

MO status and installation schedule

MSK collaboration workshop for the European XFEL

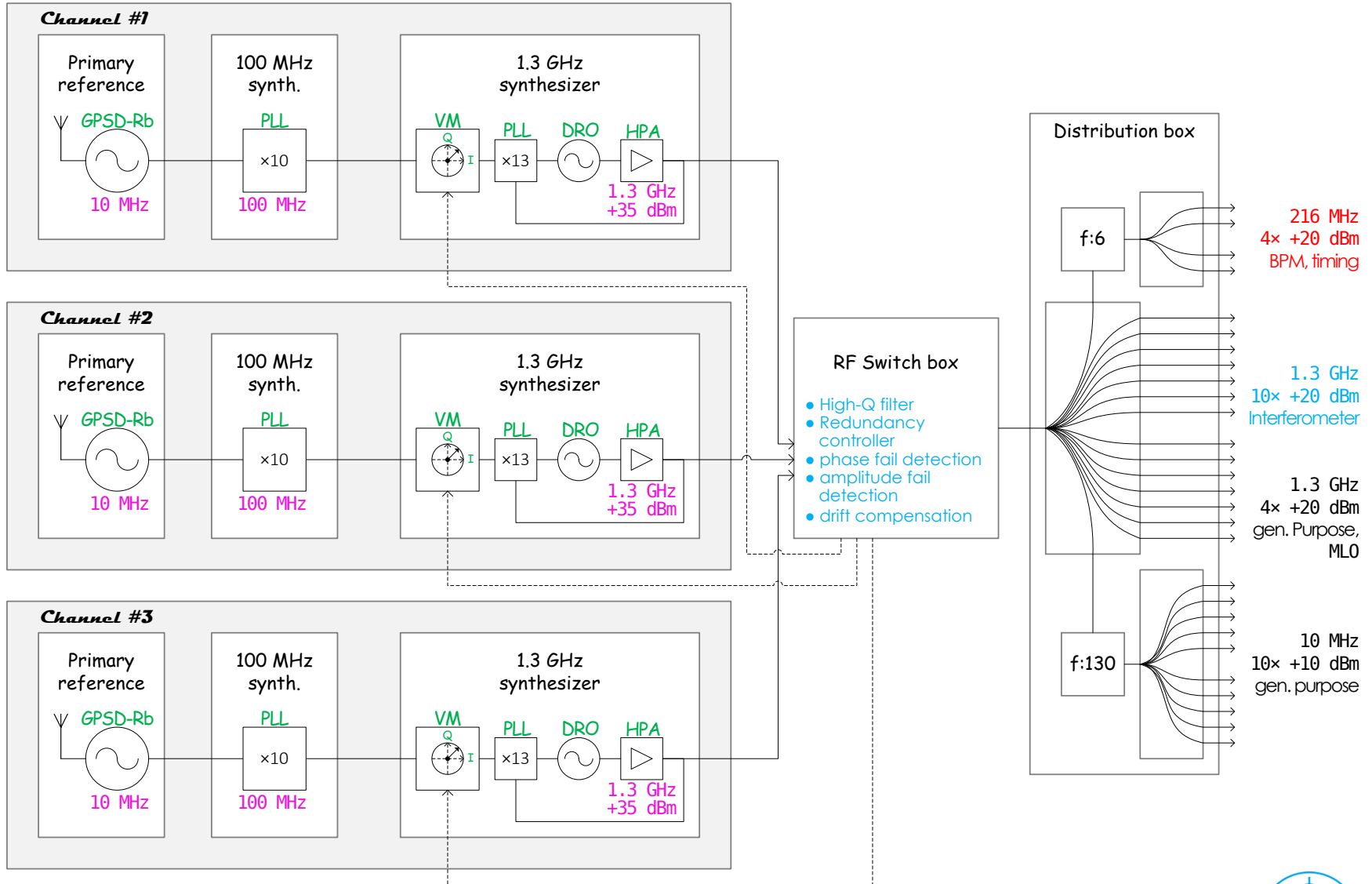
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DESY Hamburg, 12.05.2014



Concept – general block diagram



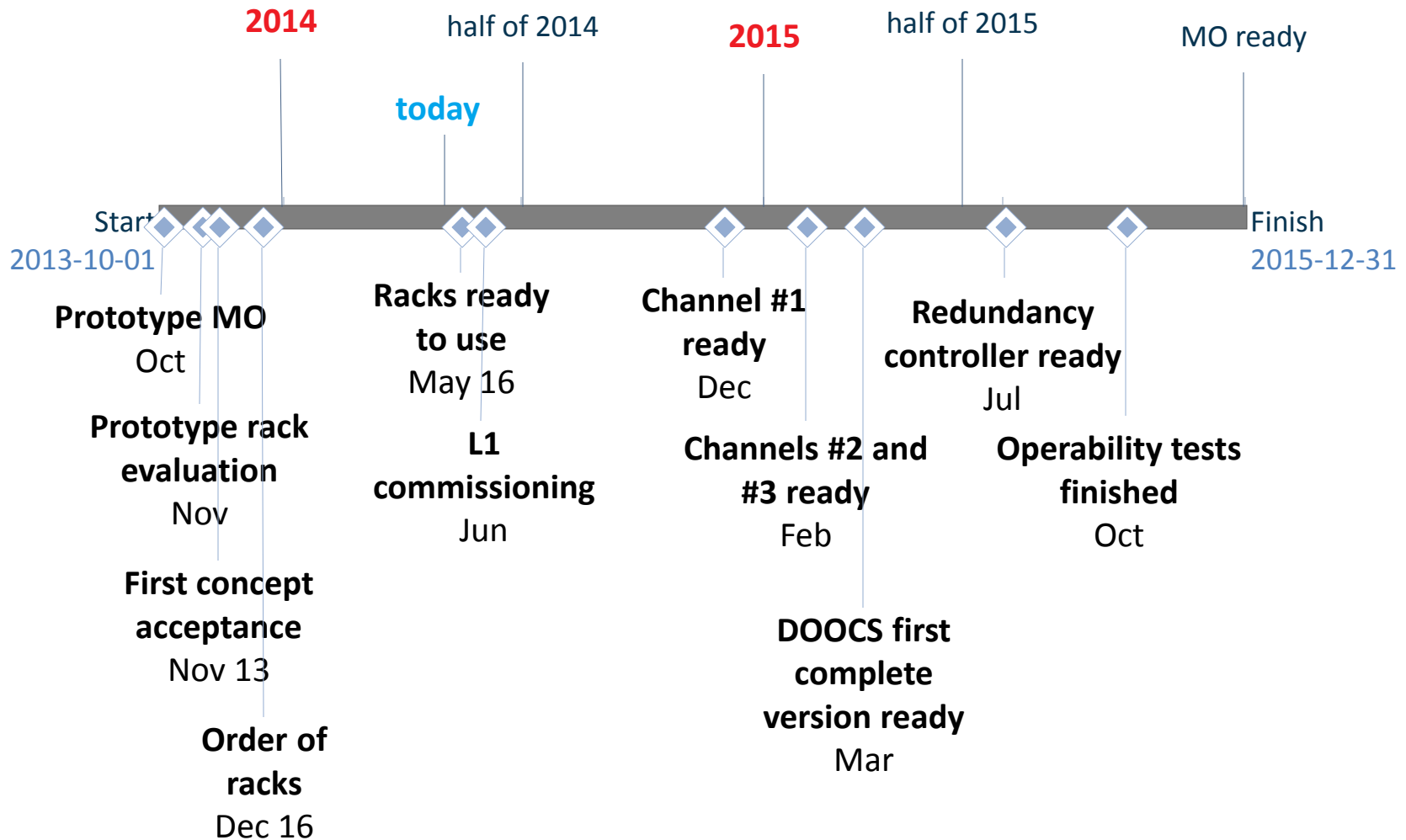
> MO users and their main requirements:

- RF Distribution System (D. Sikora) – 1.3 GHz, total required power of +32 dBm
- MLO (C. Sydlo) – 1.3 GHz: phase noise and long term stability
- Timing (K. Rehlich) – 1.3 GHz, 216 MHz
- BPM (D. Lipka) – 216 MHz

> Outputs summary:

- 1.3 GHz:
 - to RF Distribution System 12× +20 dBm
 - to MLO: 2× +20 dBm
 - general purpose: 2× +20 dBm
- 216 MHz:
 - to timing system: 2× +20 dBm
 - to BPM: 2× +20 dBm
- 10 MHz: 10× +10 dBm (general purpose)

General Schedule



Status of boxes – Channel #1

Module	To do	Order date	Delivery time	Cost
GPS-Rb	<ul style="list-style-type: none">Order	End of this week	Up to 5 months	11 - 17 keuro

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GPS-Rb	<ul style="list-style-type: none">• Order	End of this week	Up to 5 months	11 - 17 keuro
100 MHz synthesizer	<ul style="list-style-type: none">• Finish specs• Order	End of this month	Up to 5 months	~11 keuro

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GPS-Rb	<ul style="list-style-type: none">• Order	End of this week	Up to 5 months	11 - 17 keuro
100 MHz synthesizer	<ul style="list-style-type: none">• Finish specs• Order	End of this month	Up to 5 months	~11 keuro
1.3 GHz PLL	<ul style="list-style-type: none">• Box design (mech. & el.)• PLL design in progress• HPA spec. & order• Assembly• Tests	-	September 2014	>20 keuro

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GPS-Rb	<ul style="list-style-type: none"> • Order 	End of this week	Up to 5 months	11 - 17 keuro
100 MHz synthesizer	<ul style="list-style-type: none"> • Finish specs • Order 	End of this month	Up to 5 months	~11 keuro
1.3 GHz PLL	<ul style="list-style-type: none"> • Box design (mech. & el.) • PLL design in progress • HPA spec. & order • Assembly • Tests 	-	September 2014	>20 keuro
Power supply	<ul style="list-style-type: none"> • Specs • Order 	June 2014	?	>2 keuro

Status of boxes

Module	To do	Order date	Delivery time	Cost
Channels #2 & #3	<ul style="list-style-type: none">• Same procedure as #1	December 2013	February 2015	~2× 50 keuro

Status of boxes

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Channels #2 & #3	<ul style="list-style-type: none">• Same procedure as #1	December 2013	February 2015	~2× 50 keuro
Redundancy controller	<ul style="list-style-type: none">• RF switch design• Box design (mech. & el.)• Controller design• Assembly	-	March 2015	~11 keuro

Status of boxes

Module	To do	Order date	Delivery time	Cost
Channels #2 & #3	<ul style="list-style-type: none"> • Same procedure as #1 	December 2013	February 2015	~2× 50 keuro
Redundancy controller	<ul style="list-style-type: none"> • RF switch design • Box design (mech. & el.) • Controller design • Assembly 	-	March 2015	~11 keuro
RF distribution box	<ul style="list-style-type: none"> • Box design (mech. & el.) • Order parts (no specs needed) • Assembly • Tests 	-	December 2014	>3 keuro

Other equipment status

Module	To do	Order date	Delivery time	Cost
Racks	<ul style="list-style-type: none">• Connect water and electricity (W. Wierba)• Register LAN ports• etc.	December 2013	Now	~3× 14.5 keuro

Other equipment status

Module	To do	Order date	Delivery time	Cost
Racks	<ul style="list-style-type: none">• Connect water and electricity (W. Wierba)• Register LAN ports• etc.	December 2013	Now	~3× 14.5 keuro
On-line phase noise measurement device	-	June 2013	November 2013	~21.5 keuro

Cost Summary

Module	To do	Order date	Delivery time	Cost
Racks	<ul style="list-style-type: none">• Connect water and electricity (W. Wierba)• Register LAN ports• etc.	December 2013	Now	3× 14.5 keuro
On-line phase noise measurement device	-	June 2013	November 2013	~21.5 keuro

All together: ~250 keuro

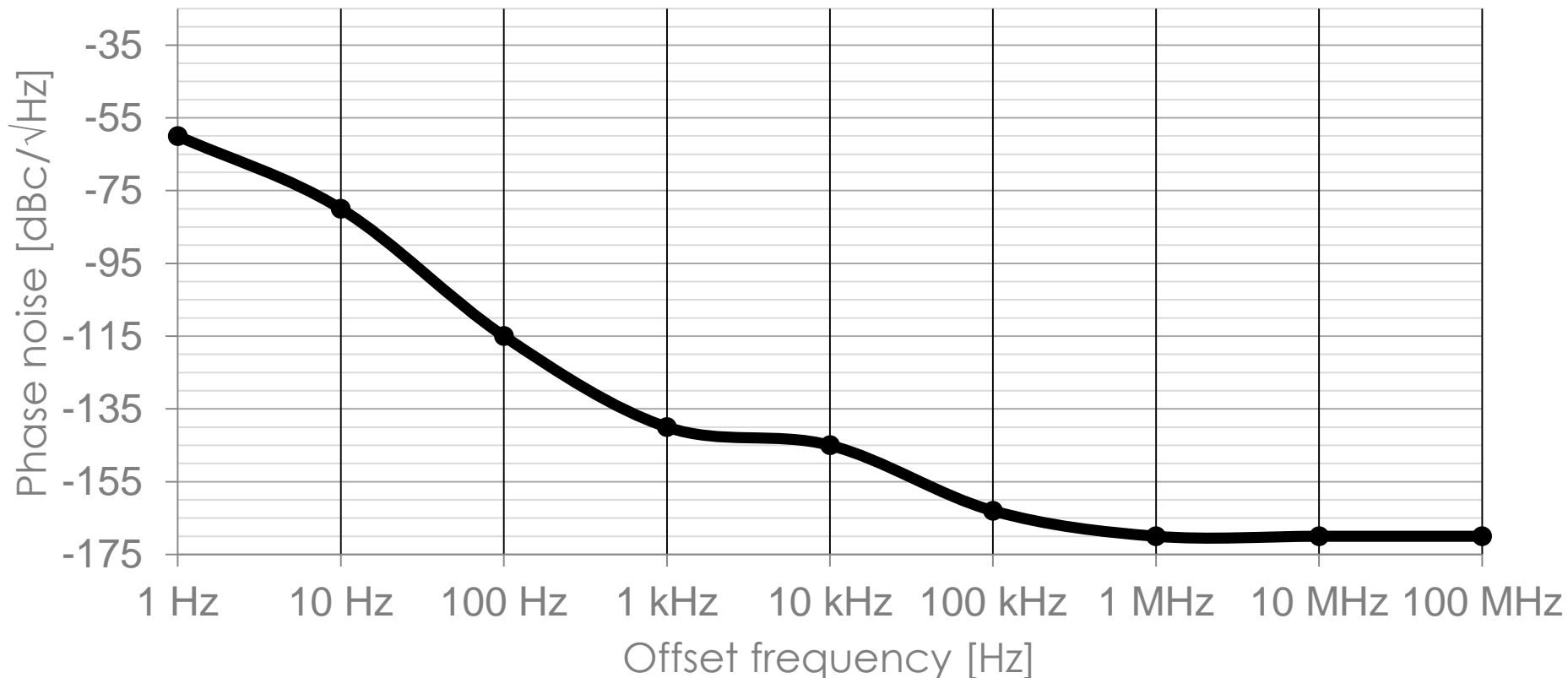
Thank you for your attention!

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Phase noise requirements

Requirements at 1.3 GHz



Phase noise options

