CORRECTION TO THE PAPER
“THE MOMENT PROBLEM FOR NON-COMPACT SEMIALGEBRAIC SETS”

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Examples 3.14 (page 86): The hypotheses of Examples 4 and 5 need adjustment, as follows:

Example 4: The assertion for $n \leq 2$ is true. Also, for odd $n \geq 3$, the assertion is true, since in this case the curve $C$ has exactly one point at infinity, which is real. If $n \geq 4$ is even (and $C$ is real), there are two points at infinity which are both real. Therefore, the moment problem for $K$ is not finitely solvable if $K$ is unbounded on two half-branches of $C(\mathbb{R})$ at infinity which represent different points at infinity. Otherwise, the moment problem for $K$ is finitely solvable.

More concretely, this means the following for $n \geq 4$. Let $Q_1, Q_2, Q_3, Q_4$ be the four quadrants of the real plane (numbered counter-clockwise in the usual way). If $n \equiv 0 \pmod{4}$, the moment problem for $K$ is finitely solvable iff at least one of

$$K \cap (Q_1 \cup Q_2), \quad K \cap (Q_3 \cup Q_4)$$

is bounded. If $n \equiv 2 \pmod{4}$, the moment problem for $K$ is finitely solvable iff at least one of

$$K \cap (Q_1 \cup Q_3), \quad K \cap (Q_2 \cup Q_4)$$

is bounded.

Example 5: For general $f(x, y)$ as in the example, $C$ can have more than one point at infinity, and some of these points can be non-real. Therefore, if an unbounded closed semialgebraic set $K \subset C(\mathbb{R})$ is given, and one wants to conclude that the moment problem for $K$ is not finitely solvable, one has to add conditions which imply that all points of $C$ at infinity are real, and lie in the projective closure of $K$. For example, it is enough to assume that the monomial $y^{n-1}$ occurs in $f(x, y)$, since then the projective closure of $C$ in $\mathbb{P}^2$ is regular and has exactly one point on the line at infinity, which is real.