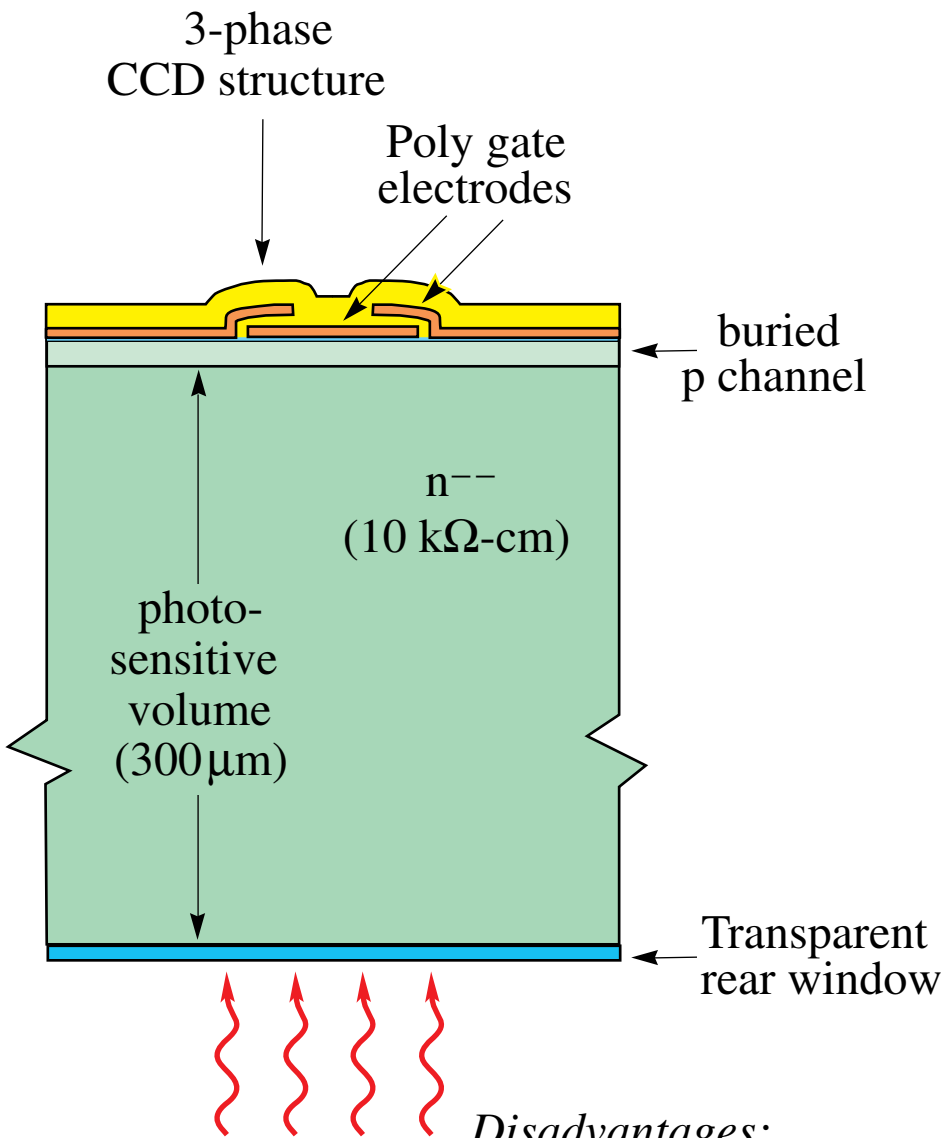
PROPOSAL:
Make a thick CCD on a high-resistivity n-type substrate, operate fully depleted with rear illumination.



Advantages:

1) Conventional MOS processes with no thinning => "inexpensive"
2) Full quantum efficiency to > 1 μm => no fringing
3) Good blue response with suitably designed rear contact
4) Efficient low-energy x-ray detector

Disadvantages:

1) Enhanced sensitivity to radiation (x-rays, cosmic rays, radioactive decay)

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