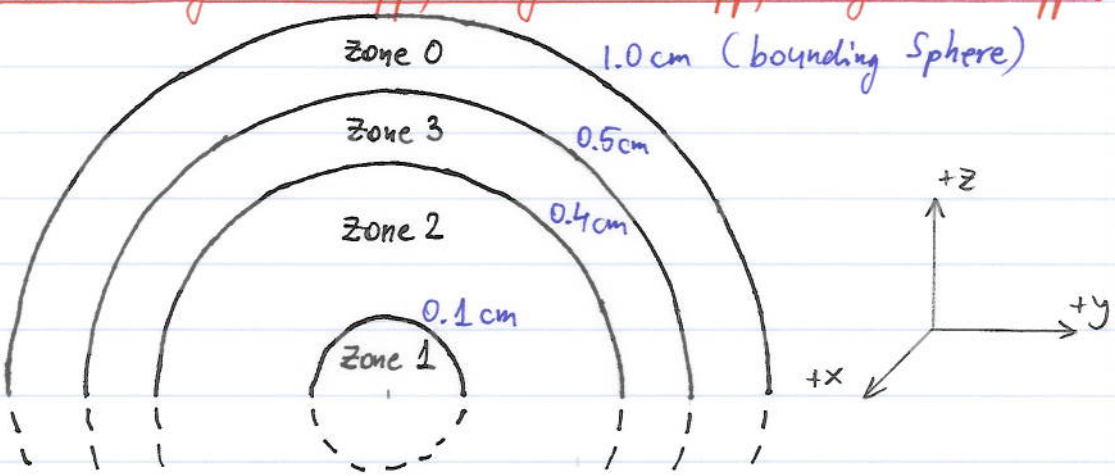
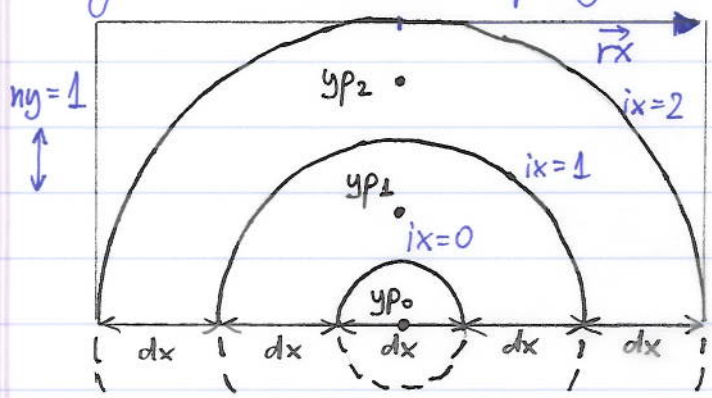
test_Diagnostics.cpp, diagnostics2.cpp, diagnostics3.cpp



Diagnostics 3 Detector SphSym 1d ; if symmetry == "spherical", then dx is adjusted so that nx is odd;



$$rx + dx/2 = nx \cdot dx$$

$$dx = \frac{rx}{nx - \frac{1}{2}} \quad (1)$$

in this figure nx = 3. Then, spatial integration of yp_{ix} in Detector.cpp:

$$ys = yp_0 \, \pi \left(\frac{dx}{2}\right)^2 + \sum_{ix=1}^{nx-1} yp_{ix} \, \pi \left(r_{>ix}^2 - r_{<ix}^2\right), \quad \text{where}$$

$$r_{>ix} = \frac{dx}{2} + ix \cdot dx, \quad r_{<ix} = r_{>ix-1} = \frac{dx}{2} + (ix-1)\,dx; \quad ix > 0$$

$$ys = \pi \left[yp_0 \frac{(dx)^2}{4} + \sum_{ix=1}^{nx-1} yp_{ix} \underbrace{(r_{>ix} + r_{<ix})}_{2 \cdot ix \cdot dx} \underbrace{(r_{>ix} - r_{<ix})}_{dx} \right]$$

ys: space-integrated spectrum

$$ys = 2\pi (dx)^2 \left[\frac{yp_0}{8} + \sum_{ix=1}^{nx-1} yp_{ix} \cdot ix \right] \quad (2)$$

where yp_{ix} are the space-resolved ("patch") spectra.