CORRECTION TO THE PAPER “ON THE RIEMANNIAN CURVATURE OF A TWISTOR SPACE”¹

J. DAVIDOV and O. MUŠKAROV (Sofia)

The system at the bottom of p.330 is not written correctly. This system and the subsequent arguments up to line 9, p.331 should be changed as follows:

$$b_{ii} - (3t/4) \sum_{k=1}^3 a_{ki}^2 + (3t/4) a_{ii}^2 = \mathcal{X},$$

$$b_{ii} + b_{jj} - (3t/4) \sum_{k=1}^3 (a_{ki}^2 + a_{kj}^2) + (3t/4)(a_{ij} + a_{ji})^2 + (3t/2) a_{ii} a_{jj} = 2\mathcal{X},$$

$$b_{ij} + b_{ji} - (3t/2) \sum_{k=1}^3 a_{ki} a_{kj} + (3t/2) a_{ii} (a_{ij} + a_{ji}) = 0$$

for $1 \leq i \neq j \leq 3$. These identities imply $a_{ii} = a_{jj}$ and $a_{ij} = -a_{ji}$ for $i \neq j$, i.e.

$$g(\mathcal{R}(s_i), X \wedge S_i X) = g(\mathcal{R}(s_j), X \wedge S_j X),$$

$$g(\mathcal{R}(s_i), X \wedge S_j X) = -g(\mathcal{R}(s_j), X \wedge S_i X), \quad i \neq j.$$

Now varying X over the unit sphere of $T_p M$ gives

$$g(\mathcal{R}(s_i), s_j) = \delta_{ij} g(\mathcal{R}(s_1), s_1),$$

$$g(\mathcal{R}(s_i), \bar{s}_j) = 0, \quad 1 \leq i, j \leq 3.$$

¹ *Acta Math. Hung.*, 58 (1991), 319–332.

Hence M is Einstein and self-dual. Since $X \wedge SX \in \mathbf{R} \cdot \sigma \oplus \bigwedge_+^2 T_p M$ for any $X \in T_p M$, it follows that $R(X \wedge SX)\sigma = 0$ and (5.1) shows that M is of constant sectional curvature $\mathcal{K}$. The rest of the proof is unchanged.

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INSTITUTE OF MATHEMATICS
BULGARIAN ACADEMY OF SCIENCES
UL. ACAD. G. BONTCHEV ST., BL. 8
1113-SOFIA
BULGARIA