

# Are ground combat zones equivalent to space combat zones

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## Abstract

It is thought by many that Space combat zones (CZs) are more impactful than ground CZs. We are going to test 3 low ground CZs versus 3 space low CZs.

*Keywords:* bgs, combat zones, space, ground

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## 1. Introduction

After Odyssey's launch in May 2021, it was often thought that space CZs have more impact on winning the war. Instead, the mechanism seems to be that the most number of objectives won makes the most difference. We know one of the objectives is the win condition, but there are other objectives as well:

- Space CZs have Spec Ops / Protect / Kill objectives
- Ground CZs have capture base objectives
- (Shared) Fighting in *all* CZs and winning a day as a result will likely move the assets fought the most to the winning side.

## 2. Methods

To investigate this in a way that can be reproducible, the experiment is designed to run both sides of the war, with the following caveats:

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- The two factions at war must be present, not controlling factions<sup>1</sup>
- The two factions' influence should not exceed 25%<sup>2</sup>
- There must be space and ground CZs of equal value (i.e. low, medium, or high)
- If multiple CZ locations, we only ran the CZs at the same location with the same rating.<sup>3</sup>
- On any particular day, we will only run one rating of CZ (low, medium, or high) in case of hidden bonuses due to objectives

Three low CZs

Data: - Objectives completed (bases, captured, etc) - how long it took over the three runs - Results

Table 1: Probability to observe Bayes Factors of a certain magnitude or above for the used sample-size of  $N = 60$  assuming the original and the null-hypothesis.

Hypothesis	BF Type	$P(\text{BF} \geq \theta)$		
		$\theta = 3$	$\theta = 10$	$\theta = 20$
$d \sim \mathcal{N}(1.57, 0.51)$	JZS $\text{BF}_{10}$	0.98	0.97	0.96
	Replication $\text{BF}_{10}$	0.98	0.96	0.96
	Meta-Analysis $\text{BF}_{10}$	0.99	0.99	0.99
$d = 0$	JZS $\text{BF}_{01}$	0.81	0.00	0.00
	Replication $\text{BF}_{01}$	0.98	0.95	0.91
	Meta-Analysis $\text{BF}_{01}$	0.63	0.27	0.06

### 3. Results

### 4. Discussion

### Acknowledgements

We'd like to thank the ED BGS Discord Server for looking over these results and providing fearless and frank advice.

<sup>1</sup>We do not want to change the controller of any system, just observe the outcome of day or days of war

<sup>2</sup>This is to ensure that the mechanism by which lower factions have boosts are canceled out, and the movement will be larger if there is a difference.

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### **Author contributions statement**

A.V. conceived the experiment(s), A.V. and Cmdr Infir conducted the experiment(s), TBA analysed the results. All authors reviewed the manuscript.