Characterizations of spaces of type S

The Gelfand-Shilov spaces were first introduced as spaces of rapidly decreasing functions with controlled decay. But they can also be realized as spaces of Gevrey vectors related to unitary representations of the Heisenberg group (see e. g. [1]). We shall make a short survey of the results obtained in this direction and we shall show that the results obtained in [1] can be extended to a wider class of spaces of type S.

[1] A. F. M. Ter Elst, Gevrey spaces and their intersections, *J. Austral. Math. Soc. (Series A)*, 54 (1993), 263-286.