BFO 2020 Existence Instantiation Axioms

Particulars exist at some time [nmq-1]

$\forall p\,(particular(p) \rightarrow \exists t\,existsAt(p,t))$

Every universal is instantiated at least once [mbf-1]

$\forall u\,(universal(u) \rightarrow \exists p,t\,instanceOf(p,u,t))$

Exists at is dissective on first argumentwhen it is a continuant [uns-1]

$\forall p,q,r\,(existsAt(p,q) \wedge continuantPartOf(r,p,q) \rightarrow existsAt(r,q))$

Instance of is dissective on third argument, a temporal region [qaf-1]

$\forall p,q,r,s\,(instanceOf(p,q,r) \wedge temporalPartOf(s,r) \rightarrow instanceOf(p,q,s))$

Relata of exists at are particulars. [oap-1]

$\forall i,t\,(existsAt(i,t) \rightarrow particular(i) \wedge particular(t) \wedge instanceOf(t,temporalRegion,t))$

Relata of instance of are particular, universal, temporal region. [lqn-1]

$\forall i,u,t\,(instanceOf(i,u,t) \rightarrow particular(i) \wedge universal(u) \wedge instanceOf(t,temporalRegion,t))$

There is always something that exists [nis-1]

$\forall t\,(instanceOf(t,temporalRegion,t)$
$\rightarrow \exists u,i\,(i{\neq}t \wedge universal(u) \wedge particular(i) \wedge instanceOf(i,u,t)))$

If m is a material entity, then there is some one dimensional temporal region during which m exists [zuw-1]

$\forall m\,(\exists t\,instanceOf(m,materialEntity,t)$
$\rightarrow \exists t\,(instanceOf(t,oneDimensionalTemporalRegion,t) \wedge existsAt(m,t)))$

If you exist you instatiate a universal and vice versa [bee-1]

$\forall a,t\,(\exists u\,(universal(u) \wedge instanceOf(a,u,t) \wedge instanceOf(t,temporalRegion,t))$
$\leftrightarrow particular(a) \wedge instanceOf(t,temporalRegion,t) \wedge existsAt(a,t))$