```
not_all  THM

⊢  ∀T:S, P:(T→Prop). ¬(∀x:T. P(x)) ⟺ (∃x:T. ¬P(x))
| by RewriteOfThm
|    Thm* ∀T:S, P:(T→𝔹). ¬₂(∀_b x:T. P(x)) = (∃_b x:T. ¬₂P(x))
|    {bnot_ball}
|    (SimpsetC [‘bequal‘])
|
1. ∀T:S, P:(T→𝔹). ¬(∀x:T. P(x)) ⟺ (∃x:T. ¬P(x))
⊢  ∀T:S, P:(T→Prop). ¬(∀x:T. P(x)) ⟺ (∃x:T. ¬P(x))
  by (RepeatMFor 2 (Analyze 0)) THEN (Unab [‘so_apply‘])
     THEN
     (InstHyp [T;λx.↓_b(P(x))] 1)
     THEN
     Simp
END
```