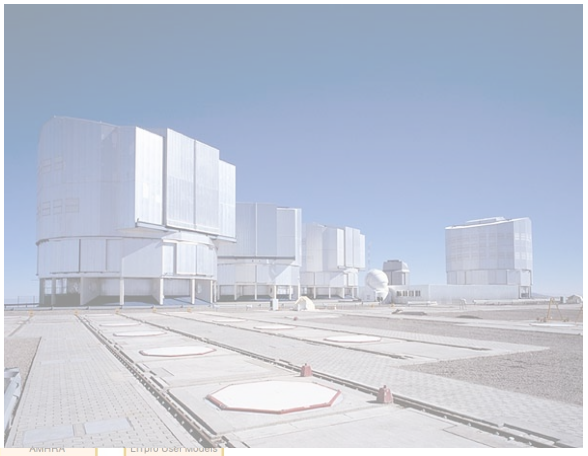
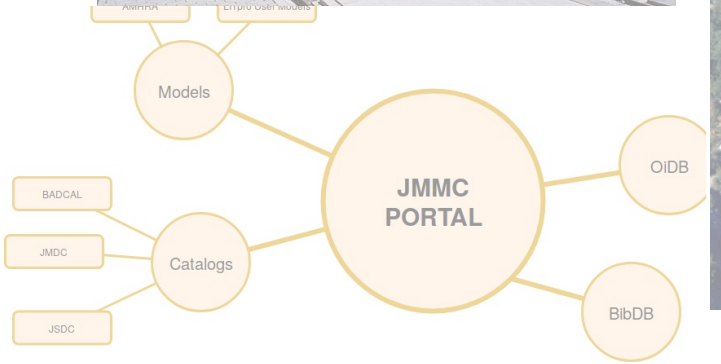
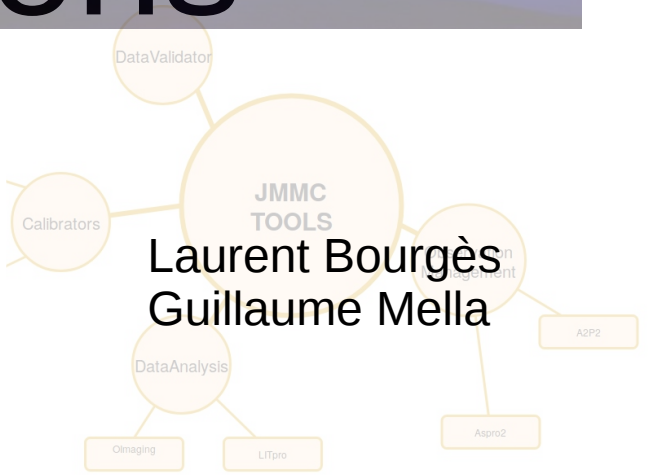
JMMC



Réalisations



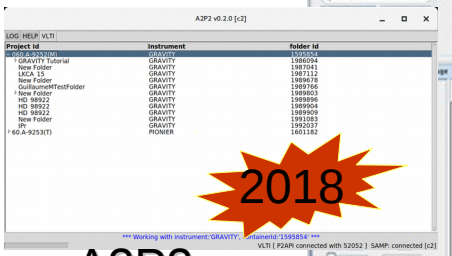


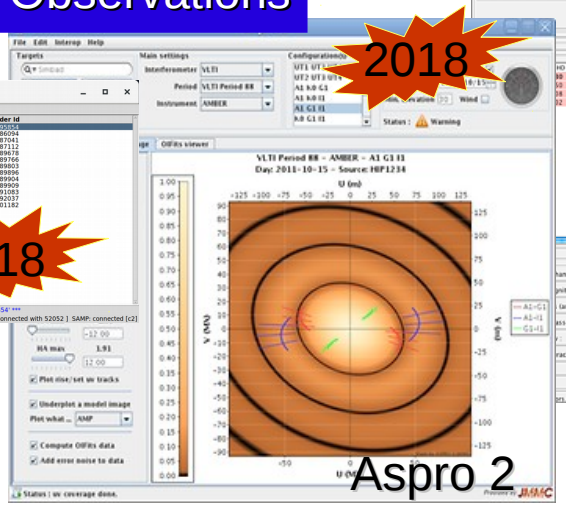
Laurent Bourgès
Guillaume Mella

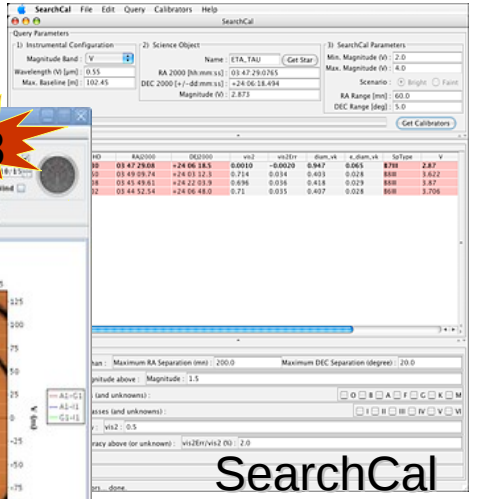
http://www.jmmc.fr/doc/index.php?search=JMMC-PRE-0000-0028

Services : boucle complète

Prepare Observations

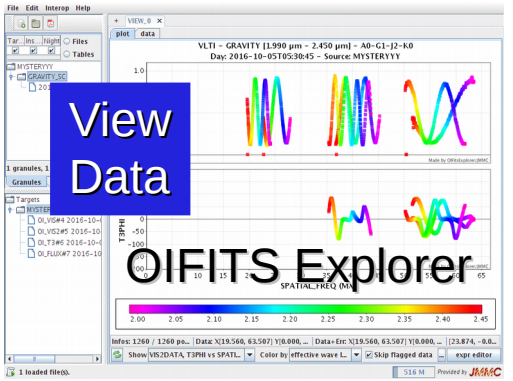




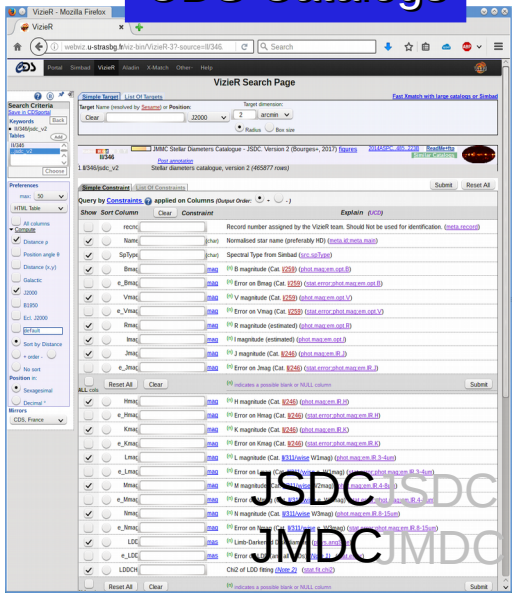


Reduce data

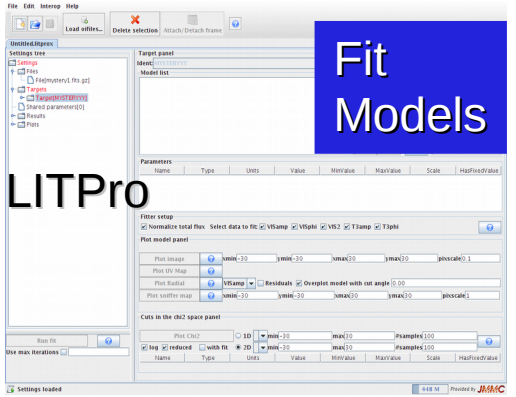
amdlib
pndrs



CDS Catalogs

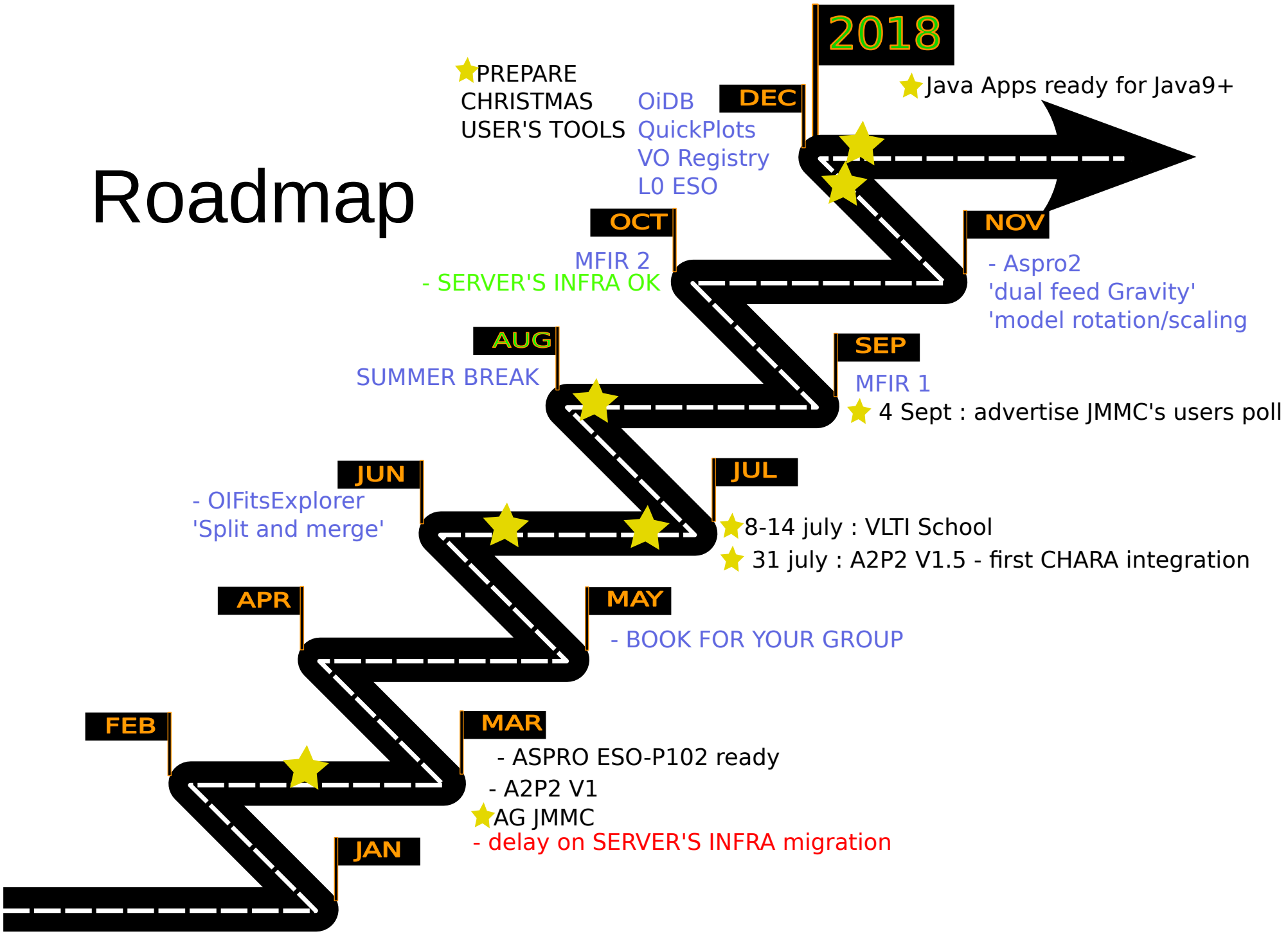


SAMP



L0 to L3 DataBases

Roadmap


2018
PREPARE CHRISTMAS USER'S TOOLS
OiDB
QuickPlots
VO Registry
L0 ESO
DEC
Java Apps ready for Java9+
OCT
NOV
MFIR 2
- SERVER'S INFRA OK
- Aspro2
'dual feed Gravity'
'model rotation/scaling
AUG
SEP
SUMMER BREAK
MFIR 1
4 Sept : advertise JMMC's users poll
JUN
JUL
- OIFitsExplorer
'Split and merge'
8-14 july : VLTI School
31 july : A2P2 V1.5 - first CHARA integration
APR
MAY
- BOOK FOR YOUR GROUP
FEB
MAR
- ASPRO ESO-P102 ready
- A2P2 V1
AG JMMC
- delay on SERVER'S INFRA migration
JAN

Retrospective roadmap

- Planification délicate (disponibilité commune en // d’autres rythmes)
- Mieux anticiper les sprints (spécifications / besoins plus précis)
- Allonger les sprints (1 mois → 2 mois ?)
- Toujours 30% d’impondérables :(

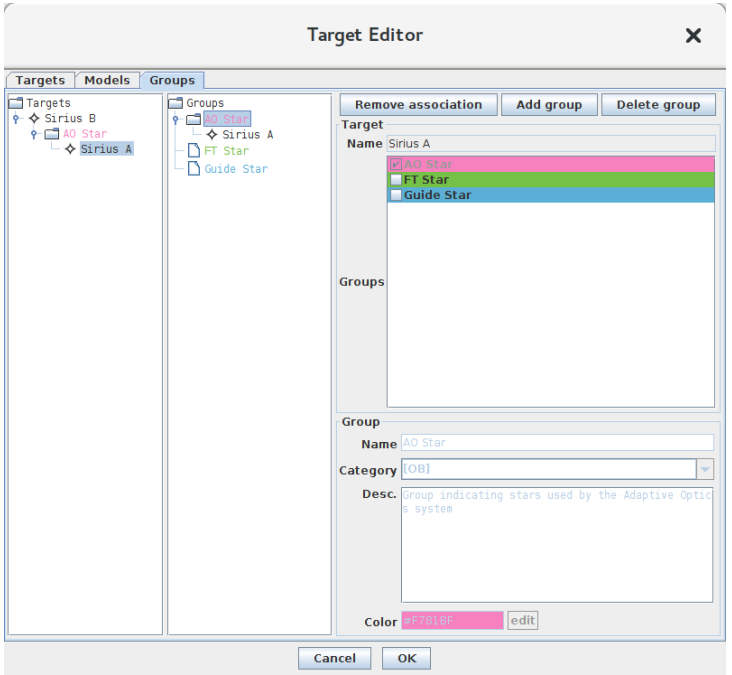
Effet positif au niveau du groupe technique :

- Alternance sur plusieurs groupes
- Motivation avec des objectifs concrets (petites victoires)

à programmer rapidement pour 2019 !

Aspro 2

- Support MATISSE (ETC)
- Support AO NAOMI / CIAO (Strehl)
- Gestion target groups / tags (AO / FT / Guide stars)
- Modèles image / cube FITS :
  - Lien vers AMHRA
  - Rotation / scale
- Intégration A2P2 (O.B)



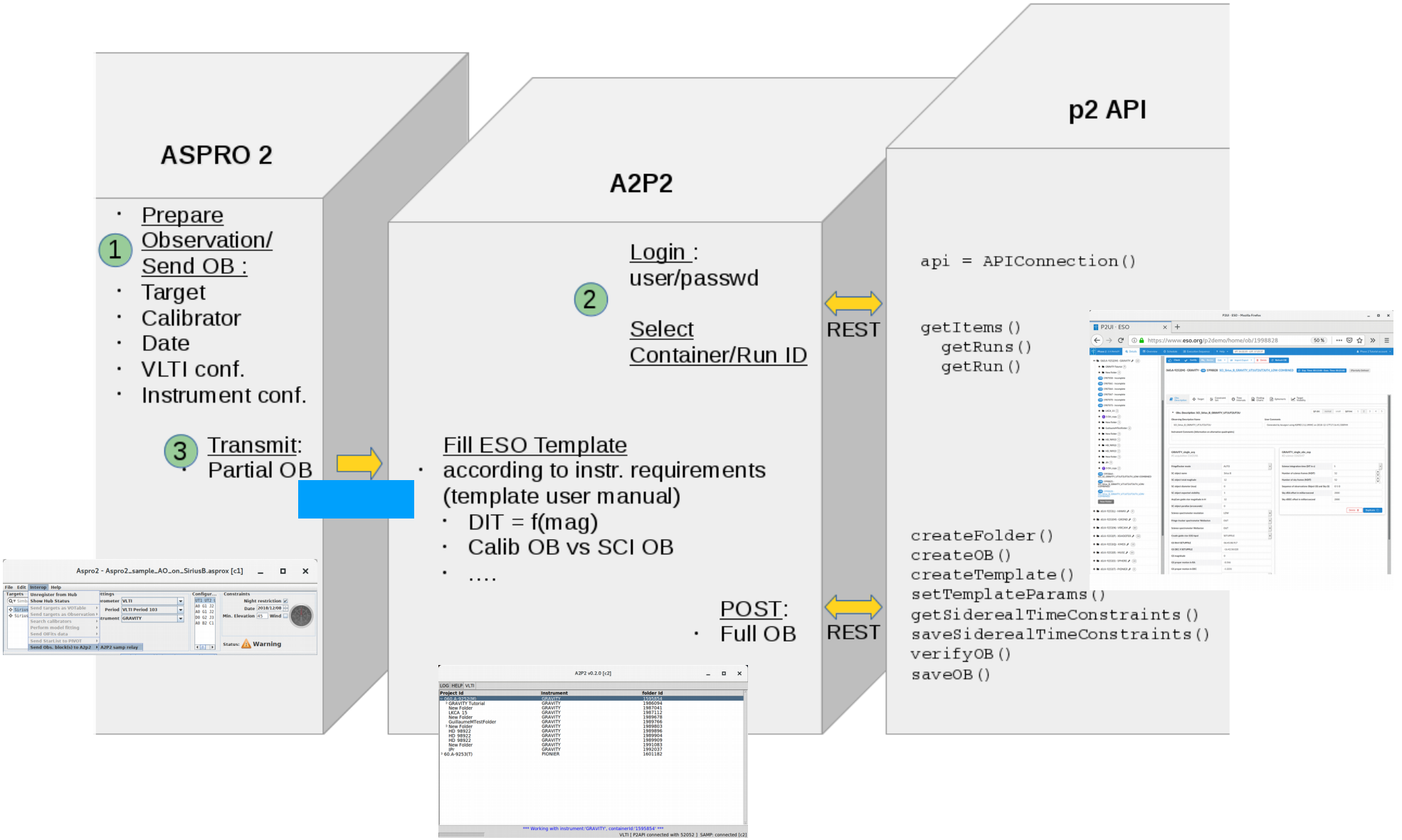
A2P2

- A2P2 : outil open-source python
  - https://github.com/JMMC-OpenDev/a2p2 pour collaboration avec instrument scientists
  - Passerelle SAMP VO pour transmettre O.B (obxml) vers ESO P2 (API REST)
  - Tutoriel annoncé sur Olbin

    https://github.com/JMMC-OpenDev/a2p2/wiki/ASPRO2-A2P2-Tutorial

    ```
    $ pip install a2p2
    ```
- Première intégration CHARA à poursuivre

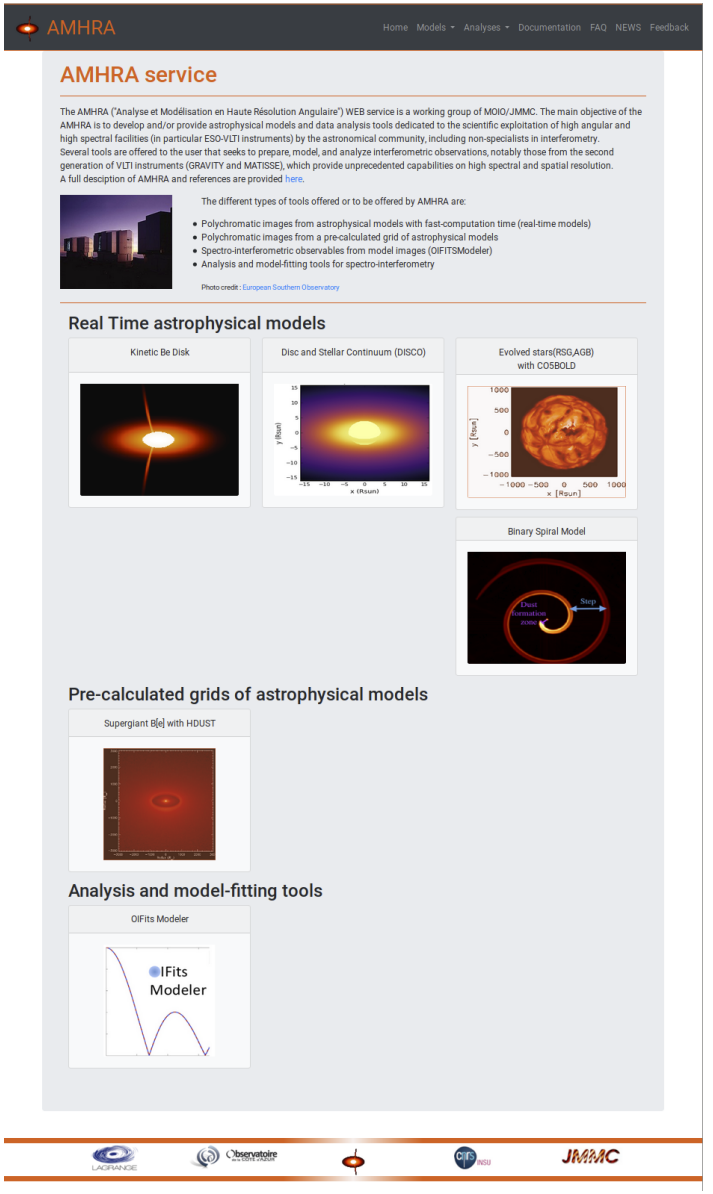
A2P2 workflow



AMHRA

"Analyse et Modélisation en Haute Résolution Angulaire"

- Interface web d'accès aux modèles astrophysiques :
  - Calcul en temps réel
  - Grille pré-calculée
- Interopérabilité ?
  - Format FITS cube
  - SAMP + https: statut ?
- *VO ? UWS, VO SimD... ?*

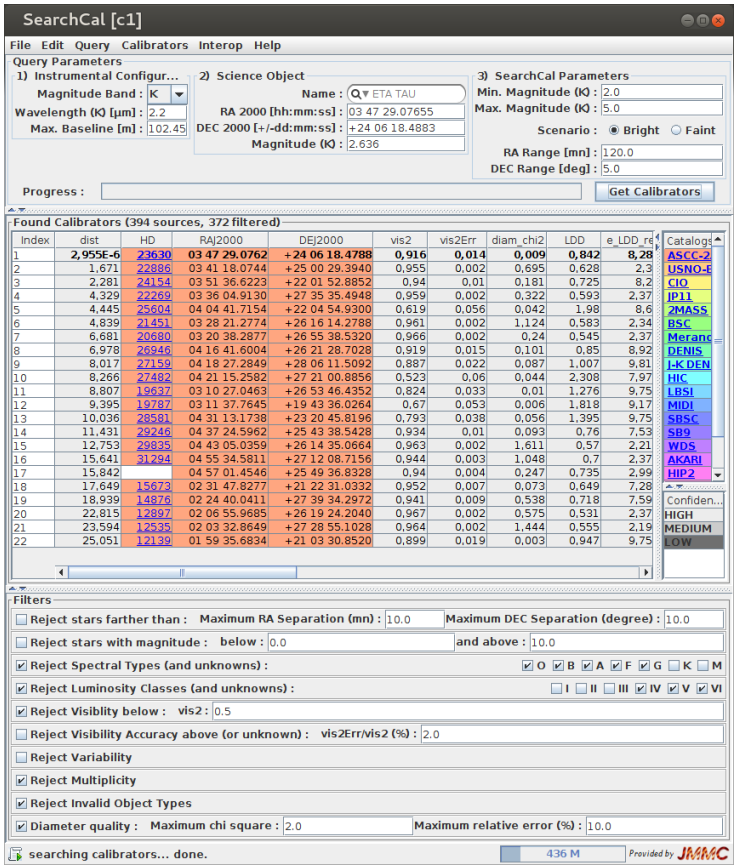


SearchCal / JSDC

Peu d'activité jusqu'à présent :

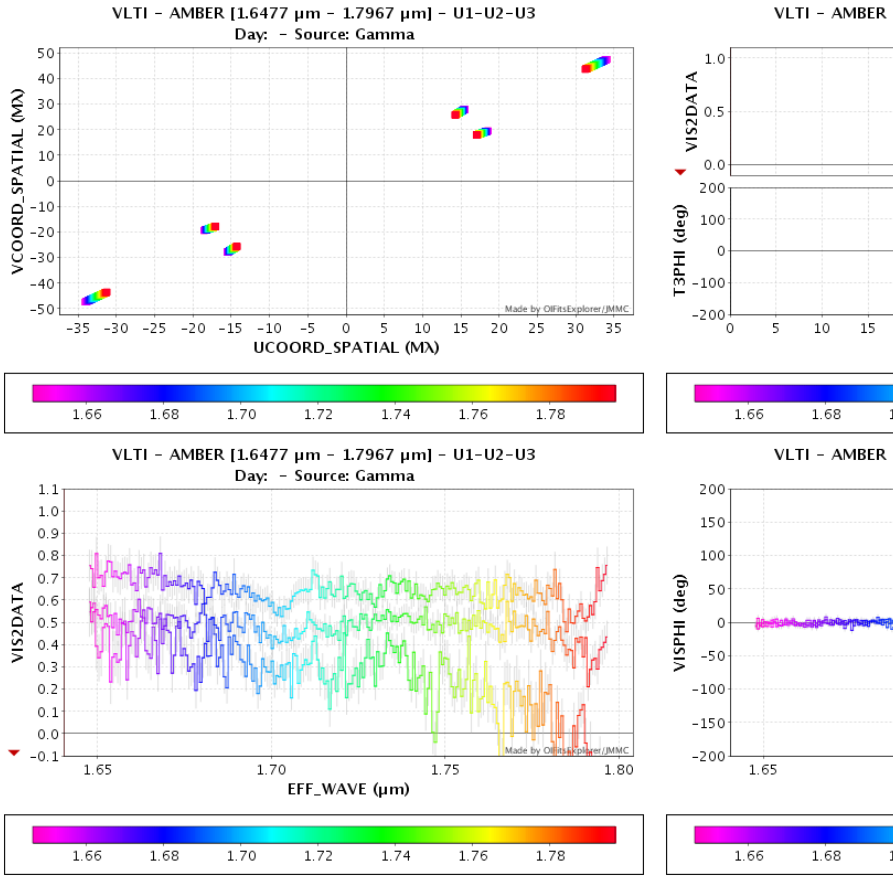
- Mise à jour du JMDC
- Maintenance à prévoir
- Toujours pas de badcal intégré :(

Vraie expertise qui pourrait être valorisée sur le service SIMBAD du CDS ...



OIFitsExplorer

- Amélioration de la selection par instruments
- Export OIFits (merge)
- Histogrammes pour les données spectrales
- Mode ligne de commande



Optical Interferometry DataBase

- Import Observation Logs ESO (VizieR TAP B/ESO)
- TAP (taplib) + ‘data links’ (quick plots, pdf)
- Besoin SUV d’instances privées pour collaborations :
  - Droits d’accès par groupe ?
  - Embargo données ?
  - Synchronisation ?

LITpro

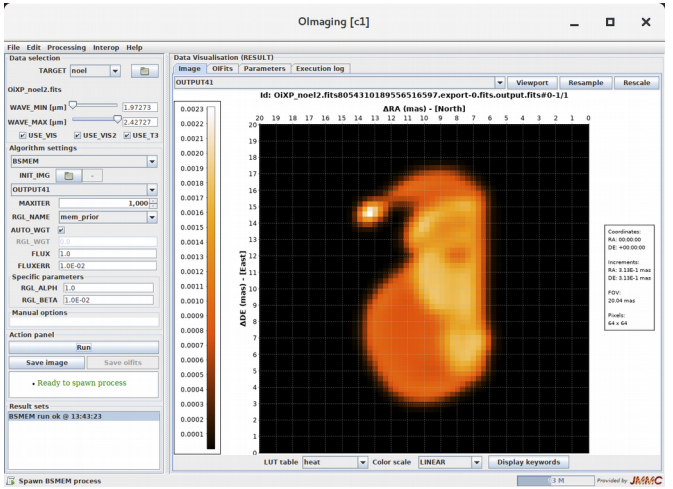
- Algo génétique implémenté en yorick
  - A tester
  - Ajout de paramètres spécifiques au GUI
- Besoins à venir :
  - Exécution asynchrone
  - Mode interactif (pas à pas, reprise…)
  - Support modèles utilisateurs

```
func lp_genfit_go(world, keywords=, verbose=, itmax=, callback=,
                  tol_degen=, tol_gradient=, tol_step=, nsol=,
                  ntrstep=, nelit=, mutproba=, tol_gen=)
/* DOCUMENT lp_genfit_go(world)

   Most global wrapper upon the genetic fitting procedure in LITpro
   environment WORLD. The routine returns the hash table WORLD in
   which have been added all precious information about the fitting
   procedure. These information is stored in a workspace, available
   after the fit, using the function:

   workspace = lpw_get_workspace(world, "fitter");

   The workspace can also be accessed directly is the function was called using
   ws = lp_genfit_go(world,..)

   All the keywords can be given as entries of a single htable passed with
   keyword KEYWORDS. So lp_genfit_go(world, itmax=20) is equivalent to
   lp_genfit_go(world, keywords = h_new(itmax=20)). Keywords given directly
   (not in the htable KEYWORDS) take precedence.

KEYWORDS:

    ITMAX=        - Maximum number of iterations (successive generations).
                    Default is 200.
    CALLBACK=       - When set to a function, this function is called after
                    each step is achieved, with world as the only argument.
                    The intension is to allow some plotting to be done
                    during the convergence of the fitter.
    VERBOSE=      - If set, no information is printed when doing the fit.
    TOL_STEP=     - Tolerance on the smallest step. Each parameter is
                    normalized by its scale (see lp_set_parameter). The
                    fit is stopped if the norm of the vector of fitter
                    parameters is less than TOL_STEP. Default is 1e-6.
    TOL_GRADIENT= - Tolerance on null gradient. Fit is stopped if the norm
                    of the vector of derivatives of chi2 versus each
                    parameter is lower than TOL_GRADIENT. Default is 1e-8.
    TOL_DEGEN=    - Tolerance on the detection on degenerencies. Default
                    is 1e-8.
    NSOL=         - Size of a generation of solutions. Default is 100
    NTRSTEP=      - Max. number of TRFIT steps to be added to the generations
                    after each step. May be 0. Default is 20.
    NELIT=        - Number of elite population = number of best solutions to
                    be kept at next generation. May be 0. Default is 5
    MUTPROBA=     - Probability of mutation of a child. Default is 0.1
    TOL_GEN=      - Chi2 tolerance = convegence test. Default is 1e-5

SEE ALSO: lp_go_fit, lp_compute_residuals, lp_compute_chi2, lp_genfit_step.
*/
```

OImaging

Interface de reconstruction d'images

- Format OIFITS + OI_Image extension = format d'échange compact
- 3 logiciels BSMEM, WISARD, **MiRA**
- Reflexion en cours pour exécution de jobs en masse (<=> LITpro)
- Release publique : Noël 2018



Actions 2019

- LITpro :
  - Mode asynchrone
  - Alléger la réponse xml (ImageOI)
  - User models GUI
  - Jobs //
- Oimaging :
  - Intégration de PAINTER
  - Images de départ
  - Comparaisons
  - Jobs //
- OiDB :
  - Liens L0<→L2-3
  - Instances privées / SUV ?
- Portail utilisateur
- (maintenance)

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