

## MIMOSA11 RADTOL CHIP

- Techno : AMS 0.35  $\mu\text{m}$  OPTO
  - Epi layer = 14  $\mu\text{m}$
  - 3 metals layers
- 8 sub-matrix, 8 layout variante pixels
  - 1 sub-matrix = 21 x 42 pixels
  - 1 Pixel Pitch = 30  $\mu\text{m}$  x 30  $\mu\text{m}$
  - Self-bias diode
- Just submitted

# M11 MATRIX

|         |         |
|---------|---------|
|         |         |
| ARRAY 1 | ARRAY 2 |
|         |         |
|         |         |
| ARRAY 0 | ARRAY 3 |
|         |         |



# M11 variantes pixels

## ■ ARRAY 1

- 11) pixel\_NWD\_SB\_GATOX
  - Diode area =  $14.62 \mu\text{m}^2$  ; **RadTol** : GATOX ring,  $\text{dist}(\text{n+ poly} - \text{NW}) = 0$  ; n+ floating, p+ GR, 15 % poly filling
  - n+diff around p+ in the well , **spacing =  $0.6 \mu\text{m}$  (min)**
- 12) pixel\_REF2\_SB\_POLY
  - Diode area =  $13.44 \mu\text{m}^2$  ; **Standard diode** (the depleted region of the diode intercepts near the surface the LOCOS isolation surface), p+ GR, 15 % poly filling
  - n+diff around p+ in the well , **spacing =  $0.7 \mu\text{m}$**

## ■ ARRAY 2

- 21) pixel\_NWD\_SB\_NPLUS\_GATOX
  - Diode area =  $14.62 \mu\text{m}^2$  , **RadTol** : GATOX ring,  $\text{dist}(\text{n+ poly} - \text{NW}) = 0.15 \mu\text{m}$  ; n+ floating, p+ GR, 15 % poly filling
  - n+diff around p+ in the well , **spacing =  $0.6 \mu\text{m}$**
- 22) pixel\_NWELLRING
  - Diode area =  $13.44 \mu\text{m}^2$  , **Standard diode**, p+ GR, **NW GR** (novel idea), p+ GR, 15 % poly filling
  - n+diff around p+ in the well , **spacing =  $0.7 \mu\text{m}$**

## ■ ARRAY 0

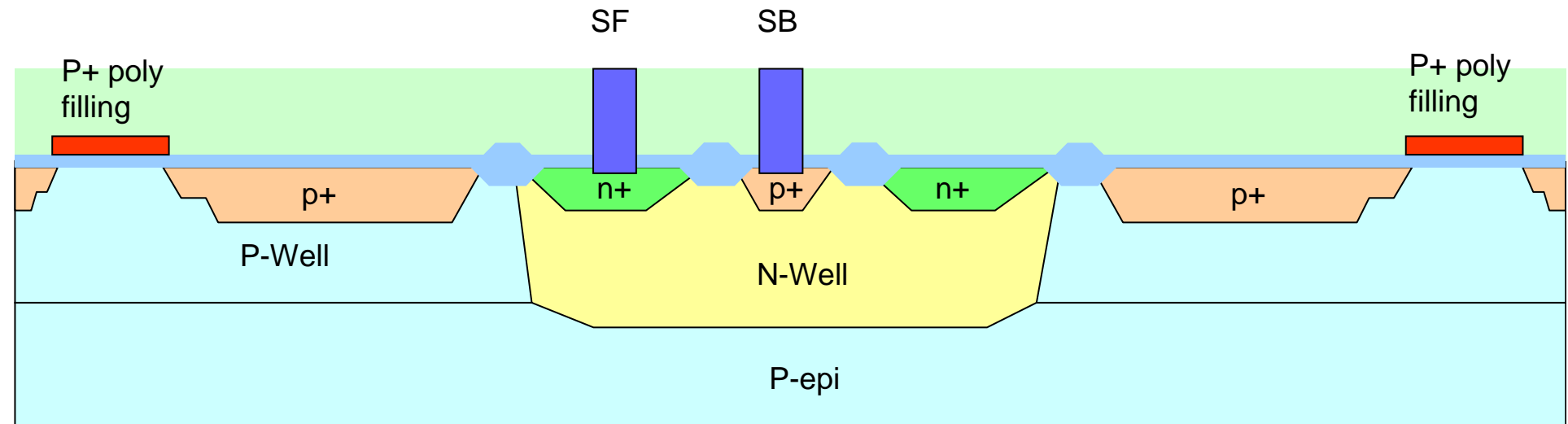
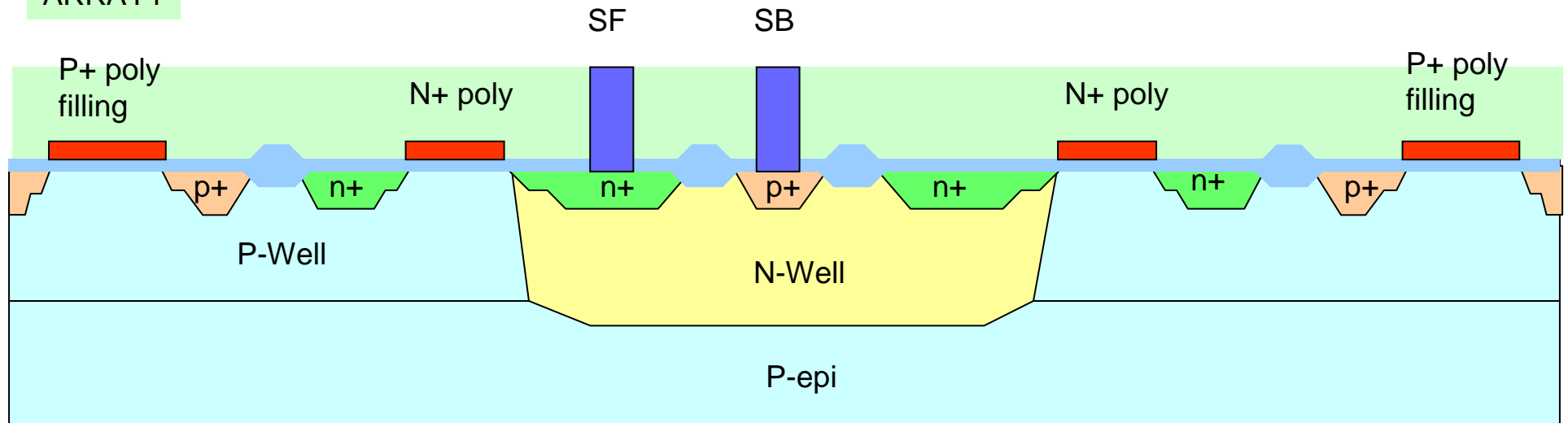
- 01) pixel\_NWD\_SB\_DIFF
  - Diode area =  $14.62 \mu\text{m}^2$  , **RadTol** : the diffusion layer is used to eliminate the LOCOS oxyde ; the p+ GR is put away from the well ( $0.8 \mu\text{m}$ ), 15 % poly filling
  - n+diff around p+ in the well , **spacing =  $0.6 \mu\text{m}$**
- 02) pixel\_REF\_SB
  - Diode area =  $14.62 \mu\text{m}^2$  , **Standard diode**, p+ GR, NO filling
  - Local n+diff and p+ in the well , **spacing =  $0.9 \mu\text{m}$**

## ■ ARRAY 3

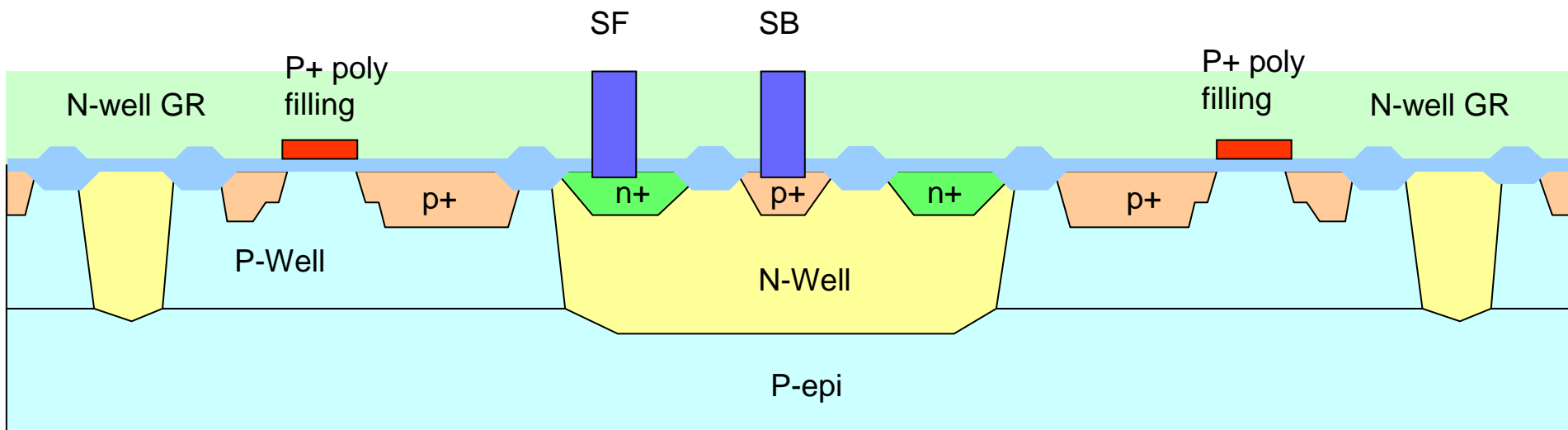
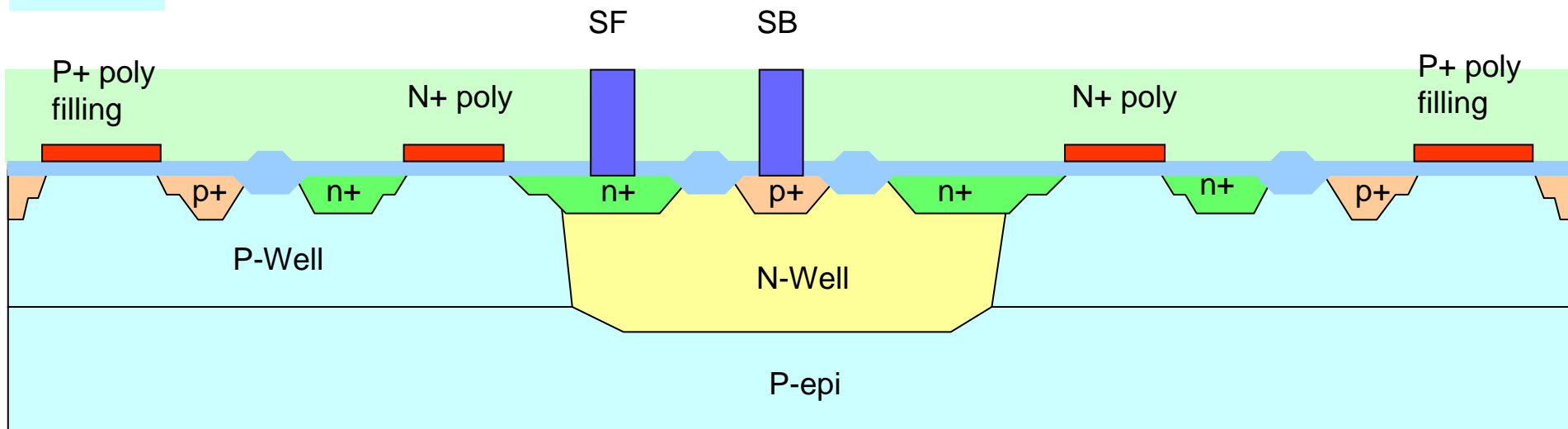
- 31) pixel\_NWD\_SB\_DIFF\_GATE
  - Diode area =  $14.62 \mu\text{m}^2$  , **RadTol** : undoped diffusion layer in nwell and GATOX ring with poly partially p+doped ,  $\text{dist}(\text{poly} - \text{NW}) = 0$  , p+ GR, 15 % poly filling
  - n+diff around p+ in the well , **spacing =  $0.6 \mu\text{m}$**
- 32) pixel\_REF\_SB\_POLYGATE
  - Diode area =  $14.62 \mu\text{m}^2$  , **Standard diode**, p+ GR, FULL poly filling
  - Local n+diff and p+ in the well , **spacing =  $0.9 \mu\text{m}$**



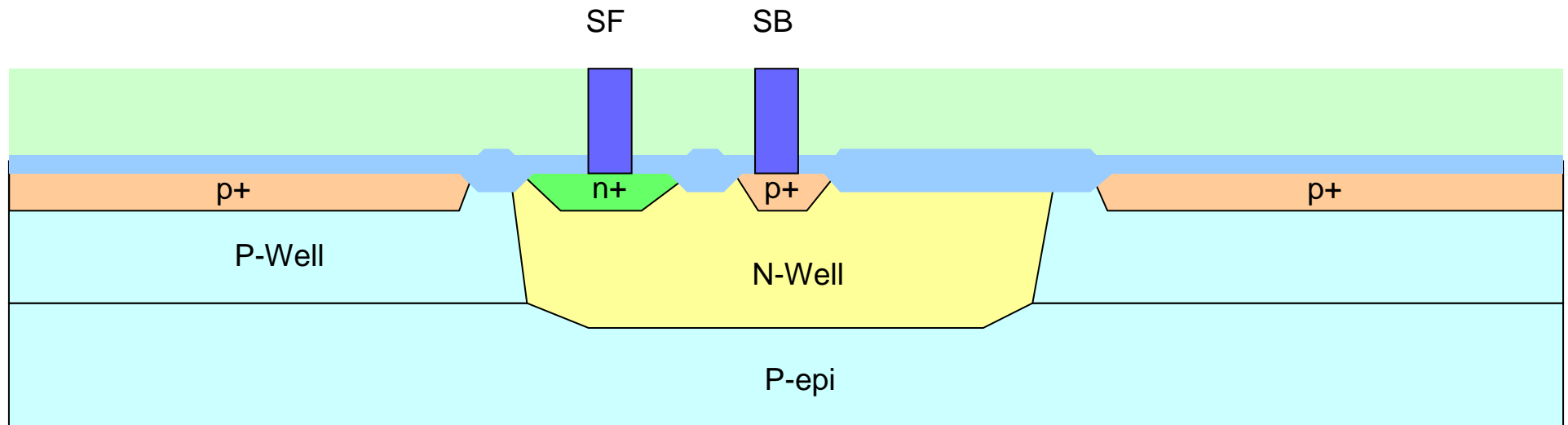
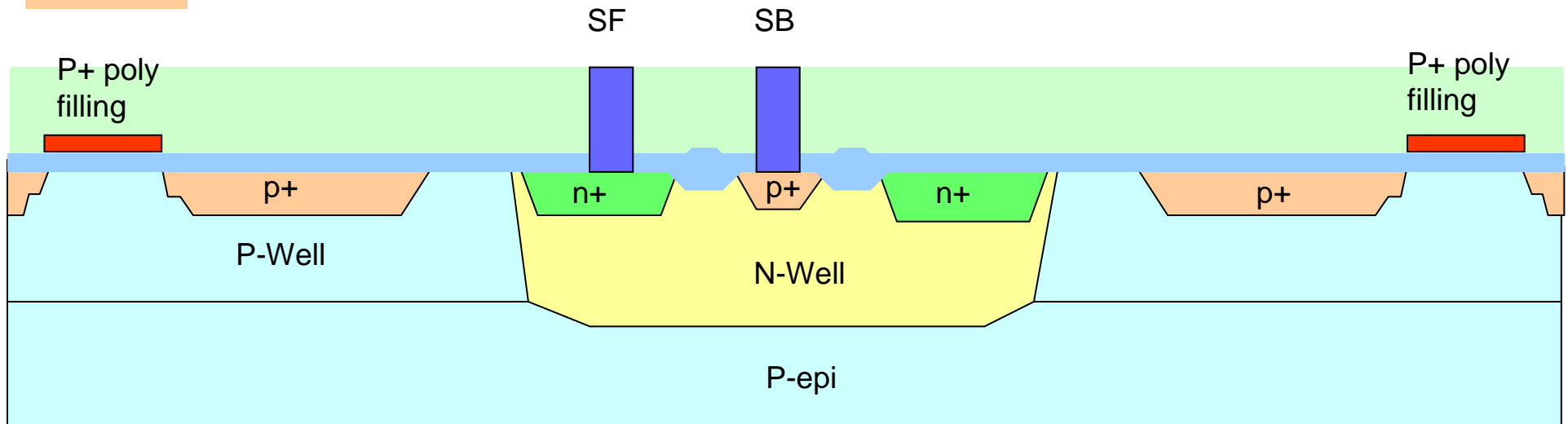
ARRAY1



ARRAY2



ARRAY 0



ARRAY3

