Let $S$ denote the oscillatory module over the complex symplectic Lie algebra $g = \mathfrak{sp}(V, \omega)$. Consider the $g$-module $W = \bigwedge^\bullet (V^*)^C \otimes S$ of forms with values in the oscillatory module. We prove that the associative commutant algebra $\text{End}_g(W)$ is generated by the image of a certain representation of the ortho-symplectic Lie super algebra $\mathfrak{osp}(1\vert 2)$ and two distinguished projection operators. The space $W$ is then decomposed with respect to the joint action of $g$ and $\mathfrak{osp}(1\vert 2)$. This establishes a Howe type duality for $\mathfrak{sp}(V, \omega)$ acting on $W$.

**Keywords:** Howe duality, symplectic spinors, Segal-Shale-Weil representation, Kostant spinor.

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