

$$A + A^T = 0$$

$$\|t-s\| = r$$

$$\Rightarrow A = -A^T$$

$$\Rightarrow \det(A) = (-1)^n \det(A^T)$$

$$\int_0^\infty \int \frac{1}{r^{N-1}} dr \cdot d\theta \quad \text{the } d\theta \text{ integrated} \\ \text{gas away}$$

$$z = x - y$$

$$u = x - y \quad t = x + y$$

X

$$dx = dy \quad (dy = \pm du)$$

$$\int \int_{-\varepsilon/2}^{\varepsilon/2}$$

$$y = -\varepsilon/2 \mapsto \varepsilon/2$$

$$x-y: \varepsilon/2 + x \mapsto x - \varepsilon/2$$

$$\int_{x=-\varepsilon/2}^{\varepsilon/2} \int_{x-\varepsilon/2}^{x+\varepsilon/2} \frac{1}{|u|} du$$

$$\leq \int_{-\varepsilon/2}^{\varepsilon/2} \int_{-\varepsilon}^{\varepsilon} \frac{1}{|u|^{N-1}} du \cdot \|u\|^{N-1}$$

$$= (\varepsilon/2)$$

$$\int_{-\varepsilon}^{\varepsilon} |u|^{N-1} du = \int_0^\pi \int_0^\varepsilon \rho \sin \theta r^{N-1} dr d\theta$$

$$= \int_0^\pi \sin \theta d\theta \int_0^\varepsilon r^{N-1} dr$$