



## MONOTONE ALGEBRAS

### Why

TODO: changed to subset system

Closure under monotone limits is a weaker condition than that included in the definition of sigma algebras, but is sufficient if the set is also an algebra. TODO: why

### Result

If a subset algebra is a monotone space, then it is a countably summable subset algebra.

**PROPOSITION 1.** *A subset algebra is a countably summable if either:*

- 1. the limit of a nondecreasing sequence of distinguished sets is distinguished*
- 2. the limit of a nonincreasing sequence of distinguished sets is distinguished.*

*Proof.* TODO

□

