

# AGT axioms

# AGT problems

**AGT001+1.p** Problem for the CPlanT system

```
include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
accept_team(countryamedicalorganization, countryacivilorganization, towna, n6) fof(query1, conjecture)
```

**AGT001+2.p** Problem for the CPlanT system

```
include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
accept_team(countryamedicalorganization, countryacivilorganization, towna, n6) fof(query1, conjecture)
```

**AGT002+1.p** Problem for the CPlanT system

```
include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
¬ accept_team(christiansufferterrahumanitarianorganization, sufferterrategovernment, towna, n6) fof(query2, conjecture)
```

**AGT002+2.p** Problem for the CPlanT system

```
include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
¬ accept_team(christiansufferterrahumanitarianorganization, sufferterrategovernment, towna, n6) fof(query2, conjecture)
```

**AGT003+1.p** Problem for the CPlanT system

```
include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
accept_team(christiansufferterrahumanitarianorganization, countryafirstaidorganization, towna, n5) fof(query3, conjecture)
```

**AGT003+2.p** Problem for the CPlanT system

```
include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
accept_team(christiansufferterrahumanitarianorganization, countryafirstaidorganization, towna, n5) fof(query3, conjecture)
```

**AGT004+1.p** Problem for the CPlanT system

```
include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
¬ accept_team(countryamedicalorganization, countryahumanitarianorganization, coastvillage, n5) fof(query4, conjecture)
```

**AGT004+2.p** Problem for the CPlanT system

```
include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
¬ accept_team(countryamedicalorganization, countryahumanitarianorganization, coastvillage, n5) fof(query4, conjecture)
```

**AGT005+1.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
accept_team(christiansufferterrahumanitarianorganization, countryafirstaidorganization, towna, n3)      fof(query5, conjecture)

```

**AGT005+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
accept_team(christiansufferterrahumanitarianorganization, countryafirstaidorganization, towna, n3)      fof(query5, conjecture)

```

**AGT006+1.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
accept_team(countrybcivilorganization, countrybhumanitarianorganization, suffertown, n4)      fof(query6, conjecture)

```

**AGT006+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
accept_team(countrybcivilorganization, countrybhumanitarianorganization, suffertown, n4)      fof(query6, conjecture)

```

**AGT007+1.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
accept_team(countrybcivilorganization, countrybhumanitarianorganization, townb, n3)      fof(query7, conjecture)

```

**AGT007+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
accept_team(countrybcivilorganization, countrybhumanitarianorganization, townb, n3)      fof(query7, conjecture)

```

**AGT008+1.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
¬ accept_team(countryamedicalorganization, countryafirstaidorganization, sunsetpoint, n6)      fof(query8, conjecture)

```

**AGT008+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
¬ accept_team(countryamedicalorganization, countryafirstaidorganization, sunsetpoint, n6)      fof(query8, conjecture)

```

**AGT009+1.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')

```

include('Axioms/NUM005+1.ax')  
 $\neg \text{accept\_team}(\text{muslimcountrybhumanitarianorganization}, \text{countrybhumanitarianorganization}, \text{citya}, n_2)$  fof(query<sub>9</sub>, conjecture)

**AGT009+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\neg \text{accept\_team}(\text{muslimcountrybhumanitarianorganization}, \text{countrybhumanitarianorganization}, \text{citya}, n_2)$  fof(query9, conjecture)
  
```

**AGT010+1.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\neg \text{accept\_population}(\text{countryamedicalorganization}, \text{native}, n_{85})$  fof(query10, conjecture)
  
```

**AGT010+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\neg \text{accept\_population}(\text{countryamedicalorganization}, \text{native}, n_{85})$  fof(query10, conjecture)
  
```

**AGT011+1.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\neg \text{accept\_population}(\text{countryamedicalorganization}, \text{native}, n_{100})$  fof(query11, conjecture)
  
```

**AGT011+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\neg \text{accept\_population}(\text{countryamedicalorganization}, \text{native}, n_{100})$  fof(query11, conjecture)
  
```

**AGT012+1.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\neg \text{accept\_population}(\text{muslimcountrybhumanitarianorganization}, \text{christian}, n_{24})$  fof(query12, conjecture)
  
```

**AGT012+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\neg \text{accept\_population}(\text{muslimcountrybhumanitarianorganization}, \text{christian}, n_{24})$  fof(query12, conjecture)
  
```

**AGT013+1.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\neg \text{accept\_population}(\text{muslimcountrybhumanitarianorganization}, \text{christian}, n_{25})$  fof(query13, conjecture)
  
```

**AGT013+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
  
```

```

include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
¬accept_population(muslimcountrybhumanitarianorganization, christian, n25)      fof(query13, conjecture)

```

**AGT014+1.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
∃x, y, z: ¬accept_population(x, y, z)      fof(query14, conjecture)

```

**AGT014+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
∃x, y, z: ¬accept_population(x, y, z)      fof(query14, conjecture)

```

**AGT015+1.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
∃x, y: ¬accept_city(x, y)      fof(query15, conjecture)

```

**AGT015+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
∃x, y: ¬accept_city(x, y)      fof(query15, conjecture)

```

**AGT016+1.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
∃x, y: ¬accept_population(muslimcountrybhumanitarianorganization, x, y)      fof(query16, conjecture)

```

**AGT016+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
∃x, y: ¬accept_population(muslimcountrybhumanitarianorganization, x, y)      fof(query16, conjecture)

```

**AGT017+1.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
∃x: ¬accept_city(muslimcountrybhumanitarianorganization, x)      fof(query17, conjecture)

```

**AGT017+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')

```

$\exists x: \neg \text{accept\_city}(\text{muslimcountrybhumanitarianorganization}, x) \quad \text{fof(query}_{17}\text{, conjecture)}$

**AGT018+1.p** Problem for the CPlanT system

```
include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
```

$\exists x: \neg \text{accept\_population}(x, \text{christian}, n_{24}) \quad \text{fof(query}_{18}\text{, conjecture)}$

**AGT018+2.p** Problem for the CPlanT system

```
include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
```

$\exists x: \neg \text{accept\_population}(x, \text{christian}, n_{24}) \quad \text{fof(query}_{18}\text{, conjecture)}$

**AGT019+1.p** Problem for the CPlanT system

```
include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
```

$\exists x, y: \neg \text{accept\_population}(x, y, n_{24}) \quad \text{fof(query}_{19}\text{, conjecture)}$

**AGT019+2.p** Problem for the CPlanT system

```
include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
```

$\exists x, y: \neg \text{accept\_population}(x, y, n_{24}) \quad \text{fof(query}_{19}\text{, conjecture)}$

**AGT020+1.p** Problem for the CPlanT system

```
include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
```

$\exists x, y: \neg \text{accept\_population}(x, \text{christian}, y) \quad \text{fof(query}_{20}\text{, conjecture)}$

**AGT020+2.p** Problem for the CPlanT system

```
include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
```

$\exists x, y: \neg \text{accept\_population}(x, \text{christian}, y) \quad \text{fof(query}_{20}\text{, conjecture)}$

**AGT021+1.p** Problem for the CPlanT system

```
include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
```

$\exists x: \neg \text{accept\_city}(x, \text{sunsetpoint}) \quad \text{fof(query}_{21}\text{, conjecture)}$

**AGT021+2.p** Problem for the CPlanT system

```
include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
```

$\exists x: \neg \text{accept\_city}(x, \text{sunsetpoint}) \quad \text{fof(query}_{21}\text{, conjecture)}$

**AGT022+1.p** Problem for the CPlanT system

```
include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
```

```

include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\exists x, y: \neg \text{accept\_population}(x, \text{native}, y) \quad \text{fof(query}_{22}, \text{conjecture})$ 

```

**AGT022+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\exists x, y: \neg \text{accept\_population}(x, \text{native}, y) \quad \text{fof(query}_{22}, \text{conjecture})$ 

```

**AGT023+1.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\exists x: \neg \text{accept\_city}(x, \text{citya}) \quad \text{fof(query}_{23}, \text{conjecture})$ 

```

**AGT023+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\exists x: \neg \text{accept\_city}(x, \text{citya}) \quad \text{fof(query}_{23}, \text{conjecture})$ 

```

**AGT024+1.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\exists x: \neg \text{accept\_population}(x, \text{christian}, n_{25}) \quad \text{fof(query}_{24}, \text{conjecture})$ 

```

**AGT024+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\exists x: \neg \text{accept\_population}(x, \text{christian}, n_{25}) \quad \text{fof(query}_{24}, \text{conjecture})$ 

```

**AGT025+1.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\exists x, y: \neg \text{accept\_population}(x, y, n_{25}) \quad \text{fof(query}_{25}, \text{conjecture})$ 

```

**AGT025+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\exists x, y: \neg \text{accept\_population}(x, y, n_{25}) \quad \text{fof(query}_{25}, \text{conjecture})$ 

```

**AGT026+1.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\exists x, y: \neg \text{accept\_population}(x, y, n_{100}) \quad \text{fof(query}_{26}, \text{conjecture})$ 

```

**AGT026+2.p** Problem for the CPlanT system

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')
include('Axioms/NUM005+0.ax')
include('Axioms/NUM005+1.ax')
 $\exists x, y: \neg \text{accept\_population}(x, y, n_{100}) \quad \text{fof(query}_{26}, \text{conjecture})$ 

```

**AGT027^1.p** Two different degrees of belief

```

include('Axioms/LCL013^0.ax')
a1: $i → $i → $o      thf(a1, type)
a2: $i → $i → $o      thf(a2, type)
a: mu      thf(a, type)
tom: mu      thf(tom, type)
p: mu → $i → $o      thf(p, type)
q: mu → $i → $o      thf(q, type)
r: mu → $i → $o      thf(r, type)
s: mu → $i → $o      thf(s, type)
mvalid@(mforall_ind@λx: mu: (mbox@a2@(mimplies@(mdia@a2@(q@x))@(p@x))))      thf(axiom_a1, axiom)
mvalid@(mforall_ind@λx: mu: (mbox@a1@(mimplies@(mand@(r@x)@(s@x))@(q@x))))      thf(axiom_a2, axiom)
mvalid@(mforall_ind@λx: mu: (mbox@a1@(mimplies@(s@x)@(mbox@a1@(r@x))))))      thf(axiom_a3, axiom)
mvalid@(mdia@a1@(s@a))      thf(axiom_a4, axiom)
mvalid@(mforall_prop@λphi: $i → $o: (mimpires@(mbox@a1@phi)@(mnot@(mbox@a1@(mnot@phi))))))      thf(axiom_D_for_a1_a1, axiom)
mvalid@(mforall_prop@λphi: $i → $o: (mimpires@(mbox@a2@phi)@(mnot@(mbox@a2@(mnot@phi))))))      thf(axiom_D_for_a1_a2, axiom)
mvalid@(mforall_prop@λphi: $i → $o: (mimpires@(mbox@a2@phi)@(mbox@a1@phi)))      thf(axiom_I_for_a2_a1, axiom)
mvalid@(mforall_prop@λphi: $i → $o: (mimpires@(mbox@a1@phi)@(mbox@a1@(mbox@a1@phi))))      thf(axiom_4s_for_a1_a1, axiom)
mvalid@(mforall_prop@λphi: $i → $o: (mimpires@(mbox@a1@phi)@(mbox@a2@(mbox@a1@phi))))      thf(axiom_4s_for_a1_a2, axiom)
mvalid@(mforall_prop@λphi: $i → $o: (mimpires@(mbox@a2@phi)@(mbox@a1@phi)@(mbox@a2@phi)))      thf(axiom_4s_for_a2_a1, axiom)
mvalid@(mforall_prop@λphi: $i → $o: (mimpires@(mbox@a2@phi)@(mbox@a2@(mbox@a2@phi))))      thf(axiom_4s_for_a2_a2, axiom)
mvalid@(mforall_prop@λphi: $i → $o: (mnot@(mbox@a1@phi)@(mbox@a1@(mnot@(mbox@a1@phi))))))      thf(axiom_4s_for_a1_a1, axiom)
mvalid@(mforall_prop@λphi: $i → $o: (mnot@(mbox@a2@phi)@(mbox@a2@(mnot@(mbox@a2@phi))))))      thf(axiom_4s_for_a1_a2, axiom)
mvalid@(mexists_ind@λx: mu: (mbox@a1@(p@x)))      thf(conj, conjecture)

```

**AGT027^2.p** Two different degrees of belief

```

include('Axioms/LCL013^0.ax')
a1: $i → $i → $o      thf(a1, type)
a2: $i → $i → $o      thf(a2, type)
a: mu      thf(a, type)
tom: mu      thf(tom, type)
p: mu → $i → $o      thf(p, type)
q: mu → $i → $o      thf(q, type)
r: mu → $i → $o      thf(r, type)
s: mu → $i → $o      thf(s, type)
mvalid@(mforall_ind@λx: mu: (mbox@a2@(mimplies@(mdia@a2@(q@x))@(p@x))))      thf(axiom_a1, axiom)
mvalid@(mforall_ind@λx: mu: (mbox@a1@(mimplies@(mand@(r@x)@(s@x))@(q@x))))      thf(axiom_a2, axiom)
mvalid@(mforall_ind@λx: mu: (mbox@a1@(mimplies@(s@x)@(mbox@a1@(r@x))))))      thf(axiom_a3, axiom)
mvalid@(mdia@a1@(s@a))      thf(axiom_a4, axiom)
mvalid@(mforall_prop@λphi: $i → $o: (mimpires@(mbox@a2@phi)@(mbox@a1@phi)))      thf(axiom_I_for_a2_a1, axiom)
mvalid@(mforall_prop@λphi: $i → $o: (mimpires@(mbox@a1@phi)@(mbox@a1@(mbox@a1@phi))))      thf(axiom_4s_for_a1_a1, axiom)
mvalid@(mforall_prop@λphi: $i → $o: (mimpires@(mbox@a1@phi)@(mbox@a2@(mbox@a1@phi))))      thf(axiom_4s_for_a1_a2, axiom)
mvalid@(mforall_prop@λphi: $i → $o: (mimpires@(mbox@a2@phi)@(mbox@a1@phi)@(mbox@a2@phi)))      thf(axiom_4s_for_a2_a1, axiom)
mvalid@(mforall_prop@λphi: $i → $o: (mimpires@(mbox@a2@phi)@(mbox@a2@(mbox@a2@phi))))      thf(axiom_4s_for_a2_a2, axiom)
mvalid@(mforall_prop@λphi: $i → $o: (mnot@(mbox@a2@phi)@(mbox@a2@(mnot@(mbox@a2@phi))))))      thf(axiom_4s_for_a1_a1, axiom)
mvalid@(mforall_prop@λphi: $i → $o: (mnot@(mbox@a1@phi)@(mbox@a1@(mnot@(mbox@a1@phi))))))      thf(axiom_4s_for_a1_a2, axiom)
mvalid@(mexists_ind@λx: mu: (mbox@a1@(p@x)))      thf(conj, conjecture)

```

**AGT042+1.p** Axioms for CPlanT

```

include('Axioms/AGT001+0.ax')
include('Axioms/AGT001+1.ax')
include('Axioms/AGT001+2.ax')

```