

es-atom-lemma2^{0,22}

$\forall es:ES, a:Atom1, e:E.$

e sends a

$\Rightarrow \text{loc}(e) \gg a$

$\vee (\exists e':E. (e' < e) \ \& \ e' \text{ sends } a \text{ to } \text{loc}(e))$

$\vee (\text{state when } \text{es-init}(es;e):\text{state}@loc(\text{es-init}(es;e)) \gg a$