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CORRIGENDUM

to the paper "Necessary conditions for the existence of global solutions to systems of fractional differential equations"

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The formulas

$$u(t) = C_{1,\alpha,\beta}(T^{max}_{\alpha,\beta} - t)^{-(\alpha+q\beta)/(pq-1)},$$

$$v(t) = C_{2,\alpha,\beta}(T^{max}_{\alpha,\beta} - t)^{-(\beta+p\alpha)/(pq-1)},$$

are valid for t close to $T^{max}_{\alpha,\beta}$.

The correct expressions of $C_{1,\alpha,\beta}$ and $C_{2,\alpha,\beta}$ are:

$$C_{1,\alpha,\beta} = \left[\frac{\Gamma(ql_2}{\Gamma(ql_2 - \alpha}\right]^{\frac{1}{pq-1}} \left[\frac{\Gamma(pl_1}{\Gamma(pl_1 - \beta}\right]^{\frac{q}{pq-1}},$$

$$C_{2,\alpha,\beta} = \left[\frac{\Gamma(ql_2}{\Gamma(ql_2 - \alpha}\right]^{\frac{p}{pq-1}} \left[\frac{\Gamma(pl_1}{\Gamma(pl_1 - \beta}\right]^{\frac{1}{pq-1}},$$

where

$$l_1 = \frac{q\beta + \alpha}{pq - 1}, \quad l_2 = \frac{p\alpha + \beta}{pq - 1}.$$

Theorem 1 is valid without the constrain (15). For, we conclude in the proof by using the estimate

$$v_0 \leq C_v T^s$$

with the power $s < 0$ as in the line 4 from bottom page 289.

For the case $1 < \alpha$, $\beta > 2$, it is the system

$$u'(t) + D^{\alpha}_{0+}(u - u_0 - tu_{1,0} = |v|^q, \quad t > 0,$$

$$v'(t) + D^{\beta}_{0+}(v - v_0 - tv_{1,0} = |u|^p, \quad t > 0,$$

which is considered.