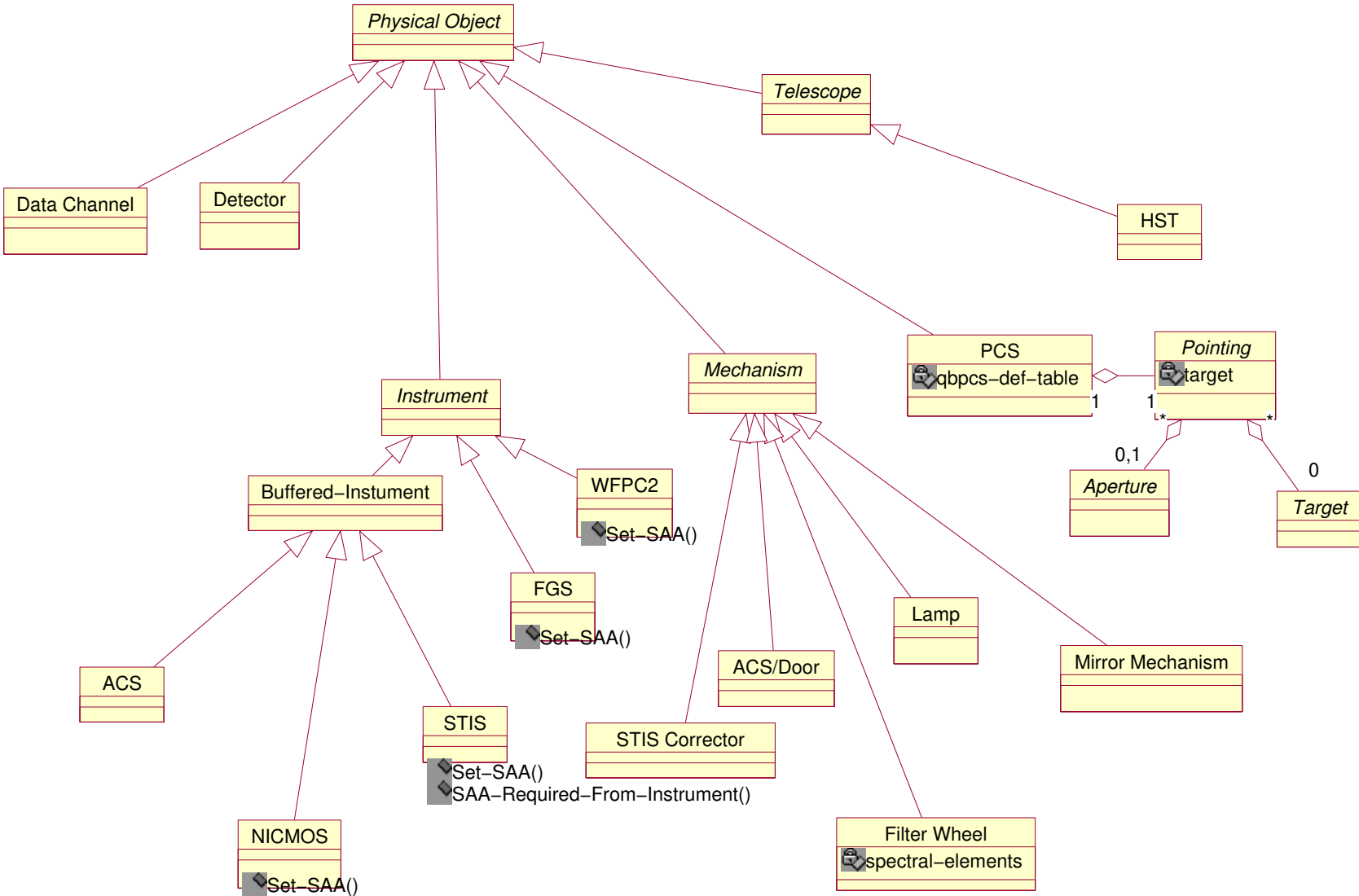POM CLASS HIERARCHY