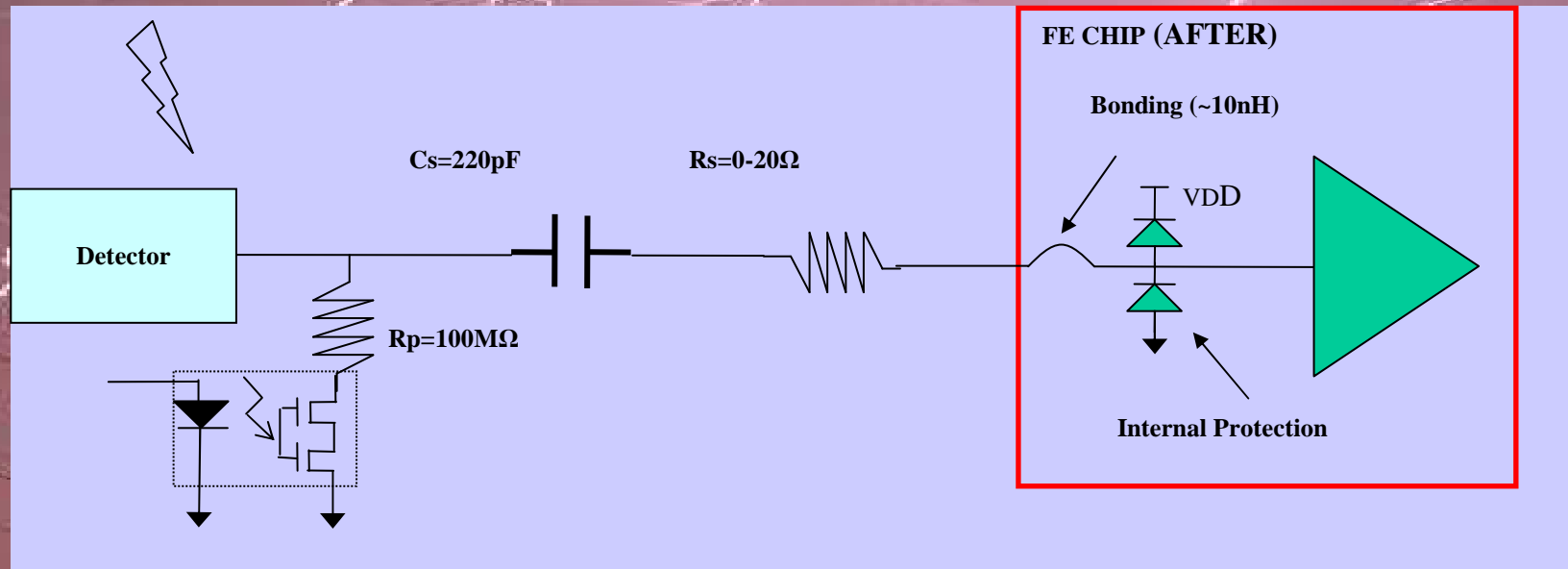




GET

Frontend protection  
ZAP

# ZAP AFTER legacy



- Testing continues
  - To check if diodes could be avoided
    - Noise  $\downarrow$
    - $V_{DD}$  unnecessary

# ZAP-AsAd Topology

- 2 ways
  - Monolithic
    - One PCB for ZAP and AsAd
    - Only one connector group between detector and PCB
  - Two separated units
    - One PCB for ZAP
    - One PCB for AsAd

# Monolithic model

- Benefits
  - Simple mechanical assembly
  - Direct coupling between Detector and PCB
- Disadvantages
  - Multiple form factor of detectors
  - Granularity AsAd versus granularity detector not adaptable

# ZAP independant PCB

- Benefits

- Adaptable with detector
- Asad is standard regardless of the connection detector

- Disadvantages

- slightly higher cost
- intermediate connectors
- higher capacitance per unit length

# However

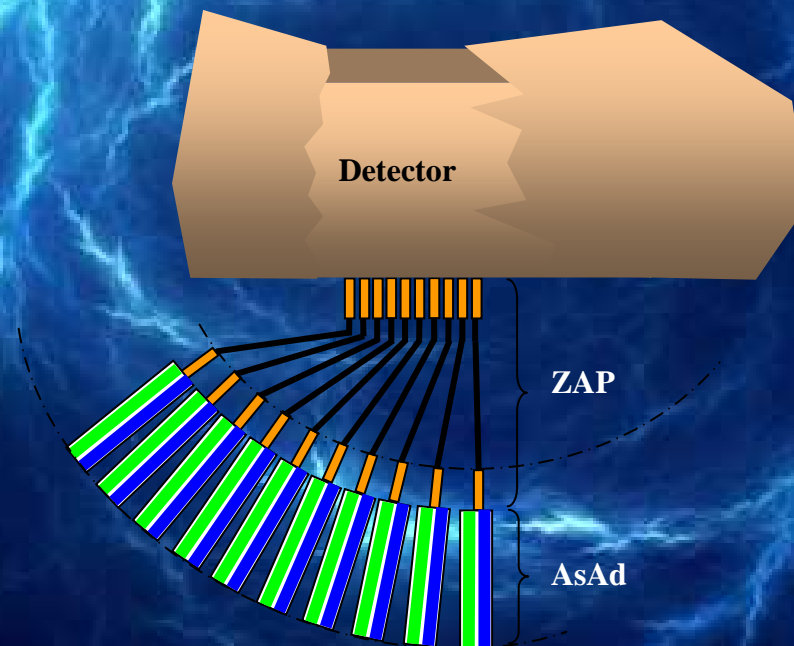
- An independant PCB for ZAP allows to add room for GET extension to other detectors
  - External PA between Detector and AGET

# Constraint

- Some future detectors offer a sufficiently broad to include the AsAd cards with shielding and cooling and others no

# ZAP Flex PCB

- Connection on the detector output depends on its characteristics. ZAP output is standard with the AsAd input connector.



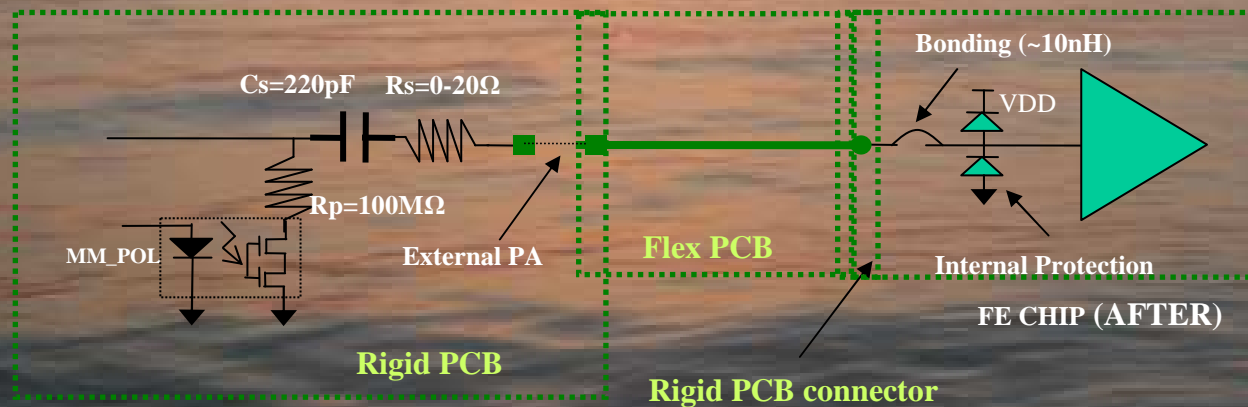


# Piralux PCB

ZAP Length	Track width	Distance between 2 pins (connector)	Resistance	capacity	Mutual capacity between 2 tracks
20 cm	0.15 mm	1.27 mm	65 m $\Omega$	5 pF	16 fF



# ZAP Flex-Rigid PCB



# ZAP development

- When ?
- Where ?
- Who ?

M 1 Florence  
J 2 Viviane  
V 3 Xavier  
S 4 Barbara  
D 5 Gérald



## Décembre

L 6 Nicolas  
M 7 Ambroise  
M 8 Elfi  
J 9 Pierre Fourier  
V 10 Romaric  
S 11 Daniel  
D 12 Chantal

L 13 Jocelyn  
M 14 Odile  
M 15 Ninon  
J 16 Alice  
V 17 Gaël  
S 18 Gatien  
D 19 Urbain

L 27 Jean  
M 28 Gaspard  
M 29 David  
J 30 Roger  
V 31 Sylvestre

L 20 Isaac  
M 21 Pierre Canis.  
M 22 Gratien  
J 23 Armand  
V 24 Adèle  
**S 25 Noël**  
D 26 Etienne