NOTES

The following statement, corresponding to Step 1 in the proof of Lemma 2.6 of the EJP paper, is correct, by looking at things separately.

If $f(x) = f_1(x) + t^{\tilde{\beta}-1} f_2(x)$ with $f_1, f_2 \in \mathcal{P}$, then there exists $h \in \mathcal{P}$ such that $|T_t f| \le e^{-\delta t} h$ for all $t \ge 1$, where

$$\delta = (\inf\{|\tilde{\beta}\alpha - |p|b| : p \in \mathbb{Z}_+^d, \langle f_1, \phi_p \rangle \neq 0\}) \wedge (\inf\{|\tilde{\beta}\alpha - |p|b| : p \in \mathbb{Z}_+^d, \langle f_2, \phi_p \rangle \neq 0\}).$$

The statement of Lemma 2.9 of the EJP paper can be changed to the following form with proof basically unchanged.

Lemma 2.9 Suppose that $g(x) = g_1(x) + t^{\tilde{\beta}-1} g_2(x)$ with $g_1, g_2 \in \mathcal{P}$. Then there exists $h \in \mathcal{P}^+$ such that for all $f \in \mathcal{P}_g = \{\theta_n T_n g : n \in \mathbb{Z}_+, \theta \in [-1, 1]\}$ and $t \ge 1$, we have $|P_t(Z_1 f - \langle Z_1 f, \varphi \rangle)| \le e^{-bt} h$.

I am proposing to change the statement of Proposition 3.5 to the following form:

Proposition 3.5 Fro all $\mu \in \mathcal{M}_c(\mathbb{R}^d)$ and $g(x) = g_1(x) + t^{\tilde{\beta}-1} g_2(x)$ with $g_1, g_2 \in \mathcal{P}$, there exist $C, \delta > 0$ such that for all $t \ge 1$ and $f \in \mathcal{P}_g := \{\theta T_n g : n \in \mathbb{Z}_+, \theta \in [-1, 1]\}$, we have

$$\mathbb{P}_\mu \left[|\mathbb{P}_\mu[e^{iv_t^f} - e^{\langle Z_1 f, \varphi \rangle}; D^c | \mathcal{F}_t| \right] \le C e^{-\delta t}.$$

I think that the proof stays the same.