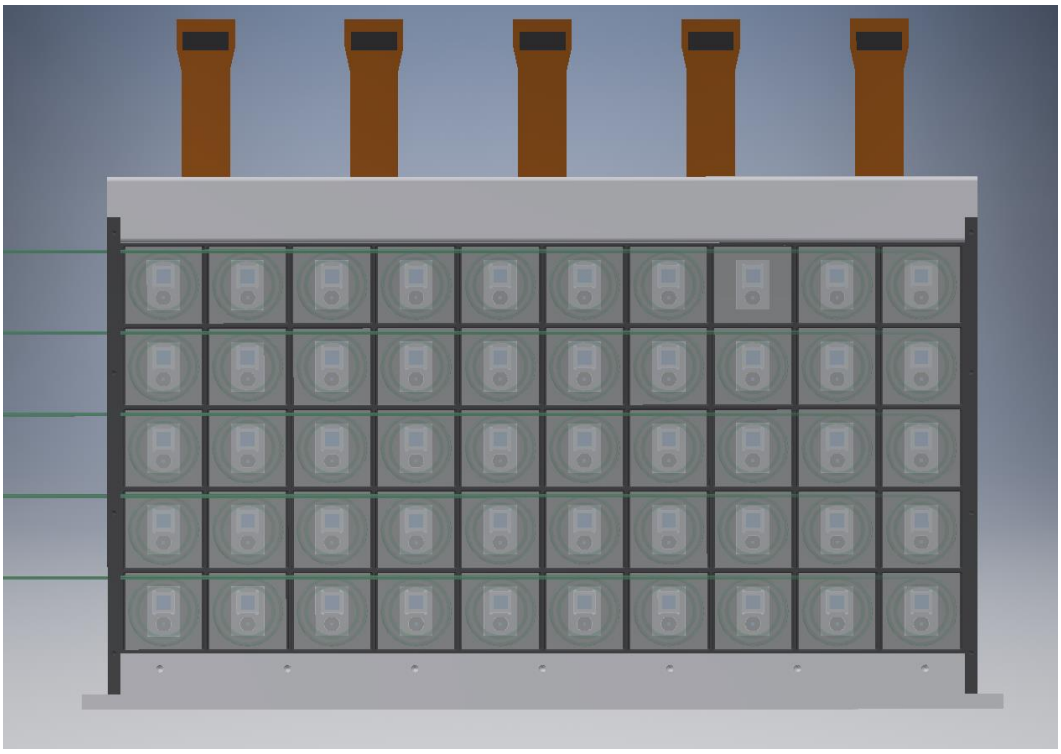
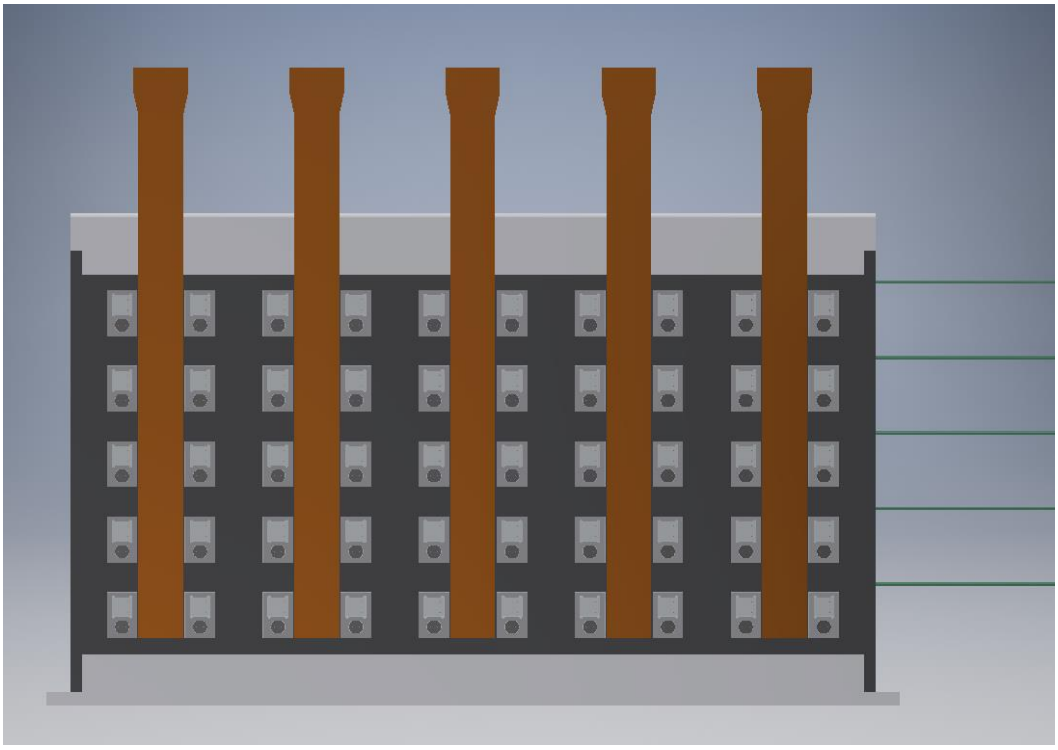
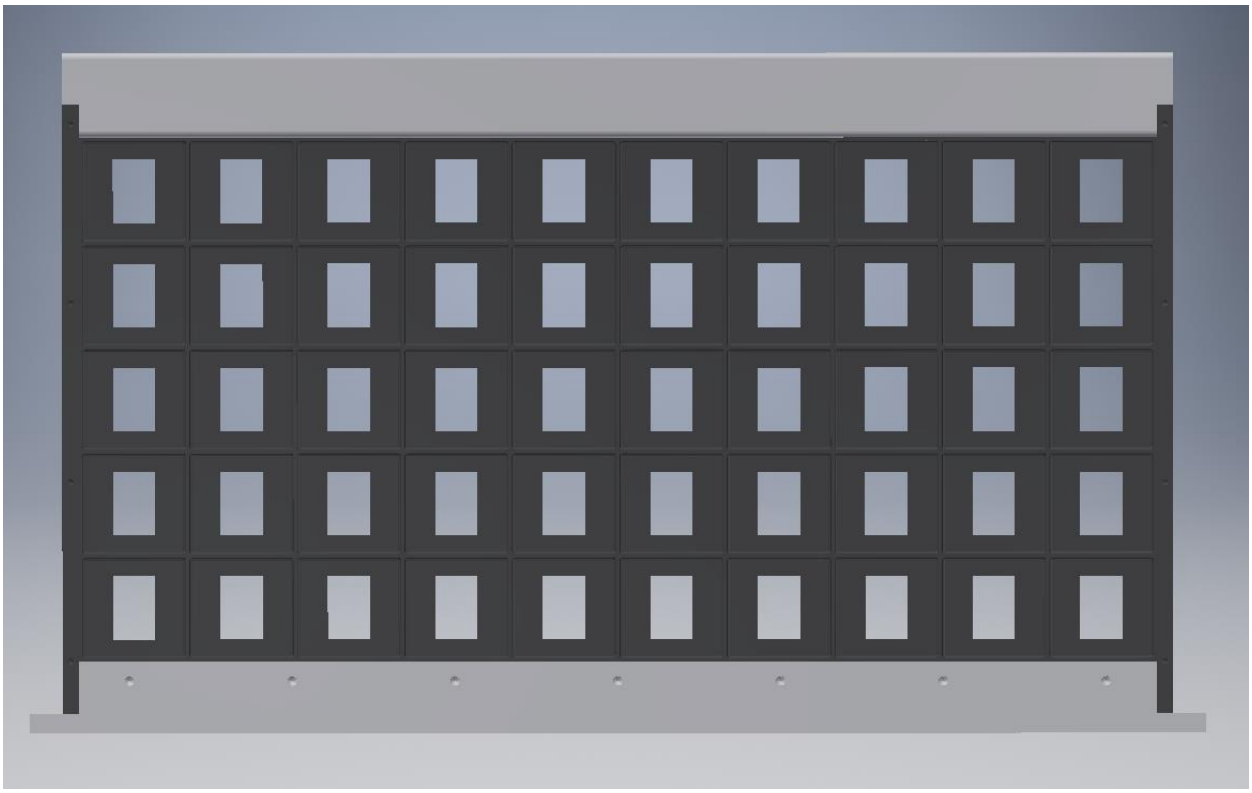
We have two ideas about PD mounting for the beam test prototype. The same package of 19.3x12.8x2.0 mm^3 will be used for both configurations.

The first one is a configuration similar to the flight model where PDs are mounted in the centre of the back face of the crystal.

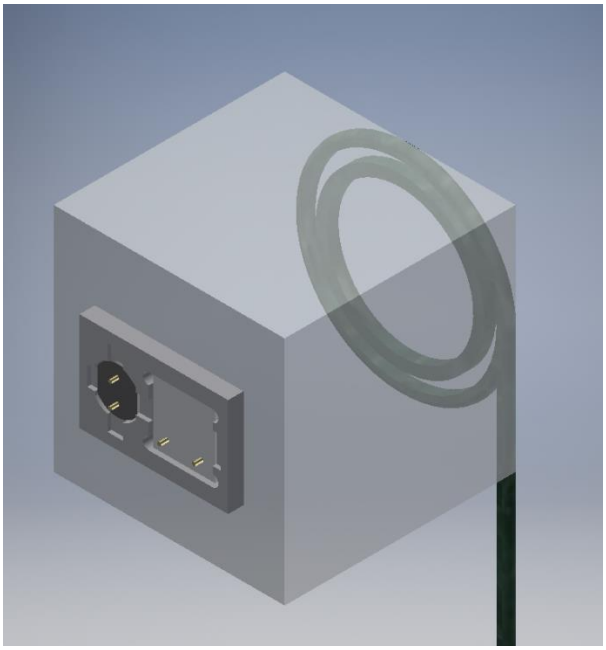




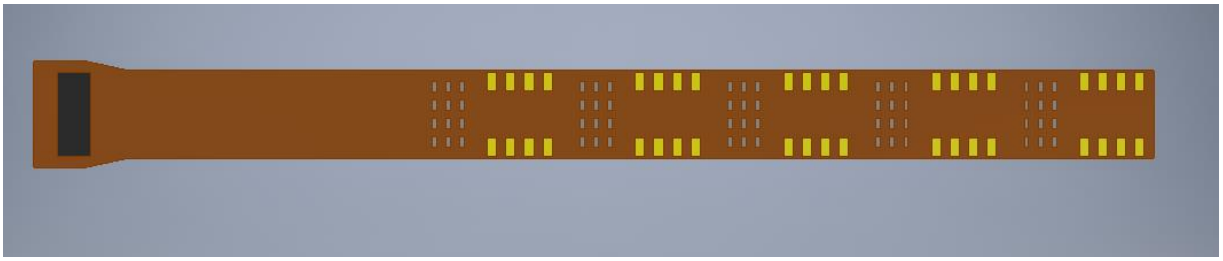
The array structure has an aperture in the centre of each cell which should contain the multipackage with come margins, let's say 20x13.5 mm.



PDs will be housed on the back face of the crystal, so the wrapping material should have the same aperture as the array structure.

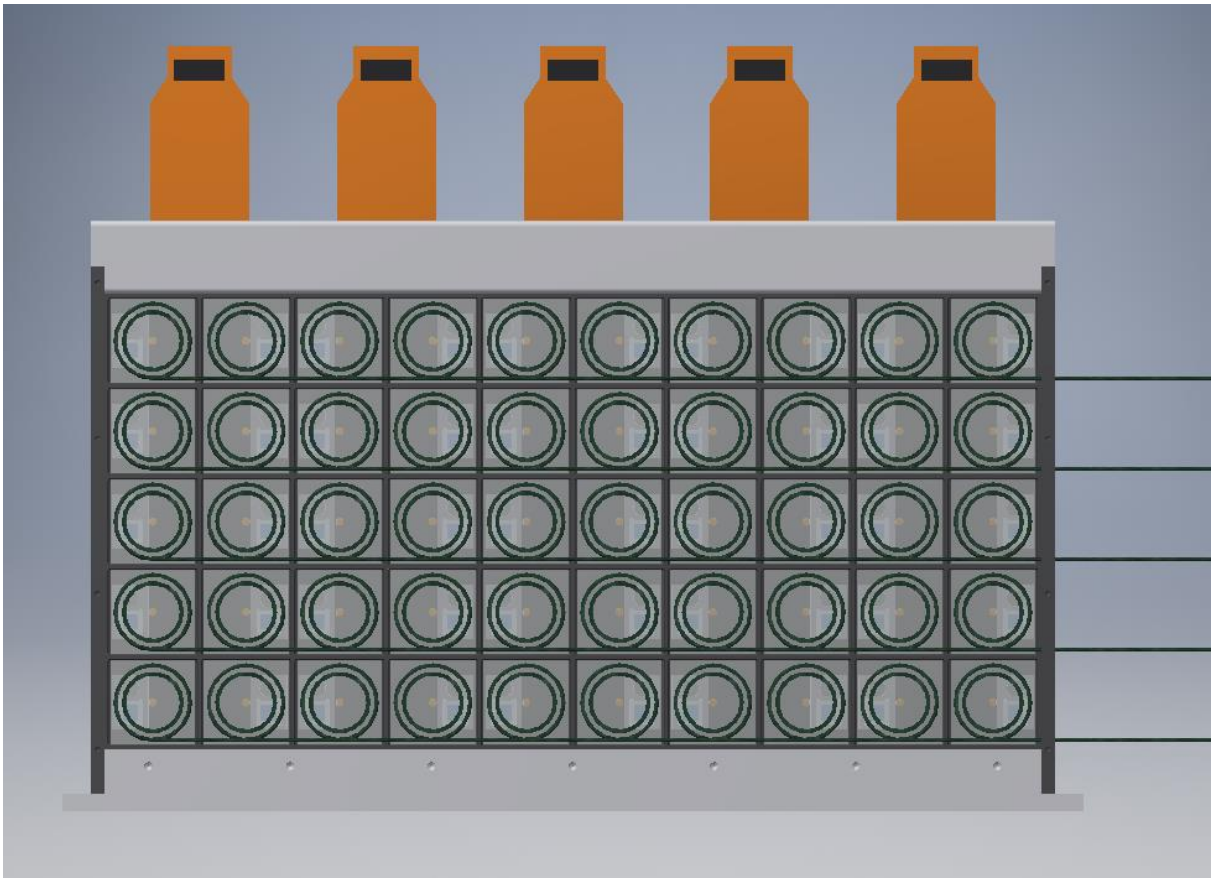


This configuration has one strong disadvantage for us. In this case distance between two columns of PDs is about 20 mm and Scolopendra cable effective width cannot exceed 19 mm.

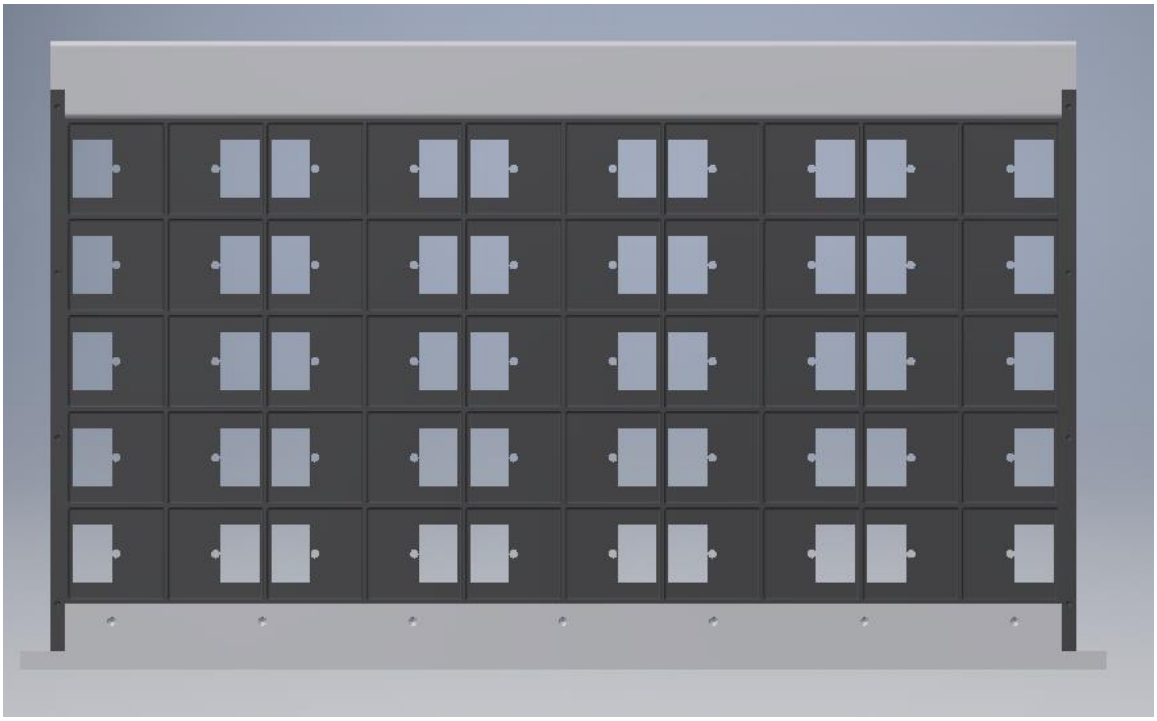


In this case, we cannot rescale the current Scolopendra design and we will be constrained to develop a completely new Scolopendra cable.

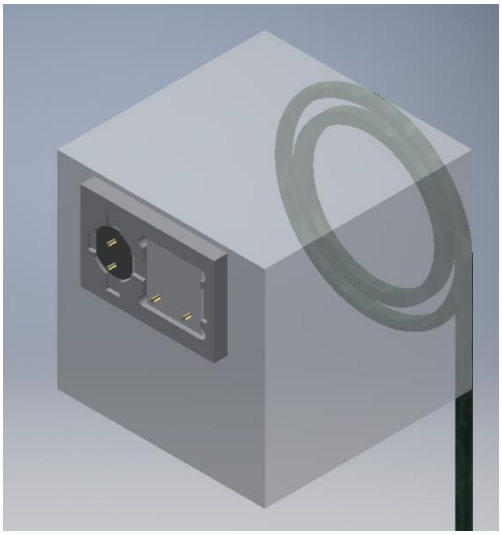
To avoid this complication, we can use an alternative configuration where the PDs are shifted close to the crystal's border.

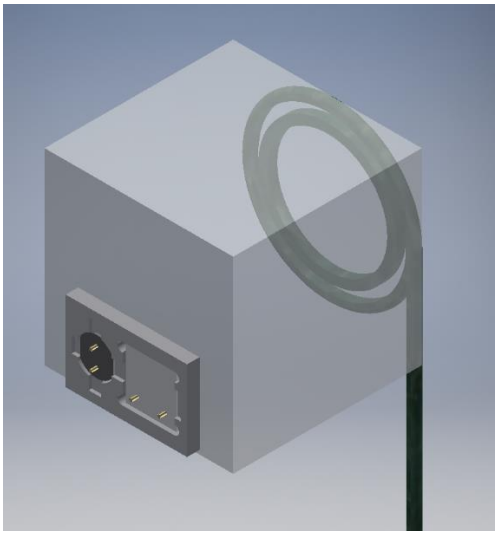


The array structure has an asymmetrical aperture shifted in opposite direction for odd and even columns.

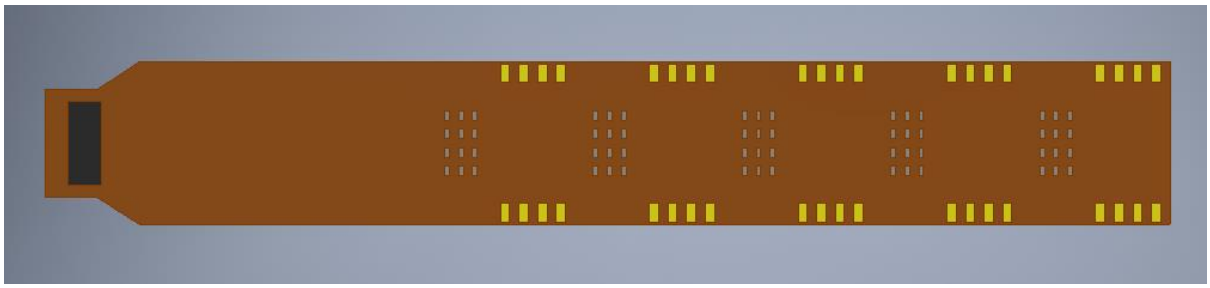


In this case, PDs are mounted in a different way for odd and even columns.





This configuration provides a distance of about 36 mm between two PDs columns and Scolopendra width about 35 mm. This width is quite similar to our current configuration and this version of Scolopendra requires minimal modifications.



Only one array support structure should be modified. We need 63? crystals with the aperture for PDs.

According to these considerations we strongly need to know which configuration (the distance between PDs) you prefer and we need also the updated CAD file. Without these data we cannot proceed with the new Scolopendra development.