Proof. By theorem 366. □

Proposition 448. $\operatorname{Cor}' a = \operatorname{Cor} a = \uparrow^{\operatorname{Base}(a)} \bigcap a$ for every filter a on a set.

Proof. By proposition 367. □

Proposition 449. $\operatorname{Cor} a \sqsubseteq a$ for every filter a on a set.

Proof. By proposition 368. □

Proposition 450. $\operatorname{Cor} a = \max \operatorname{down} a$ for every filter a on a set.

Proof. By proposition 369. □

Proposition 451. For the lattice $\mathfrak{F}$ of filters on a set $\mathfrak{U}$, $\mathcal{A} \in \mathfrak{F}$, $B \in \mathfrak{P}$ we have:

1°. $B \asymp^{\mathfrak{F}} \mathcal{A} \Leftrightarrow \overline{B} \sqsupseteq \mathcal{A}$;
2°. $B \equiv^{\mathfrak{F}} \mathcal{A} \Leftrightarrow \overline{B} \sqsubseteq \mathcal{A}$.

Proof. By theorem 370. □

Proposition 452. $\bigsqcup^{\mathfrak{F}} S = \bigcap S$ for a set S of filters on a powerset.

Proof. By theorem 373. □

Corollary 453. A set of filters on a powerset is always a complete lattice.

Corollary 454. $\mathcal{A} \sqcup \mathcal{B} = \mathcal{A} \cap \mathcal{B}$ for filters $\mathcal{A}$ and $\mathcal{B}$ on a powerset.

Proposition 455. For $S \in \mathscr{P}\mathfrak{F} \setminus \{\emptyset\}$ where $\mathfrak{F}$ are filters on a powerset

$$\bigsqcap^{\mathfrak{F}} S = \left\{ \frac{K_0 \cap \cdots \cap K_n}{K_i \in \bigcup S \text{ where } i = 0, \dots, n \text{ for } n \in \mathbb{N}} \right\}.$$

Proof. By theorem 377. □

Proposition 456. For every $\mathcal{F}_0, \dots, \mathcal{F}_m$ $(m \in \mathbb{N})$ where $\mathfrak{F}$ are filters on a powerset

$$\mathcal{F}_0 \sqcap^{\mathfrak{F}} \cdots \sqcap^{\mathfrak{F}} \mathcal{F}_m = \left\{ \frac{K_0 \cap \cdots \cap K_m}{K_i \in \mathcal{F}_i \text{ where } i = 0, \dots, m} \right\}.$$

Proof. By theorem 378. □

Proposition 457. If $\mathcal{A} \in \mathfrak{F}$ and $S \in \mathscr{P}\mathfrak{F}$ where $\mathfrak{F}$ are filters on a powerset then

$$\mathcal{A} \sqcup^{\mathfrak{F}} \bigsqcap^{\mathfrak{F}} S = \bigsqcap^{\mathfrak{F}} \langle \mathcal{A} \sqcup^{\mathfrak{F}} \rangle^* S.$$

Proof. By theorem 380. □

Corollary 458. The poset of filters on a powerset is a distributive lattice.

Corollary 459. The poset of filters on a powerset is a co-brouwerian lattice.

Proposition 460. $a \setminus^{\mathfrak{F}} B = a \sqcap^{\mathfrak{F}} \overline{B}$ for every $a \in \mathfrak{F}$, $B \in \mathfrak{P}$ (where $\mathfrak{F}$ is filters on a powerset and the complement is taken on $\mathfrak{P}$).

Proof. By theorem 383. □

Proposition 461. Let $\mathfrak{F}$ be the poset of filters on a powerset. $A \sqcap^{\mathfrak{F}} \bigsqcup^{\mathfrak{F}} S = \bigsqcup^{\mathfrak{F}} \langle A \sqcap^{\mathfrak{F}} \rangle^* S$ for every $A \in \mathfrak{P}$ and every set $S \in \mathscr{P}\mathfrak{F}$.

Proof. By theorem 385. □