3°. $(\mathfrak{A}, \mathfrak{Z})$ is a filtered complete lattice filtrator with down-aligned, binarily meet-closed, separable core which is a complete boolean lattice.

4°. $a^* = \overline{\operatorname{Cor} a} = \overline{\operatorname{Cor}' a}$ for every $a \in \mathfrak{A}$.

PROOF.

1°⇒2° Obvious.

2°⇒3° It is filtered by theorem 531. It is complete lattice filtrator by 515. It is with binarily meet-closed core (proposition 533), with separable core (theorem 534).

3°⇒4° Our filtrator is with join-closed core (theorem 531). $a^* = \bigsqcup^{\mathfrak{A}}\left\{ \frac{c \in \mathfrak{A}}{c \sqcap^{\mathfrak{A}} a = \bot^{\mathfrak{A}}} \right\}$. But $c \sqcap^{\mathfrak{A}} a = \bot^{\mathfrak{A}} \Rightarrow \exists C \in \operatorname{up} c : C \sqcap^{\mathfrak{A}} a = \bot^{\mathfrak{A}}$. So

$$a^* = \bigsqcup^{\mathfrak{A}}\left\{ \frac{C \in \mathfrak{Z}}{C \sqcap^{\mathfrak{A}} a = \bot^{\mathfrak{A}}} \right\} = \bigsqcup^{\mathfrak{A}}\left\{ \frac{C \in \mathfrak{Z}}{a \sqsubseteq \overline{C}} \right\} = \bigsqcup^{\mathfrak{A}}\left\{ \frac{\overline{C}}{C \in \mathfrak{Z}, a \sqsubseteq C} \right\} = \bigsqcup^{\mathfrak{A}}\left\{ \frac{\overline{C}}{C \in \operatorname{up} a} \right\} = \bigsqcup^{\mathfrak{Z}}\left\{ \frac{\overline{C}}{C \in \operatorname{up} a} \right\} = \overline{\bigsqcap^{\mathfrak{Z}}\left\{ \frac{C}{C \in \operatorname{up} a} \right\}} = \overline{\bigsqcap^{\mathfrak{Z}} \operatorname{up} a} = \overline{\operatorname{Cor} a}$$

(used lemma 548).

$\operatorname{Cor} a = \operatorname{Cor}' a$ by theorem 542. □

THEOREM 592. The following is an implications tuple:

1°. $(\mathfrak{A}, \mathfrak{Z})$ is a powerset filtrator.

2°. $(\mathfrak{A}, \mathfrak{Z})$ is a primary filtrator over a complete boolean lattice.

3°. $(\mathfrak{A}, \mathfrak{Z})$ is a filtered down-aligned and up-aligned complete lattice filtrator with binarily meet-closed, separable and co-separable core which is a complete boolean lattice.

4°. $a^* = a^+ = \overline{\operatorname{Cor} a} = \overline{\operatorname{Cor}' a} \in \mathfrak{Z}$ for every $a \in \mathfrak{A}$.

PROOF.

1°⇒2°. Obvious.

2°⇒3°. The filtrator $(\mathfrak{A}, \mathfrak{Z})$ is filtered by the theorem 531. $\mathfrak{A}$ is a complete lattice by corollary 515. $(\mathfrak{A}, \mathfrak{Z})$ is with co-separable core by theorem 587. $(\mathfrak{A}, \mathfrak{Z})$ is binarily meet-closed by proposition 533, with separable core by theorem 534.

3°⇒4°. Comparing two last theorems.

□

THEOREM 593. The following is an implications tuple:

1°. $(\mathfrak{A}, \mathfrak{Z})$ is a primary filtrator over a complete lattice.