

# STABILITY CONSTANT OF THE WEAK\*-FPP FOR DUAL OF SEPARABLE LINDENSTRAUSS SPACE

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ABSTRACT. Let  $X$  be a predual of  $\ell_1$  such that  $X^*$  has the w\*-fpp (see [3]). We introduce two constants:

$$r^*(X) = \inf \{r > 0 : (\text{ext}(B_{\ell_1}))' \subset rB_{\ell_1}\}$$
$$\gamma^*(X) = \sup \{\gamma \geq 1 : \text{every } Y^* \text{ has } \sigma(Y^*, Y)\text{-fpp whenever } d(X, Y) \leq \gamma\}.$$

It is well-known that if  $r^*(X) = 0$ , then  $X = c_0$  and by results of Soardi [6] and Lim [5] we have  $\gamma^*(c_0) = 2$ . From Theorem 3.4 in [4] we know that if  $r^*(X) = 1$ , then  $\gamma^*(X) = 1$ . Further, if  $r^*(X) \in (0, 1)$  then the inequality  $\gamma^*(X) \geq \frac{2}{1+r^*(X)}$  follows from the proof of Theorem 3.4 in [4]. We shall prove that if  $r^*(X) \in (0, 1)$ , then  $\gamma^*(X) \leq \frac{2}{1+r^*(X)}$ .

## REFERENCES

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