IVOA object visibility and observation location services at the Chandra X-Ray Center

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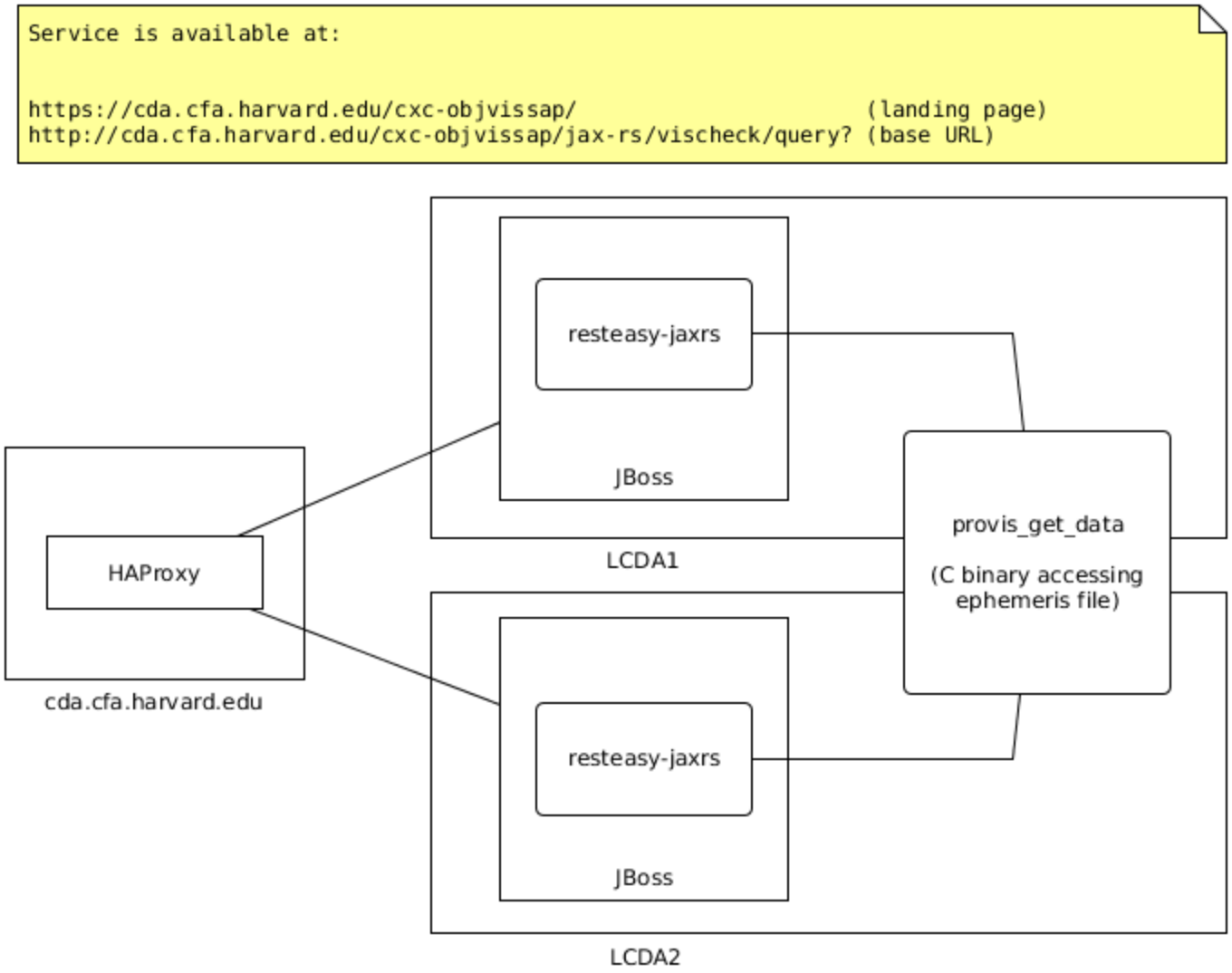
IVOA visibility and observation locator services

The following two new service recommendations are currently under development:

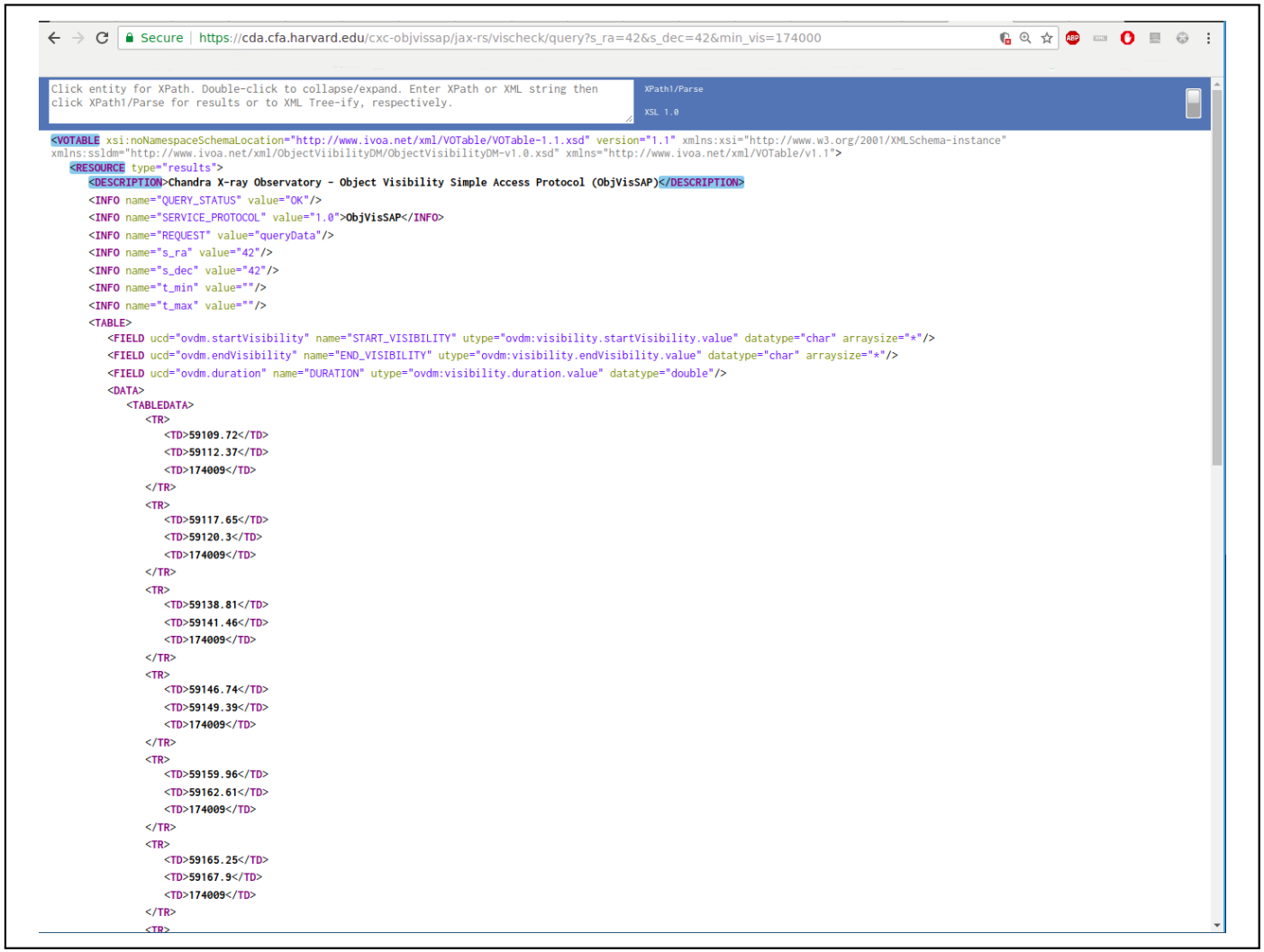
- Object Visibility Simple Access Protocol:
  http://www.ivoa.net/documents/ObjVisSAP/index.html
  . . . currently at version 0.5
- Observation Locator Table Access Protocol:
  http://www.ivoa.net/documents/ObsLocTAP/index.html
  . . . currently at version 0.4

Object Visibility Simple Access Protocol Service

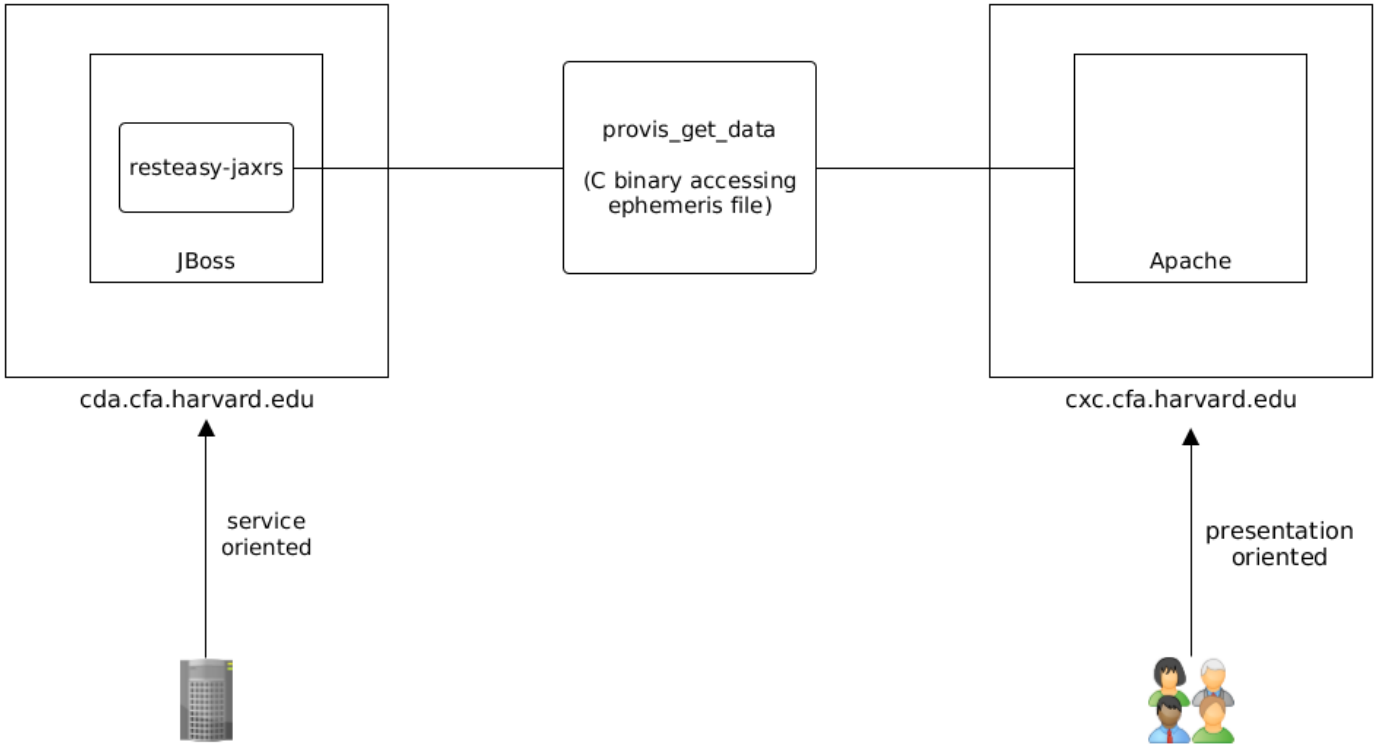


Object Visibility SAP landing page

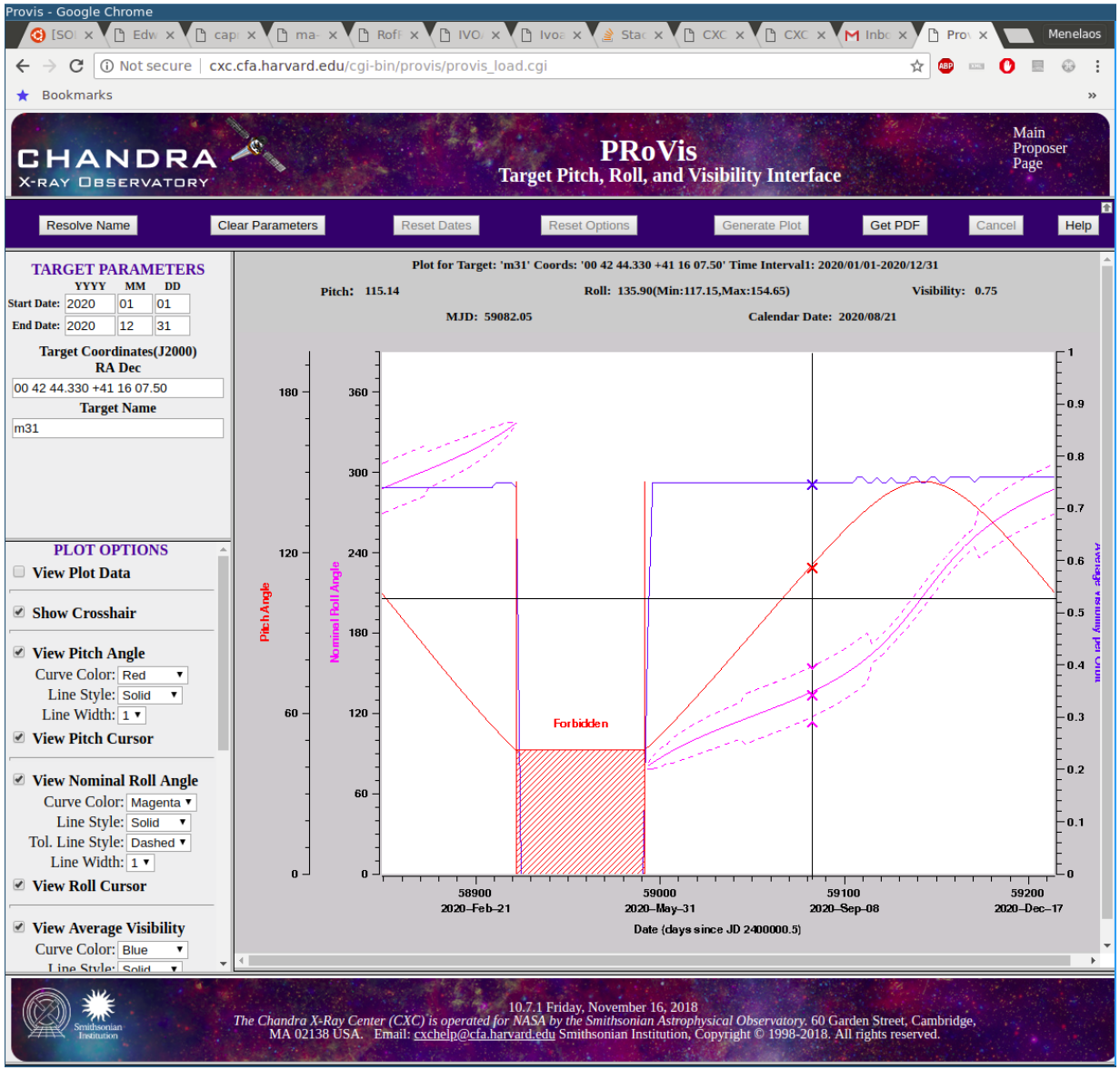
Object Visibility SAP response



Pre-existing presentation-oriented application



Pre-existing presentation-oriented application



Experience developing against the specification

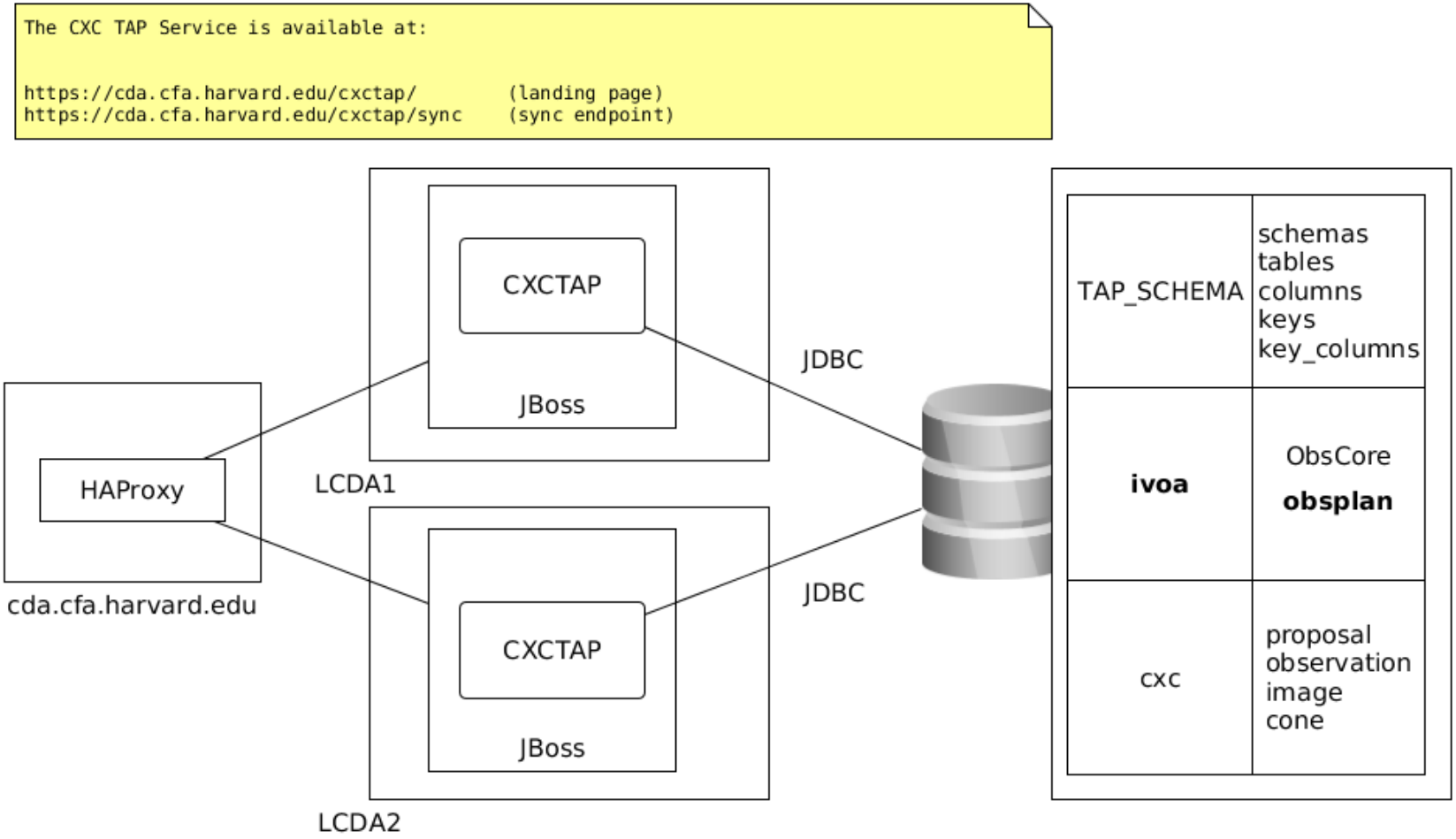
- spec is in version 0.4 work so still fluid
- the semantics of certain parameters and of the output VOTable are not very precisely defined
- no clear statement in the spec as to whether the service targets only future or also past dates
- in general, it would be nice to have some use cases discussed in detail
  - however, some (high-level) use cases are given in: J.-U. Ness et al. "Towards a better coordination of Multimessenger observations: VO and future developments" https://arxiv.org/abs/1903.10732

Demo of the CXC Object Visibility SAP service

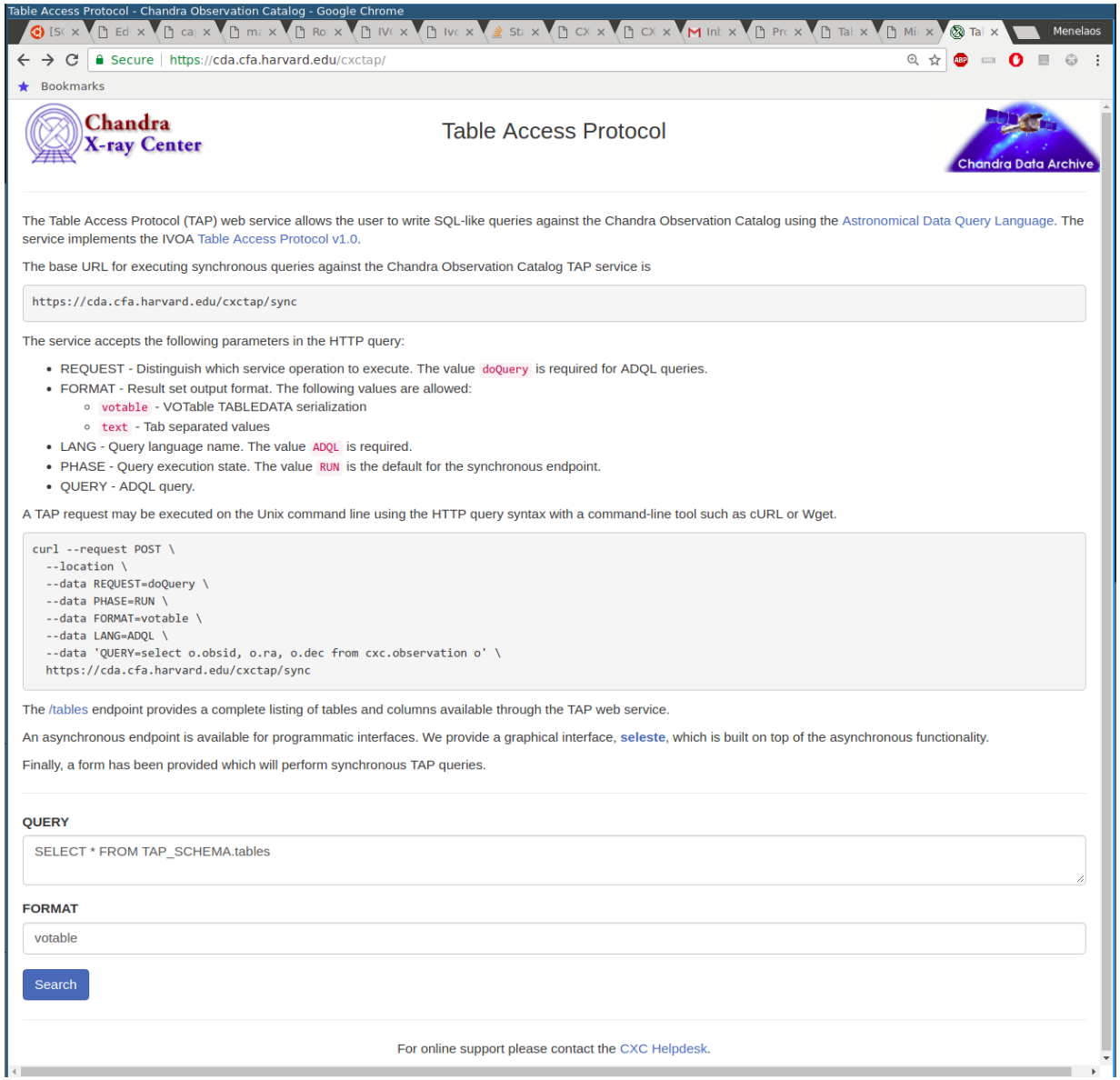
next slide is video — **click** anywhere on it to start

(make sure that file `cxc-obj-visibility-SAP.mp4` is available on the same directory as this PDF file)

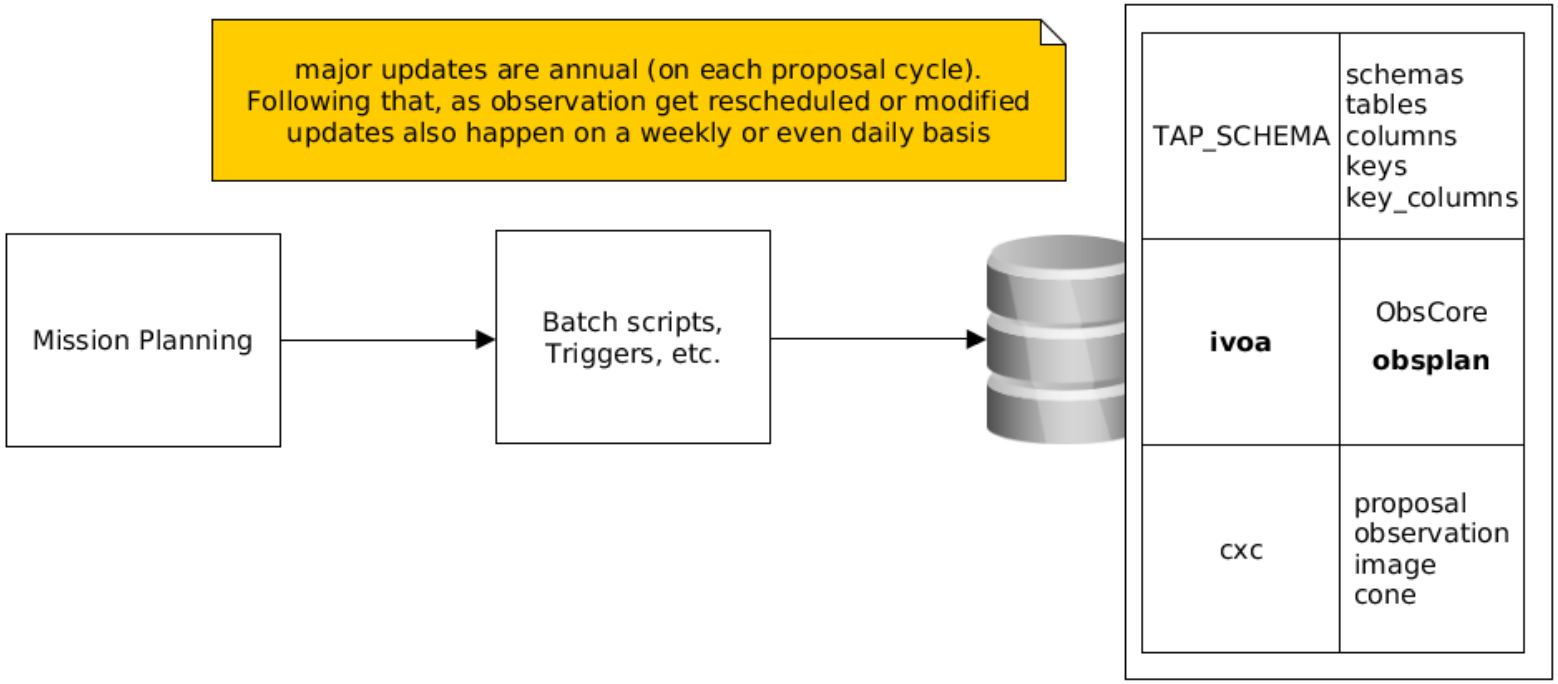
Observation Locator Table Access Protocol



Chandra X-ray Center TAP Service



Populating the obsplan table



Experience developing the Object Locator TAP service

- spec is work in progress, non-trivial differences from 0.2 to 0.4
- main challenge for the implementor is to decide how tightly to integrate the updates to the `obsplan` table with their existing pipeline; we opted for a tight integration that was more time consuming
- using the `obscore` model as the baseline for `obsplan` simplified things a lot

Demo of the CXC Object Locator TAP service

next slide is video — **click** anywhere on it to start

(make sure that file `cxc-obs-locator-TAP.mp4` is available on the same directory as this PDF file)