



WP4-Task5: The baseline XLS module layout

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Facility level integration

- Presentation of parameter list by Eugene on Tuesday at 14:55

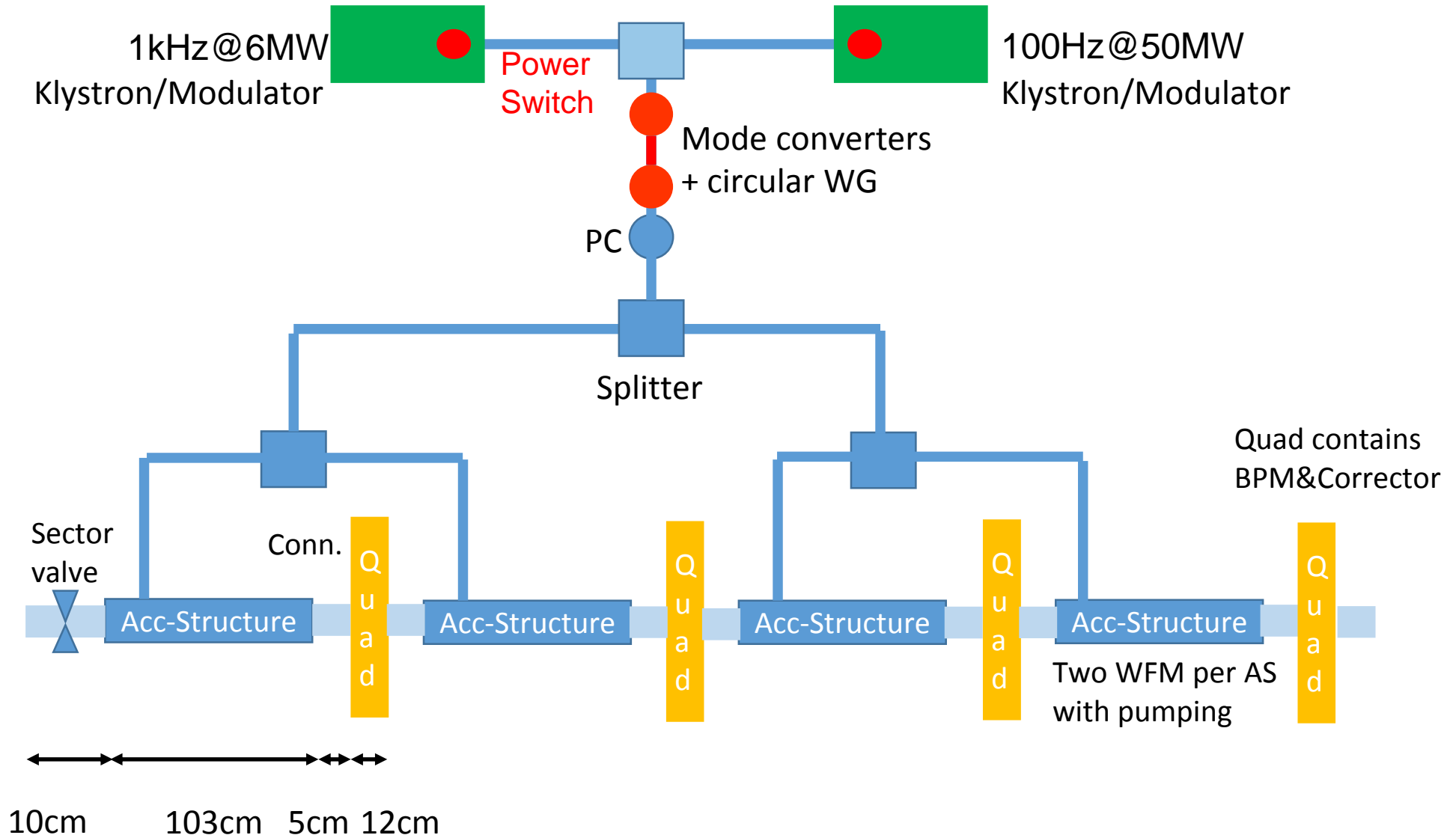
<https://indico.cern.ch/event/974687/contributions/4110532/>

Thanks to work of and interaction with Avni, Andrea, Eugene and Nick we came up with following methodology:

- From PLACET simulations export a .txt file with all elements, their names, positions and properties.
- Conversion to .xlsx and uploading on the Workspace of WP2
- This file serves as "one point of truth" for building up the CAD model and integration efforts (Nick) and compare to the cost model (Carlo)
- Update after each major modification in lattice



Baseline Module layout Low-Energy (up to 0.3 GeV)



Module length: 5.10 m; RF-fill factor: 71%



Module update for beam instrumentation

Email from Alessandro Cianchi on 19.11.2020

“The length of the stripline is longer than the quads itself, you can consider 15 cm without any bellow”

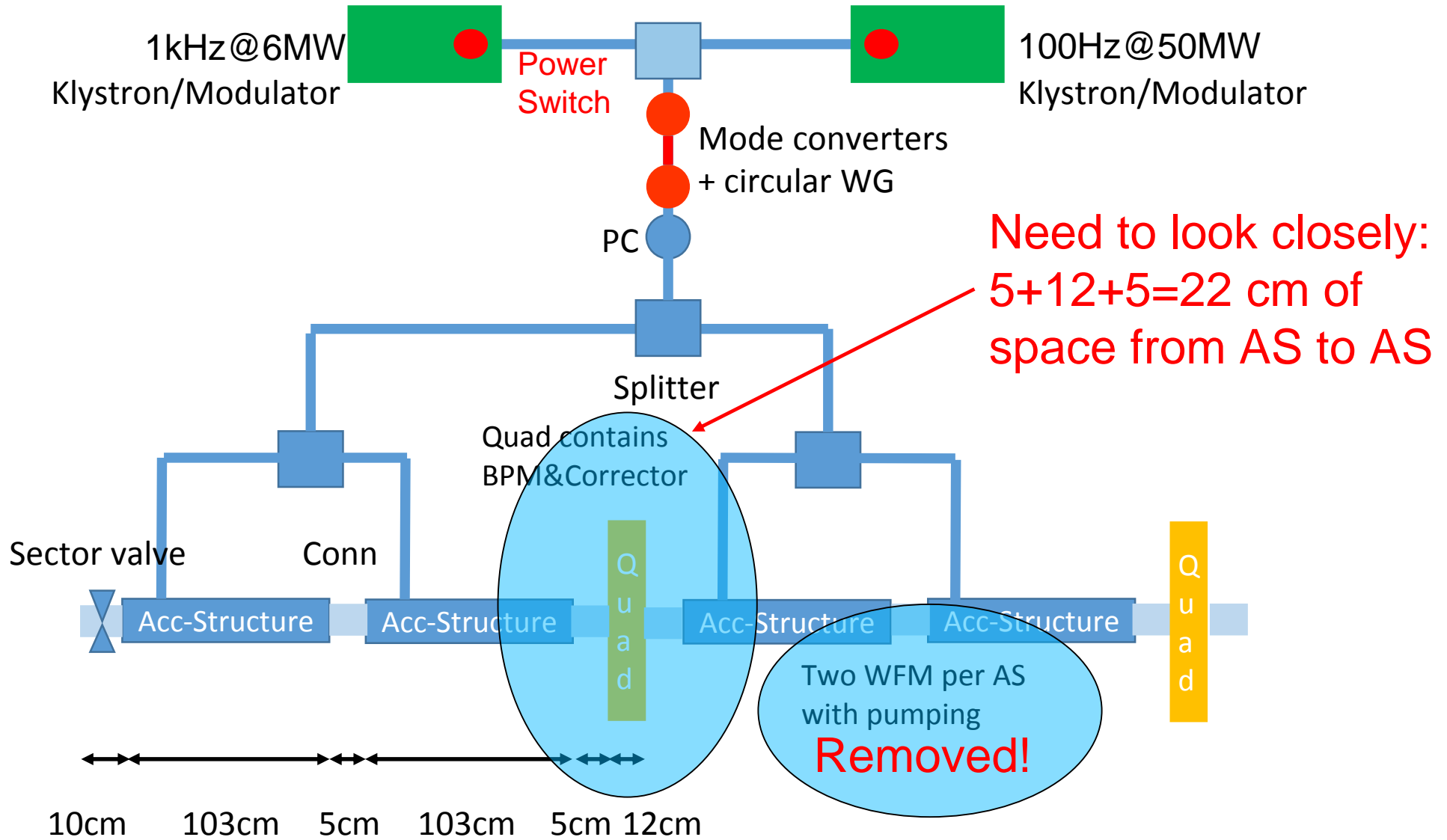
-> Potentially not enough space reservation until now. Need to look in detail. Potentially need to change lattice

”About view screens this is the policy, you can consider a box of 10 cm. [...] We can put 1 view screen every 4 structures in Linac1 and Linac2. Every 8 structures in Linac3”

-> View screens can be part of medium energy module but NOT high energy module (or we put also 1 every 4 structures, then YES)



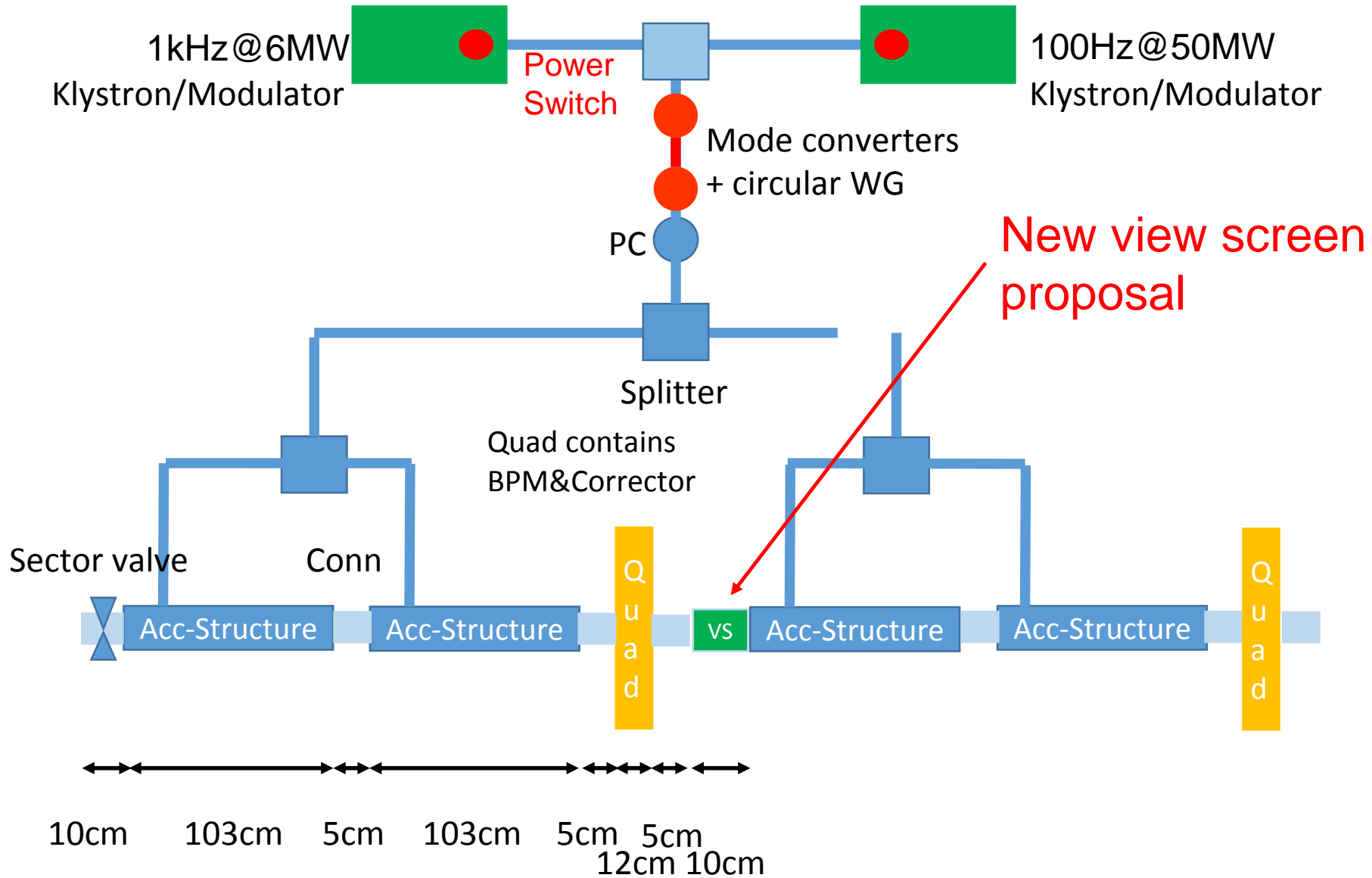
Baseline Module layout Medium-Energy (up to 1.7 GeV)



Module length: 4.76 m; RF-fill factor: 76%



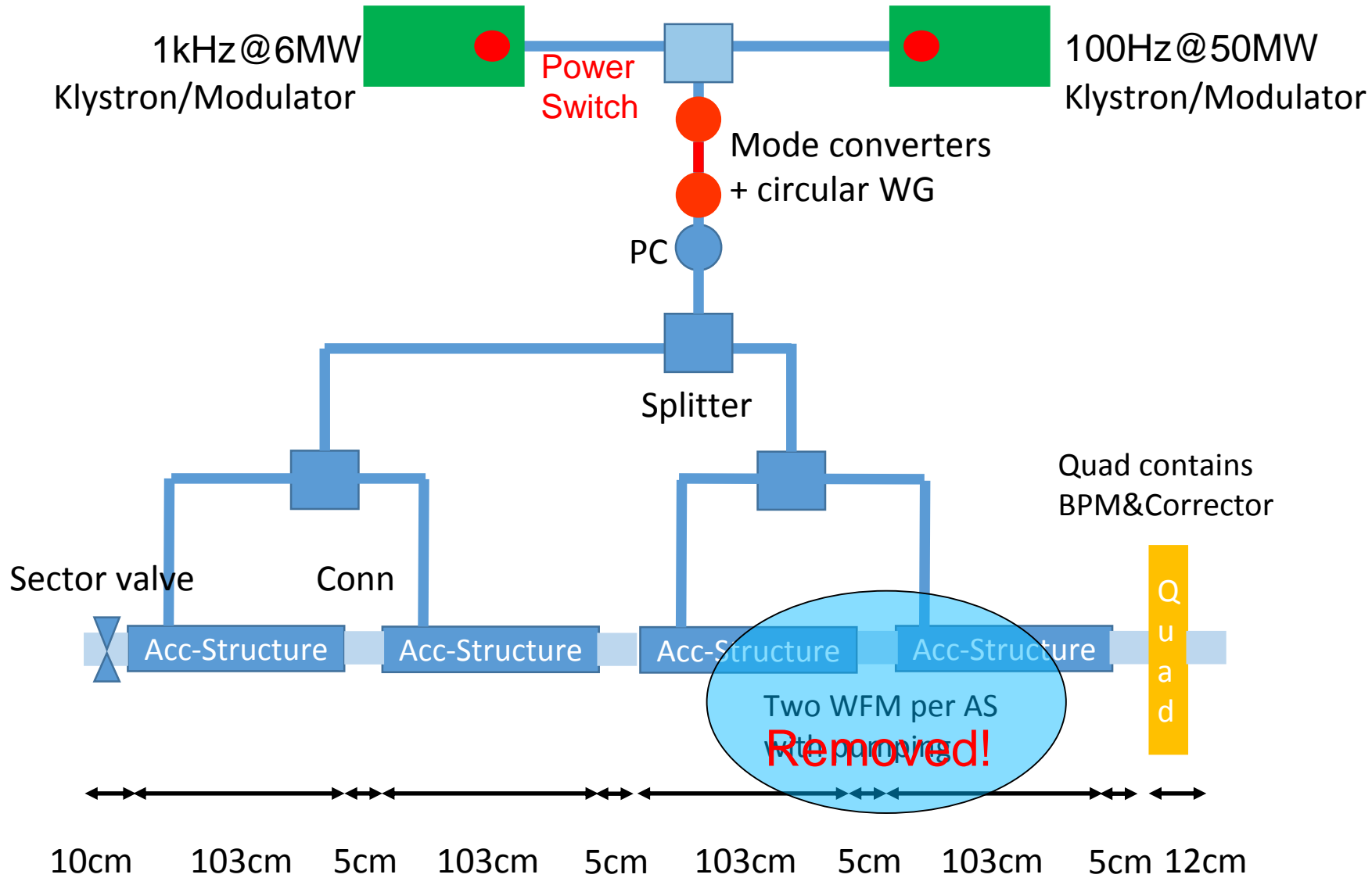
Baseline Module layout Medium-Energy (up to 1.7 GeV)



Module length: 4.86 m; RF-fill factor: 74%



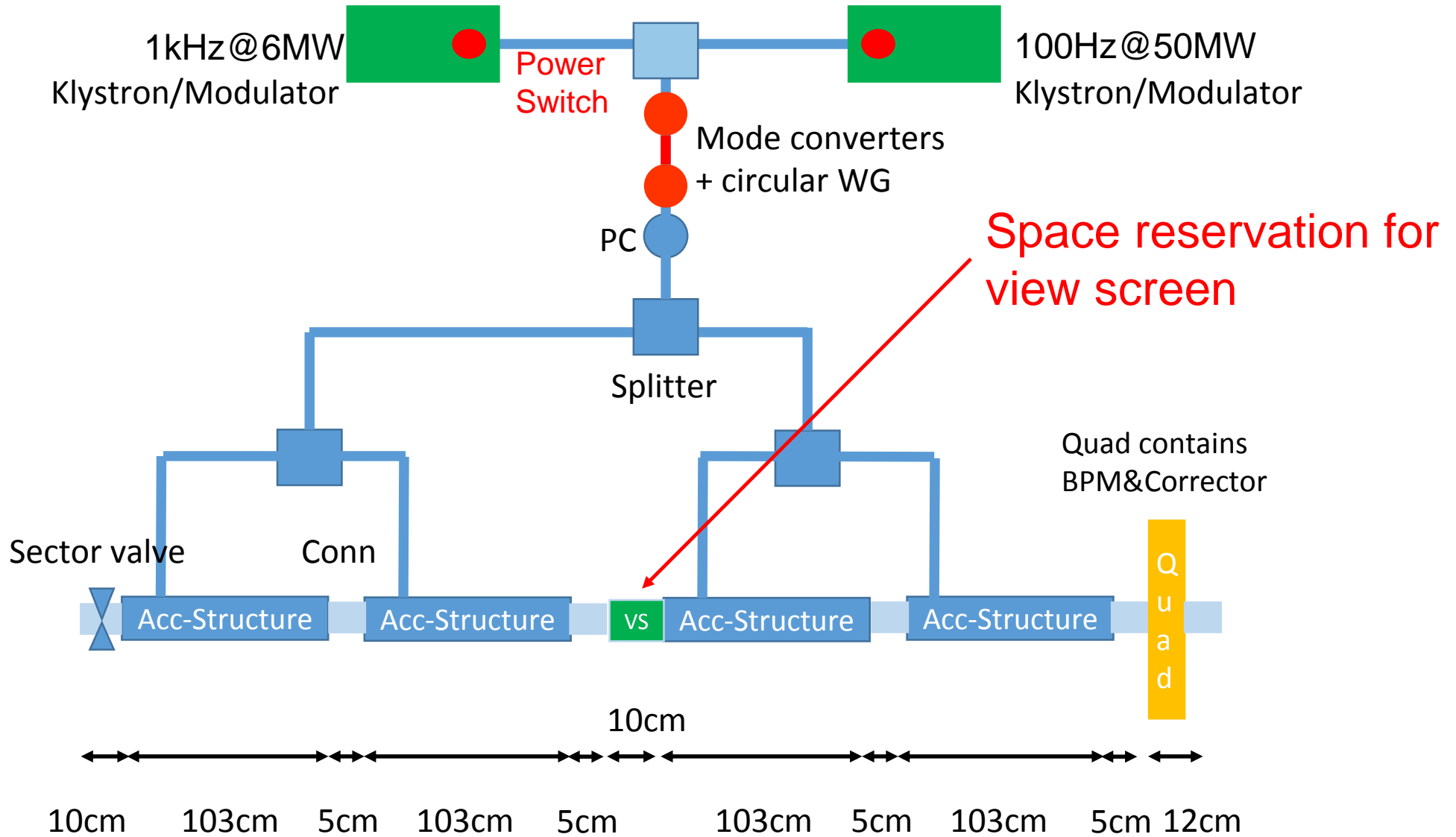
Baseline Module layout High-Energy (up to 5.5 GeV)



Module length: 4.59 m; RF-fill factor: 78%



Baseline Module layout High-Energy (up to 5.5 GeV)



Module length: 4.69 m; RF-fill factor: 77%



Thank you!

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