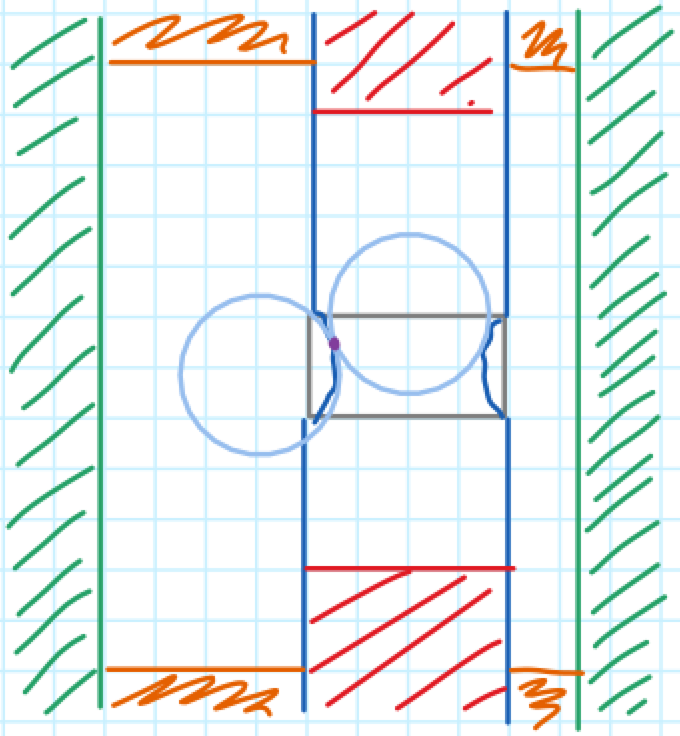

$$= \{ (x', x_n) \text{ s.d. } |x'-q'| > R+1 \}$$

$$= \{ (x', x_n) \text{ s.d. } |x'| < R \,,\ |x_n - q_n| > 2\mu \}$$ ← leave this for negative term

$$= \{ (x', x_n) \text{ s.d. } |x'| \geq R \,,\ |x'-q'| \leq R+1,\ |x_n - q_n| > \Delta\mu \}$$ ← instead of 2μ

$\Delta \geq 4$

$$\subseteq S := \{ (x', x_n) \text{ s.d. } |x'-q'| \leq R+1 \,,\ |x_n - q_n| \leq \Delta \mu \}$$

↑ enough since pos estimate from above

These changes give us: 3. $\displaystyle\int \frac{\chi_{E^c} - \chi_E}{|y-q|^{n+s}} \leq c(n,s)\,(R-1+\Delta\mu)^{-s} \leq c(n,s)\,(\Delta\mu)^{-s}$ instead of $(R-1+\mu)^{-s}$

$S \subset B_{R+2}$ for $R \geq 1$ since
$((\Delta\mu)^2 + (R+1)^2)^{1/2}$
$\leq (R^2+2R+2)^{1/2} \leq (R^2+4R+4)^{1/2}$
↑ $\Delta\mu \leq 1$ $\quad = R+2$

4 iv) $$\int_{S \setminus B_{\Delta\mu}} \frac{\chi_{E^c} - \chi_E}{|y-q|^{n+s}} \leq \int_{B_{R+2}/B_{\Delta\mu}} \frac{1}{|y|^{n+s}} = c(n,s)\left((\Delta\mu)^{-s} - (R+2)^{-s} \right)$$

Thus in total:
$$\int_{\mathbb{R}^n} \frac{\chi_{E^c} - \chi_E}{|y-q|^{n+s}} \leq \overset{2.}{-c_1 \mu^{-s}} + c_0\Big(\overset{1.}{R^{-(1+s)}} + \overset{3.}{(\Delta\mu)^{-s}} + \overset{4\,iv)}{(\Delta\mu)^{-s} - (R+2)^{-s}} + \overset{4\,iii)}{\Delta^{1-s}\mu^{1-s}} \Big)$$

$$\leq -c_1 \mu^{-s} \Big(1 - \frac{c_0}{c_1}\big(R^{-(1+s)}\mu^s + 2\Delta^{-s} - (R+2)^{-s}\mu^s + \Delta^{1-s}\mu \big)\Big)$$

Now choose Δ large and μ small enough $\qquad \leq -c_2 \mu^{-s}$