BRITISH EMBASSY
BELGRADE

$\boxed{\text{wlog } u_1 = 0 = u_2}$

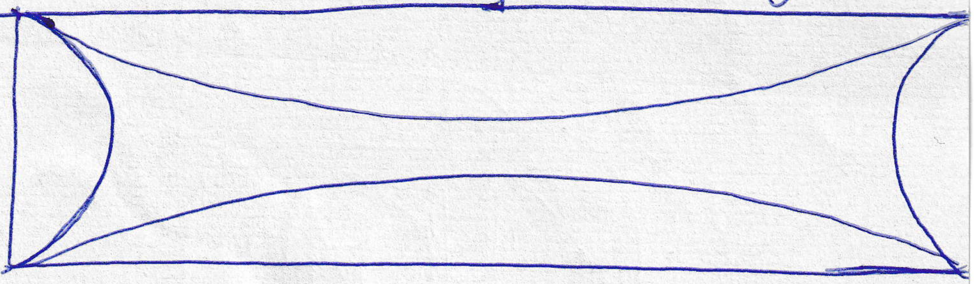
$$N^\varepsilon = \int_T \delta_\varepsilon(f_1(t))\, \mathbb{1}_{B_1}(g_1(t))\, |\det \nabla f_1(t)|\, dt$$

and $$M^\varepsilon = \int_T \delta_\varepsilon(f_2(t))\, \mathbb{1}_{B_2}(g_2(t))\, |\det \nabla f_2(t)|\, dt$$

need just moments to be finite here.

i.e. this condition is needed in 2nd half of the proof though.

no you dont can exchange int, derivative as ≥ 0 by fubini



So exchanging find that:

~~$\mathbb{E} N^\varepsilon M^\varepsilon$~~ $\boxed{\mathbb{E}}$

$$\mathbb{E}[N^\varepsilon(T) M^\varepsilon(T)] = \int_{T_1}\int_{T_2}\int_{\mathbb{R}^N \times \mathbb{R}^{N(N+1)/2} \times B_1 \times \mathbb{R}^N \times \mathbb{R}^{N(N+1)/2} \times B_2} \delta_\varepsilon(x_1)\, \delta_\varepsilon(x_2)\, |\det \nabla y_1|\, |\det \nabla y_2|$$

$$\times\, p_{t_1 t_2}(x_1, \nabla y_1, v_1, x_2, \nabla y_2, v_2) \quad dx_1\, dx_2\, d\nabla y_1\, d\nabla y_2\, dv_1\, dv_2$$