

# QUANTIFIER ELIMINATION IN SHELAH-SPENCER GRAPHS

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ABSTRACT. We simplify [?] proof of quantifier elimination in Shelah-Spencer graphs.

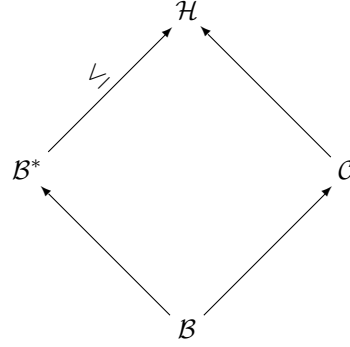
## 1. INTRODUCTION

Laskowski's paper [?] provides a combinatorial proof of quantifier elimination in Shelah-Spencer graphs. Here we provide a simplification of the proof using only maximal chains and avoiding technical lemmas of sections 3 and 4.

## 2. PROOF

**Definition 2.1.** Fix  $\mathcal{B} \in \mathbf{K}_\alpha$ ,  $\Phi, \Gamma$  finite subsets of  $\mathbf{K}_\alpha$ , and  $m \in \omega$  such that for each  $\mathcal{C} \in \Phi$  or  $\mathcal{C} \in \Gamma$  we have  $\mathcal{B} \subseteq \mathcal{C}$  and  $|C \setminus B| < m$ . Define  $Z(\mathcal{B}, \Phi, \Gamma, m)$  to be all  $\mathcal{B}^* \in X_m(\mathcal{B})$  such that

- (1) For every  $\mathcal{C} \in \Phi$  there are no  $\mathcal{H}$  with  $|H \setminus C^*| < m$  satisfying



- (2) For every  $\mathcal{D} \in \Gamma$  there is some  $\mathcal{G}$  with  $|G \setminus B^*| < m$  satisfying

## REFERENCES

- [1] Klaus-Peter Podewski and Martin Ziegler. Stable graphs. *Fund. Math.*, 100:101-107, 1978.
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- [3] P. Simon, *On dp-minimal ordered structures*, J. Symbolic Logic 76 (2011), no. 2, 448460.  
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