1. Last time:

$$\mathcal{S}(\mathbb{R}^{2n}) \longleftrightarrow \dot{C}^\infty(S^{2n}_+) \hookrightarrow C^\infty(S^{2n}_+)$$

$$\begin{array}{ccc} \mathbb{R}^{2n} & \hookrightarrow & S^{2n}_+ \\ \| & & \\ W & \hookrightarrow & \overline{W} \end{array}$$ radial compactification

New notation

$$\mathcal{S}(W) \longleftrightarrow \dot{C}^\infty(\overline{W}) \hookrightarrow C^\infty(\overline{W})$$ any vector space

On $\mathcal{S}(\mathbb{R}^{2n})$ the non-commutative (operator) product corresponds to a symplectic form

$$\omega \in \Lambda^2 W \longleftrightarrow \omega' \in \Lambda^2 W'$$

$\omega \wedge \dots \wedge \omega \neq 0$
$\frac{1}{2}\dim W$ times

<u>Th$^{\underline{m}}$</u> There is a <u>smooth family</u> of (associative) products on $C^\infty(\overline{W})$ parametrized by $\Lambda^2 W'$

Epstein-M.

$$\Lambda^2 W' \times C^\infty(\overline{W} \times \overline{W}) \longrightarrow C^\infty(\overline{W})$$
$$(\omega', a \otimes b) \longmapsto a \#_{\omega'} b$$

- Up to isomorphism depends on rank ω' only.