

## Exercises

E8.70 [2B7] Prerequisites: [06P], [230]. Difficulty: \*\*.

Let  $(Y, \sigma)$  be a Hausdorff topological space. Let  $J$  be a filtering set and  $x : J \rightarrow Y$  be a net in  $Y$ . For every  $\alpha \in J$  define  $E_\alpha \stackrel{\text{def}}{=} \{x_\beta : \beta \in J, \beta \geq \alpha\}$  and

$$E = \bigcap_{\alpha \in J} \overline{E_\alpha}$$

Prove that  $E$  coincides with the set  $L$  of limit points (defined in [2B4]).

**Solution 1.** [2FK]