Arrows only in literals

Suppose $\Gamma \models \mathrm{AI}^{\Delta}(C)$. We show:

- if in the original clause set, a variable occurs grey and colored in a literal, whatever is contained at the position of the grey occurrence is quantified before whatever is contained at the position of the colored literal.

(2) Quantifier order among other lifting variables is not relevant.

This shows that $\Gamma \models \mathrm{AI}(C)$.
Ad 1)

Conjectured Proposition 1 (Witness terms)**.**

Proof. cf. examples.
* for $P(u, f(u))$, to show $\forall u \exists x_1 P(u, x_1)$, u must be contained in the witness term. Hence we can not prove $\exists x_1 \forall u P(y, x_1)$ (this is not valid).
* for $P(x, f(u)) \vee Q(u)$, to show $\exists x_1 \forall x \forall u (P(x, x_1) \vee Q(u))$, u does not need to be (can not be?) contained in the witness term. $\forall x \forall y \exists x_1 (P(x, x_1) \vee Q(u))$ is easy to see (as above). □