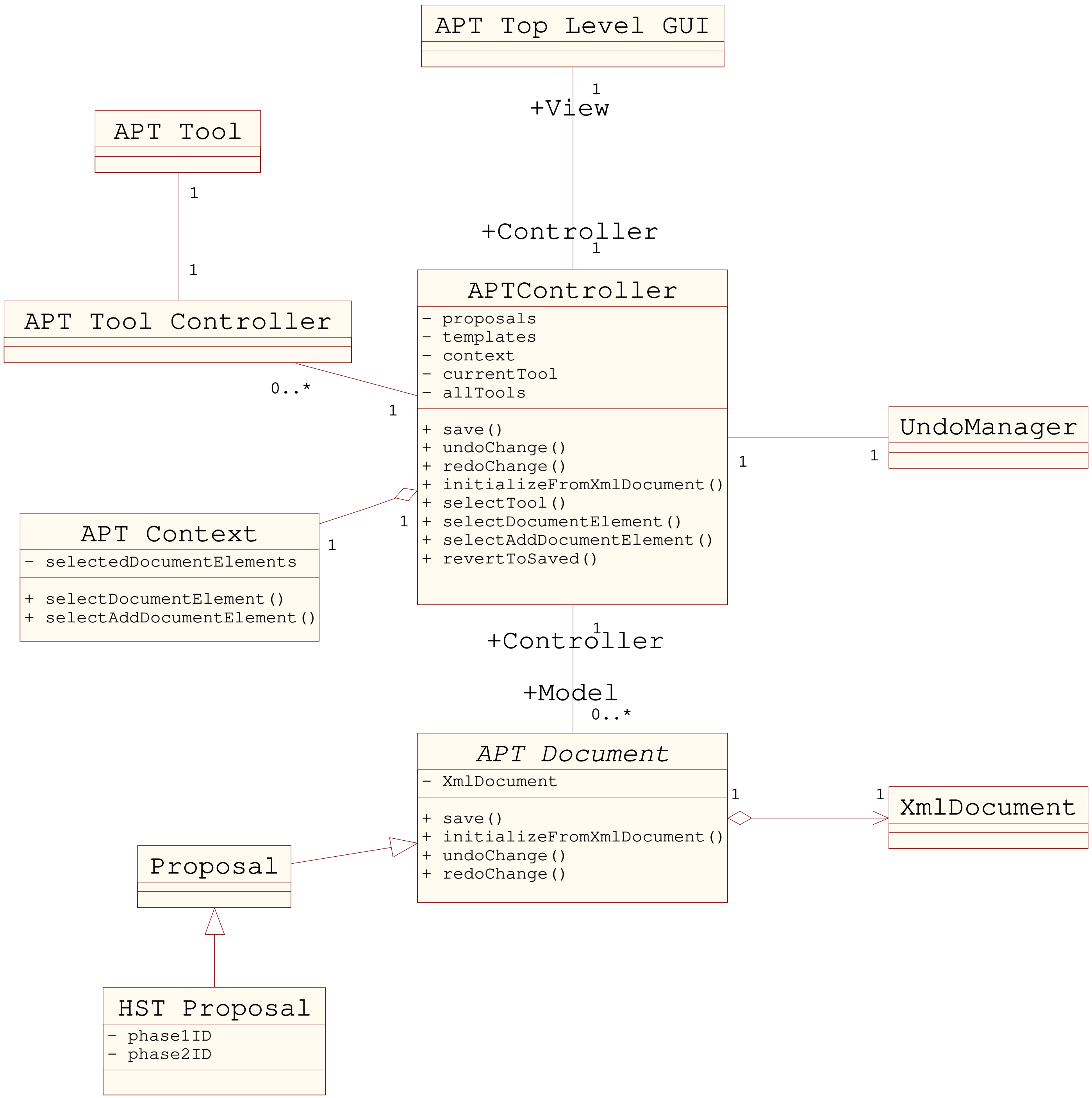
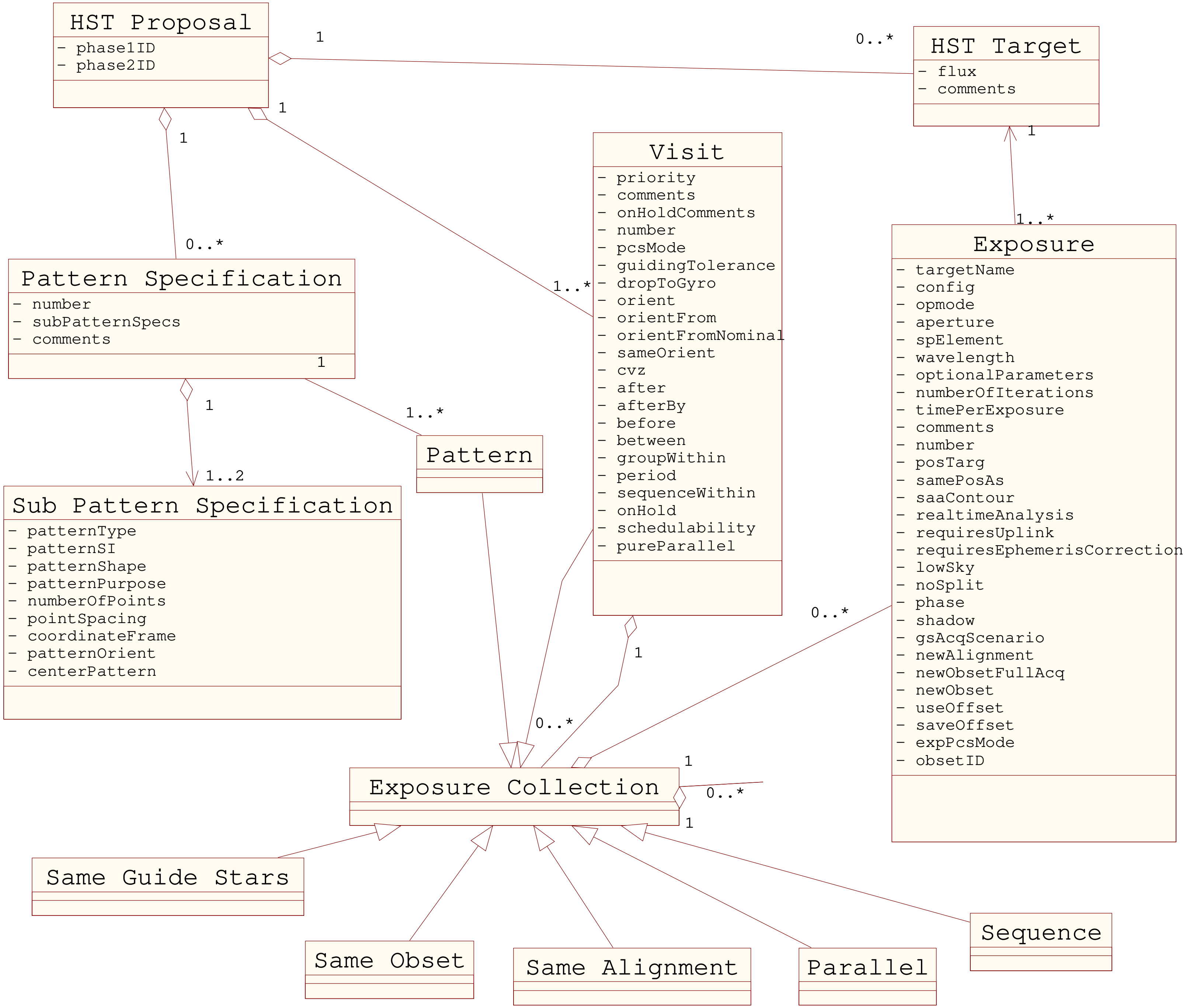
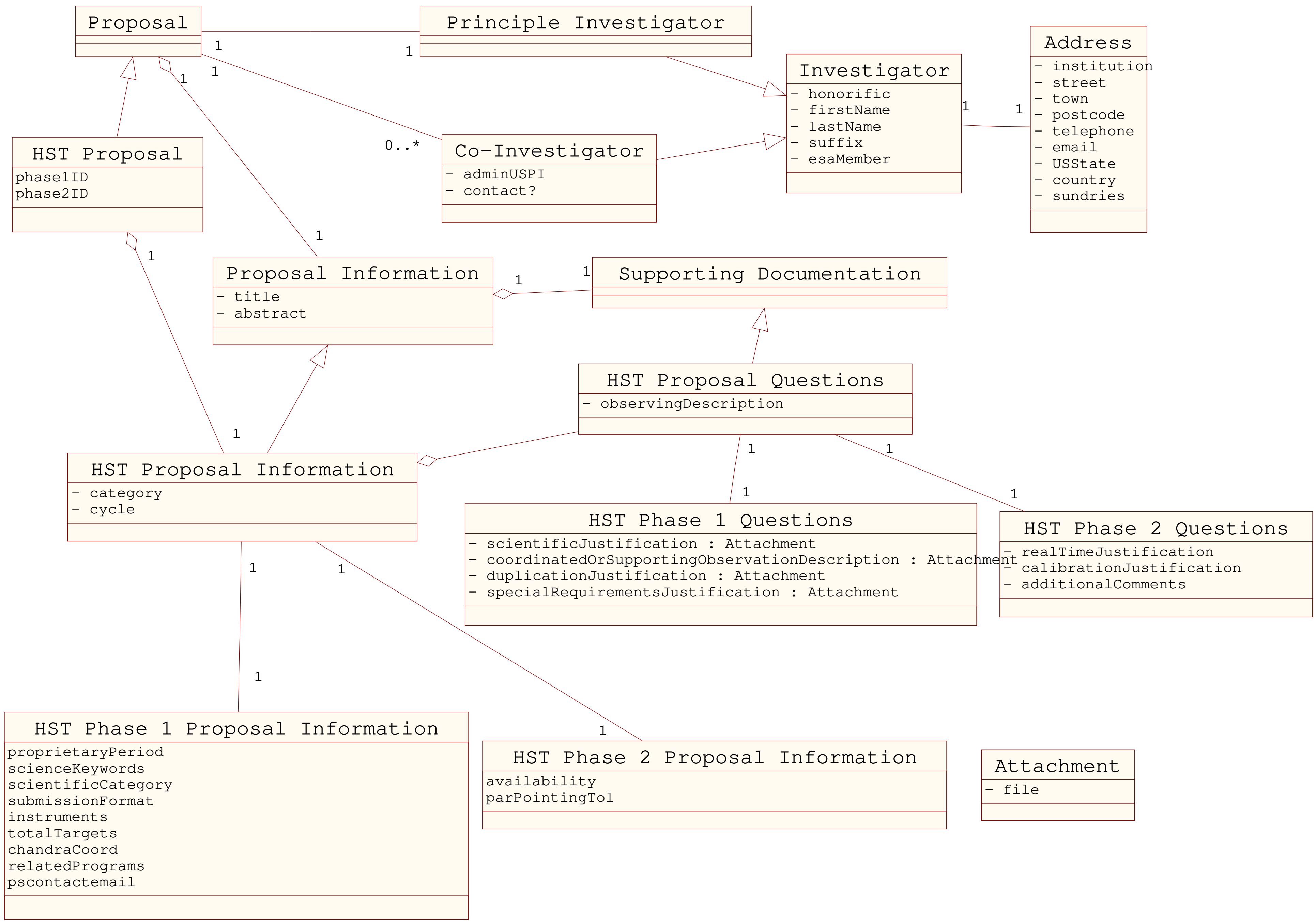
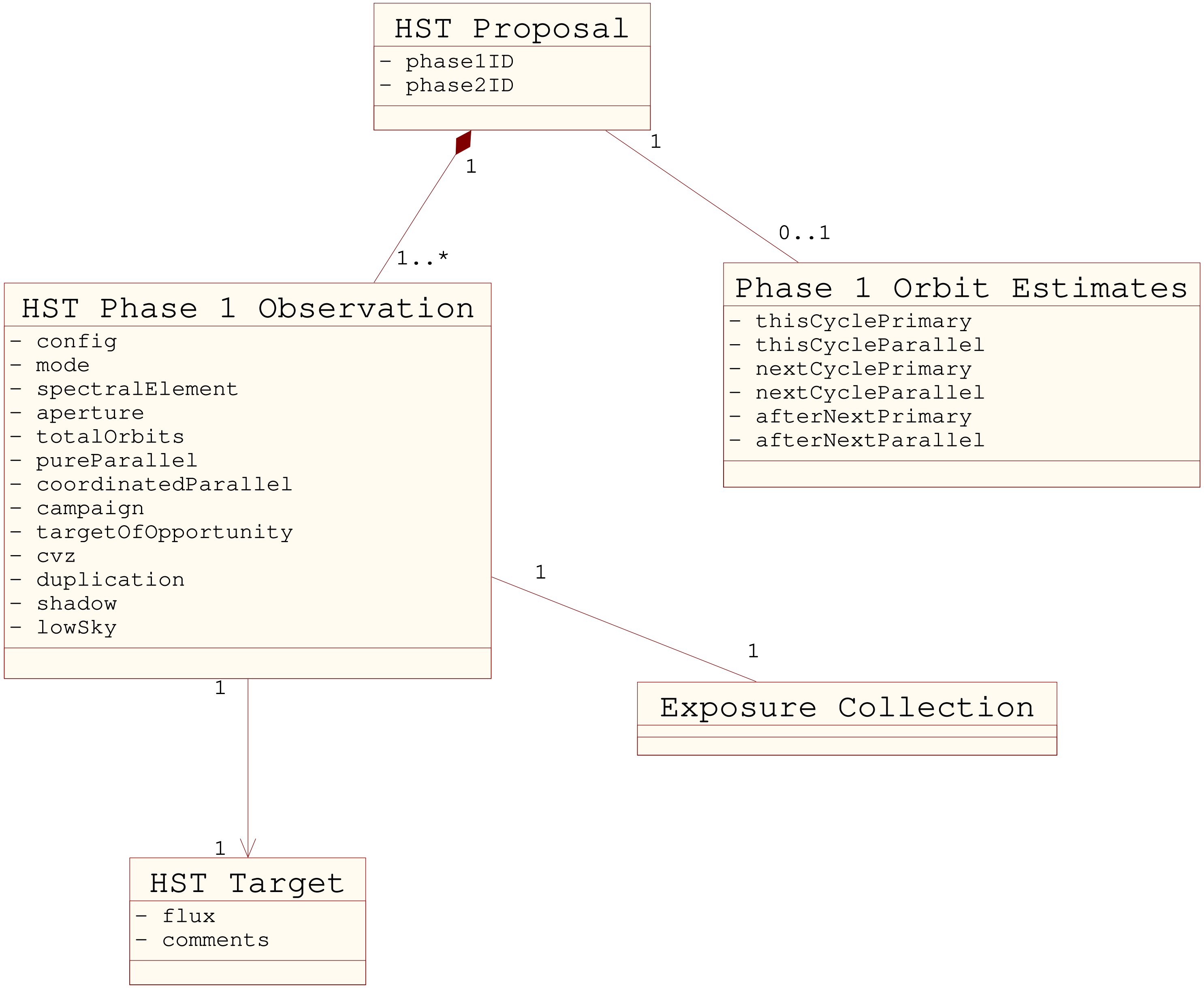
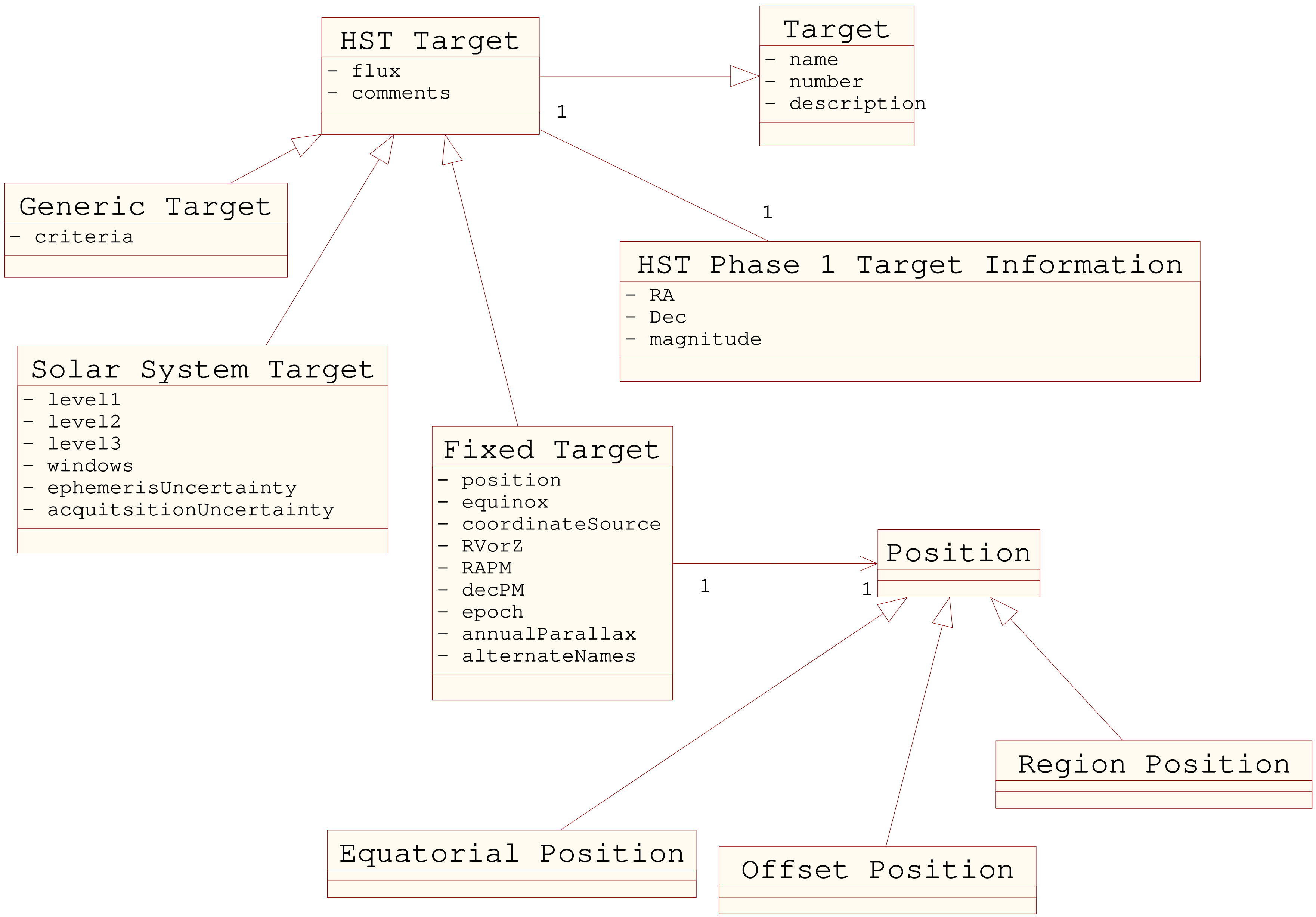

APT Top Level GUI
1
+View
+Controller
1
APT Tool
1
1
APT Tool Controller
0..*
1
APTController
- proposals
- templates
- context
- currentTool
- allTools
+ save()
+ undoChange()
+ redoChange()
+ initializeFromXmlDocument()
+ selectTool()
+ selectDocumentElement()
+ selectAddDocumentElement()
+ revertToSaved()
1
1
UndoManager
APT Context
- selectedDocumentElements
+ selectDocumentElement()
+ selectAddDocumentElement()
1
1
1
+Controller
+Model
0..*
APT Document
- XmlDocument
+ save()
+ initializeFromXmlDocument()
+ undoChange()
+ redoChange()
1
1
XmlDocument
Proposal
HST Proposal
- phase1ID
- phase2ID


HST Proposal
- phase1ID
- phase2ID
HST Target
- flux
- comments
Visit
- priority
- comments
- onHoldComments
- number
- pcsMode
- guidingTolerance
- dropToGyro
- orient
- orientFrom
- orientFromNominal
- sameOrient
- cvz
- after
- afterBy
- before
- between
- groupWithin
- period
- sequenceWithin
- onHold
- schedulability
- pureParallel
Exposure
- targetName
- config
- opmode
- aperture
- spElement
- wavelength
- optionalParameters
- numberOfIterations
- timePerExposure
- comments
- number
- posTarg
- samePosAs
- saaContour
- realtimeAnalysis
- requiresUplink
- requiresEphemerisCorrection
- lowSky
- noSplit
- phase
- shadow
- gsAcqScenario
- newAlignment
- newObsetFullAcq
- newObset
- useOffset
- saveOffset
- expPcsMode
- obsetID
Pattern Specification
- number
- subPatternSpecs
- comments
Pattern
Sub Pattern Specification
- patternType
- patternSI
- patternShape
- patternPurpose
- numberOfPoints
- pointSpacing
- coordinateFrame
- patternOrient
- centerPattern
Exposure Collection
Same Guide Stars
Same Obset
Same Alignment
Parallel
Sequence
1
0..*
1
1
1..*
1
0..*
1
1..*
1
1..*
1
1..2
0..*
1
0..*
1
0..*
1


Proposal
Principle Investigator
Address
- institution
- street
- town
- postcode
- telephone
- email
- USState
- country
- sundries
Investigator
- honorific
- firstName
- lastName
- suffix
- esaMember
HST Proposal
phase1ID
phase2ID
Co-Investigator
- adminUSPI
- contact?
0..*
Proposal Information
- title
- abstract
Supporting Documentation
HST Proposal Questions
- observingDescription
HST Proposal Information
- category
- cycle
HST Phase 1 Questions
- scientificJustification : Attachment
- coordinatedOrSupportingObservationDescription : Attachment
- duplicationJustification : Attachment
- specialRequirementsJustification : Attachment
HST Phase 2 Questions
- realTimeJustification
- calibrationJustification
- additionalComments
HST Phase 1 Proposal Information
proprietaryPeriod
scienceKeywords
scientificCategory
submissionFormat
instruments
totalTargets
chandraCoord
relatedPrograms
pscontactemail
HST Phase 2 Proposal Information
availability
parPointingTol
Attachment
- file


HST Proposal
- phase1ID
- phase2ID
1
1
0..1
1..*
HST Phase 1 Observation
- config
- mode
- spectralElement
- aperture
- totalOrbits
- pureParallel
- coordinatedParallel
- campaign
- targetOfOpportunity
- cvz
- duplication
- shadow
- lowSky
Phase 1 Orbit Estimates
- thisCyclePrimary
- thisCycleParallel
- nextCyclePrimary
- nextCycleParallel
- afterNextPrimary
- afterNextParallel
1
1
Exposure Collection
1
1
HST Target
- flux
- comments


HST Target
- flux
- comments
Target
- name
- number
- description
1
1
Generic Target
- criteria
HST Phase 1 Target Information
- RA
- Dec
- magnitude
Solar System Target
- level1
- level2
- level3
- windows
- ephemerisUncertainty
- acquitsitionUncertainty
Fixed Target
- position
- equinox
- coordinateSource
- RVorZ
- RAPM
- decPM
- epoch
- annualParallax
- alternateNames
Position
1
1
Region Position
Equatorial Position
Offset Position