Correction to: A-Numerical Radius Orthogonality and Parallelism of Semi-Hilbertian Space Operators and Their Applications

Pintu Bhunia¹ · Kais Feki² · Kallol Paul¹

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In the original article published, during the final typesetting stage the equation in the proof of the Theorem 3.5 was published incorrectly. The correct equation is:

Theorem 3.5 *Let $T, S \in \mathcal{B}_A(\mathcal{H})$ be such that $T \parallel_A S$. Also let $\mathbb{A} = \begin{pmatrix} A & 0 \\ 0 & A \end{pmatrix}$. Then*

$$\omega_{\mathbb{A}} \begin{pmatrix} O & T \\ e^{-2i\beta} S^{\sharp_A} & O \end{pmatrix} = \frac{1}{2} (\|T\|_A + \|S\|_A),$$

for some real β .

Proof We have $\|T + e^{2i\beta} S\|_A = \|T\|_A + \|S\|_A$ for some real β , as $T \parallel_A S$. Therefore, using Theorem 3.4, we have

$$\begin{aligned} \|T\|_A + \|S\|_A &= \|T + e^{2i\beta} S\|_A \\ &\leq 2\omega_{\mathbb{A}} \begin{pmatrix} O & T \\ e^{-2i\beta} S^{\sharp_A} & O \end{pmatrix} \\ &\leq \|T\|_A + \|S\|_A. \end{aligned}$$

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✉ Kais Feki
 kais.feki@hotmail.com
 Pintu Bhunia
 pintubhunia5206@gmail.com
 Kallol Paul
 kalloldada@gmail.com

¹ Department of Mathematics, Jadavpur University, Kolkata, West Bengal 700032, India

² University of Sfax, Sfax, Tunisia

It follows that

$$\omega_{\mathbb{A}} \begin{pmatrix} O & T \\ e^{-2i\beta} S^{\sharp_A} & O \end{pmatrix} = \frac{1}{2}(\|T\|_A + \|S\|_A),$$

for some real β .

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