

Need to choose h s.t

w.h.p $B_\varepsilon^+(u, v) \subseteq B(h)$

(can do as for high u , $u-v \approx \exp(-1)$).

Then use Thm 3.3 to say.

$$\mathbb{P} \left(\sup_{t \in B(h)} \left| X(t/\sqrt{n}) - u + \frac{1}{2} t^T \Lambda t \right| > \varepsilon \|u\| \right) \rightarrow 0$$

$\forall h.$

and in particular for our h .

and change $S \rightarrow B(h)$ in B^+, B^-

say "given $h > 0$ let $B^+ =, B^- = \}$

$B(u, v, h)$

Note that as well as $B^- \subseteq C_{u,v} \subseteq B^+$

$B^- \subseteq \text{annump of } 0 \subseteq B^+$

as all in B^- are $> \psi$, none ^{outside} in B^+ (within $B(h)$) are!