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Erratum

Holomorphic H -spherical distribution vectors in principal series representations

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In Proposition 2.2.3 (i) we missed to include a certain conjugation. As a consequence a few minus-signs have to be reverted in the remainder of the text. Below is the corrected version of Proposition 2.2.3 (i) together with a list of the necessary sign-changes.

1. Before Proposition 2.2.3, include the following paragraph: Note, that $x_H H_{\mathbb{C}} x_H^{-1} = K_{\mathbb{C}}$ is equivalent to $\overline{x_H} H_{\mathbb{C}} \overline{x_H}^{-1} = K_{\mathbb{C}}$. Thus, as in Theorem 2.1.3, one shows that

$$\overline{v_H} = \lim_{t \nearrow 1} \pi^0(a_{-t})v_K$$

exists in $\mathcal{H}^{-\omega}$ and is H -fixed. We refer to $\overline{v_H}$ as the H -spherical distribution vector conjugate to v_H .

2. Proposition 2.2.3 (i): Replace v_H by $\overline{v_H}$.

3. Proof of Proposition 2.2.3:

- After the first sentence include the following: In the sequel we write f for $f_{v, \overline{v_H}}$.
- Replace the fifth line (first display) by

$$\langle \pi(g^{-1})v, \pi^0(a_{-t})v_K \rangle = \langle v, \pi^0(ga_{-t})v_K \rangle = \tilde{f}(ga_t K_{\mathbb{C}}).$$

- The first display on p. 15, replace v_H by $\overline{v_H}$.

4. Shortly after (3.1.3): The two lines starting with “Define a norm ...” should be replaced by: Define a norm $\| \cdot \|_H$ on $i\mathfrak{a}^*$ by

$$\|\lambda\|_H := \sup_{w \in \mathcal{W}/\mathcal{W}_0} \lambda(iwX_H) \quad (\lambda \in i\mathfrak{a}^*).$$

5. The fourth line in Subsect. 3.2: The expression $z_H^{-2w^{-1}\lambda}$ in the sum has to be replaced by $z_H^{2w^{-1}\lambda}$.
6. In the proof of Lemma 3.2.1: The expression $z_H^{-2w^{-1}\lambda}$ in the sum has to be replaced by $z_H^{2w^{-1}\lambda}$.
7. From (3.2.3) until to the beginning of Subsect. 3.3:
- Replace $v_{H,\lambda}$ by $\overline{v_{H,\lambda}}$.
 - Replace a_ϵ, a_t and $a_{t-\epsilon}$ by $a_{-\epsilon}, a_{-t}$ and $a_{\epsilon-t}$ respectively.
8. Theorem 3.2.4: In the statement in the display: φ_λ in the integrand has to be replaced by $\varphi_{-\lambda}$.
9. Proof of Theorem 3.4.1, p. 34:
- Every expression of the form $z_H^{\{\text{something}\}}$ has to be replaced by $z_H^{-\{\text{something}\}}$, for example $z_H^{-2w^{-1}\lambda}$ becomes $z_H^{2w^{-1}\lambda}$ etc.
 - The symbol $v_{H,\lambda}$ which appears once, in line -8, has to be replaced by $\overline{v_{H,\lambda}}$.

Reference

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