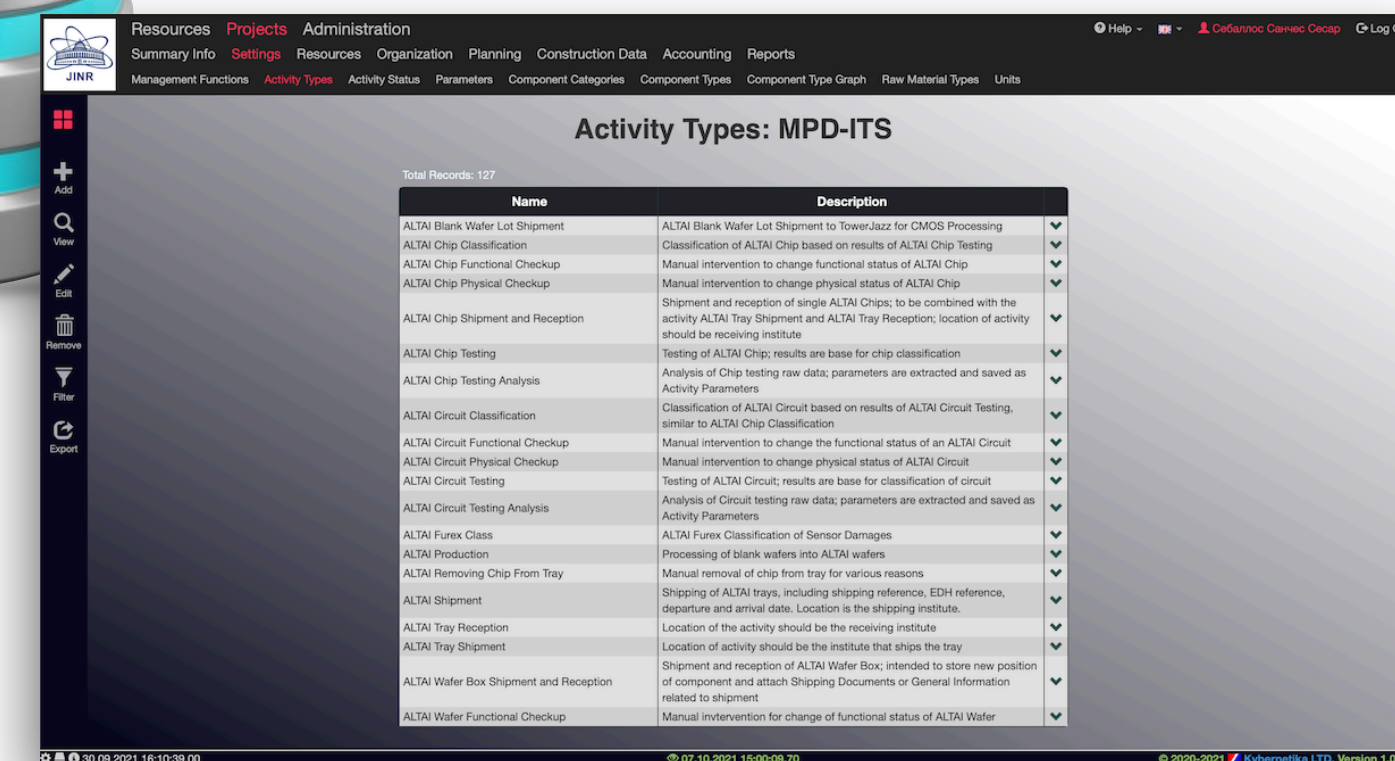





Construction Management Information System at JINR

César Ceballos Sánchez (JINR).

“Nucleus-2022”, 2022.07.11-16





KYBERNETIKA s.r.o.
Automatizované systémy riadenia

Construction Management Information System

Customer	Joint Institute for Nuclear Research 6 Joliot-Curie St Dubna Moscow Region Russia
Contact person	Yuri Murin
Date	11. 11. 2019
Authors	Ján Jadlovský Henrieta Telepovska Jakub Čerkala Vasil' Vančík

All-around multiple-projects handler.

It is composed of the following base modules:

- » **Resources Module**
 - » Members
 - » Institutes
- » **Project Module**
 - » Project Definition and Planning
 - » Project Management and Resources
 - » Construction Data
 - » Activities
 - » Finances
 - » Reports
- » **Administration**
- » **Help**

**Information System for ALICE Upgrade
Construction Management System**



**ALICE UPGRADE CONSTRUCTION
MANAGEMENT SYSTEM**

January 2019

Ver. 3

CERN

KYBERNETIKA, s.r.o., Košice

Orgovánová 4

040 11 Košice

Slovak republic



KYBERNETIKA s.r.o.
Automatizované systémy riadenia

Construction Management Information System

Customer

Joint Institute for Nuclear Research
6 Joliot-Curie St
Dubna
Moscow Region
Russia

Contact person

Yuri Murin

Date

11. 11. 2019

Authors

Ján Jadlovský
Henrieta Telepovska
Jakub Čerkala
Vasil' Vančík



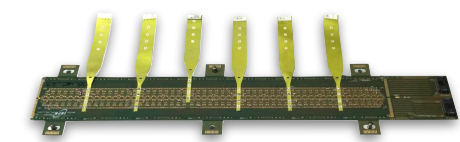
OB Stave Production

Berkely (USA), Daresbury (UK), Frascati (Italy), Nikhef (Netherlands), Turin (Italy)



OB HIC Production

Bari (Italy), Liverpool (UK), Pusan/Inha (Rep. of Korea), Strasbourg (France), Wuhan (China)



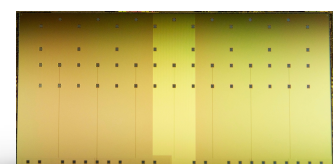
OB FPC Production

SWISS GS, Hybrid SA (Switzerland), Catania, Trieste (Italy)



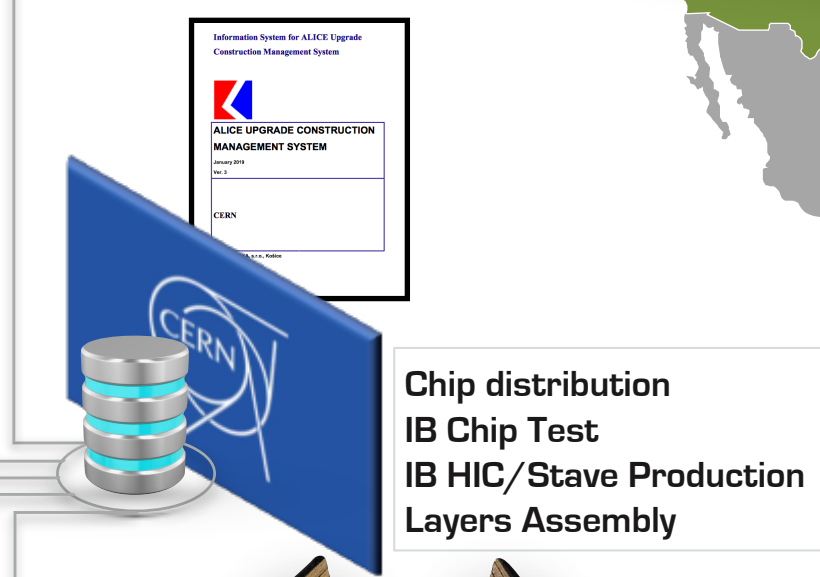
Chip Test

Pusan/Inha, Yonsei (Rep. of Korea)

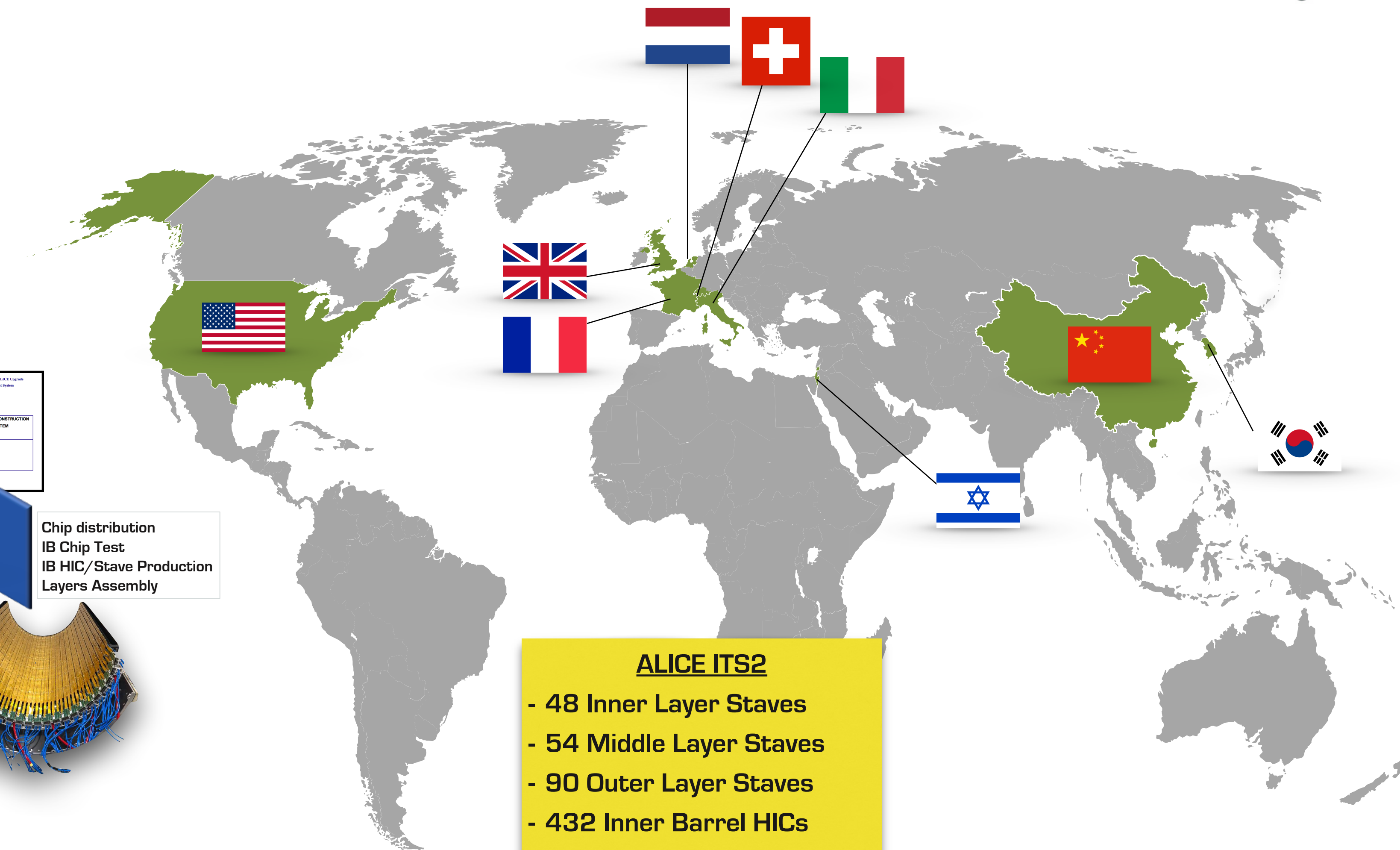
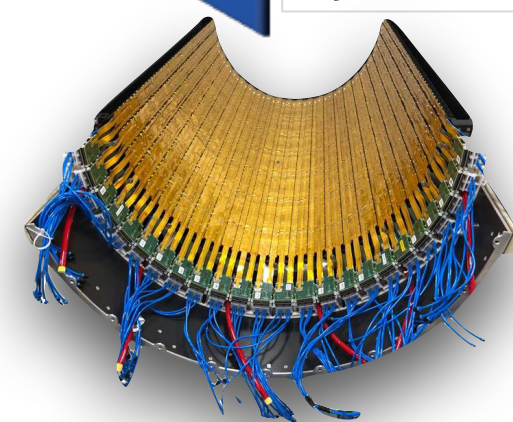


Chip production

MEMC (Italy), TowerJazz (Israel), Furex (Rep. of Korea)



Chip distribution
IB Chip Test
IB HIC/Stave Production
Layers Assembly



- ALICE ITS2**
- 48 Inner Layer Staves
 - 54 Middle Layer Staves
 - 90 Outer Layer Staves
 - 432 Inner Barrel HICs
 - 1692 Outer Barrel HICs
 - 27576 Pixel Chips
- (plus spares)**



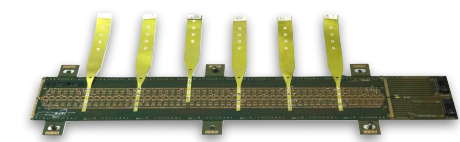
OB Stave Production

Berkely (USA), Daresbury (UK), Frascati (Italy), Nikhef (Netherlands), Turin (Italy)



OB HIC Production

Bari (Italy), Liverpool (UK), Pusan/Inha (Rep. of Korea), Strasbourg (France), Wuhan (China)



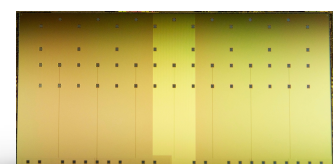
OB FPC Production

SWISS GS, Hybrid SA (Switzerland), Catania, Trieste (Italy)



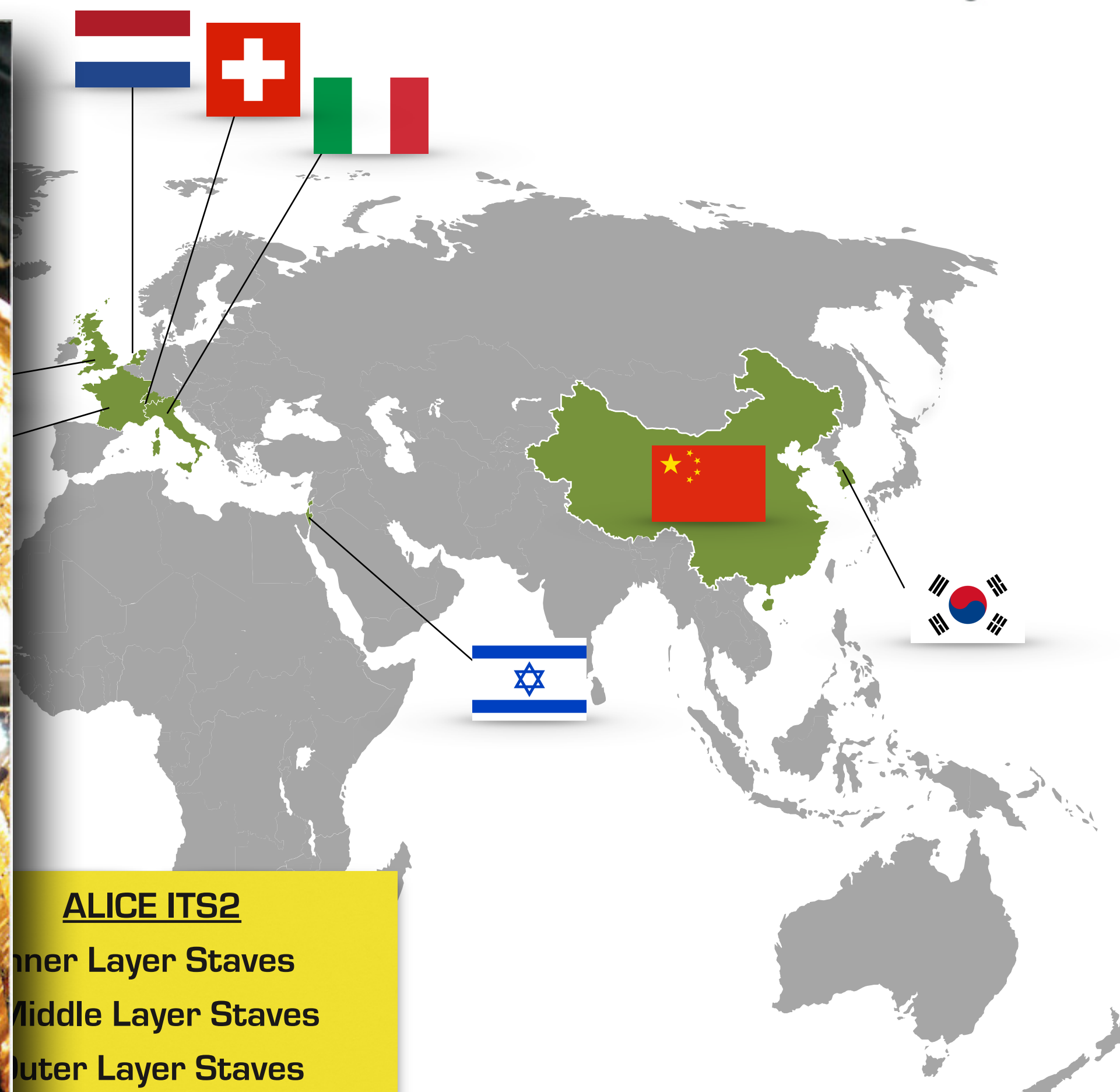
Chip Test

Pusan/Inha, Yonsei (Rep. of Korea)



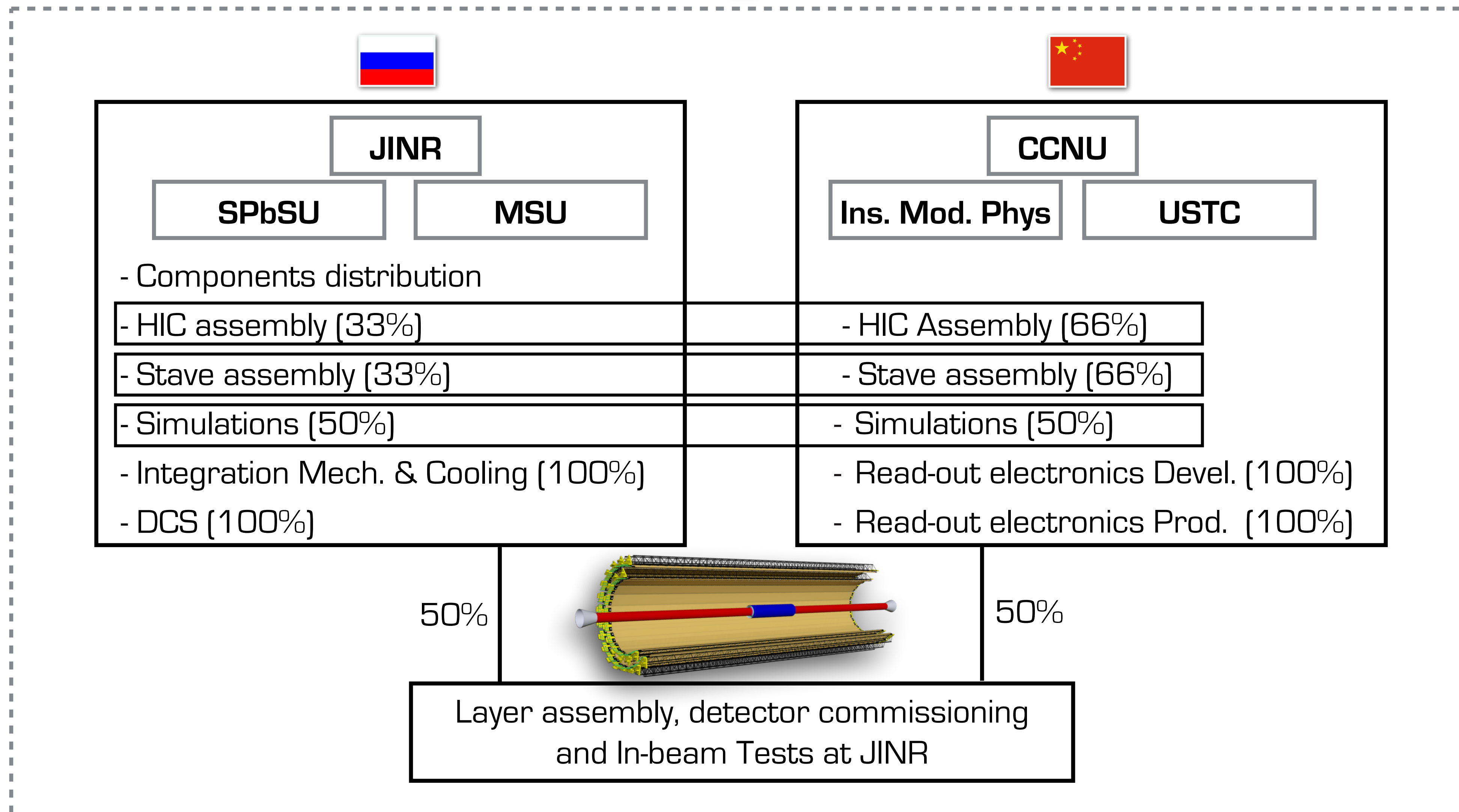
Chip production

MEMC (Italy), TowerJazz (Israel), Furex (Rep. of Korea)



ALICE ITS2
 Inner Layer Staves
 Middle Layer Staves
 Outer Layer Staves
 Inner Barrel HICs
 2 Outer Barrel HICs
 76 Pixel Chips
 (spares)

CERN supervision

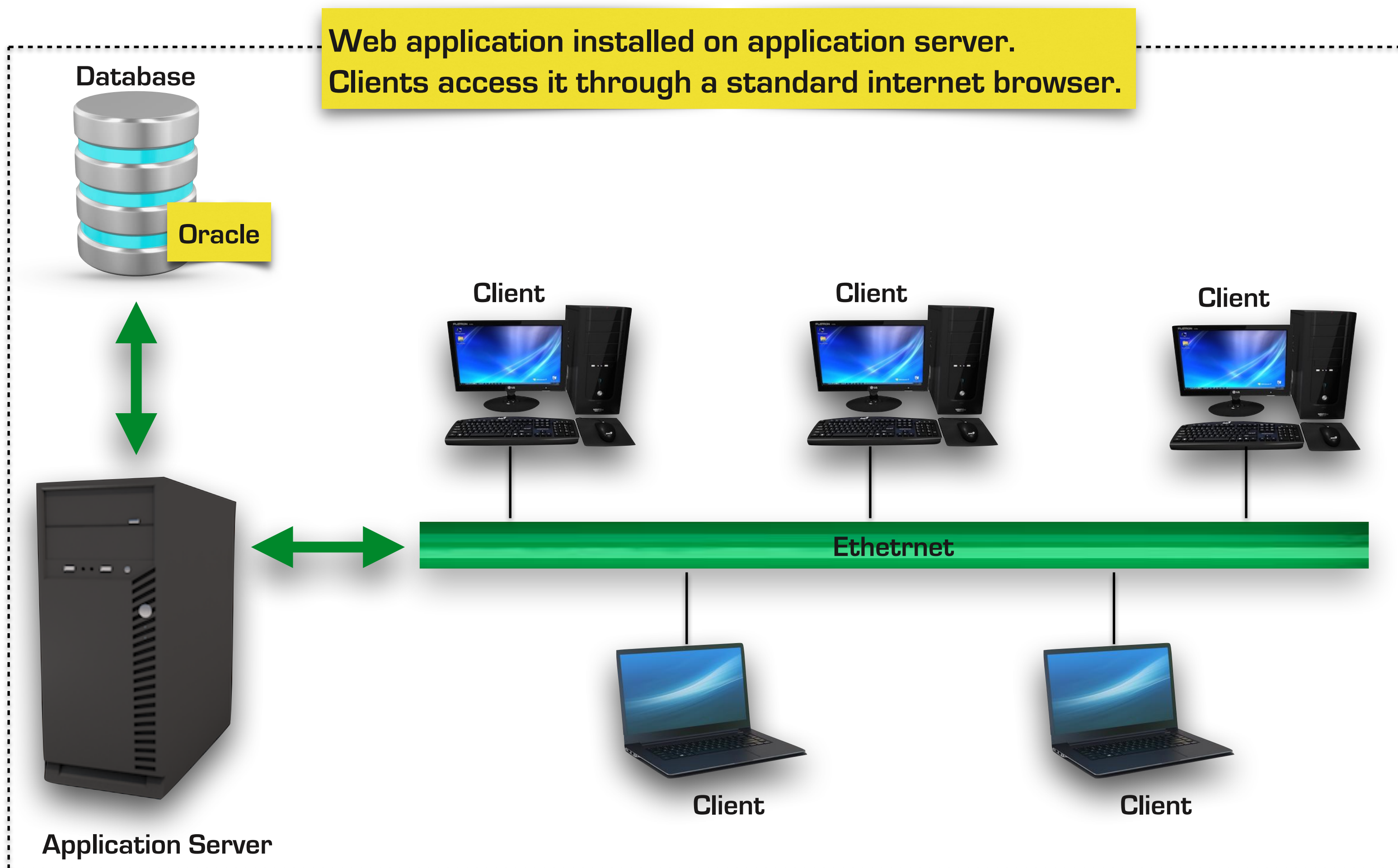


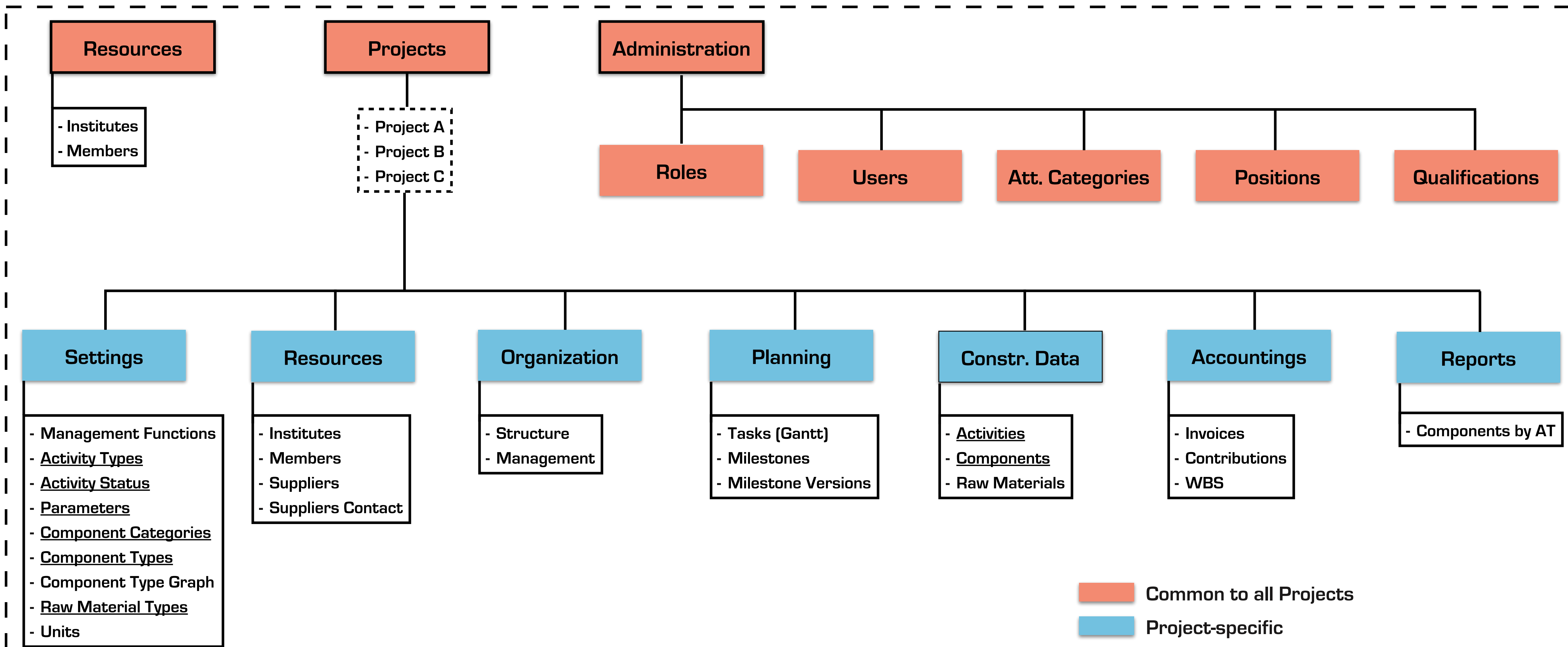


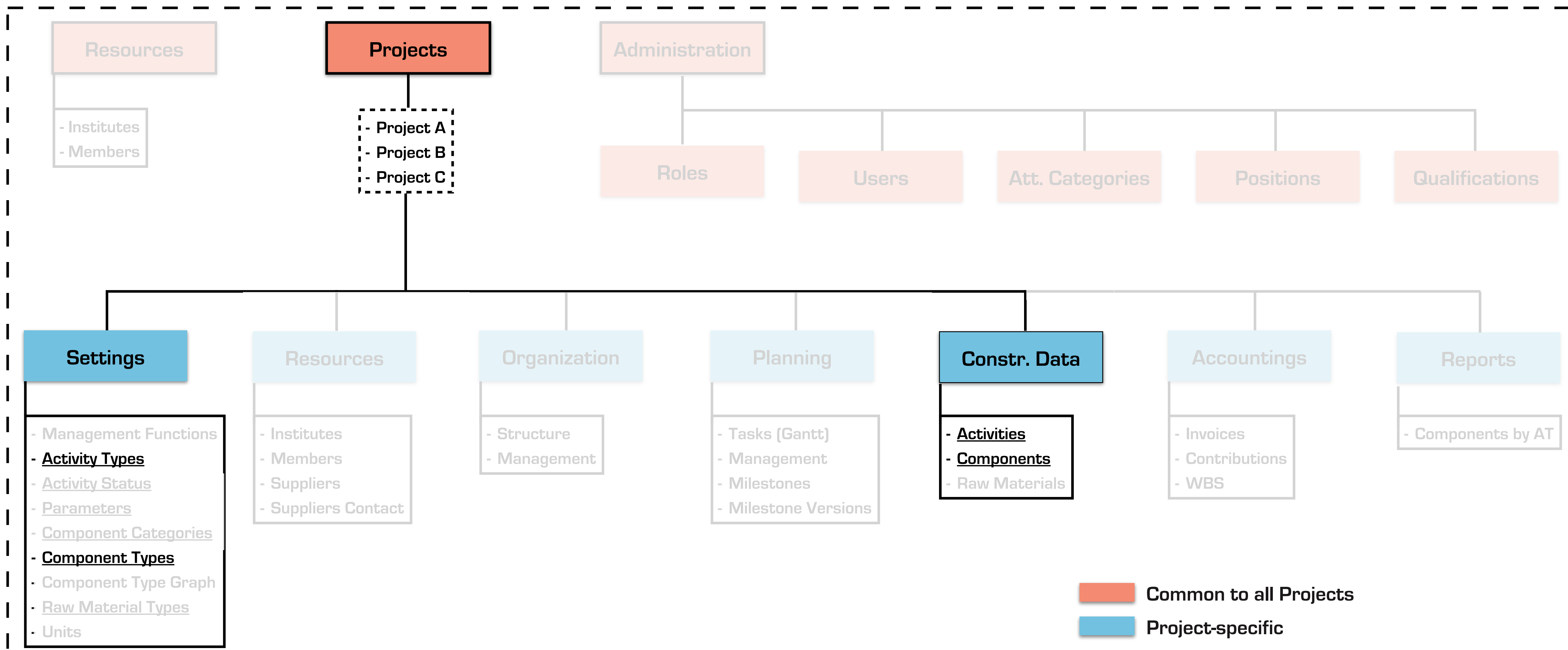
KYBERNETIKA s.r.o.
Automatizované systémy riadenia

Construction Management Information System

Customer	Joint Institute for Nuclear Research 6 Joliot-Curie St Dubna Moscow Region Russia
Contact person	Yuri Murin
Date	11. 11. 2019
Authors	Ján Jadlovský Henrieta Telepovska Jakub Čerkala Vasil' Vančik







Common to all Projects
 Project-specific

Activities are **actions** performed on **Components** that may change their **Physical/Functional^(*)** status.

Activity: MAPS Chip Classification of ChipXX



Component: MAPS ChipXX



Result: MAPS ChipXX [Physical Satus] = <physical_status_value>
MAPS ChipXX [Functional Satus] = <functional_status_value>

(*) All possible Physical and Functional statuses of a component are declared on the 'Component Type' definition.
The possible result of an Activity are combinations of Physical and functional statuses and are declared on the 'Activity Type' definition.

Type

Component Type: MAPS Chip

Activity Type: MAPS Chip Classification

Instance

Component: T854193W09R41

Activity: Classification T854193W09R41

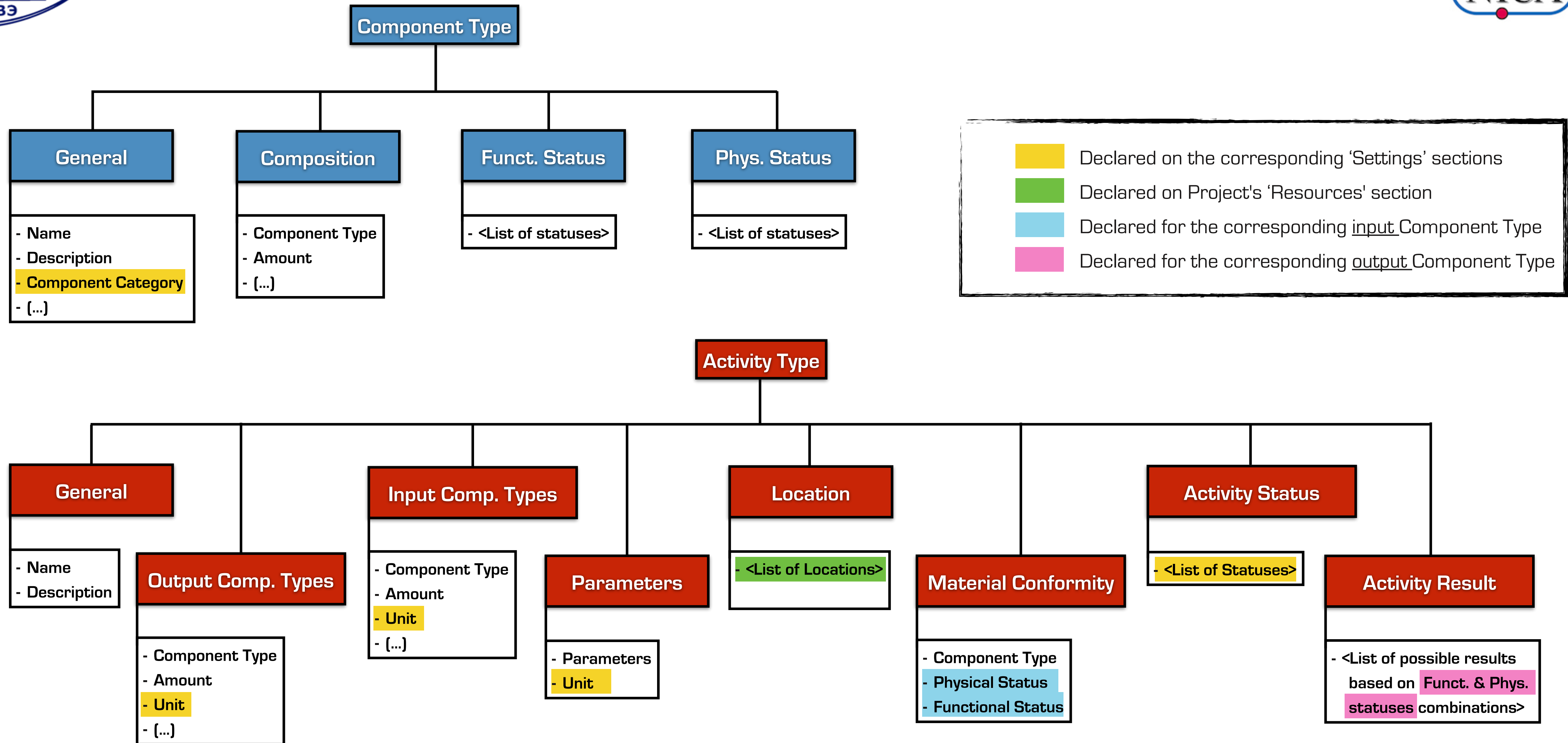
General definitions

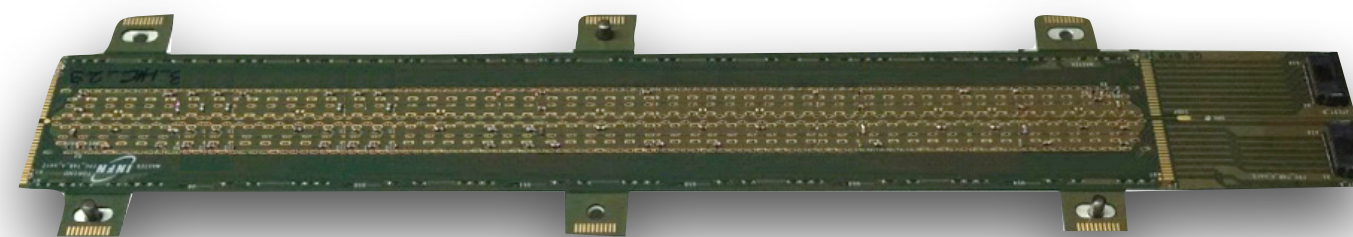
Activity Status: Open(default), Close(default),...

Component Category: Carbon support structure, Components container, ...

Parameters: Analog Current, DVDD Impedance, ...

Units: Ampere [A], Ohm [Ohm], Gram [g], ...





JINR

Resources **Projects** Administration

Summary Info **Settings** Resources Organization Planning Construction

Management Functions Activity Types Activity Status Parameters Component Categories

Total Records: 55

	Name	Description	Estimated Yield
	[294] ALTAI Chip	ALTAI Chip	1
	[295] ALTAI Circuit	ALTAI Circuit is intended for wafer p	1
	[293] ALTAI Tray	Tray containing up to 23 ALTAI chip	1
	[300] ALTAI Tray Box	Box for shipment of ALTAI Trays	1
	[292] ALTAI Wafer	CMOS Wafer containing 46 ALTAI C	1
	[291] ALTAI Wafer Box	Wafer Box containg up to 25 ALTAI	1
	[290] ALTAI Wafer Lot	Lot of up to 25 ALTAI Wafers which over up to 5 ALPIDEB Wafer Boxes	1
	[306] Blank Outer Barrel FPC	Blank Outer Barrel FPC as delivered Cross-Cable soldering	0.75
	[309] Blank Outer Barrel FPC Box	Box for Blank Outer Barrel FPC shi	1
	[307] Blank Outer Barrel FPC Lot	Blank OB FPC Lot, as delivered by	1
	[279] Blank Wafer	Blank Wafer for CMOS Processing	1

Edit Existing Component Type

General
Composition
Functional Status
Physical Status

*** Name**

*** Code**

*** Description**

*** Component Category**

*** Nominal Quantity**

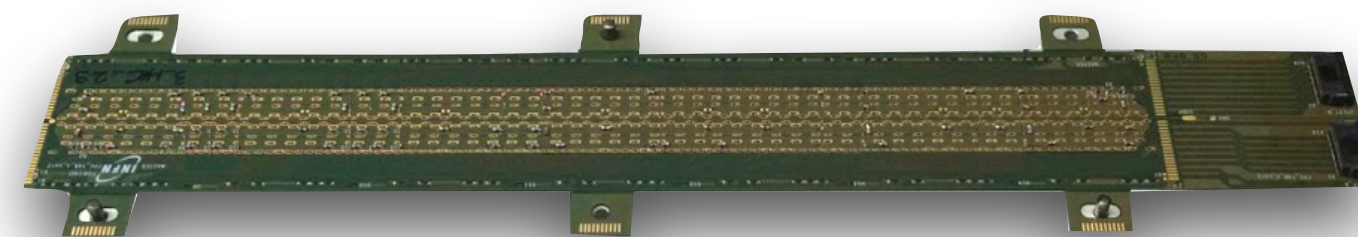
*** Fraction Of Working Spares**

*** Total Quantity Of Working Components**

*** Estimated Yield**

*** Total Quantity To Be Manufactured**

Previously declared on 'Settings → Component Categories'



Resources **Projects** Administration
 Summary Info **Settings** Resources Organization Planning Construction D
 Management Functions Activity Types Activity Status Parameters Component Categories

JINR

Total Records: 55

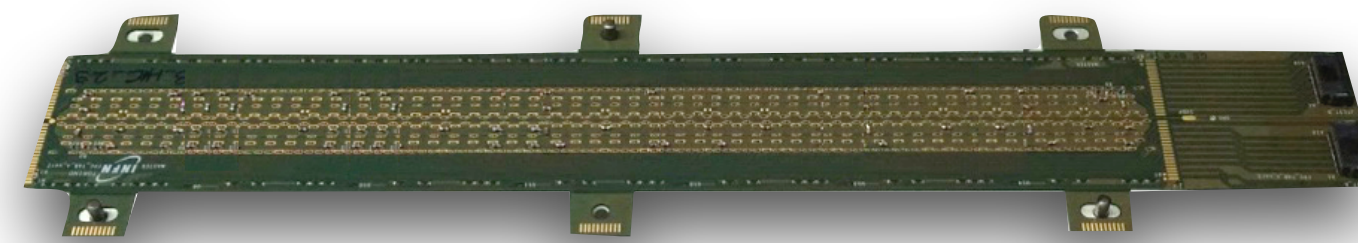
Name	Description	Code	Amount	Unit	Valid From	Valid To	Estimated Yield	Total Quantity To Be Manufactured
[294] ALTAI Chip	ALTAI Chip						1	64400
[295] ALTAI Circuit	ALTAI Circuit is intended for wafer p						1	64400
[293] ALTAI Tray	Tray containing up to 23 ALTAI chips						1	2800
[300] ALTAI Tray Box	Box for shipment of ALTAI Trays	ALPIDEB_TRAYBOX	0			100	1	100
[292] ALTAI Wafer	CMOS Wafer containing 46 ALTAI Circuits	WFR_ALPIDEB	0			1400	1	1400
[291] ALTAI Wafer Box	Wafer Box containg up to 25 ALTAI Wafers	WFRBOX_ALPIDEB	0			56	1	56
[290] ALTAI Wafer Lot	Lot of up to 25 ALTAI Wafers which can be divided and shipped over up to 5 ALPIDEB Wafer Boxes	WFRLOT_ALPIDEB	0			56	1	56
[306] Blank Outer Barrel FPC	Blank Outer Barrel FPC as delivered by OB FPC producer, before Cross-Cable soldering	BLOBFPC	0.2			750	0.75	1313
[309] Blank Outer Barrel FPC Box	Box for Blank Outer Barrel FPC shipment	BOBFPCBX	0			1	1	1
[307] Blank Outer Barrel FPC Lot	Blank OB FPC Lot, as delivered by OB FPC producer	BLOBFPCCL	0			1	1	1
[279] Blank Wafer	Blank Wafer for CMOS Processing	BWf	0			1550	1	1550
[289] Blank Wafer Box 25um Epi	Box containing 25 blank wafers with 25um epi, that will typically be processed into one ALPIDE wafer lot	BWFRBOX_25EPI	0			56	1	56
	Lot of blank wafers with 25um epitaxial layer thickness. Contains							

Edit Existing Component Type

General **Composition** Functional Status Physical Status

* Component Type	* Amount	* Unit	* Valid From	Valid To	+
No data					

02.09.2021 17:14:47.00 08.10.2021 15:27:46.39



JINR

Resources **Projects** Administration

Summary Info **Settings** Resources Organization Planning Construction D

Management Functions Activity Types Activity Status Parameters Component Categories

Total Records: 55

	Name	Description		Estimated Yield	Total Quantity To Be Manufactured
	[294] ALTAI Chip	ALTAI Chip		1	64400
	[295] ALTAI Circuit	ALTAI Circuit is intended for wafer p		1	64400
	[293] ALTAI Tray	Tray containing up to 23 ALTAI chips		1	2800
	[300] ALTAI Tray Box	Box for shipment of ALTAI Trays		1	100
	[292] ALTAI Wafer	CMOS Wafer containing 46 ALTAI C		1	1400
	[291] ALTAI Wafer Box	Wafer Box containg up to 25 ALTAI		1	56
	[290] ALTAI Wafer Lot	Lot of up to 25 ALTAI Wafers which can be divided and shipped over up to 5 ALPIDEB Wafer Boxes	WFRLOT_ALPIDEB	1	56
	[306] Blank Outer Barrel FPC	Blank Outer Barrel FPC as delivered by OB FPC producer, before Cross-Cable soldering	BLOBFPC	0.75	1313
	[309] Blank Outer Barrel FPC Box	Box for Blank Outer Barrel FPC shipment	BOBFPCBX	1	1
	[307] Blank Outer Barrel FPC Lot	Blank OB FPC Lot, as delivered by OB FPC producer	BLOBFPCCL	1	1
	[279] Blank Wafer	Blank Wafer for CMOS Processing	BWf	1	1550
	[289] Blank Wafer Box 25um Epi	Box containing 25 blank wafers with 25um epi, that will typically be processed into one ALPIDE wafer lot	BWFRBOX_25EPI	1	56
		Lot of blank wafers with 25um epitaxial layer thickness. Contains			

Edit Existing Component Type

General
Composition
Functional Status
Physical Status

Functional Status +

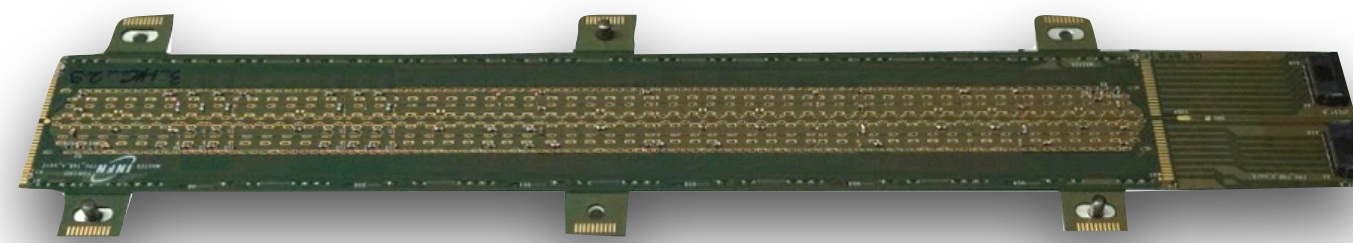
NOK ×

OK ×

[EMPTY]

Save
Cancel

02.09.2021 17:14:47.00
08.10.2021 15:27:46.39



JINR

Resources **Projects** Administration

Summary Info **Settings** Resources Organization Planning Construction D

Management Functions Activity Types Activity Status Parameters Component Categories

Total Records: 55

	Name	Description		Estimated Yield	Total Quantity To Be Manufactured
	[294] ALTAI Chip	ALTAI Chip		1	64400
	[295] ALTAI Circuit	ALTAI Circuit is intended for wafer p		1	64400
	[293] ALTAI Tray	Tray containing up to 23 ALTAI chips		1	2800
	[300] ALTAI Tray Box	Box for shipment of ALTAI Trays		1	100
	[292] ALTAI Wafer	CMOS Wafer containing 46 ALTAI C		1	1400
	[291] ALTAI Wafer Box	Wafer Box containg up to 25 ALTAI		1	56
	[290] ALTAI Wafer Lot	Lot of up to 25 ALTAI Wafers which can be divided and shipped over up to 5 ALPIDEB Wafer Boxes	WFRLOT_ALPIDEB	0	56
	[306] Blank Outer Barrel FPC	Blank Outer Barrel FPC as delivered by OB FPC producer, before Cross-Cable soldering	BLOBFPC	0.2	750
	[309] Blank Outer Barrel FPC Box	Box for Blank Outer Barrel FPC shipment	BOBFPCBX	0	1
	[307] Blank Outer Barrel FPC Lot	Blank OB FPC Lot, as delivered by OB FPC producer	BLOBFPCCL	0	1
	[279] Blank Wafer	Blank Wafer for CMOS Processing	BWf	0	1550
	[289] Blank Wafer Box 25um Epi	Box containing 25 blank wafers with 25um epi, that will typically be processed into one ALPIDE wafer lot	BWFRBOX_25EPI	0	56
		Lot of blank wafers with 25um epitaxial layer thickness. Contains			

Edit Existing Component Type

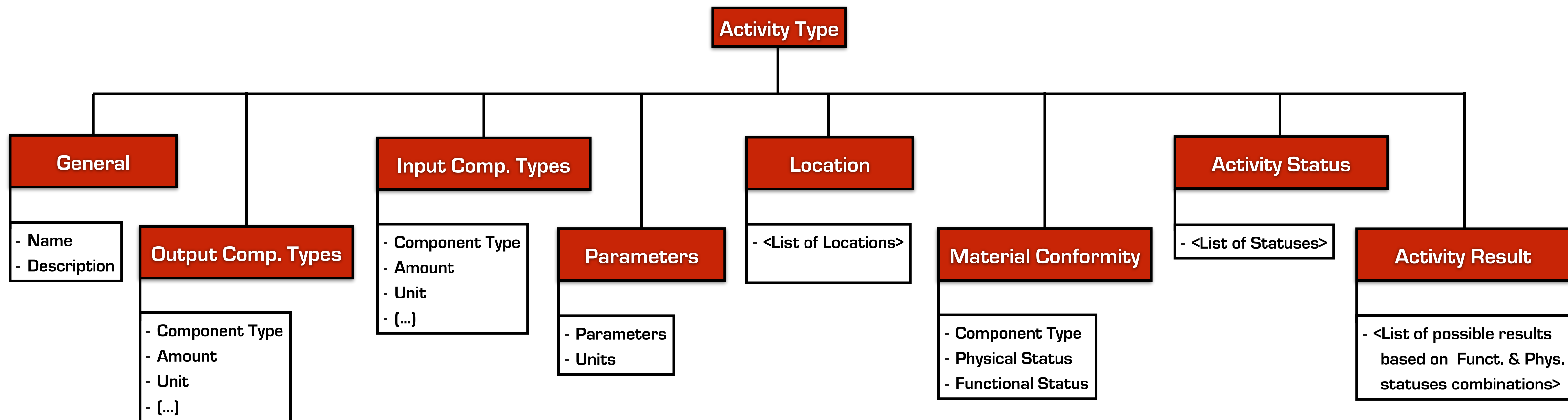
General Composition Functional Status **Physical Status** (!)

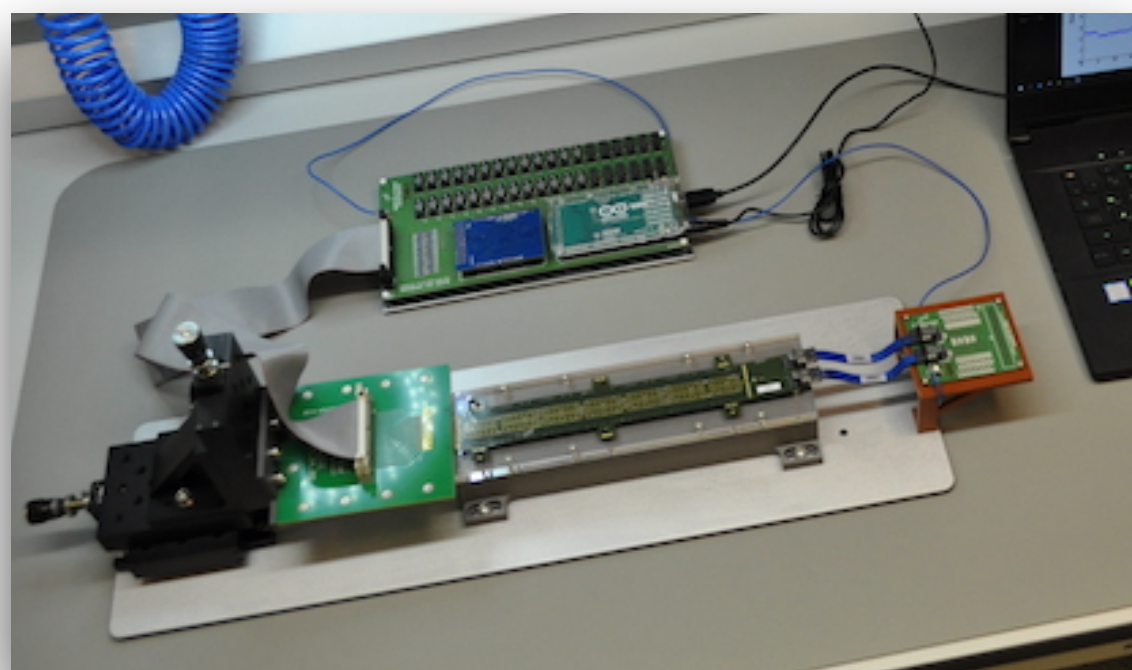
Physical Status +

NOK	✕
OK	✕
[EMPTY]	

Save
Cancel

02.09.2021 17:14:47.00 08.10.2021 15:28:26.31





Resources Projects Administration
 Summary Info Settings Resources
 Management Functions Activity Types Acti

JINR

Units
 Help ▾

Edit Existing Activity Type

General Output Component Types **1** Input Component Types **1** Parameters
 Location **1** Mat. Conformity Activity Status **2** Activity Result **3**

*** Name**
 Blank Outer Barrel FPC Electrical Test

Description
 Electrical test of Blank OB FPC

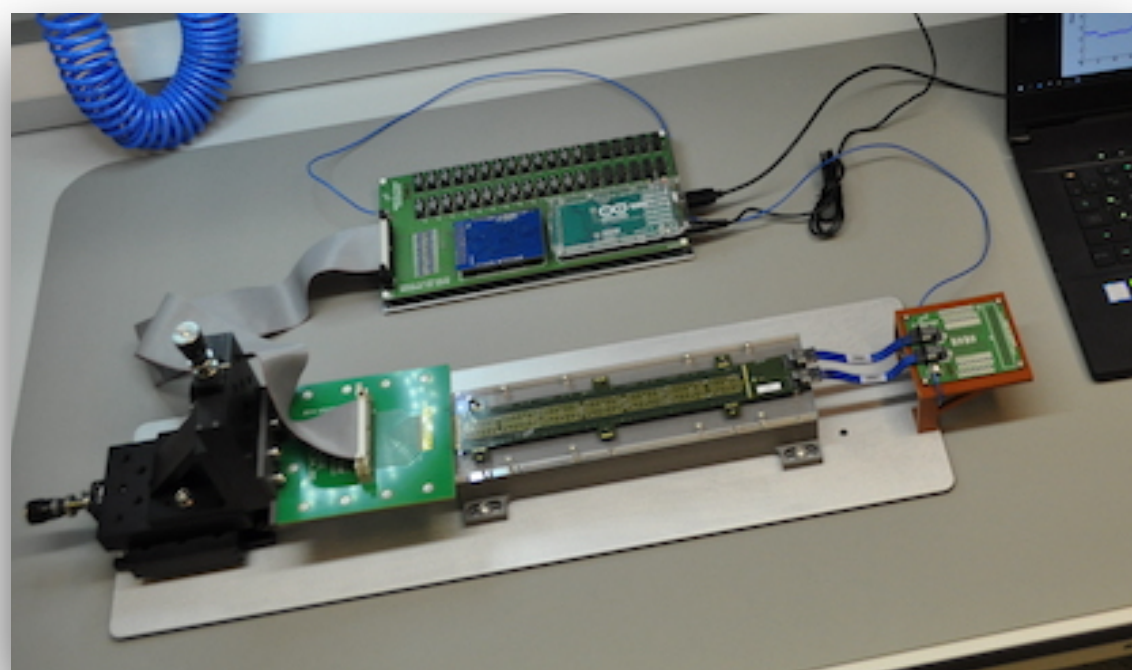
Activity Type is Assembly Yes No

Save Cancel

Parameters

Parameter	Unit
No Parameter records found	
Location	
Name	
[287] - [INS_241] Joint Institute for Nuclear Research (JINR), Dubna	
Mat. Conformity	
Component Type	Functional Status
	Physical Status

02.09.2021 17:14:47.00 11.10.2021 15:06:40.99



Resources Projects Administration
 Summary Info Settings Resources
 Management Functions Activity Types Acti

Edit Existing Activity Type

General **Output Component Types 1** Input Component Types 1 Parameters
 Location 1 Mat. Conformity Activity Status 2 Activity Result 3

* Component Type	* Amount	* Unit	* Valid From	Valid To
Blank Outer Barrel FPC	1	pc	20.02.2018	Select date...

Previously declared on 'Settings → Units'

Save Cancel

[368] Blank Outer Barrel FPC Electrical Test | Electrical test of Blank OB FPC

Component Type	Direction	Amount	Unit
[729] Blank Outer Barrel FPC	Output	1	[361] pc
[730] Blank Outer Barrel FPC	Input	1	[361] pc

Parameters

Parameter	Unit
No Parameter records found	

Location

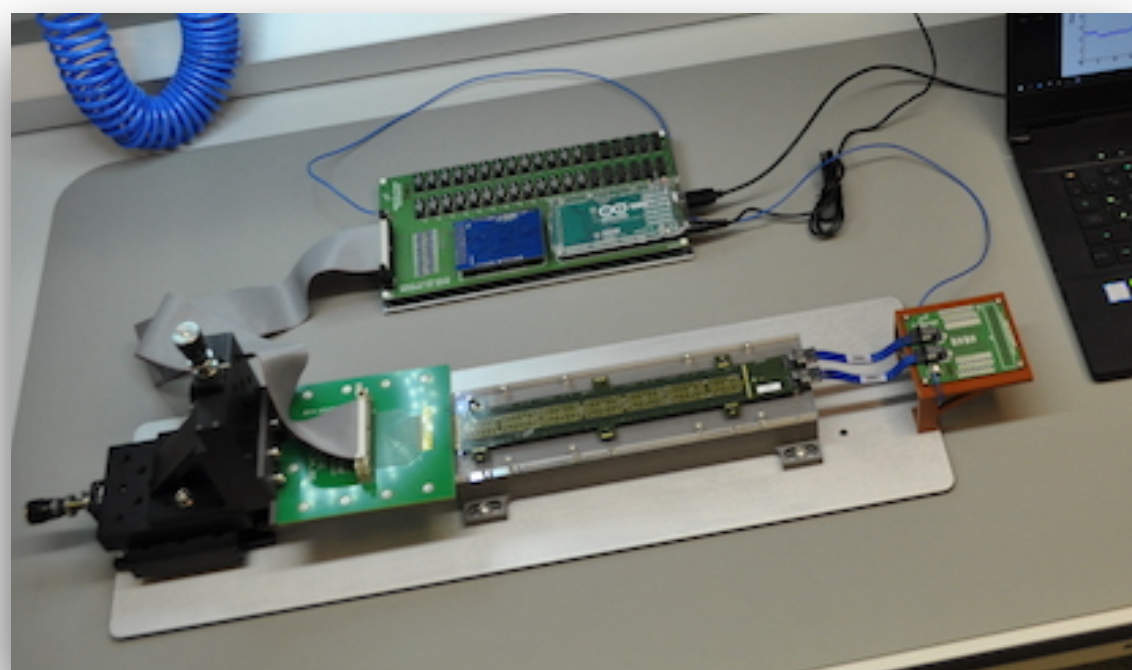
Name

[287] - [INS_241] Joint Institute for Nuclear Research (JINR), Dubna

Mat. Conformity

Component Type	Functional Status	Physical Status

02.09.2021 17:14:47.00 11.10.2021 15:06:40.99



Resources Projects Administration
 Summary Info Settings Resources
 Management Functions Activity Types Acti

Edit Existing Activity Type

General Output Component Types 1 Input Component Types 1 Parameters
 Location 1 Mat. Conformity Activity Status 2 Activity Result 3

* Component Type	* Amount	* Unit	* Valid From	Valid To
Blank Outer Barrel FPC	1	pc	20.02.2018	Select date...

Previously declared on 'Settings → Units'

Save Cancel

[368] Blank Outer Barrel FPC Electrical Test | Electrical test of Blank OB FPC

Component Type	Direction	Amount	Unit
[729] Blank Outer Barrel FPC	Output	1	[361] pc
[730] Blank Outer Barrel FPC	Input	1	[361] pc

Parameters

Parameter	Unit
No Parameter records found	

Location

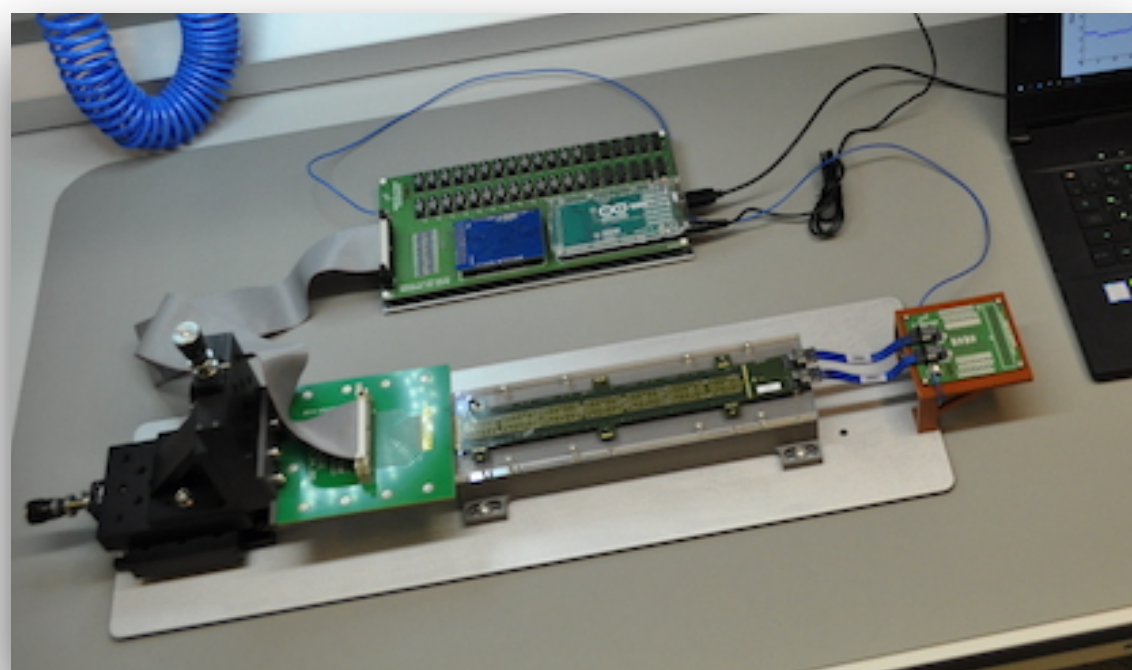
Name

[287] - [INS_241] Joint Institute for Nuclear Research (JINR), Dubna

Mat. Conformity

Component Type	Functional Status	Physical Status

02.09.2021 17:14:47.00 11.10.2021 15:06:40.99



Resources Projects Administration
 Summary Info Settings Resources
 Management Functions Activity Types Acti

Edit Existing Activity Type

General Output Component Types **1** Input Component Types **1** **Parameters**
 Location **1** Mat. Conformity Activity Status **2** Activity Result **3**

Parameter	Unit
No Parameter records found	

+ Add 5 slots + Add 10 slots + Add 20 slots + Add 50 slots

Save Cancel

Component Type	Direction	Amount	Unit
[729] Blank Outer Barrel FPC	Output	1	[361] pc
[730] Blank Outer Barrel FPC	Input	1	[361] pc

Parameters

Parameter	Unit
No Parameter records found	

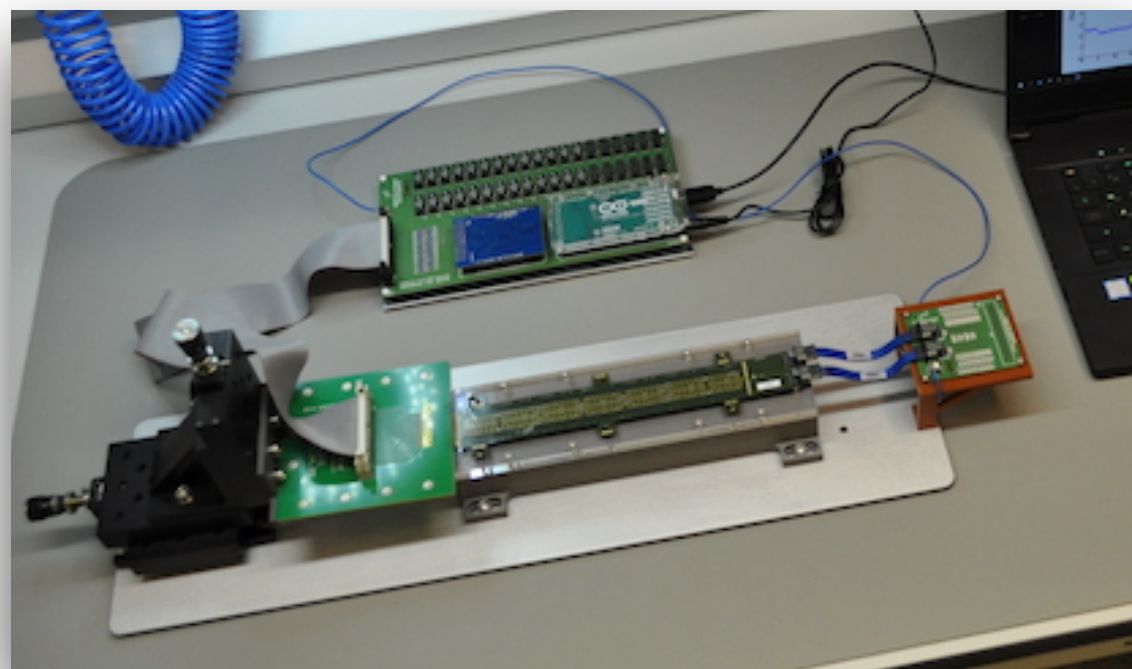
Location

Name
[287] - [INS_241] Joint Institute for Nuclear Research (JINR), Dubna

Mat. Conformity

Component Type	Functional Status	Physical Status

02.09.2021 17:14:47.00 11.10.2021 15:06:40.99



Resources Projects Administration
 Summary Info Settings Resources
 Management Functions Activity Types Activ

Edit Existing Activity Type

General Output Component Types **1** Input Component Types **1** Parameters
 Location **2** Mat. Conformity Activity Status **2** Activity Result **3**

Location

- Central China Normal University, Whuan
- JINR, Dubna

Previously declared on 'Projects → Resources → Institutes'

Save Cancel

Component Type			
Component Type	Direction	Amount	Unit
[729] Blank Outer Barrel FPC	Output	1	[361] pc
[730] Blank Outer Barrel FPC	Input	1	[361] pc

Parameters

Parameter	Unit
No Parameter records found	

Location

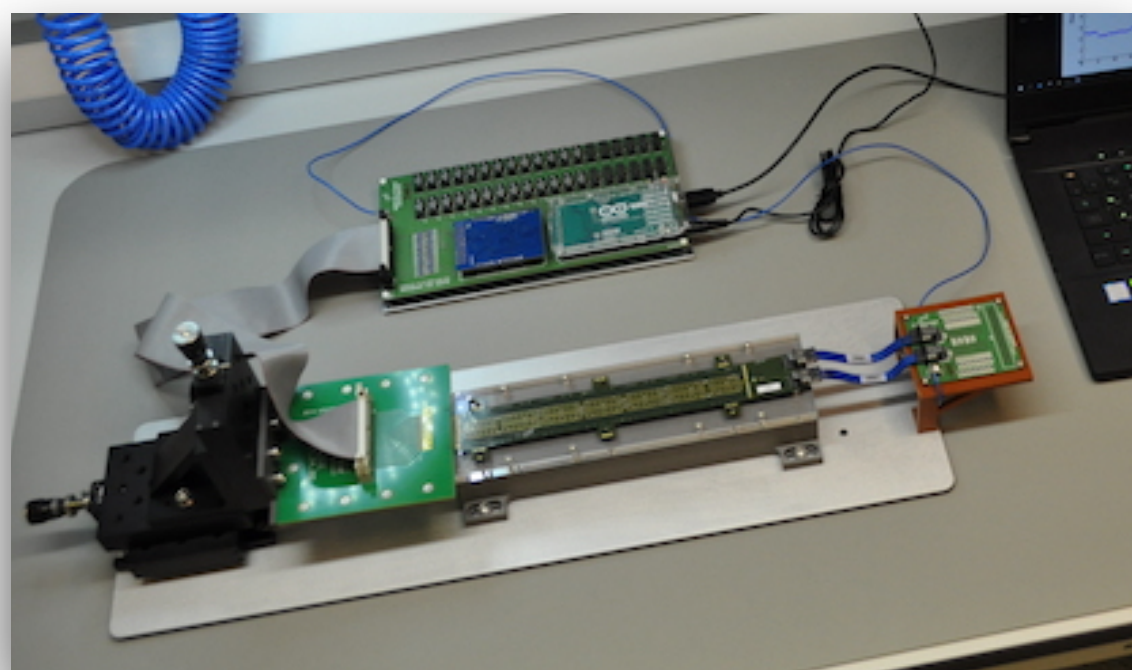
Name

- [341] - [INS_262] Central China Normal University, Whuan
- [287] - [INS_241] Joint Institute for Nuclear Research (JINR), Dubna

Mat. Conformity

Component Type	Functional Status	Physical Status
----------------	-------------------	-----------------

02.09.2021 17:14:47.00 11.10.2021 23:30:20.69



Resources Projects Administration
 Summary Info Settings Resources
 Management Functions Activity Types Acti

Edit Existing Activity Type

General Output Component Types **1** Input Component Types **1** Parameters
 Location **1** **Mat. Conformity** Activity Status **2** Activity Result **3**

Component Type	Functional Status	Physical Status	
No Material Conformity records found			

Previously declared on 'Fuctional/Physical Satus' section of the 'Input Component Types' (!)

Save Cancel

[368] Blank Outer Barrel FPC Electrical Test | Electrical test of Blank OB FPC

Component Type	Direction	Amount	Unit
[729] Blank Outer Barrel FPC	Output	1	[361] pc
[730] Blank Outer Barrel FPC	Input	1	[361] pc

Parameters

Parameter	Unit
No Parameter records found	

Location

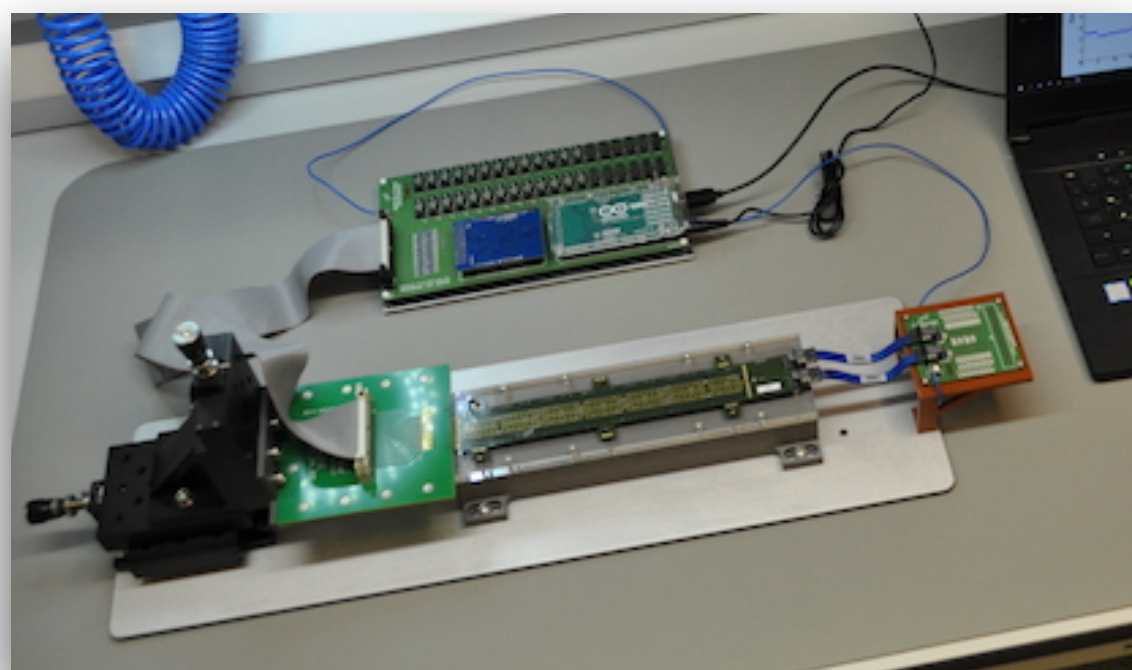
Name

[287] - [INS_241] Joint Institute for Nuclear Research (JINR), Dubna

Mat. Conformity

Component Type	Functional Status	Physical Status

02.09.2021 17:14:47.00 | 11.10.2021 15:06:40.99



Resources Projects Administration
 Summary Info Settings Resources
 Management Functions Activity Types Acti

Edit Existing Activity Type

General Output Component Types **1** Input Component Types **1** Parameters
 Location **1** Mat. Conformity Activity Status **2** Activity Result **3**

Activity Status

OPEN
 CLOSED

Previously declared on 'Settings → Activity Status'

Save Cancel

Component Type	Direction	Amount	Unit
[729] Blank Outer Barrel FPC	Output	1	[361] pc
[730] Blank Outer Barrel FPC	Input	1	[361] pc

Parameters

Parameter	Unit
No Parameter records found	

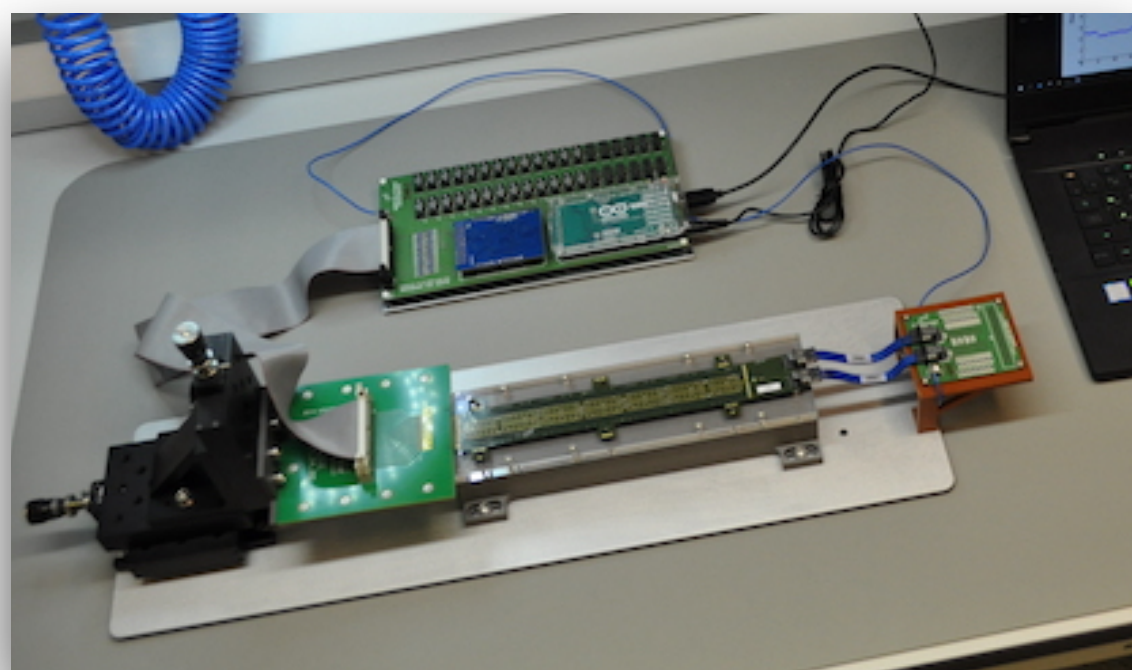
Location

Name
 [287] - [INS_241] Joint Institute for Nuclear Research (JINR), Dubna

Mat. Conformity

Component Type	Functional Status	Physical Status

02.09.2021 17:14:47.00
 11.10.2021 15:06:40.99



Resources Projects Administration
 Summary Info Settings Resources
 Management Functions Activity Types Acti

Edit Existing Activity Type

General Output Component Types **1** Input Component Types **1** Parameters
 Location **1** Mat. Conformity Activity Status **2** **Activity Result **2****

Activity Result		
NOK		
Component Type	Functional Status	Physical Status
Blank Outer Barrel FPC	NOK	[EMPTY]
754		
OK		
Component Type	Functional Status	Physical Status
Blank Outer Barrel FPC	OK	[EMPTY]
753		

Previously declared on 'Fuctional/Physical Status' section of the 'Output Component Types' (!)

Save Cancel

Location
 Name
 [287] - [INS_241] Joint Institute for Nuclear Research (JINR), Dubna
 Mat. Conformity
 Component Type Functional Status Physical Status
 11.10.2021 15:15:04.69

02.09.2021 17:14:47.00

Activity 'OBFPC Electrical Test AL003479'

Activities: MPD-ITS

Displaying only selected Activity record Show All

Total Filtered Records: 1

Activity Name	Activity Type	Start Date	End Date	Location	Activity Status	Activity Result
[430] OBFPC ElecticTest AL003479	[458] Outer Barrel FPC Electrical Test	09.09.2021	09.09.2021	[293] JINR, Dubna	[242] CLOSED	[586] OK

Output Components			
Component Type	Component ID	Functional Status	Physical Status
[308] Outer Barrel FPC	[1847] - R:[779] AL003479	[815] OK	[816] OK

Input Components			
Component Type	Component ID	Functional Status	Physical Status
[308] Outer Barrel FPC	[1847] - R:[778] AL003479	[817] [EMPTY]	[816] OK

Parameters	
No Records	

Attachments		
Category	File	Path
[665] - [225] GeneralInformation	FPC_GSBI1_A_03479.zip	\\eos-gw02.jinr.ru\eos-mpdits\Attachments\Dev\Act\400-499\430\FPC_GSBI1_A_03479.zip
[666] - [225] GeneralInformation	FPC_GSBI1_A_03479_summary.pdf	\\eos-gw02.jinr.ru\eos-mpdits\Attachments\Dev\Act\400-499\430\FPC_GSBI1_A_03479_summary.pdf

Uri	
No Records	

Members	
Name	
[209] - PIP:	[381] Sheremetiev Aleksei Dmitrievich

- Add
- View
- Edit
- Remove
- Filter
- Export

The screenshot shows the NICA web application interface. At the top, there is a navigation menu with options like Resources, Projects, Administration, Summary Info, Settings, Resources, Organization, Planning, Construction Data, Accounting, and Reports. The user is logged in as 'Себаллос Санчес Сесар'. The main heading is 'Components: MPD-ITS - Outer Barrel FPC'. Below this, it says 'Displaying only selected Component Id' with a 'Show All' button. A table shows 'Total Filtered Records: 1' with the following data:

Component ID	OK	Component Type	Supplier Component ID	Description	Lot ID	Package ID	Physical Status	Functional Status		
[1365] AL002113	OK	[308] Outer Barrel FPC	GS Swiss	Outer Barrel FPC	GSA9P	18/08/2021	[816] OK	[815] OK	→	↓

A yellow banner at the bottom left states 'Filter applied for component 'AL002113''. On the right, two red arrows point from text boxes to the rightmost icons in the table row: 'Detailed Composition' points to the right arrow icon, and 'Activity History' points to the downward arrow icon.

Detailed Composition

Activity History



Access to Component's 'Composition' & 'History'



Resources **Projects** Administration
 Summary Info Settings Resources Organization Planning **Construction Data** Accounting Reports
 Activities **Components** Raw Materials

Help 🇺🇸 Себаллос Санчес Сесар

JINR

Components: MPD-ITS - Outer Barrel FPC

Displaying only selected Component Id Show All

Total Filtered Records: 1

Component ID	OK	Component Type	Supplier Component ID	Description	Lot ID	Package ID	Physical Status	Functional Status	
[1365] AL002113	OK	[308] Outer Barrel FPC	GS Swiss	Outer Barrel FPC	GSA9P	18/08/2021	[816] OK	[815] OK	

Parents

Component Type	Component ID	Position in this Component	Description
[310] Outer Barrel FPC Box	[1370] - [1219] BXF002	1	Outer Barrel FPC Box

Children

Component Type	Component ID	Position	Description
[306] Blank Outer Barrel FPC	[1352] - [1209] A002113	1	Blank Outer Barrel FPC
[277] Cross Cable Set	[1364] - [1210] CC0907	2	

Resources **Projects** Administration
Help ▾ Себаллос Санчес Сесар

JINR
Summary Info Settings Resources Organization Planning **Construction Data** Accounting Reports

Activities Components Raw Materials

Activities: MPD-ITS History: AL002113 [1365]

Displaying only Activities History for selected component Show All

Total Filtered Records: 3

Activity Name	Activity Type	Start Date	End Date	Location	Activity Status	Activity Result		
[408] OBFPC ElecticTest AL002113	[458] Outer Barrel FPC Electrical Test	02.09.2021	02.09.2021	[293] JINR, Dubna	[242] CLOSED	[586] OK		▼
[382] OBFPC ElecticTest AL002113	[458] Outer Barrel FPC Electrical Test	20.08.2021	20.08.2021	[293] JINR, Dubna	[242] CLOSED	[586] OK	2	▼
[362] BLOBFPCL CrossCableSolder A002113	[457] Outer Barrel FPC Cross Cable Soldering	19.08.2021	19.08.2021	[291] JINR, Dubna	[242] CLOSED	[583] OK		▼

Selecting the Component Activity History

Resources **Projects** Administration
Help ▼ 🇬🇧 ▼ 👤 Себаллос Санчес Сесар

Summary Info Settings Resources Organization Planning **Construction Data** Accounting Reports
Activities Components Raw Materials

Activities: MPD-ITS History: AL002113 [1365]

Displaying only Activities History for selected component Show All

Total Filtered Records: 3

Activity Name	Activity Type	Start Date	End Date	Location	Activity Status	Activity Result		
[408] OBFPC ElecticTest AL002113	[458] Outer Barrel FPC Electrical Test	02.09.2021	02.09.2021	[293] JINR, Dubna	[242] CLOSED	[586] OK		▼
[382] OBFPC ElecticTest AL002113	[458] Outer Barrel FPC Electrical Test	20.08.2021	20.08.2021	[293] JINR, Dubna	[242] CLOSED	[586] OK	2	▲

Output Components

Component Type	Component ID	Functional Status	Physical Status
[308] Outer Barrel FPC	[1365] - R:[686] AL002113	[815] OK	[816] OK

Input Components

Component Type	Component ID	Functional Status	Physical Status
[308] Outer Barrel FPC	[1365] - R:[685] AL002113	[817] [EMPTY]	[816] OK

Parameters

No Records

Attachments

Category	File	Path
[583] - [225] GeneralInformation	FPC_BT01.07.10.19_A_03475_data.txt	\\eos-gw02.jinr.ru\eos-mpdits\Attachments\Dev\Act\300-399\382\FPC_BT01.07.10.19_A_03475_data.txt
[584] - [225] GeneralInformation	FPC_BT01.07.10.19_A_03475_summary.txt	\\eos-gw02.jinr.ru\eos-mpdits\Attachments\Dev\Act\300-399\382\FPC_BT01.07.10.19_A_03475_summary.txt

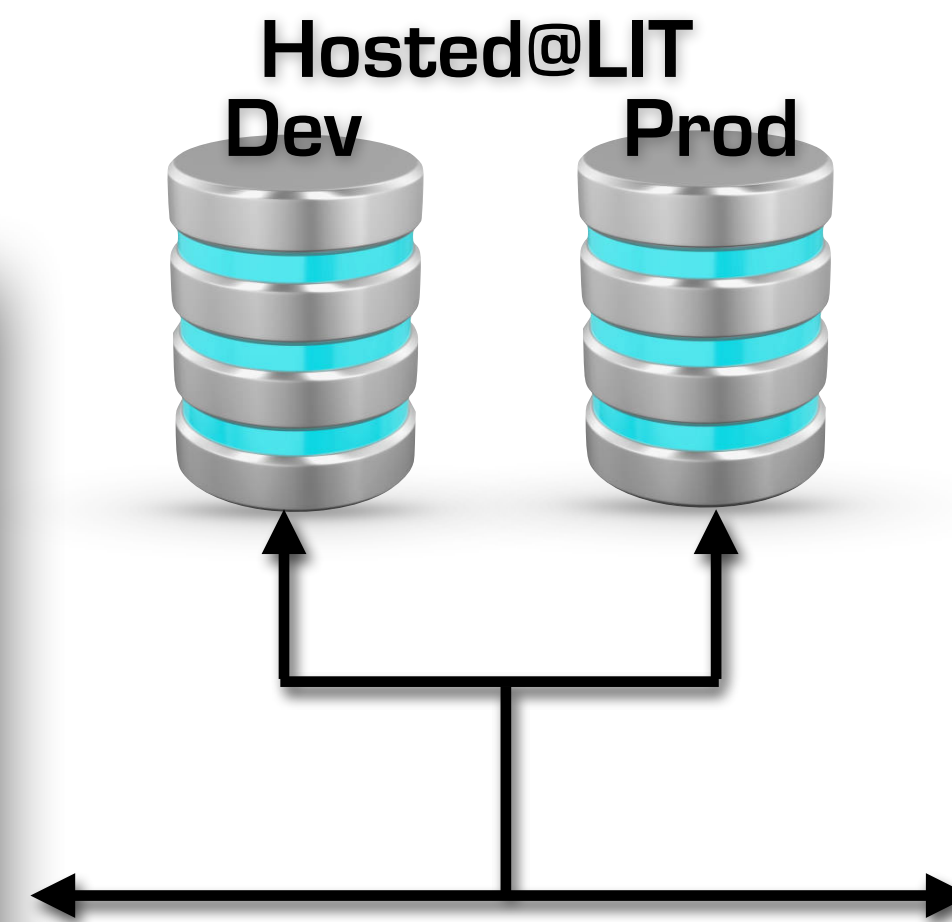
WebApp

Resources Projects Administration
 Summary Info Settings Resources Organization Planning Construction Data Accounting Reports
 Activities Components Raw Materials

Activities: MPD-ITS

Total Records: 60

Activity Name	Activity Type	Start Date	End Date	Location	Activity Status	Activity Result	
[430] OBFPC ElectricTest AL003479	[458] Outer Barrel FPC Electrical Test	09.09.2021	09.09.2021	[293] JINR, Dubna	[242] CLOSED	[586] OK	2
[429] BLOBFPC CrossCableSolder A003479	[457] Outer Barrel FPC Cross Cable Soldering	09.09.2021	09.09.2021	[291] JINR, Dubna	[242] CLOSED	[583] OK	
[428] CROSSCBL AttachLotInfo CX011	[377] Cross Cable Lot Attach Information	09.09.2021	09.09.2021	[290] JINR, Dubna	[241] OPEN		
[427] BLOBFPC ElectricalTest A003479	[368] Blank Outer Barrel FPC Electrical Test	09.09.2021	09.09.2021	[287] JINR, Dubna	[242] CLOSED	[572] OK	2
[426] BLOBFPC ElectricalTest A003479	[368] Blank Outer Barrel FPC Electrical Test	09.09.2021	09.09.2021	[287] JINR, Dubna	[242] CLOSED	[572] OK	
[425] BLOBFPC ElectricalTest A003479	[368] Blank Outer Barrel FPC Electrical Test	09.09.2021	09.09.2021	[287] JINR, Dubna	[242] CLOSED	[572] OK	1
[424] BLOBFPC Metrology A003479	[371] Blank Outer Barrel FPC Metrology	09.09.2021	09.09.2021	[285] JINR, Dubna	[242] CLOSED	[569] OK	
[423] BLOBFPC Metrology A003479	[371] Blank Outer Barrel FPC Metrology	09.09.2021	09.09.2021	[285] JINR, Dubna	[242] CLOSED	[569] OK	
[422] BLOBFPC VisInspect A003479	[373] Blank Outer Barrel FPC Visual Inspection	09.09.2021	09.09.2021	[286] JINR, Dubna	[242] CLOSED	[595] OK	
[421] BLOBFPC Metrology A003479	[371] Blank Outer Barrel FPC Metrology	09.09.2021	09.09.2021	[285] JINR, Dubna	[242] CLOSED	[569] OK	
[410] CROSSCBL AttachLotInfo CX013	[377] Cross Cable Lot Attach Information	03.09.2021	03.09.2021	[290] JINR, Dubna	[241] OPEN		
[409] CROSSCBL AttachLotInfo CX015	[377] Cross Cable Lot Attach Information	03.09.2021	03.09.2021	[290] JINR, Dubna	[241] OPEN		
[408] OBFPC ElectricTest AL002113	[458] Outer Barrel FPC Electrical Test	02.09.2021	02.09.2021	[293] JINR, Dubna	[242] CLOSED	[586] OK	
[407] CROSSCBL AttachLotInfo CX001	[377] Cross Cable Lot Attach Information	02.09.2021	02.09.2021	[290] JINR, Dubna	[241] OPEN		1
[406] BLOBFPC CrossCableSolder A003122	[457] Outer Barrel FPC Cross Cable Soldering	02.09.2021	02.09.2021	[291] JINR, Dubna	[242] CLOSED	[583] OK	
[405] BLOBFPC CrossCableSolder A003546	[457] Outer Barrel FPC Cross Cable Soldering	31.08.2021	31.08.2021	[291] JINR, Dubna	[242] CLOSED	[583] OK	
[404] BLOBFPC CrossCableSolder A003545	[457] Outer Barrel FPC Cross Cable Soldering	31.08.2021	31.08.2021	[291] JINR, Dubna	[242] CLOSED	[584] NOK	
[403] BLOBFPC ElectricalTest A003520	[368] Blank Outer Barrel FPC Electrical Test	31.08.2021	31.08.2021	[287] JINR, Dubna	[242] CLOSED	[573] NOK	
[402] BLOBFPC Metrology A003545	[371] Blank Outer Barrel FPC Metrology	31.08.2021	31.08.2021	[285] JINR, Dubna	[242] CLOSED	[570] NOK	
[401] OBFPC ElectricTest AL002112	[458] Outer Barrel FPC Electrical Test	29.08.2021	29.08.2021	[293] JINR, Dubna	[242] CLOSED	[586] OK	5



API functions

CmisWebAPI

The following operations are supported. For a formal definition, please review the [Service Description](#).

- [ActivityAttachmentCreate](#)
- [ActivityAttachmentRemove](#)
- [ActivityChange](#)
- [ActivityComponentAssign](#)
- [ActivityComponentRemove](#)
- [ActivityCreate](#)
- [ActivityMemberAssign](#)
- [ActivityMemberChange](#)
- [ActivityMemberRemove](#)
- [ActivityParameterChange](#)
- [ActivityParameterCreate](#)
- [ActivityParameterRemove](#)
- [ActivityRead](#)
- [ActivityReadOne](#)
- [ActivityTypeRead](#)
- [ActivityTypeReadAll](#)
- [ActivityUriChange](#)
- [ActivityUriCreate](#)
- [ActivityUriRemove](#)
- [AttachmentCategoryRead](#)
- [ComponentActivityHistoryRead](#)
- [ComponentChange](#)
- [ComponentChildrenRead](#)
- [ComponentCompositionCreate](#)
- [ComponentCompositionPositionChange](#)
- [ComponentCompositionRemove](#)
- [ComponentCreate](#)

Web interface to be used by registered users for reading/writing data from/to the DB.

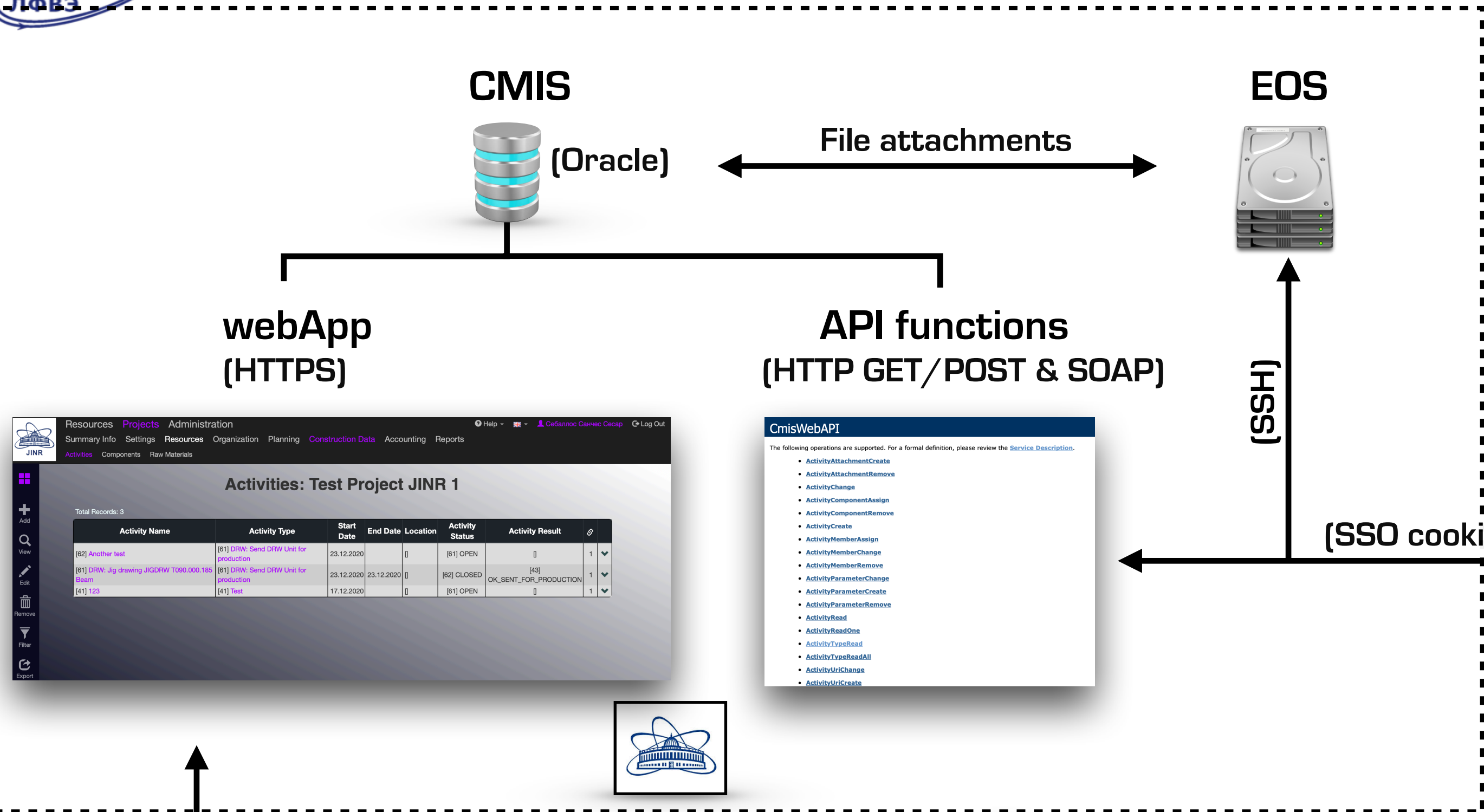
Activity and Component Types definitions are always done via WebApp

API function collection meant to be used by the construction and test hardware to read/write data from/to the DB.



CMIS implementation at JINR (LIT)

Interlaboratory Collaboration



Resources Projects Administration
Summary Info Settings Resources Organization Planning Construction Data Accounting Reports
Activities Components Raw Materials

Activities: Test Project JINR 1

Total Records: 3

Activity Name	Activity Type	Start Date	End Date	Location	Activity Status	Activity Result
[82] Another test	[81] DRW: Send DRW Unit for production	23.12.2020			[81] OPEN	
[81] DRW: Jig drawing JIGDRW T090.000.185 Beam	[81] DRW: Send DRW Unit for production	23.12.2020	23.12.2020		[82] CLOSED	[43] OK_SENT_FOR_PRODUCTION
[41] 103	[41] Test	17.12.2020			[81] OPEN	

- CmisWebAPI
- The following operations are supported. For a formal definition, please review the Service Description.
- ActivityAttachmentCreate
 - ActivityAttachmentRemove
 - ActivityChange
 - ActivityComponentAssign
 - ActivityComponentRemove
 - ActivityCreate
 - ActivityMemberAssign
 - ActivityMemberChange
 - ActivityMemberRemove
 - ActivityParameterChange
 - ActivityParameterCreate
 - ActivityParameterRemove
 - ActivityRead
 - ActivityReadOne
 - ActivityTypeRead
 - ActivityTypeReadAll
 - ActivityUriChange
 - ActivityUriCreate



CERN SSO:

- » Web access.
- » Registered JINR-SSO users.
- » Role-based access rights.

Custom Assembly & Testing programs

Direct HW interface to DB

(Kerberos credentials automatically renewed)

```
File Edit View Search Terminal Help
-> IBS is requesting the tray ID together with status
->> PLEASE SCAN BARCODE
->>>
WARNING: unrecognized ID scanned: "TR05181", try again!
<- tray ID is 5388A148
Please confirm that this tray is for HIC assembly of type: "085" by typing "085": 085
085 1 2 3 4 5 6 7 8
A | NK | NK | OK | OK | NK | OK | OK | OK |
B | OK | NK | OK | OK | NK | OK | OK | NK |
C | | NK | NK | NK | NK | NK | NK | NK |
Please confirm chip content by typing "OK" or anything else to cancel: OK
OK
<- "TR05181A08_A3: NK_A3: NK_A3: OK; A4: OK; A5: NK; A6: OK; A7: OK; A8: OK; B1: OK; B2: NK; B3: OK; B4: OK; B5: NK; B6: OK; B7: OK; B8: NK; C1: OK; C2: NK; C3: OK; C4: NK; C5: NK; C6: NK; C7: NK; C8: OK"
->> Removed command <TRID> from command list
```

Home New HIC Assembly Add Crew Member Log In

Home > AR003016 > Edit HIC Assembly AR003016

HIC Assembly AR003016 has been updated.

Edit HIC Assembly AR003016

View Edit

FPC Name *
AR003016

HIC Category *
Outer-Barrel(Silver)

Crew members

Assembly Crew *

CARLOLA PASQUALE
CEBALLOS SANCHEZ CESAR
COLELLA DOMENICO
FIORENZA GABRIELE

Annotations

Logbook
Assembly Annotations:

JINR SSO:

- » Registered service accounts.
- » Kerberos credentials.
- » Access cookies acquired through 'get-sso-cookie.py'.

Actions

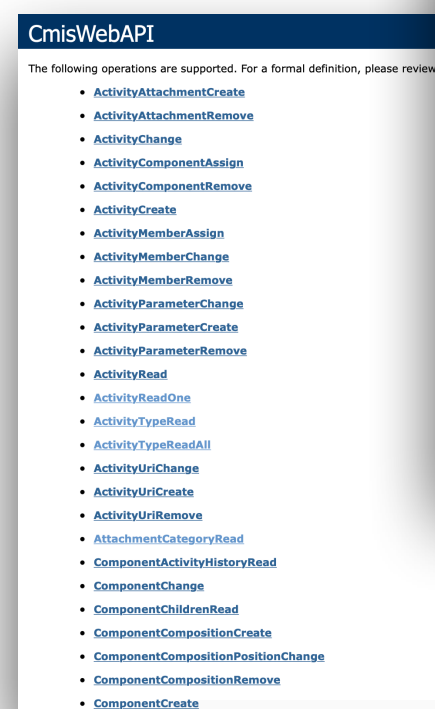
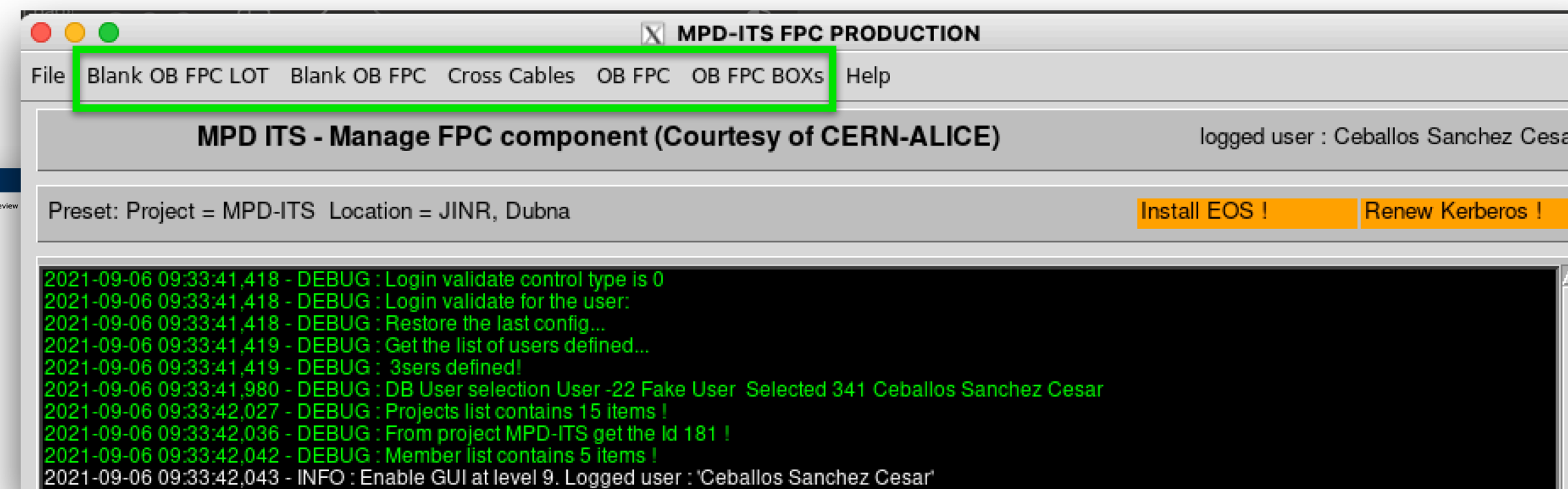
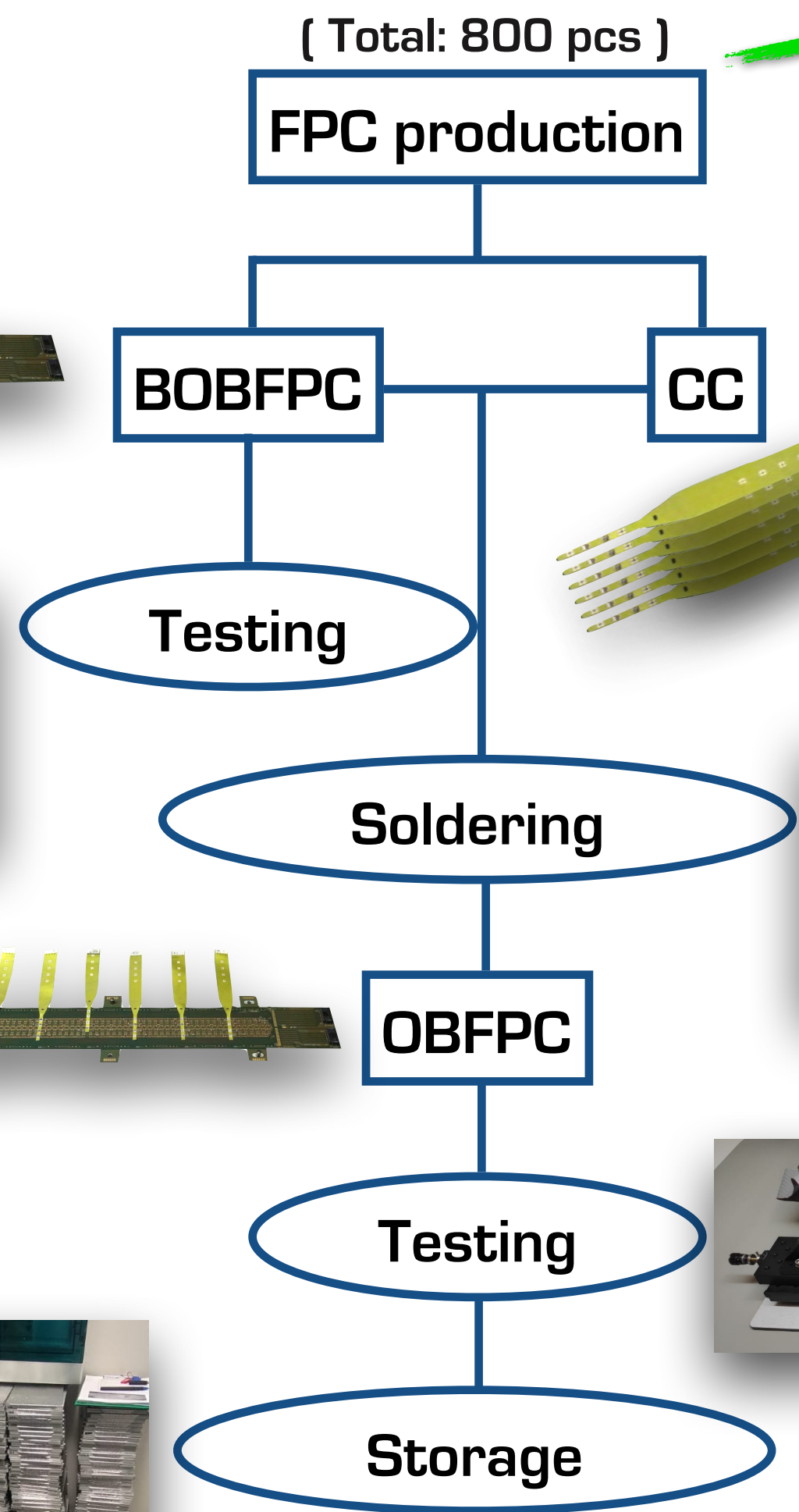
OB HIC Qualification Test

scan	status
1. Power Test	Done (n: 1 ms)
2. Dcct Measurement	Done (n: 4 ms)
3. Ffo Scan	Done (n: 1 ms)
4. Ffo Scan, V +10%	Done (n: 1 ms)
5. Ffo Scan, V -10%	Done (n: 1 ms)
6. Digital Scan BB 0	Done (n: 0 ms)
7. Digital Scan BB 0, V +10%	Done (n: 0 ms)
8. Digital Scan BB 0, V -10%	Done (n: 0 ms)
9. Digital White Frame BB 0	Done (n: 0 ms)
10. Threshold Scan 0.0 V	Done (n: 7 ms)
11. Tune VCASN Scan 0.0 V	Done (n: 0 ms)
12. Tune THSR Scan 0.0 V	Done (n: 0 ms)
13. Threshold Scan 0.0 V	Done (n: 7 ms)
14. Noise Occupancy 0.0 V	Done (n: 0 ms)
15. Noise Occupancy 0.0 V	Done (n: 0 ms)
16. Digital Scan BB 1	Done (n: 0 ms)
17. Tune VCASN Scan 3.0 V	Done (n: 0 ms)
18. Tune THSR Scan 3.0 V	Done (n: 0 ms)
19. Threshold Scan 3.0 V	Done (n: 7 ms)
20. Digital Scan BB 1	Done (n: 0 ms)
21. Digital White Frame BB 1	Done (n: 0 ms)
22. Threshold Scan 3.0 V	Done (n: 7 ms)
23. Tune VCASN Scan 3.0 V	Done (n: 0 ms)
24. Tune THSR Scan 3.0 V	Done (n: 0 ms)
25. Threshold Scan 3.0 V	Done (n: 7 ms)
26. Noise Occupancy 3.0 V	Done (n: 0 ms)

Object Layout

OUTER BARRELHIC

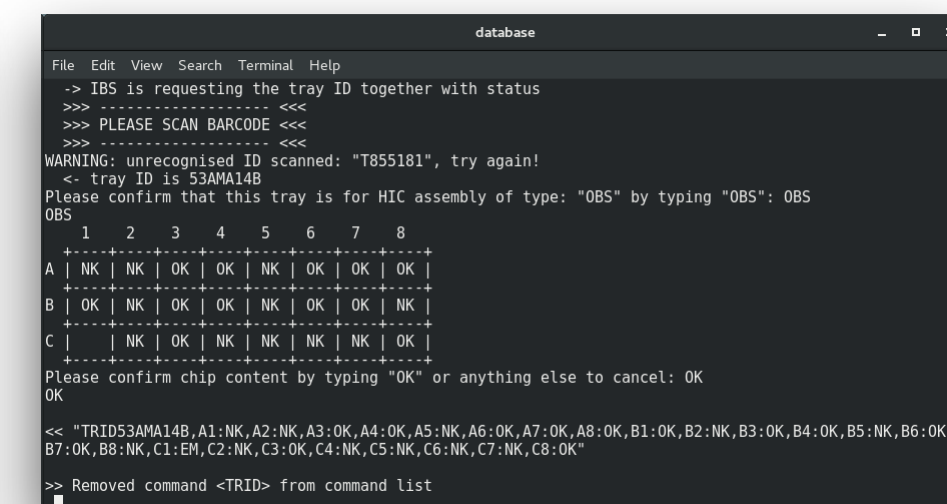
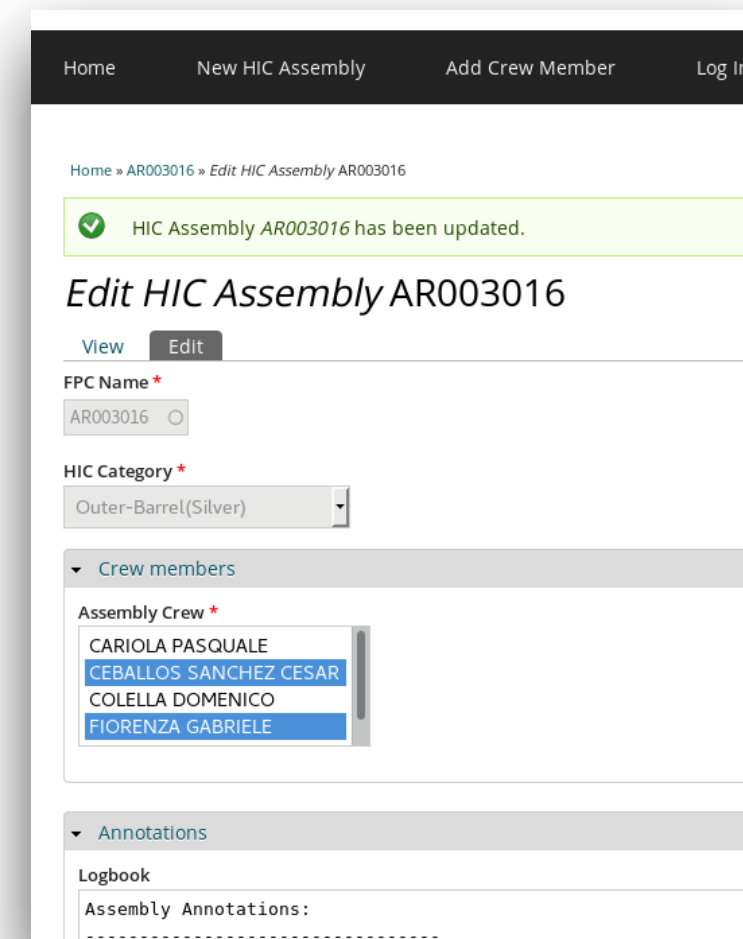
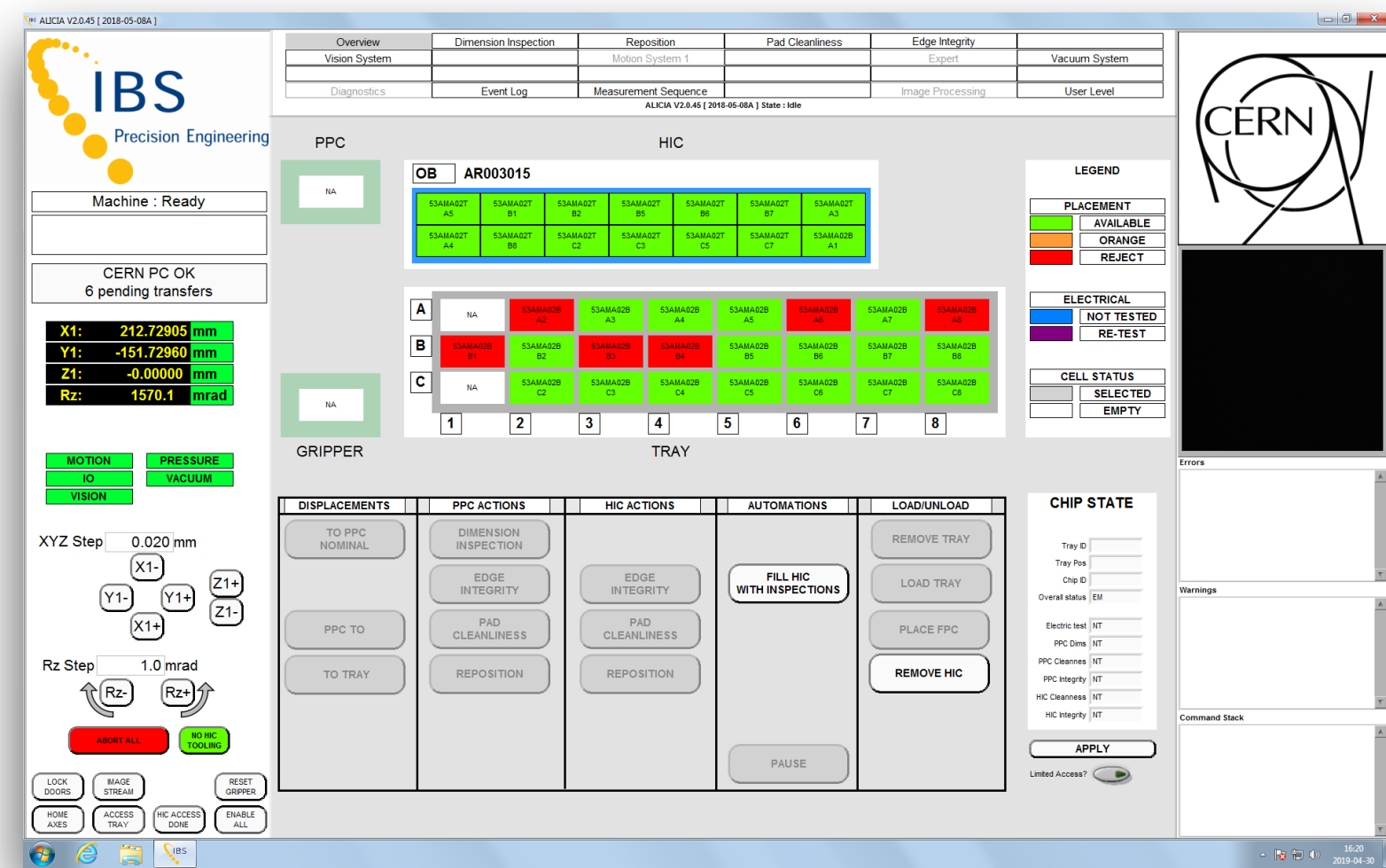
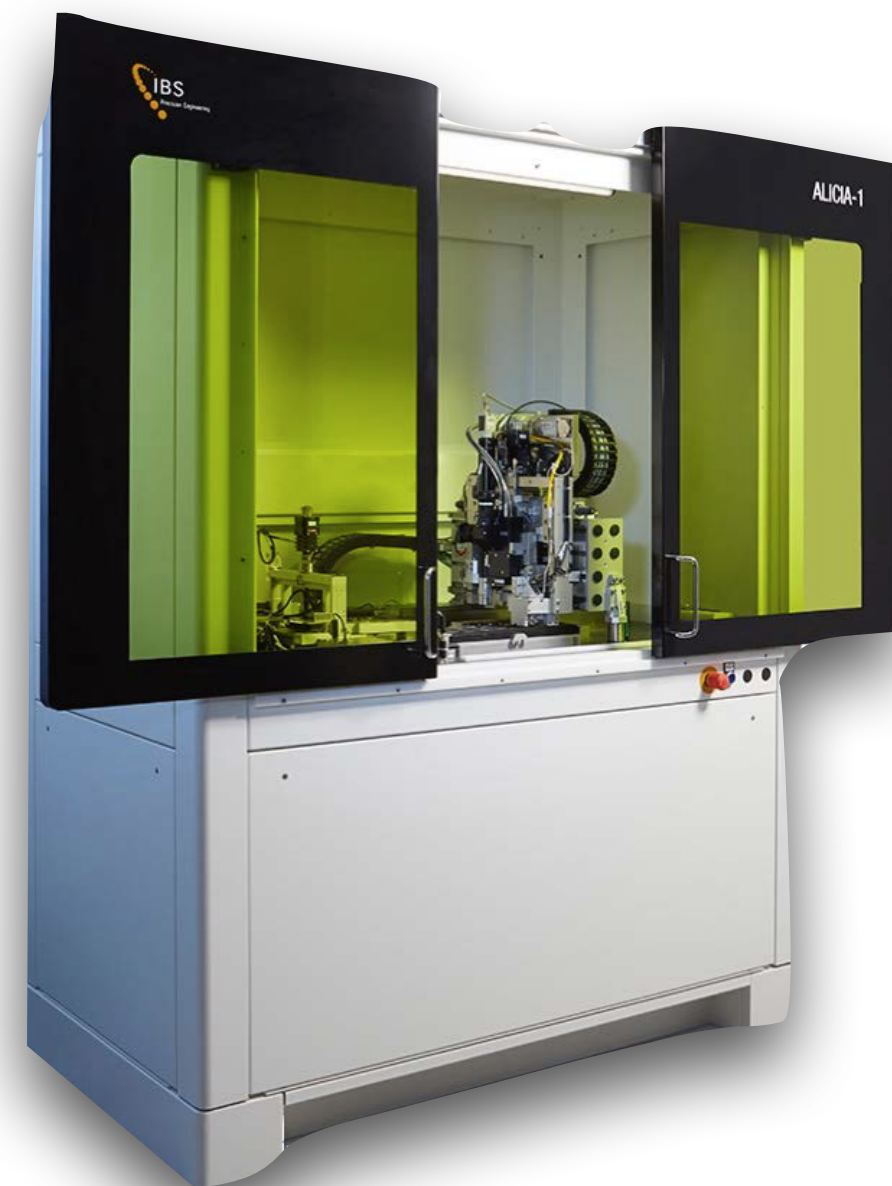
Chp0 Chp1 Chp2 Chp3 Chp4 Chp5 Chp6 Chp7 Chp8



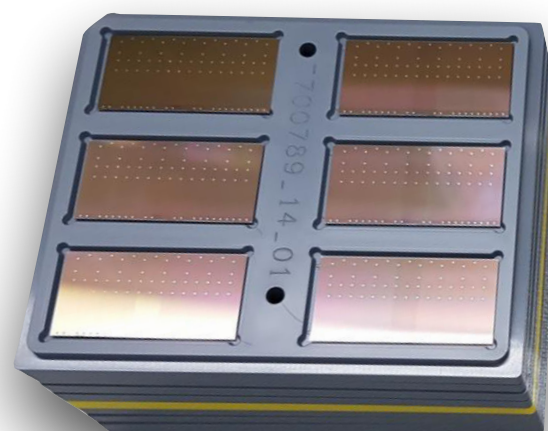
Activities: MPD-ITS

Total Records: 60

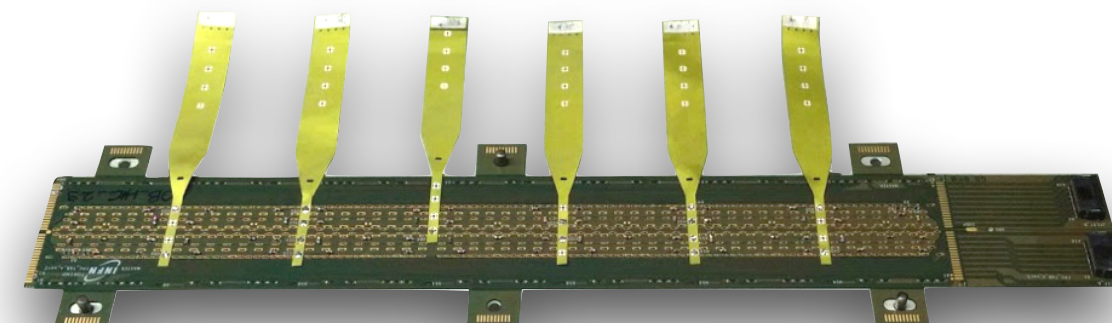
Activity Name	Activity Type	Start Date	End Date	Location	Activity Status	Activity Result	
[430] OBFFPC ElectricTest AL003479	[458] Outer Barrel FPC Electrical Test	09.09.2021	09.09.2021	[293] JINR, Dubna	[242] CLOSED	[586] OK	2
[429] BLOBFPC CrossCableSolder A003479	[457] Outer Barrel FPC Cross Cable Soldering	09.09.2021	09.09.2021	[291] JINR, Dubna	[242] CLOSED	[583] OK	
[428] CROSSCBL AttachLotInfo CX011	[377] Cross Cable Lot Attach Information	09.09.2021	09.09.2021	[290] JINR, Dubna	[241] OPEN	[]	
[427] BLOBFPC ElectricalTest A003479	[368] Blank Outer Barrel FPC Electrical Test	09.09.2021	09.09.2021	[287] JINR, Dubna	[242] CLOSED	[572] OK	2
[426] BLOBFPC ElectricalTest A003479	[368] Blank Outer Barrel FPC Electrical Test	09.09.2021	09.09.2021	[287] JINR, Dubna	[242] CLOSED	[572] OK	
[425] BLOBFPC ElectricalTest A003479	[368] Blank Outer Barrel FPC Electrical Test	09.09.2021	09.09.2021	[287] JINR, Dubna	[242] CLOSED	[572] OK	1
[424] BLOBFPC Metrology A003479	[371] Blank Outer Barrel FPC Metrology	09.09.2021	09.09.2021	[285] JINR, Dubna	[242] CLOSED	[569] OK	
[423] BLOBFPC Metrology A003479	[371] Blank Outer Barrel FPC Metrology	09.09.2021	09.09.2021	[285] JINR, Dubna	[242] CLOSED	[569] OK	
[422] BLOBFPC Visinspect A003479	[373] Blank Outer Barrel FPC Visual Inspection	09.09.2021	09.09.2021	[286] JINR, Dubna	[242] CLOSED	[595] OK	
[421] BLOBFPC Metrology A003479	[371] Blank Outer Barrel FPC Metrology	09.09.2021	09.09.2021	[285] JINR, Dubna	[242] CLOSED	[569] OK	
[410] CROSSCBL AttachLotInfo CX013	[377] Cross Cable Lot Attach Information	03.09.2021	03.09.2021	[290] JINR, Dubna	[241] OPEN	[]	
[409] CROSSCBL AttachLotInfo CX015	[377] Cross Cable Lot Attach Information	03.09.2021	03.09.2021	[290] JINR, Dubna	[241] OPEN	[]	
[408] OBFFPC ElectricTest AL002113	[458] Outer Barrel FPC Electrical Test	02.09.2021	02.09.2021	[293] JINR, Dubna	[242] CLOSED	[586] OK	
[407] CROSSCBL AttachLotInfo CX001	[377] Cross Cable Lot Attach Information	02.09.2021	02.09.2021	[290] JINR, Dubna	[241] OPEN	[]	1
[406] BLOBFPC CrossCableSolder A003122	[457] Outer Barrel FPC Cross Cable Soldering	02.09.2021	02.09.2021	[291] JINR, Dubna	[242] CLOSED	[583] OK	
[405] BLOBFPC CrossCableSolder A003546	[457] Outer Barrel FPC Cross Cable Soldering	31.08.2021	31.08.2021	[291] JINR, Dubna	[242] CLOSED	[583] OK	
[404] BLOBFPC CrossCableSolder A003545	[457] Outer Barrel FPC Cross Cable Soldering	31.08.2021	31.08.2021	[291] JINR, Dubna	[242] CLOSED	[584] NOK	
[403] BLOBFPC ElectricalTest A003520	[368] Blank Outer Barrel FPC Electrical Test	31.08.2021	31.08.2021	[287] JINR, Dubna	[242] CLOSED	[573] NOK	
[402] BLOBFPC Metrology A003545	[371] Blank Outer Barrel FPC Metrology	31.08.2021	31.08.2021	[285] JINR, Dubna	[242] CLOSED	[570] NOK	
[401] OBFFPC ElectricTest AL002112	[458] Outer Barrel FPC Electrical Test	29.08.2021	29.08.2021	[293] JINR, Dubna	[242] CLOSED	[586] OK	5



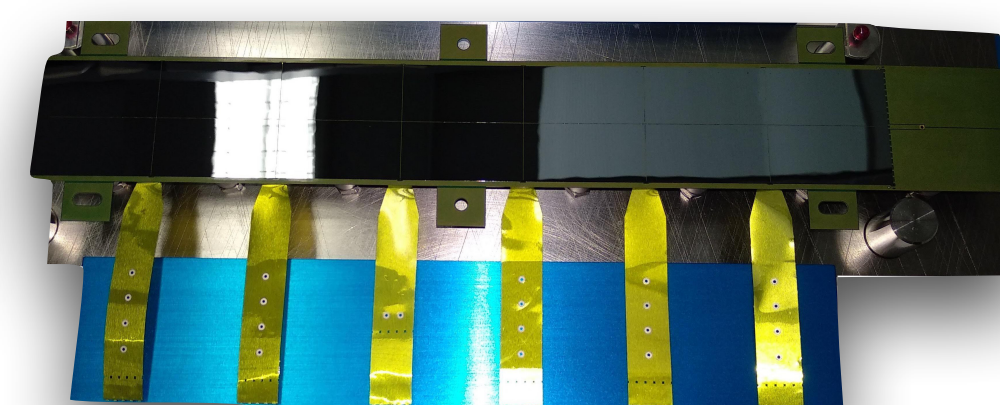
2 x 7 Chips



1 FPC



1 OBHIC



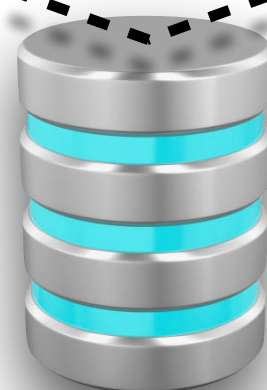
Parameters			
Name	Description	Value	Unit
Analog Current	Analog Current consumption of e.g. ALPIDEB	11.6233333333	mA
Analogue Scan 3V Broken Pixels		4	N/A
Analogue Scan 3V Dead Pixels		4274	N/A
Analogue Scan 3V Noisy Pixels		30	N/A
BackBias 3V PWELL/SUB Current		2.56843	mA
BackBias Avg Analog Current		16.5051851852	A
BackBias Avg Digital Current		57.1281481481	A
BackBias Avg PWELL/SUB Current		2.63092111111	A
BackBias Max Analog Current		115.66	mA
BackBias Max Digital Current		61.46	mA
BackBias Max PWELL/SUB Current		3.55672	mA

```

database
File Edit View Search Terminal Help
-> IBS is requesting the tray ID together with status
>>> ----- <<<
>>> PLEASE SCAN BARCODE <<<
>>> ----- <<<
WARNING: unrecognised ID scanned: "T855181", try again!
<- tray ID is 53AMA14B
Please confirm that this tray is for HIC assembly of type: "OBS" by typing "OBS": OBS
OBS
  1  2  3  4  5  6  7  8
+---+---+---+---+---+---+---+---+
A | NK | NK | OK | OK | NK | OK | OK |
+---+---+---+---+---+---+---+---+
B | OK | NK | OK | OK | NK | OK | OK |
+---+---+---+---+---+---+---+---+
C |   | NK | OK | NK | NK | NK | NK |
+---+---+---+---+---+---+---+---+
Please confirm chip content by typing "OK" or anything else to cancel: OK
OK

<< "TRID53AMA14B,A1:NK,A2:NK,A3:OK,A4:OK,A5:NK,A6:OK,A7:OK,A8:OK,B1:OK,B2:NK,B3:OK,B4:OK,B5:NK,B6:OK,
B7:OK,B8:NK,C1:EM,C2:NK,C3:OK,C4:NK,C5:NK,C6:NK,C7:NK,C8:OK"

>> Removed command <TRID> from command list
  
```



2. Chips are categorized on-the-fly as “SILVER” or “BRONZE” according to cuts applied to 47 parameters (Dead pixels, Fake Hit Rate, BackBias Max Voltage, ...).

3. The tray map shows “OK/NK” for each chip according to the selected category.

HIC Assembly Interface

View mode

Edit mode

It allows to:

- » Collect the assembly information.
- » Keep track of all assemblies on site at different stages.
- » Register the new HIC component and assembly activity into the project's DB and to send the assembly data to EOS (offline).

All data have been collected

Submit to the DB

New HIC Component

Component ID	Component Type	Supplier Component ID	Description	Lot ID	Package ID	Phys. Status	Func. Status
OBHIC-AR003017	Outer Barrel HIC Module	-	-	-	-	OK	OBHIC-BRONZE

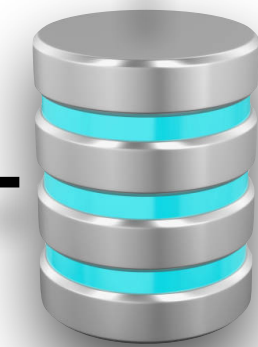
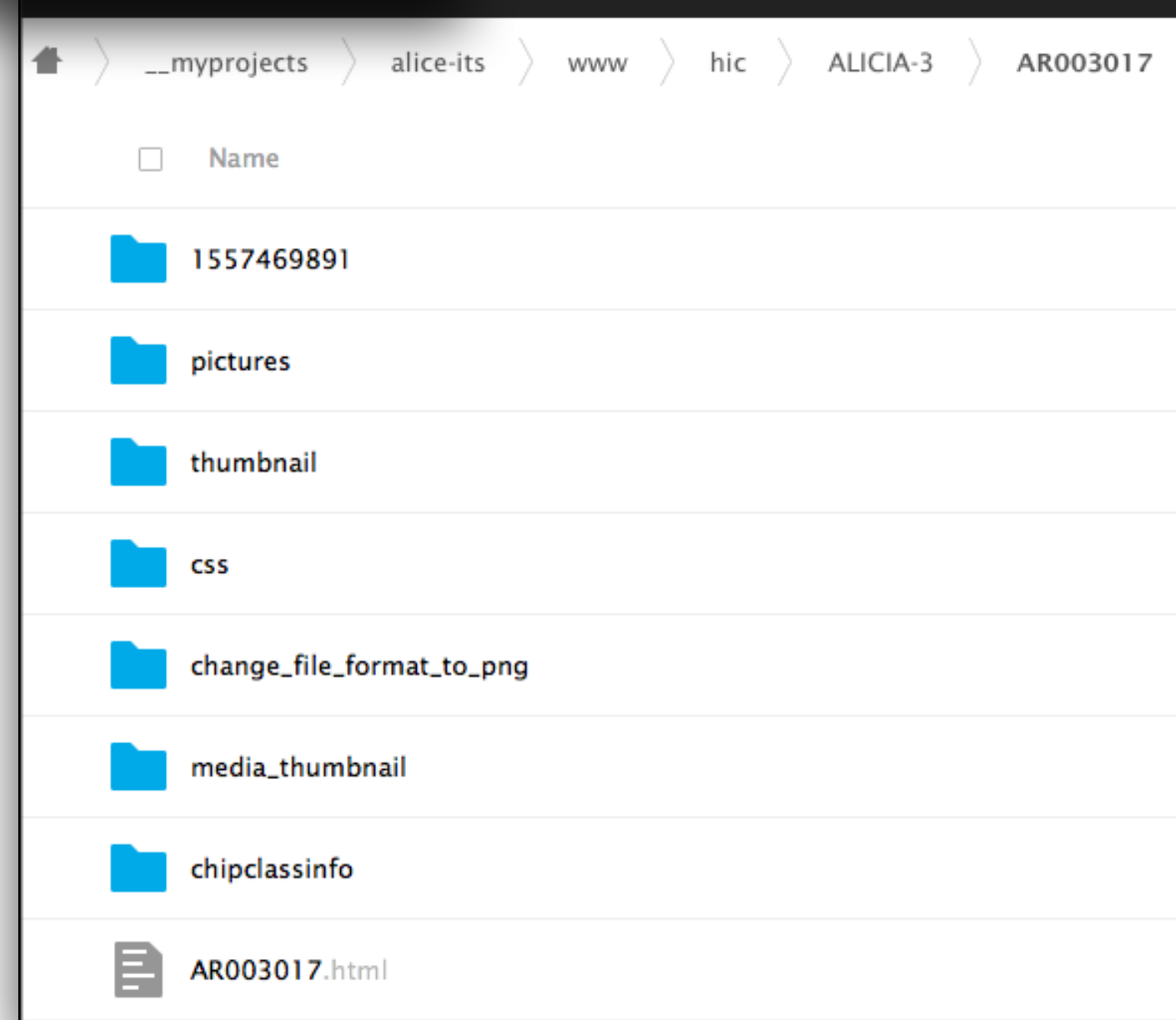
Parents				Children			
Component Type	Component ID	Position in this Component	Description	Component Type	Component ID	Position	Description
None				ALPIDEB Chip	T847782W11R26	HA1	
				ALPIDEB Chip	T847782W11R40	HA2	
				ALPIDEB Chip	T847782W11R03	HA3	
				ALPIDEB Chip	T854192W11R14	HA4	
				ALPIDEB Chip	T854192W11R03	HA5	
				ALPIDEB Chip	T854192W11R08	HA6	
				ALPIDEB Chip	T847782W11R30	HA7	
				ALPIDEB Chip	T847782W11R36	HB1	
				ALPIDEB Chip	T854192W11R00	HB2	
				ALPIDEB Chip	T854186W19R45	HB3	
				ALPIDEB Chip	T854186W19R38	HB4	
				ALPIDEB Chip	T854186W19R27	HB5	
				ALPIDEB Chip	T854186W19R33	HB6	
				ALPIDEB Chip	T854186W19R19	HB7	
				Outer Barrel FPC	AR003017	N/A	Outer Barrel FPC

Real data from ALICE-ITS

New HIC Assembly Activity

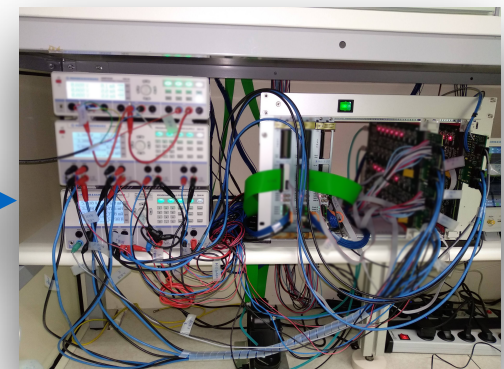
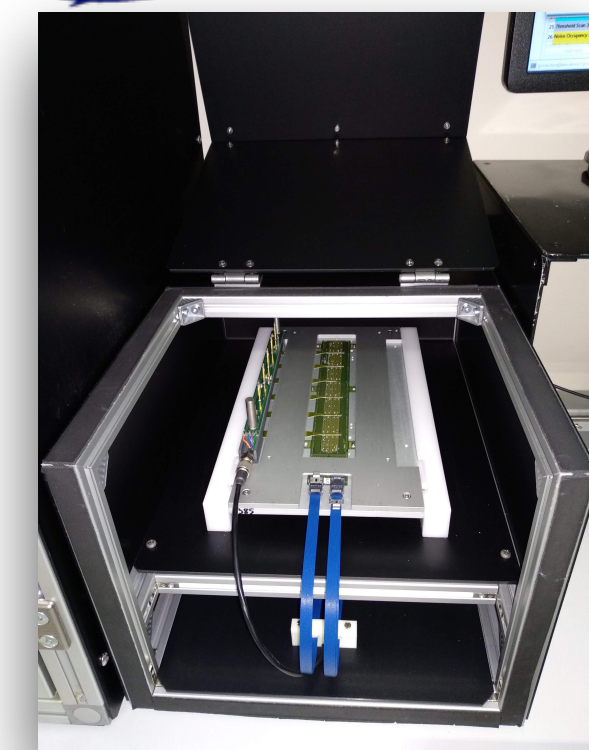
Assembly of OBHIC-AR003017	OB HIC Assembly	09.05.2019	10.05.2019	Sezione INFN, Bari	Closed	OBHIC BRONZE Assembled
Output Components						
Component Type	Component ID	Functional Status	Physical Status			
Outer Barrel HIC Module	OBHIC-AR003017	unknown	OK			
Input Components						
Component Type	Component ID	Functional Status	Physical Status			
ALPIDEB Chip	T854186W19R45	OK	OK			
ALPIDEB Chip	T854186W19R33	OK	OK			
ALPIDEB Chip	T847782W11R26	OK	OK			
ALPIDEB Chip	T847782W11R40	OK	OK			
ALPIDEB Chip	T854192W11R14	OK	OK			
ALPIDEB Chip	T847782W11R30	OK	OK			
ALPIDEB Chip	T854192W11R08	OK	OK			
ALPIDEB Chip	T847782W11R03	OK	OK			
ALPIDEB Chip	T854186W19R38	OK	OK			
ALPIDEB Chip	T854186W19R19	OK	OK			
ALPIDEB Chip	T847782W11R36	OK	OK			
ALPIDEB Chip	T854192W11R03	OK	OK			
ALPIDEB Chip	T854192W11R00	OK	OK			
ALPIDEB Chip	T854186W19R27	OK	OK			
Outer Barrel FPC	AR003017	OK	OK			
Parameters						
Name	Description	Value	Unit			
Chip Classification Version	The version of the classification used by the ALPIDE-mass-testing-software	45	N/A			
Attachments						
Attachment Type	File					
HIC Assembly Data	Results.html					
Uri						
URI	Description					
/eos/project/a/alice-its/hic/ALICIA-3/AR003017/chipclassinfo.tar.gz	path to chip classification info on EOS					
http://cern.ch/hicassembly/ALICIA-3/AR003017/chipclassinfo.tar.gz	link to chip classification info on EOS					
Members						
Name						
CEBALLOS SANCHEZ CESAR						
FIORENZA GABRIELE						

Assembly data on EOS

Directory structure on EOS:

- 1557469891
- pictures
- thumbnail
- css
- change_file_format_to_png
- media_thumbnail
- chipclassinfo
- AR003017.html



OB HIC Qualification Test

scan	status
1 Power Test	Done (in 1 min)
2 DcTtl Measurement	Done (in 4 min)
3 Fifo Scan	Done (in 1 min)
4 Fifo Scan, V +10%	Done (in 1 min)
5 Fifo Scan, V -10%	Done (in 1 min)
6 Digital Scan BB 0	Done (in 0 min)
7 Digital Scan BB 0, V +10%	Done (in 0 min)
8 Digital Scan BB 0, V -10%	Done (in 0 min)
9 Digital White Frame BB 0	Done (in 0 min)
10 Threshold Scan 0.0 V	Done (in 7 min)
11 Tune VCASN Scan 0.0 V	Done (in 0 min)
12 Tune ITHR Scan 0.0 V	Done (in 0 min)
13 Threshold Scan 0.0 V	Done (in 7 min)
14 Noise Occupancy 0.0 V	Done (in 0 min)
15 Noise Occupancy 0.0 V	Done (in 0 min)
16 Digital Scan BB 1	Done (in 0 min)
17 Tune VCASN Scan 1.0 V	Done (in 0 min)
18 Tune ITHR Scan 1.0 V	Done (in 0 min)
19 Threshold Scan 1.0 V	Done (in 7 min)
20 Digital Scan BB 3	Done (in 0 min)
21 Digital White Frame BB 3	Done (in 0 min)
22 Threshold Scan 3.0 V	Done (in 7 min)
23 Tune VCASN Scan 3.0 V	Done (in 0 min)
24 Tune ITHR Scan 3.0 V	Done (in 0 min)
25 Threshold Scan 3.0 V	Done (in 7 min)
26 Noise Occupancy 3.0 V	Done (in 0 min)

Object Layout: OUTER BARREL/HIC

Buttons: Chp14, Chp13, Chp12, Chp11, Chp10, Chp9, Chp8, Chp7, Chp6, Chp5, Chp4, Chp3, Chp2, Chp1

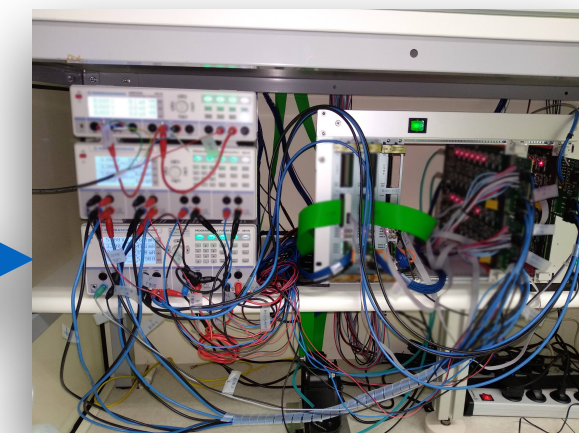
API operations supported:

- ActivityAttachmentCreate
- ActivityAttachmentRemove
- ActivityChange
- ActivityComponentAssign
- ActivityComponentRemove
- ActivityCreate
- ActivityMemberAssign
- ActivityMemberChange
- ActivityMemberRemove
- ActivityParameterChange
- ActivityParameterCreate
- ActivityParameterRemove
- ActivityRead
- ActivityReadOne
- ActivityTypeRead
- ActivityTypeReadAll
- ActivityTypeChange
- ActivityTypeCreate
- AttachmentCategoryRead
- ComponentActivityHistoryRead
- ComponentChange
- ComponentChildrenRead
- ComponentCompositionCreate
- ComponentCompositionPositionChange
- ComponentCompositionRemove
- ComponentCreate

HIC Qualification Test



HIC Endurance Test



CmisWebAPI

The following operations are supported. For a formal definition, please review the Service Description.

- ActivityAttachmentCreate
- ActivityAttachmentRemove
- ActivityChange
- ActivityComponentAssign
- ActivityComponentRemove
- ActivityCreate
- ActivityMemberAssign
- ActivityMemberChange
- ActivityMemberRemove
- ActivityParameterChange
- ActivityParameterCreate
- ActivityParameterRemove
- ActivityRead
- ActivityReadOne
- ActivityTypeRead
- ActivityTypeReadAll
- ActivityTypeChange
- ActivityTypeCreate
- AttachmentCategoryRead
- ComponentActivityHistoryRead
- ComponentChange
- ComponentChildrenRead
- ComponentCompositionCreate
- ComponentCompositionPositionChange
- ComponentCompositionRemove
- ComponentCreate

OB HIC Endurance Test

scan	status
1 Fifo Scan	Done (in 22 min)
2 Endurance Cycle	Running 0
3 Endurance Cycle	Waiting
4 Endurance Cycle	Waiting
5 Endurance Cycle	Waiting
6 Endurance Cycle	Waiting
7 Endurance Cycle	Waiting
8 Endurance Cycle	Waiting
9 Endurance Cycle	Waiting
10 Endurance Cycle	Waiting
11 Endurance Cycle	Waiting

Object Layout: ENDURANCE BOX

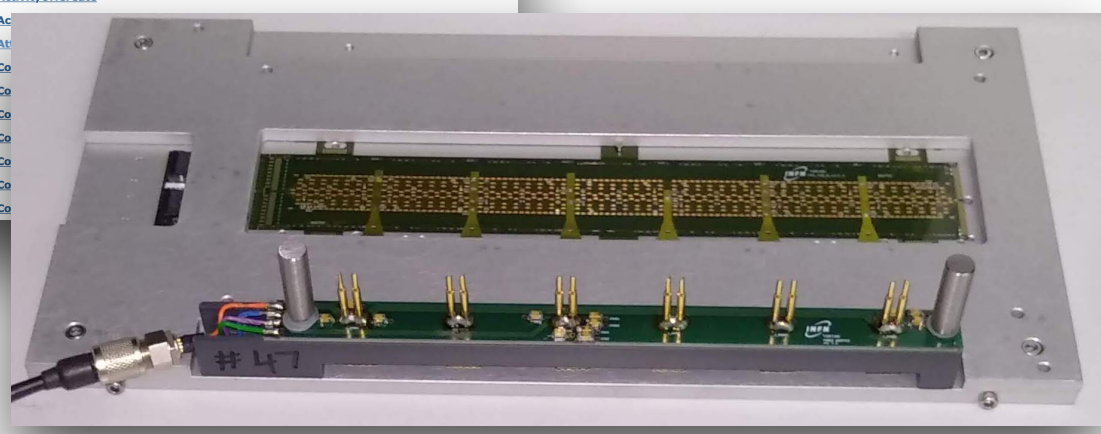
Buttons: HIC-AR0020, HIC-AR0021, HIC-AR0022, HIC-AL0020, HIC-AL0021, HIC-AL0022, HIC-BI0020, HIC-BI0021, HIC-BI0022



CmisWebAPI

The following operations are supported. For a formal definition, please review the Service Description.

- ActivityAttachmentCreate
- ActivityAttachmentRemove
- ActivityChange
- ActivityComponentAssign
- ActivityComponentRemove
- ActivityCreate
- ActivityMemberAssign
- ActivityMemberChange
- ActivityMemberRemove
- ActivityParameterChange
- ActivityParameterCreate
- ActivityParameterRemove
- ActivityRead
- ActivityReadOne
- ActivityTypeRead
- ActivityTypeReadAll
- ActivityTypeChange
- ActivityTypeCreate
- AttachmentCategoryRead
- ComponentActivityHistoryRead
- ComponentChange
- ComponentChildrenRead
- ComponentCompositionCreate
- ComponentCompositionPositionChange
- ComponentCompositionRemove
- ComponentCreate



HIC Impedance Test



Activity Name	Activity Type	Start Date	End Date	Location	Activity Status	Activity Result
[162] Assembly of Module M294-2R-155-B025	[201] Assembly of Module	04.10.2021	07.10.2021	[81] JINR, Dubna	[82] CLOSED	[238] OK_GOLD

Output Components			
Component Type	Component ID	Functional Status	Physical Status
[209] MODULE	[250] - R:[152] M294-2R-155-B025	[297] [EMPTY]	[300] [EMPTY]

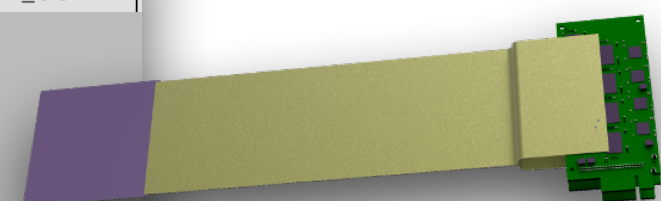
Input Components			
Component Type	Component ID	Functional Status	Physical Status
[207] FIN	[0] - R:[0]	[0]	[0]
[206] SENSOR	[251] - R:[151] 1CBM62HDS0038	[276] [EMPTY]	[279] [EMPTY]
[205] CCFEB	[0] - R:[0]	[0]	[0]
[205] CCFEB	[0] - R:[0]	[0]	[0]
[208] SET_OF_SHIELDING	[0] - R:[0]	[0]	[0]

Parameters			
Name	Description	Value	Unit
[129] Message ID	Message ID in ELOG	5	[282] Message ID
[0] FEB-P_HDR	FEB-P_HDR		[321] 1/0
[0] FEB-P_Sync	FEB-P_Sync		[321] 1/0
[0] FEB-P_BE test	FEB-P_BE test		[321] 1/0
[0] FEB-P_AFE test	FEB-P_AFE test		[321] 1/0
[0] FEB-P_Non working strips	Non-working strips (P-side)		[283] Strips
[0] FEB-P_Cluster_Size	FEB-P_Cluster_Size		[322] Cl.Size
[0] FEB-N_HDR	FEB-N_HDR		[321] 1/0
[0] FEB-N_Sync	FEB-N_Sync		[321] 1/0
[0] FEB-N_BE test	FEB-N_BE test		[321] 1/0
[0] FEB-N_AFE test	FEB-N_AFE test		[321] 1/0
[0] FEB-N_Non working strips	FEB-N_Non working strips		[283] Strips
[0] FEB-N_Cluster_Size	FEB-N_Cluster_Size		[322] Cl.Size

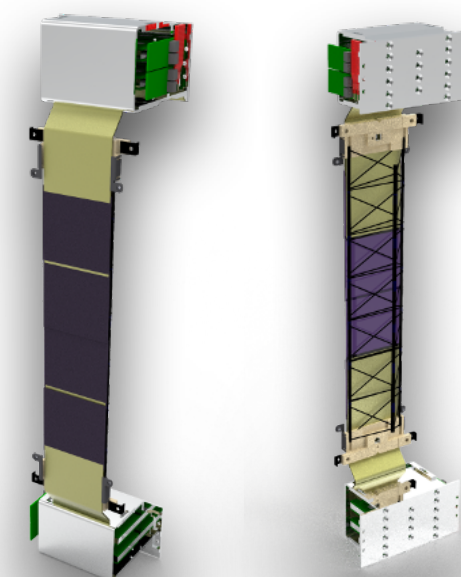
Attachments	
No Records	

Uri	
Uri	Description
[107] 159.93.221.79/eelog/Module+Assembly/5	ELOG details for the Module

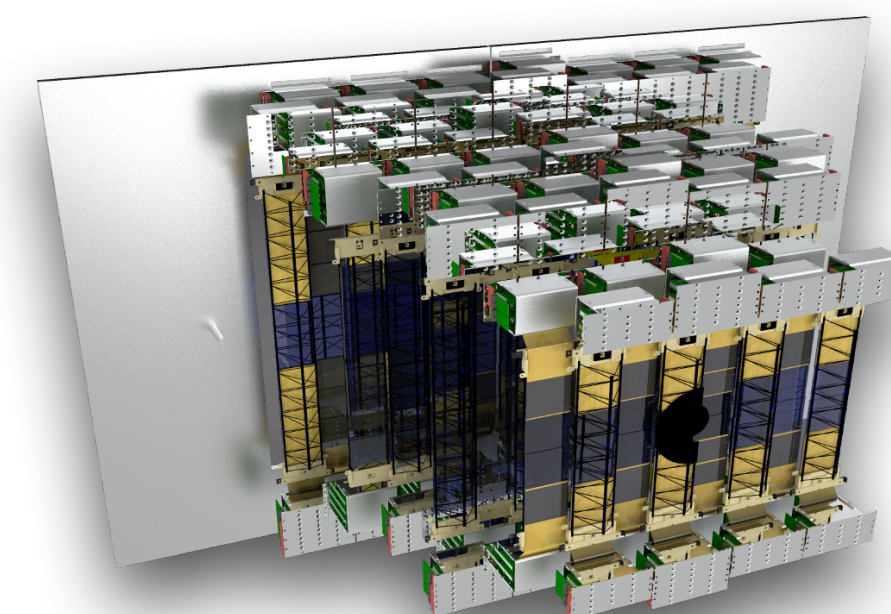
Members	
Name	
[221] - PIP: [162] Dementiev Dimitri Vladimirovich	



BM@N STS Module



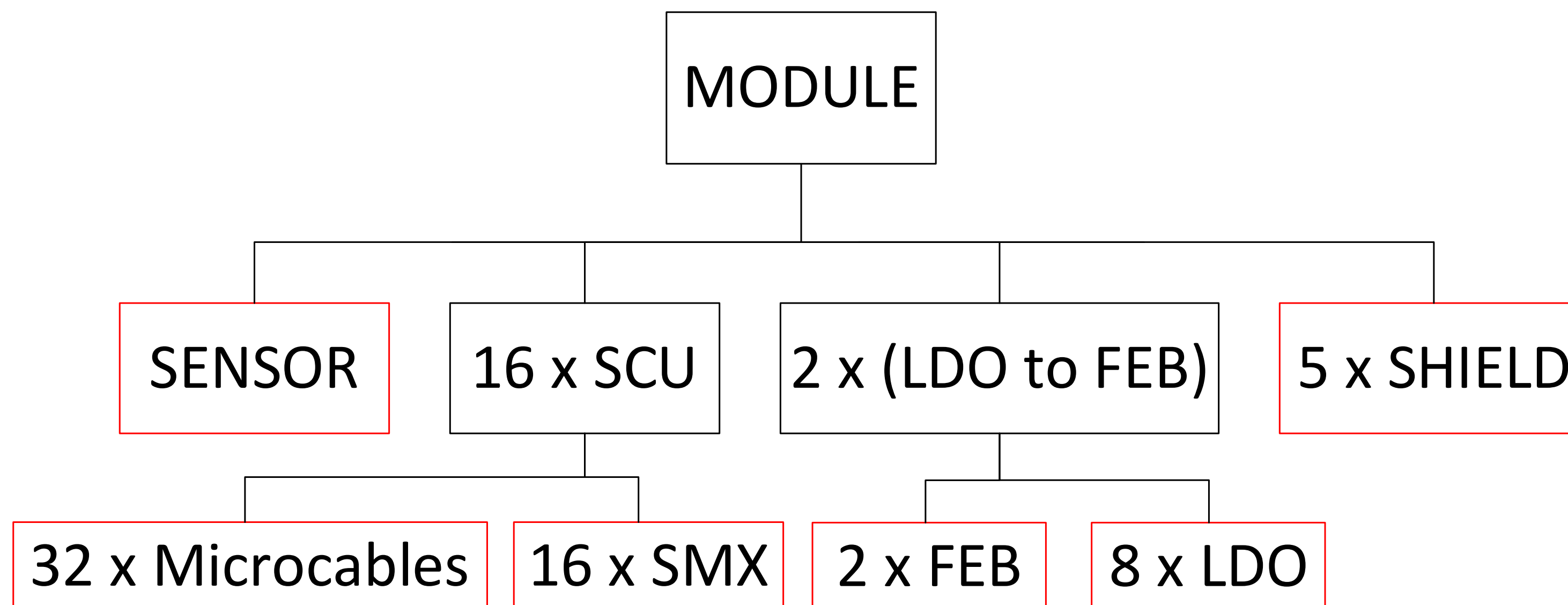
BM@N STS Ladder

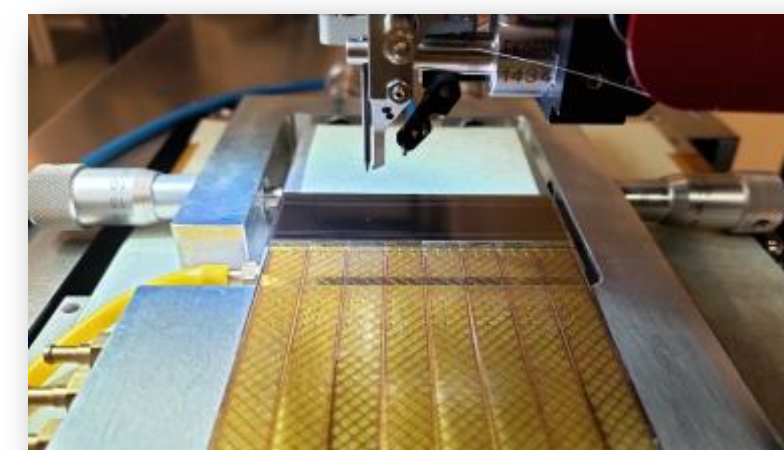
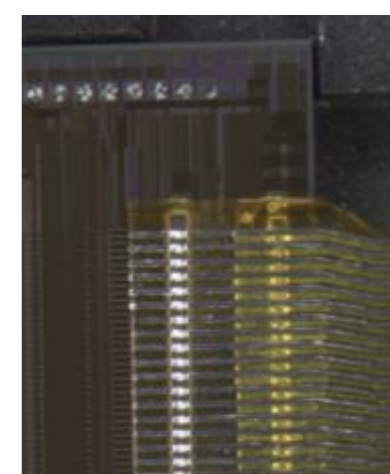
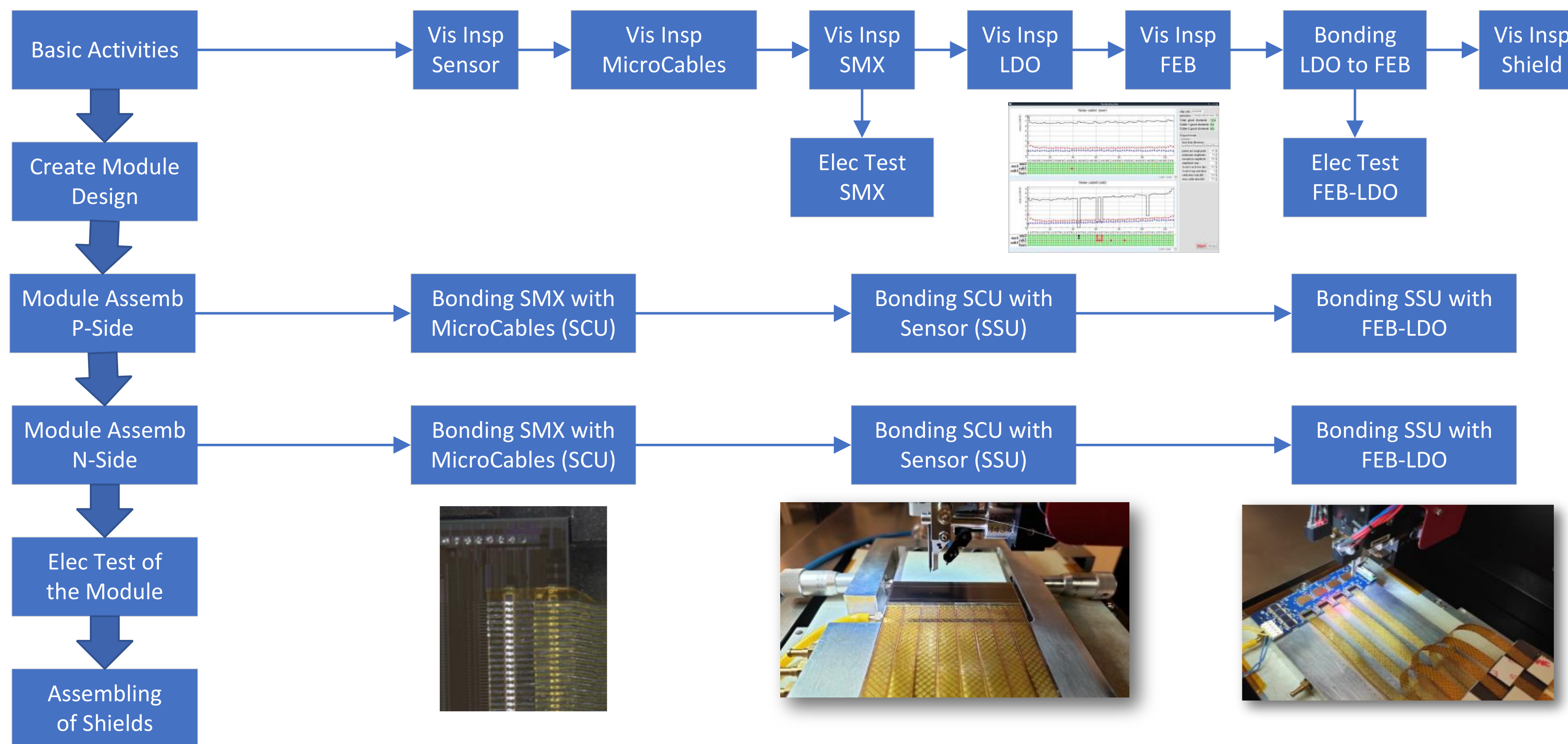
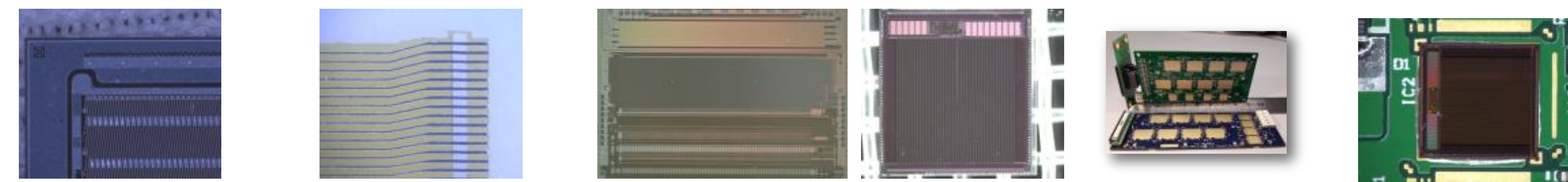


BM@N STS Station



- 4x - Stations;
- 44x - Ladders;
- 292x - Silicon strip modules.







Visual Inspection of STS MST Sensor

Operator:

box code:

sensor code:

microscope inspection: P-Side begin the inspection end the inspection inspection is not running

Physical status:

view/add/remove attachments: attachments browser #of defects: P-side: 0 N-side: 0

write to the database

Comments:

VISUAL INSPECTION OF THE FEB ACTIVITY

OPERATOR: BMN_STS_FEB_ ID: 001 Physical Status:

Link	Resistance	Position ID	Comments	Load Pictures
V _{DD} - GND 1.8	0.000MΩ	CN0		LOAD
AV _{DD} - GND 1.8	0.000MΩ	CN1		LOAD
V _{DD} - GND 1.2	0.000MΩ	CN2		LOAD
AV _{DD} - GND 1.2	0.000MΩ	CN3		LOAD
		CN4		LOAD
		CN5		LOAD
		CN6		LOAD
		CN7		LOAD

Start Path:

CLOSE

BONDING LDO TO FEB ACTIVITY

OPERATOR: FEB ID: N001 PHYSICAL STATUS:

	With Glue	After Owen	Bonding	Encapsulation	Glue Information
L 1.8 T:	<input type="text"/> LOAD <input type="button"/>	<input type="text"/> LOAD <input type="button"/>	<input type="text"/> LOAD <input type="button"/>	<input type="text"/> LOAD <input type="button"/>	Type: E4110 Date of Mix: 13/05/2022
L 1.8 B:	<input type="text"/> LOAD <input type="button"/>	<input type="text"/> LOAD <input type="button"/>	<input type="text"/> LOAD <input type="button"/>	<input type="text"/> LOAD <input type="button"/>	
L 1.2 T:	<input type="text"/> LOAD <input type="button"/>	<input type="text"/> LOAD <input type="button"/>	<input type="text"/> LOAD <input type="button"/>	<input type="text"/> LOAD <input type="button"/>	Owen Settings: Temperature: 80 °C Time: 15 min
L 1.2 B:	<input type="text"/> LOAD <input type="button"/>	<input type="text"/> LOAD <input type="button"/>	<input type="text"/> LOAD <input type="button"/>	<input type="text"/> LOAD <input type="button"/>	Ultrasonic Bonding Parameter: Time: 40 Power: 110 Bond Force: 18

Upload Electrical Test

Comments:

Encapsulation Parameter: Adhesive: Dymax 9008 Dymax 9001 Time: 0 min

Start Path:

CLOSE DB Online UPLOAD

VISUAL INSPECTION OF THE CABLES ACTIVITY

OPERATOR: SET ID: B000 Nom. length: 000

Type	Cable No	Comments	Bias Line	Spare	Photos
PSB					LOAD
PSB					LOAD
PSB					LOAD
PSB					LOAD
PSB					LOAD
PST					LOAD
PST					LOAD
PST					LOAD
PST					LOAD
PLB					LOAD
PLB					LOAD
PLB					LOAD
PLB					LOAD
PLT					LOAD
PLT					LOAD
PLT					LOAD
PLT					LOAD
PLT					LOAD

CLOSE Start Path:

VISUAL INSPECTION OF THE SMX ACTIVITY

OPERATOR: Rev:

Batch ID: C001 Layer ID From: 01 To: 16 Position ID From: 01 To: 16 GEN

SMX ID	Gel Pack ID	UV Clean	PHYSICAL STATUS	Upload Photos
C000001	G001			LOAD
C000001	G001			LOAD
C000001	G001			LOAD
C000001	G001			LOAD
C000001	G001			LOAD
C000001	G001			LOAD
C000001	G001			LOAD
C000001	G001			LOAD
C000001	G001			LOAD
C000001	G001			LOAD

CLOSE Start Path: DB Online UPLOAD

VISUAL INSPECTION OF THE SHIELDS ACTIVITY

OPERATOR: SET ID: T000 Nom. length: 000 Physical Status:

Position ID	Comments	Load Pictures
FS-N		LOAD
SS-N		LOAD
FS-P		LOAD
SS-P		LOAD
AS		LOAD

CLOSE Start Path: DB Online UPLOAD

Module Assembling Activities

MODULE ASSEMBLING ACTIVITIES

OPERATOR: Module ID: M294-2R-155-B025

Modules assembling details

Assembling Activity	P - Side	N - Side	Electrical Test		
			T1	T2	T3
SMX with Microcables Unit (SCU)	✓	✓	✓		
SCU with Sensor Unit (SSU)	✓		✓		
SSU with FEB-LDO	✓		✓		
Shields	✓		✓		

CLOSE Start Path C:\Users\arodriguez\Pictures

Visual Inspection of the LDOs

ASSEMBLING OF MICROCABLES TO SMX CHIPS

OPERATOR: Module ID: M294-2R-155-B025

Cable Set: B001 Gel Pack ID: G001 Side: P GEN

Chip ID	Type	Cable ID	Bios	Comments	PHYSICAL STATUS	Upload Photos
C0020205	PSB	212-3	✓	Dead channel through 1	✓	LOAD
	PST	224-1	✓	Dead channel through 1		
C0020206	PSB	518-2		OK	✓	LOAD
	PST	490-1		(107)-NB		
C0020207	PSB	319-2		(76,68)-NB	✓	LOAD
	PST	486-3		(41,105)-NB		
C0020208	PSB	317-4		(68,84)-NB	✓	LOAD
	PST	490-2		(101)-NB		
C0020209	PLB	236-2	✓	OK	✓	LOAD
	PLT	241-3	✓	OK		
C0020210	PLB	236-3		(20,44,56,68,72,92,94,100,108,116)-NB	✓	LOAD
	PLT	244-4		(31,95)-NB		
C0020211	PLB	232-3		(16,18,36,40,44,48,54,56,60,64,66,68,72,80,82,84,88,102,104,106)-NB	✓	LOAD
	PLT	242-1		(41,61,79,89,95,119,121)-NB		

CLOSE Start Path C:\Users\arodriguez\Pictures DB Online UPLOAD

TBD

- Assembling of STS SCU with Sensor (SSU)
- Assembling of STS SSU with FEB-LDO
- Assembling of Shields



The conclusions

Thank you for your attention!



Васкуп

