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On parabolic Whittaker functions II

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We derive a Givental-type stationary phase integral representation for the specified $\mathrm{Gr}_{m,N}$ -Whittaker function introduced in [GLO2], which presumably describes the $S^1 \times U_N$ -equivariant Gromov-Witten invariants of Grassmann variety $\mathrm{Gr}_{m,N}$. Our main tool is a generalization of Whittaker model for principal series $U(\frac{gl}{N})$ -modules. In particular, our construction includes a representation theory interpretation of the Batyrev--Ciocan-Fontanine--Kim--van Straten toric degeneration of Grassmannian, providing a direct connection between this toric degeneration of $\mathrm{Gr}_{m,N}$ and total positivity for unipotent matrices.

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