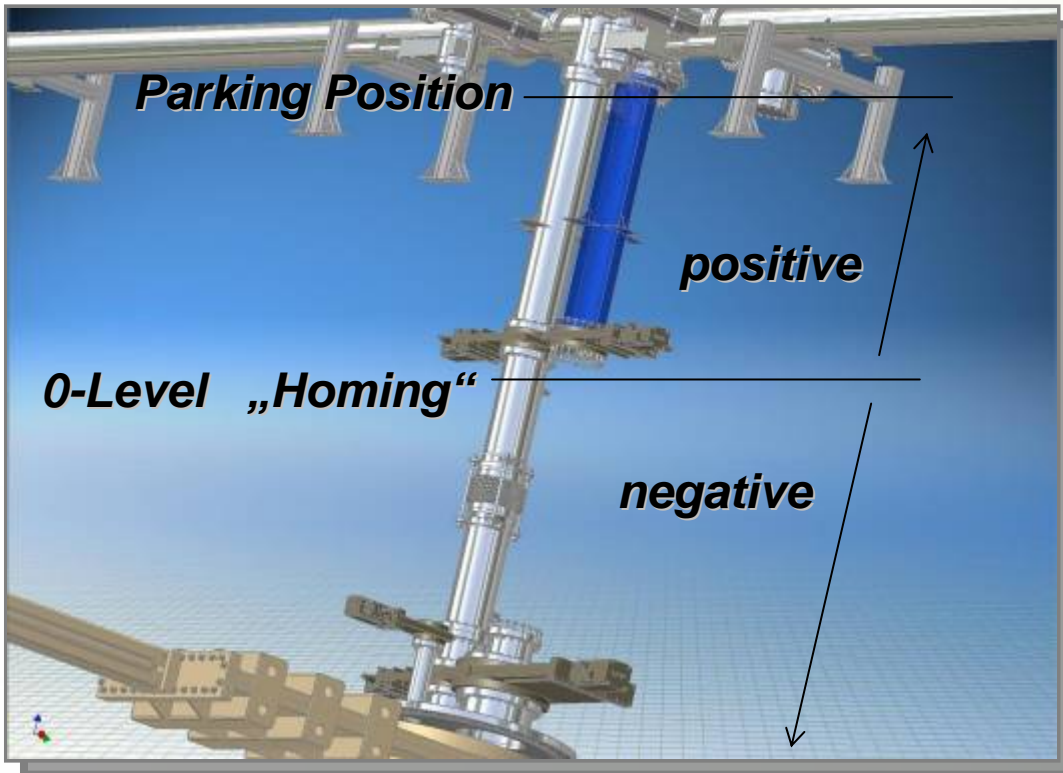
Current position [mm]

And what to do ?

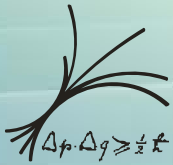


Let's insert a string

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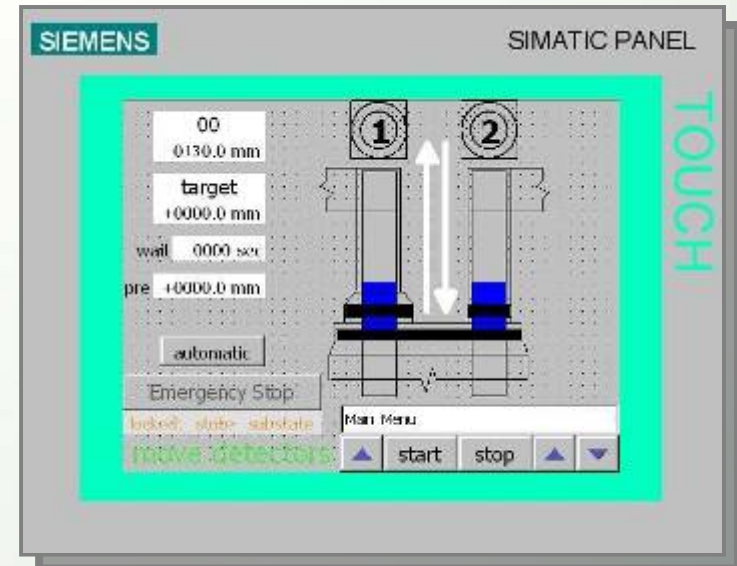
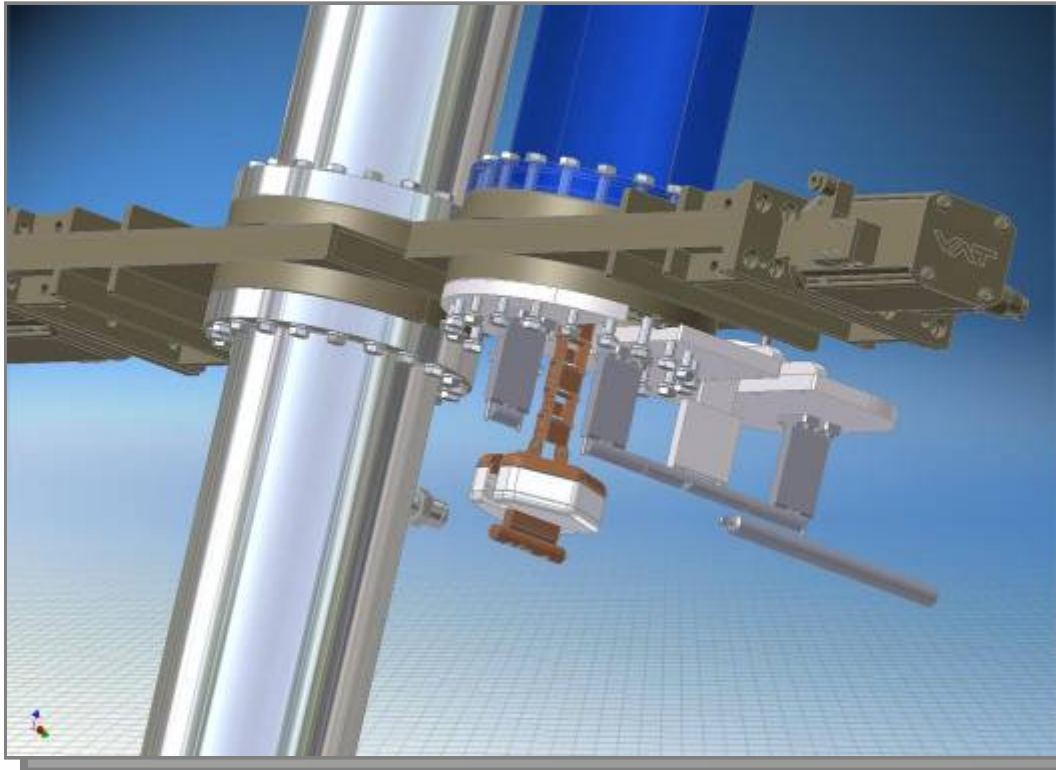


- **+900 – GoTo MTRailSys**
- 130 – GoTo Homing**
- 20 – Exec Homing**
- 0 – GoTo UnMTRailSys**
- 150 – GoTo Parking Position**
- +900 – Exec Imerge String LAr**
- 7000 – GoTo Parking Pos**

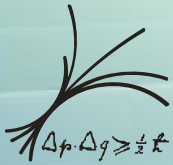


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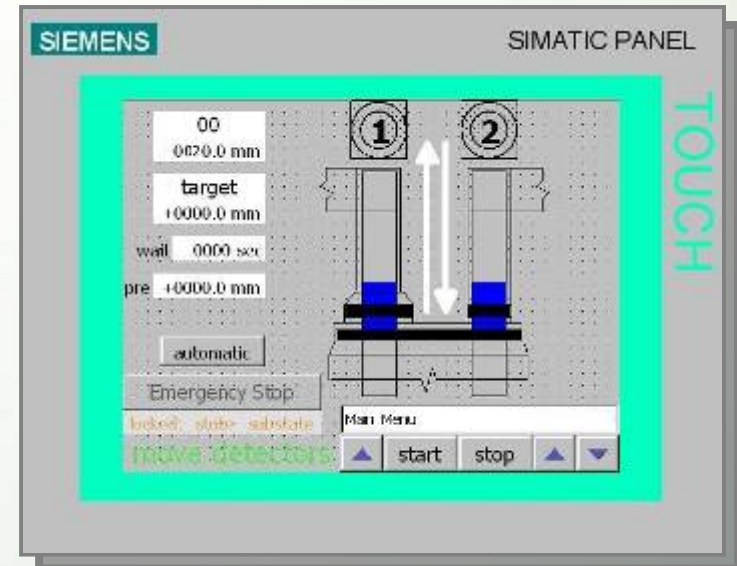
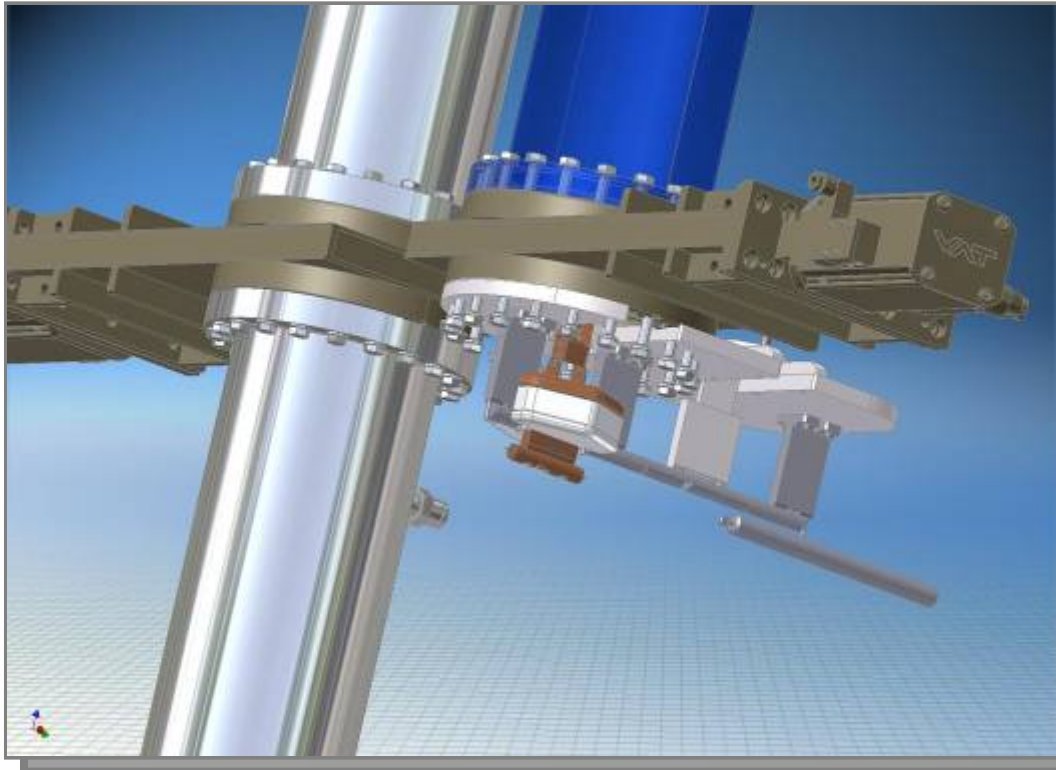


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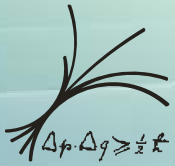


Let's insert a string

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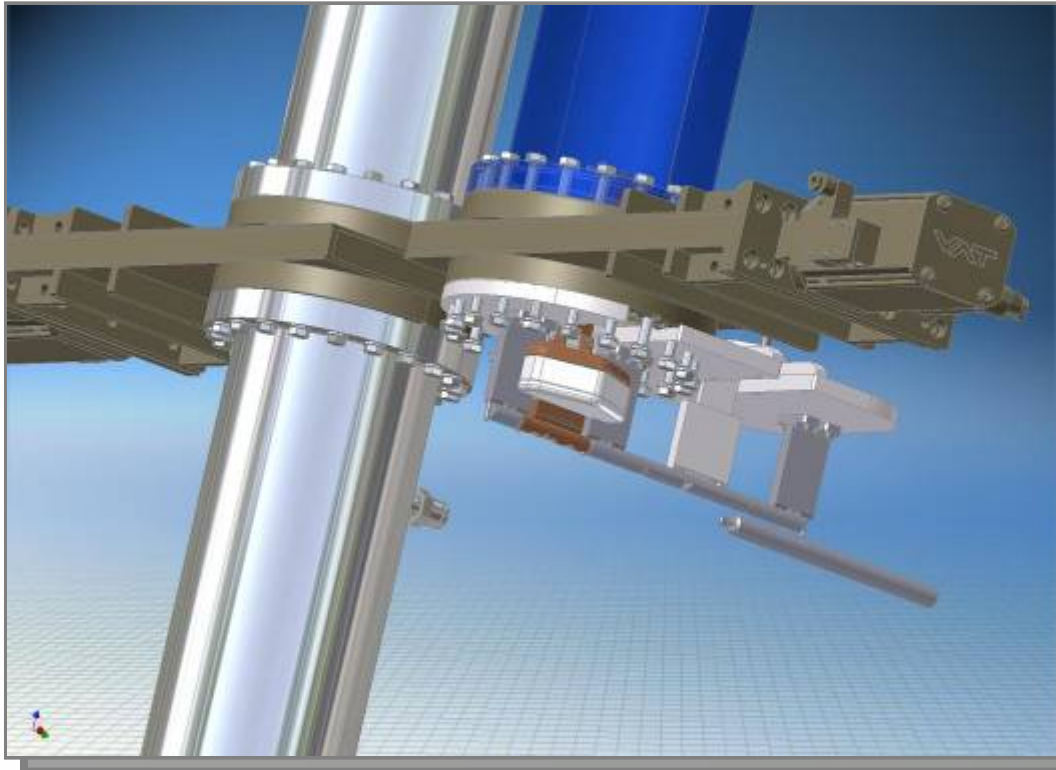


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Let's insert a string

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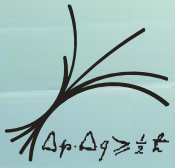


SIEMENS SIMATIC PANEL

00
-0000.0 mm
target
+0000.0 mm
wait 0000 sec
pre +0000.0 mm
automatic
Emergency Stop
locked: state: substate
Main Menu
move detectors start stop

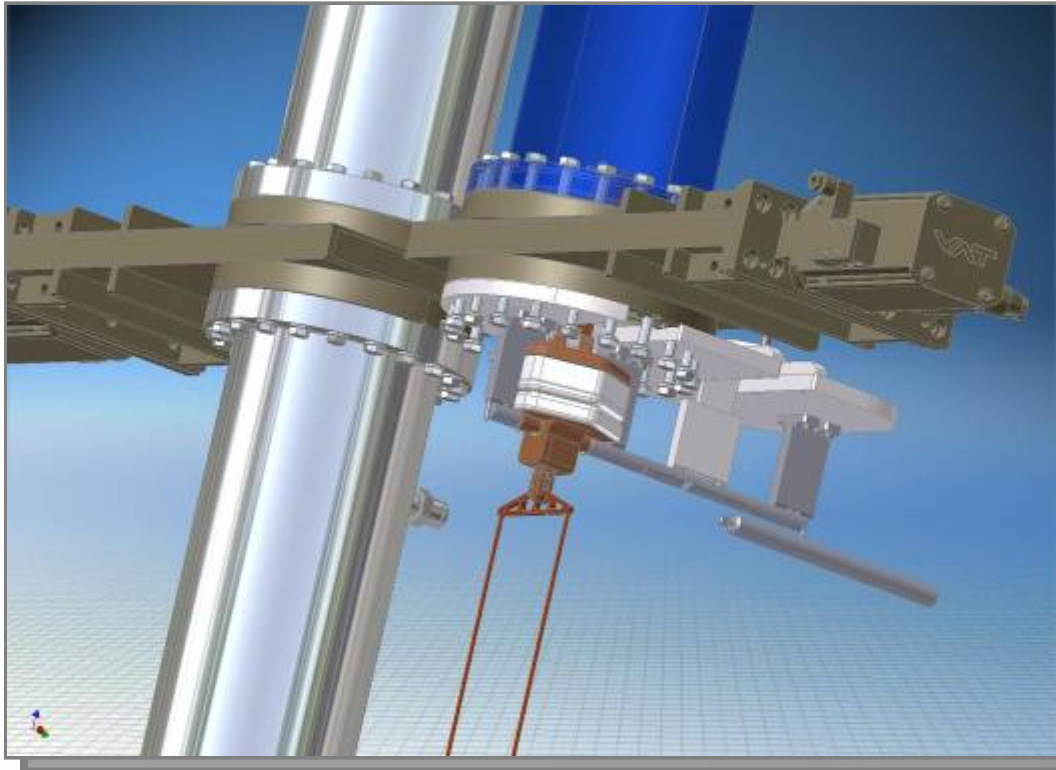
TOUCH

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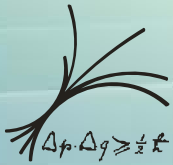
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SIEMENS SIMATIC PANEL TOUCH

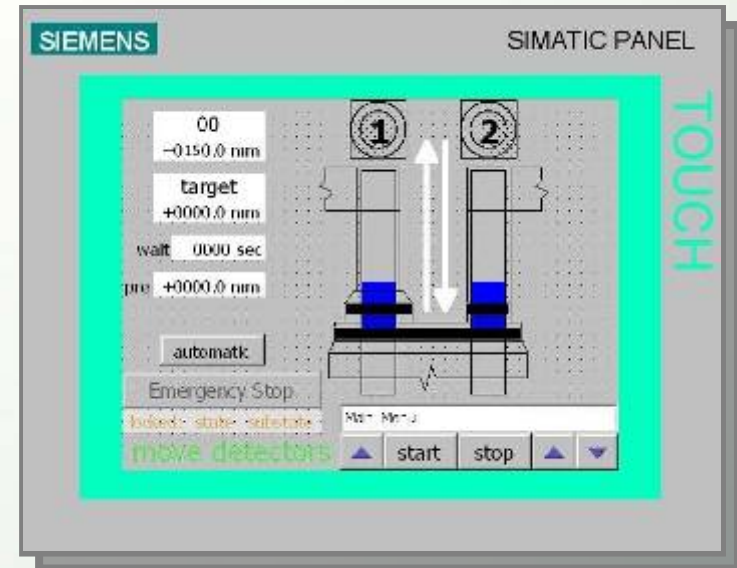
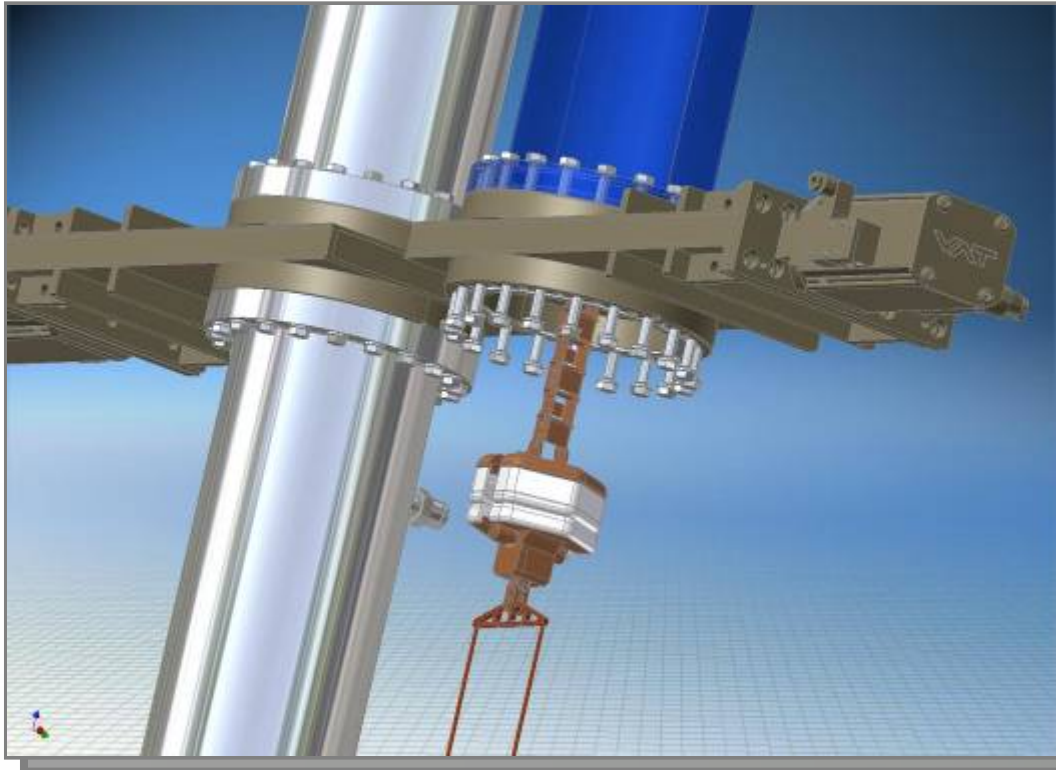
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-0000.0 mm
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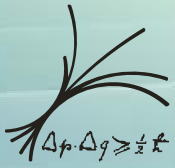


Let's insert a string

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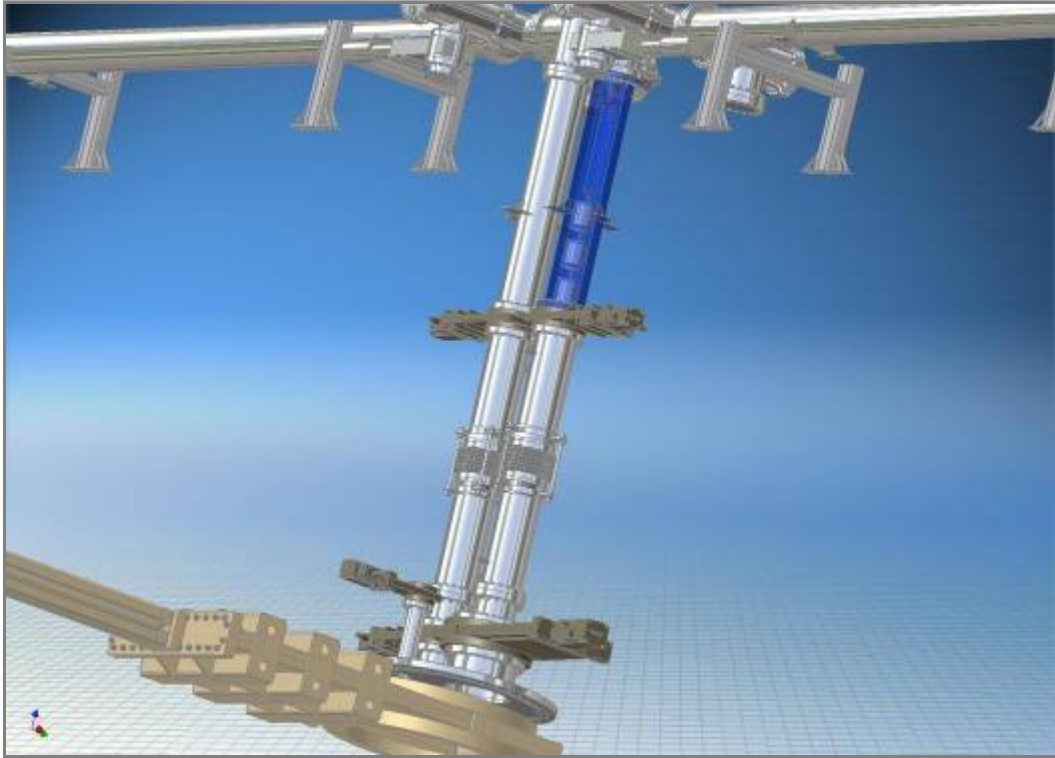


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Let's insert a string

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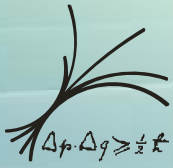


SIEMENS SIMATIC PANEL TOUCH

00 +0900.0 mm
target +0000.0 mm
wait 0000 sec
pre +0000.0 mm
automatic
Emergency Stop
Main Menu
start stop

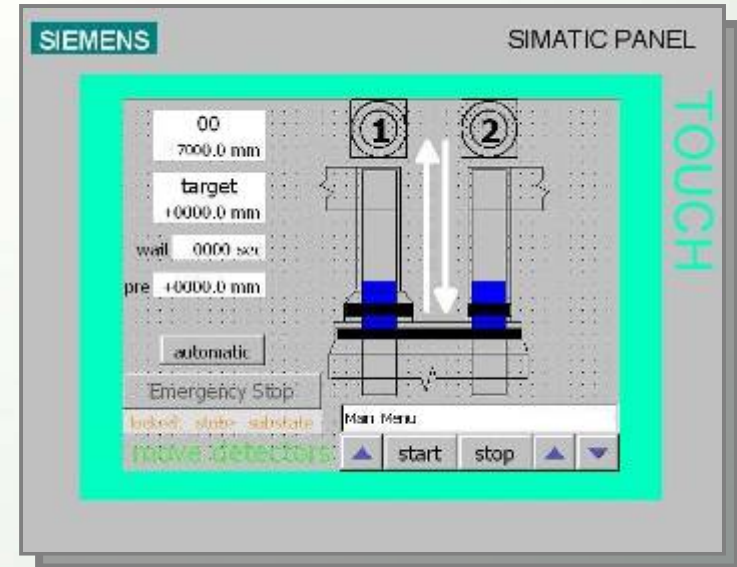
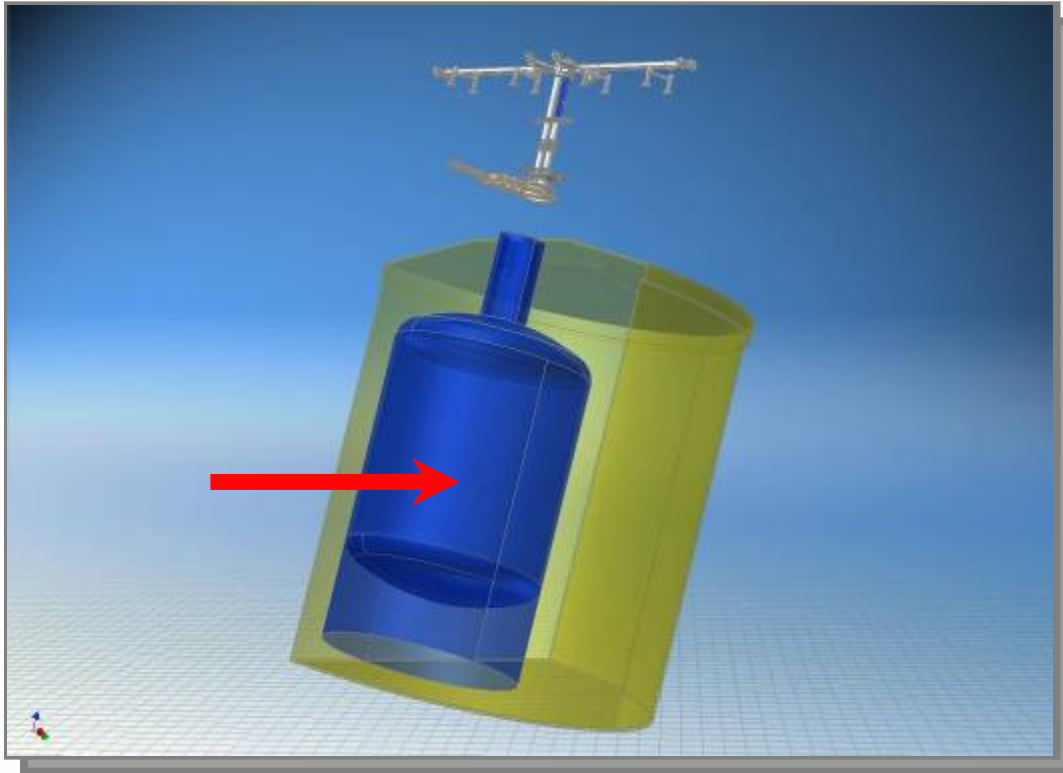
move detectors

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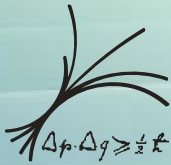


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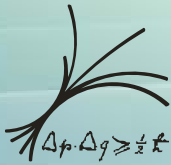
PLC - Handbook

All those procedures can be found in the handbook

PLC – Handbook is almost finished

It contains

- ***a detailed description how to operate the PLC***
 - ***Sections for Operation, Maintenance, Administration***
- ***a logfile for admins to track changes in the settings***

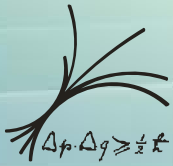


PLC – final lock

No news since last collaboration meeting, since we focused on the temporary lock.

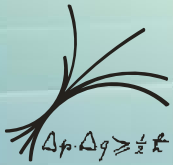
As soon as the temporary lock is finished (from a PLC point of view) we will attack the final lock

Since many things where already completed by Markus Kästle the system will be finished on time



Summary

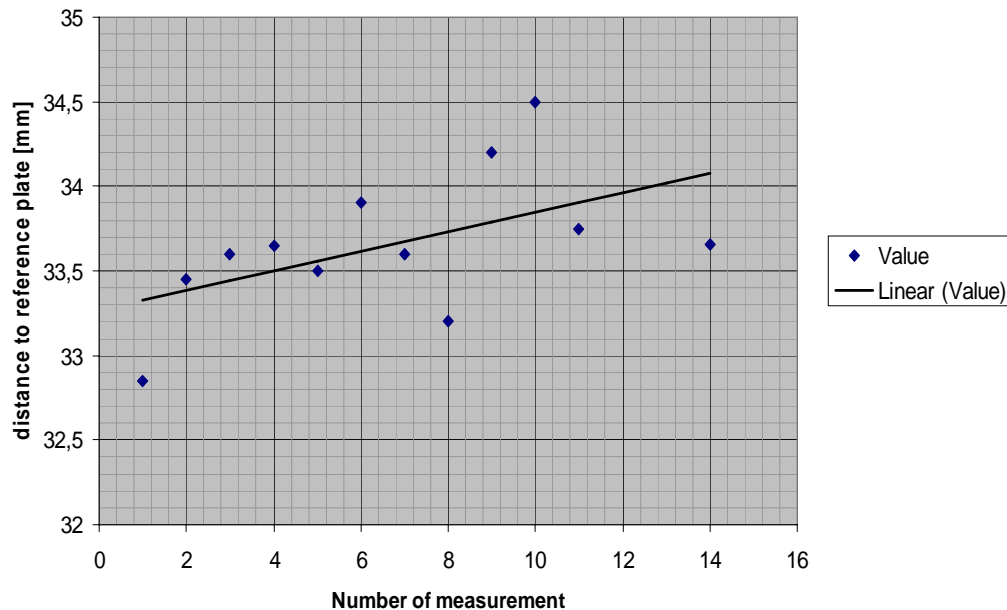
- ***PLC for the temp. lock is finished***
- ***PLC - handbook is almost finished (80 %)***
- ***Measurements and performance tests***



Backup slide

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Reproducibility of string movement [25.02.09]



33.65 ± 0.42 mm