BRITISH EMBASSY
BELGRADE

$$= \int_{T_1}\int_{T_2}\int_{\longleftrightarrow \times B_1 \times B_2} |\det \nabla y_1|\,|\det \nabla y_2|\, p_{t_1,t_2}(\nabla y_1, \nabla y_2, v_1, v_2)\, d\longleftrightarrow$$

need to use Lebesgue's cty theorem here need to check it works in 2D here!

$$\times \int_{\mathbb{R}^N \times \mathbb{R}^N} \delta_\varepsilon(x_1)\,\delta_\varepsilon(x_2)\, p_{t_1 t_2}(x_1, x_2 \mid v_1, v_2, \nabla y_1, \nabla y_2)\, dx_1 dx_2.$$

$p_{t_1 t_2}(x_1, x_2 \mid v_1, v_2)$ assumed to be cts and bounded so this integral

note not bounded necessarily!

converges to: $p_{t_1 t_2}(0, 0 \mid v_1, v_2, \nabla y_1, \nabla y_2)$ need to assume this only may if not on the same set!

by Lebesgue's cty thm (since δ_ε has been normalized!)

as $\varepsilon \to 0$

Need moments here

Also, this int is $\leq \sup_{x_1, x_2} p_{t_1 t_2}(x_1, x_2 \mid \nabla y_1, \nabla y_2, v_1, v_2)$

which is bounded (by assumption)

this ~~may~~ is ~~be diffic~~ difficult to show if $N \neq M$ or you're on similar neighbourhoods as have a diagonals problem.

(okay if you're on separate neighbourhoods as there ~~is~~ then a valid joint distn)

Look at Klenke!