A topological representation of residuation subreducts of residuated integral pogroupoids

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A partially ordered (left) residuated integral groupoid, or polrig, is an algebra $(A, \cdot, \to, 1)$, where $(A, \cdot, 1)$ is a pogroupoid with unit 1, which is also the largest element in A, and $x \leq y \to z$ iff $x \cdot y \leq z$. A residuation subreduct of A is any subalgebra of the reduct $(A, \to, 1)$. We describe the quasivariety **qBCC** of all residuation subreducts of polrigs, and show that every algebra $B \in \mathbf{qBCC}$ is dually isomorphic to a compact basis for a topology on the space of irreducible upper cones of B.