

$$\mathbb{E} \left[\frac{1}{k} (2u^{-1/2}p + 2H) \right]$$

$$\mathbb{E} \left[\left(2u^{-1/2}p_{ij} + 2H_{ij} \right)^k \mathbb{1} \left[\|2H\| > \sqrt{1/2} n^{1/2} \right] \right]$$

Both accommodation!

candidate

$$\mathbb{1} \left[\|2H\| > \sqrt{1/2} n^{1/2} \right]$$

$$= \mathbb{1} \left[\|2H\| > \sqrt{1/2} n^{1/2}, \|2H_{ij}\| > \sqrt{1/2} n^{1/2} \right]$$

$$+ \mathbb{1} \left[\|2H\| > \sqrt{1/2} n^{1/2}, \|2H_{ij}\| < \sqrt{1/2} n^{1/2} \right]$$