$$\mathbb{R}^{n}\times{}_{n}\mathbb{R}\overset{\triangledown}{{}_{\infty}}\mathbb{C}$$

$$\mathbb{R}^{n}\times{}_{n}\mathbb{R}\overset{\triangledown}{{}_{\infty}}\mathbb{C}\;\xleftarrow[\text{sympl FT}]{\overset{\vee}{()}}\;\mathbb{R}^{n}\times{}_{n}\mathbb{R}\overset{\triangledown}{{}_{\infty}}\mathbb{C}$$

$$_{y|\eta}\overset{\vee}{F}=\int\limits_{dx}^{\mathbb{R}^{n}}\int\limits_{d\xi}^{{}_{n}\mathbb{R}}{}_{x|\xi}F\,\exp i\,\underbrace{y|\xi-x|\eta}\;\text{sympl Fourier}$$

$$\overset{\vee}{F}{}^{\vee}=F$$

$$\mathbb{R}^{n}\times{}_{n}\mathbb{R}\overset{\triangledown}{{}_{\infty}}\mathbb{C}\;\xleftarrow[\text{orth FT}]{\overset{\wedge}{()}}\;\mathbb{R}^{n}\times{}_{n}\mathbb{R}\overset{\triangledown}{{}_{\infty}}\mathbb{C}$$

$$_{y|\eta}\hat{F}=\int\limits_{dx}^{\mathbb{R}^{n}}\int\limits_{d\xi}^{{}_{n}\mathbb{R}}{}_{x|\xi}F\,\exp i\,\underbrace{y|x+\xi|\eta}\;\text{orth Fourier}$$

$$\hat{F}{}^{\wedge}=F\bigcirc(-I)$$

$$\mathcal{W}(F)=\int\limits_{dy}^{\mathbb{R}^{n}}\int\limits_{d\eta}^{{}_{n}\mathbb{R}}{}_{y|\eta}\overset{\vee}{F}\,\exp i\,\underbrace{Q|\eta-y|P}$$

$$^{x}\overbrace{\mathcal{W}(F)\,\phi}=\int\limits_{dy}^{\mathbb{R}^{n}}\int\limits_{d\eta}^{{}_{n}\mathbb{R}}{}_{x\frac{+}{2}y|\eta}F\,\exp i\,\underbrace{x-y|\eta}\,{}^{y}\phi$$

$$\mathcal{W}\left(F_{1}\right)\mathcal{W}\left(F_{2}\right)=\mathcal{W}\left(F_{1}\sharp F_{2}\right)$$

$$_{x|\xi}\underbrace{F_{1}\sharp F_{2}}=\sum\frac{1}{\alpha!\beta!}\partial_{x}^{\alpha}\,\partial_{\xi}^{\beta}\,F_{1}\,\partial_{x}^{\beta}\,\partial_{\xi}^{\alpha}\,F_{2}$$

$$_{x\xi}\overbrace{h_{1}\sharp h_{2}}={}_{y\eta}h_{1}\,{}_{z\zeta}h_{2}\,\exp\left(-2i\begin{bmatrix}y-x & \eta-\xi\end{bmatrix}\begin{array}{c|c}0 & 1\\ \hline -1 & 0\end{array}\begin{bmatrix}z-x\\ \zeta-\xi\end{bmatrix}\right)=\mathfrak{e}^{i\mathcal{L}}\left(h_{1}\boxtimes h_{2}\right)(x\xi|x\xi)$$

$$\mathcal{L}=\frac{\partial}{\partial z^{j}}\frac{\partial}{\partial\eta_{j}}-\frac{\partial}{\partial y^{j}}\frac{\partial}{\partial z_{j}}$$