

Employing VO Technology in OSPS (SSAP lightcurves, SIAP, MOC)

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IVOA Apps I seesion
Kona, Hawaii, USA 26^h Sep 2013

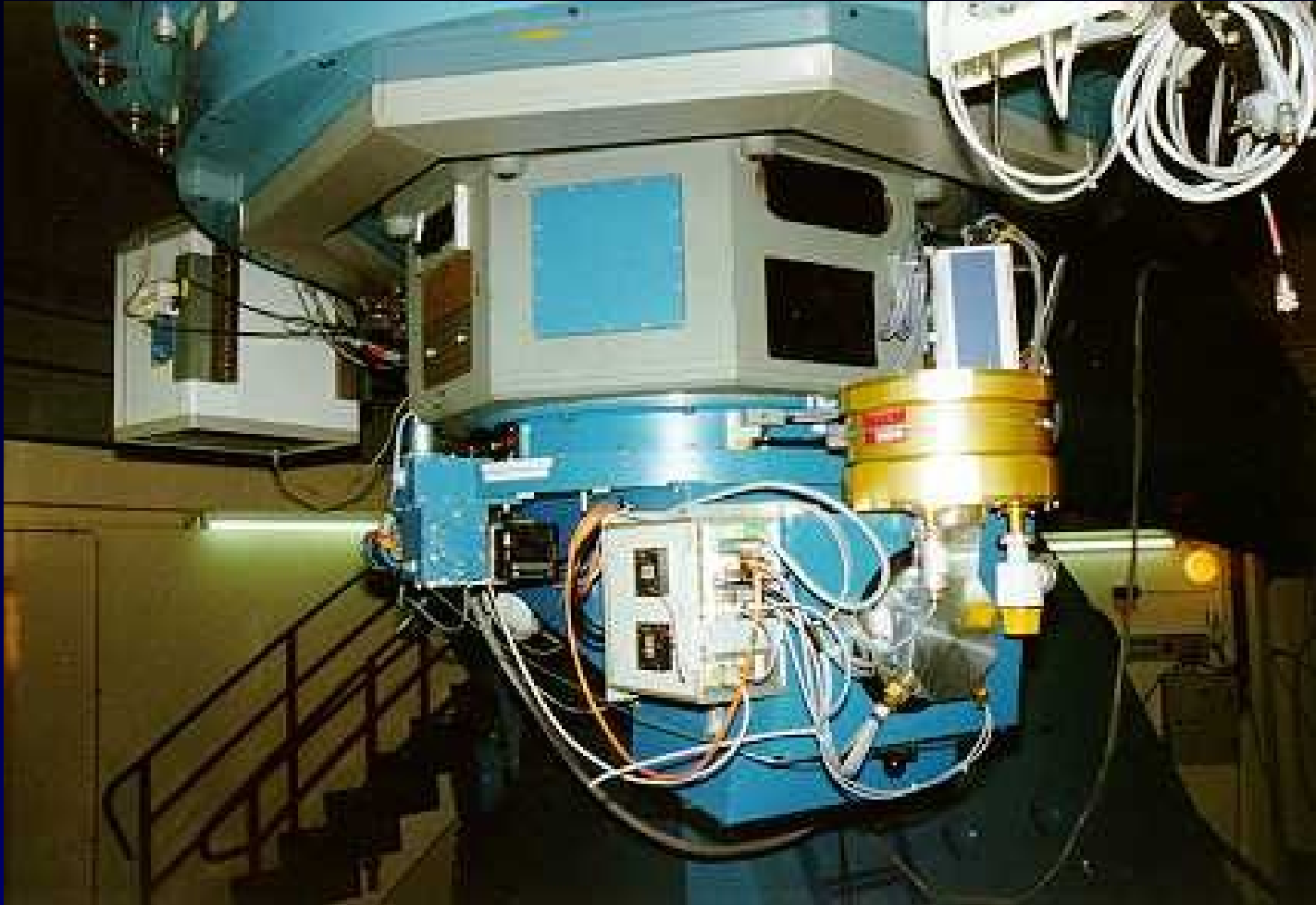
Danish 1.54m at La Silla robotized in Summer 2012



Danish 1.54m Telescope



DFOSC at 1.54m



Camera CCD

2048x2048 (cut 4k)

13.5x13.5 arcmin

filters U,B,V,R,I
Halpha, Hbeta ...

3 groups of Czech
astronomers

October-April time

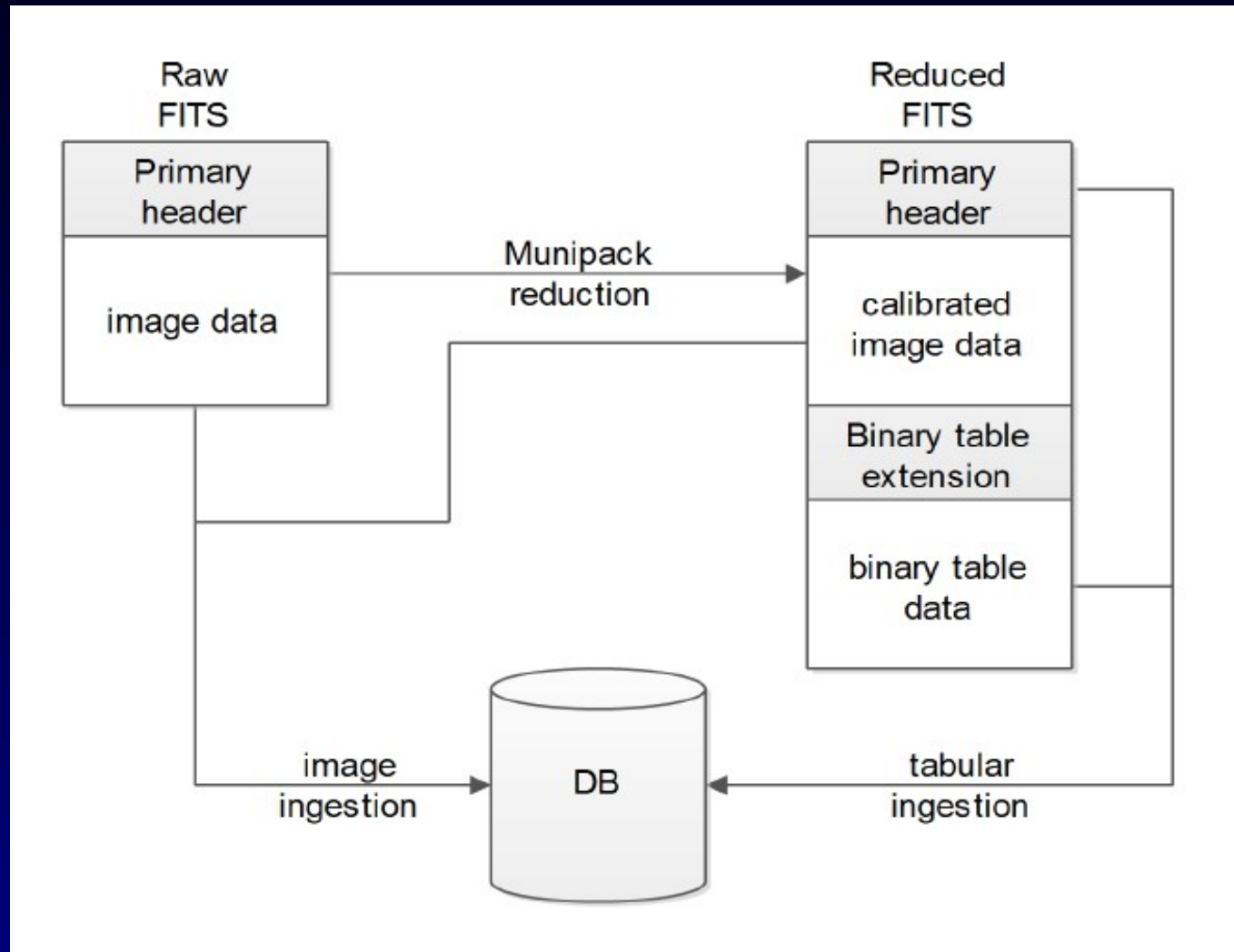
Remote observing

OSPS (Ondrejov Southern Photometry Survey) – use unused part (99%) of data
lightcurves on the click Updating after recalibration

VO Technology as a Engine

- Promise to increase the productivity
- Private data TOGETHER with public (VO client)
 - Comparison, X-matching, Theoretical + observed
- ==> LOCAL data in VO clients
 - Need for RESTRICTED ACCESS
- Authentication in SPLAT, Aladin, TOPCAT
- Images od DK154 – in SIAP allowed if degraded
 - PNG compressed, nonlinear intensity, 3x3 pixels bin
- Light curves (SSAP, TAP) photometry points ????
 - Locking table records... (by ID, ??, SSAP sources?)

OSPS Technology Calibration, Ingestion+X-matching



OSPS Technology - Publishing

RAW frames in SIAP

(authentication for FITS, free PNG)

CALIBRATED IMAGE in SIAP

(FITS contains the bintable extension with source cat)

BINTABLE extension

SCS(+query by filter,time)

TAP (advanced query in ADQL)

SSAP LIGHTCURVE (constructed on the fly by objID)

OSPS Technology - Consuming

Aladin (SIAP, SCS) Image+catalogue in 1file

TOPCAT (TAP, SCS SSAP activation)

SPLAT-VO (direct name resolution)

web form

SAMP !!!

VO is used in whole survey as integral part of SW

OSPS Light Curve Generation

```
http://vos2.asu.cas.cz/extract/q/getspec/custom/lightcurve.fits?  
LANG=ADQL&REQUEST=doQuery&FORMAT=fits&  
QUERY=select+*+from+bextract.objjobs+where+sourceid+=  
'6667217533313055071'+and+band='V'+and+mag<99+  
order+by+hjd
```

More details in Bachelor Theses of Jiří Nádvorník and Daria Mikhailova,
Faculty of Information Technology, Czech Technical University,
Prague 2013

Poster at ADASS 2013 (P54)

http://dip.felk.cvut.cz/browse/pdfcache/nadvoji1_2013bach.pdf

http://dip.felk.cvut.cz/browse/pdfcache/mikhadar_2013bach.pdf

DEMO