Claim 1. *Let*

$$m = \Lambda^{-1} K_{uu}^{-1} K_{uf}\, y\, \sigma^{-2} \tag{1}$$
$$A = L^{-1} K_{uf}\, \sigma^{-1} \tag{2}$$
$$B = L_B L_B^{\intercal} \tag{3}$$
$$c = L_B^{-1} A\, y\, \sigma^{-1} \tag{4}$$

given

$$K_{uu}^{-1} \Lambda^{-1} K_{uu}^{-1} = L^{-\intercal} B^{-1} L^{-1} \tag{5}$$

then

$$K_{uu}^{-1} m = L^{-T} L_B^{-T} c$$

Proof.

$$\begin{aligned} K_{uu}^{-1} m &= K_{uu}^{-1} \Lambda^{-1} K_{uu}^{-1} K_{uf}\, y\, \sigma^{-2} && (6)\\ &= L^{-\intercal} B^{-1} L^{-1} K_{uf}\, y\, \sigma^{-2} && (7)\\ &= L^{-\intercal} B^{-1} A\, y\, \sigma^{-1} && (8)\\ &= L^{-\intercal} L_B^{-\intercal} L_B^{-1} A\, y\, \sigma^{-1} && (9)\\ &= L^{-\intercal} L_B^{-\intercal} c && (10) \end{aligned}$$

Notes:

- In Eq. 6 we used Eq. 1,
- Eq. 7 employed Eq. 5.
- Eq. 2 was used in Eq. 8,
- from Eq. 3 follows that $B^{-1} = L_B^{-\intercal} L_B^{-1}$, which was used in Eq. 9.
- Eq. 10 used Eq. 4.

□