

## Ninth ctools coding sprint

The ninth ctools coding sprint will take place at IRAP, Toulouse in the week 5-9 November 2018. A detailed schedule will be uploaded in the near future.

Follow us on twitter (hash tag #ctools9).

## Audience and Participants

Everyone is welcome; if you have used ctools for CTA science simulations or IACT data analysis, if you are interested in contributing to the ctools and GammaLib software code development, or if you are already an experienced developer, you can contribute. You will need programming skills in Python or C++, best is of course if you are experienced in both. We will split into groups and work on a number of issues and projects! Bring your laptop. If possible, install both the ctools and gammalib packages before arriving (installation instructions are available [here](http://cta.irap.omp.eu/ctools/)). For new folks: you can get a head start also by making an account on Redmine and taking a look at the code documentation (<http://cta.irap.omp.eu/ctools/> and <http://cta.irap.omp.eu/gammalib/>).

If you plan to attend, simply add your name to the list below:

- Jürgen Knödlseder (IRAP)
- Josh Cardenzana (IRAP)
- Luigi Tibaldo (IRAP)
- Andreas Specovius (ECAP)
- Domenico Tiziani (ECAP)
- Simon Bonnefoy (DESY)

## Practical information

The coding sprint will take place at IRAP-Roche building (address [9 Avenue du Colonel Roche](http://cta.irap.omp.eu/toulouse2011/practical.html)) in room 225-226 (in the basement):

Information of how to reach the location can be found at <http://cta.irap.omp.eu/toulouse2011/practical.html> (the bus schedule may be a bit outdated!) Toulouse has a decent public transportation system with updated route information available on the [Tisseo website](http://www.tisseo.com) (there is also an app, just search for 'Tisseo').

From the airport (travel time: 1 hour):

- Take the tramway, line T2, towards Palais de Justice (~30 minutes, note tickets should be purchased at the kiosks next to the tram, they are not available on the tram, buy a one-way or a 10-trip ticket, not the airport-shuttle ticket)
- At Palais de Justice, transfer from the tram to the metro, line B (yellow) heading towards Ramonville. (~10 minutes)
- Get off the metro at Faculté de Pharmacie and transfer to the bus 78 heading towards Saint-Orens Lycée SAINT-ORENS-DE-GAMEVILLE (~5 minutes)
- Exit the bus at stop LAAS, and walk to IRAP-Roche building (<5 min walk).

A suggestion of possible hotels is on <http://cta.irap.omp.eu/toulouse2011/accomodation.html> (also this information dates back to 2011, but I guess most hotels are still there).

Another link with information about IRAP is here: <http://www.irap.omp.eu/en/presentation/infos-pratiques>

## Prerequisites for the sprint

- Install Git on your laptop and familiarize yourself with it's use (see <https://git-scm.com>). You may use a GUI front end for Git. Personally I use SmartGit which I find extremely convenient to forget about the detailed syntax of Git commands (see <http://www.syntevo.com/smartgit/>)
- Learn about the ctools & GammaLib Git workflow and learn how to use GitLab (see <http://cta.irap.omp.eu/ctools/develop/git/index.html> for instructions on how to setup an account)
- If you have never done a commit, try to create a fake commit in your GitLab user space as follows
  - create forks of the ctools and GammaLib projects in your GitLab user space
  - create a feature branch in the fork (either in ctools or GammaLib)
  - clone the fork to your machine
  - edit the code
  - compile the code
  - commit the code

- Read our GammaLib & ctools reference paper (<http://www.aanda.org/articles/aa/abs/2016/09/aa28822-16/aa28822-16.html>)

## Agenda

- Monday:
  - 12h: Gathering for getting lunch together
  - 14h: Start of coding sprint
    - Welcome & Introduction (Jürgen) attachment:9th-coding-sprint.pdf
    - Discussion of projects and signup attachment:variability\_presentation.pdf attachment:hess-project.pdf
- Tuesday:
  - 9 - 18h: Project implementation (coding)
  - 20h : Coding dinner at "Midi Minuit", 3 Place du Peyrou (reservation: Luigi) (attachment:dinner.pdf)
    - public transport : metro B stop Compans-Caffarelli
    - easy to reach on foot from the city center, next to Basilique de Saint Sernin
- Wednesday:
  - 9 - 18h: Project implementation (coding)
- Thursday:
  - 9 - 18h: Project implementation (coding)
- Friday:
  - 9 - 12h: Assessment of project status and outlook

## Collection of issues and projects to work on during the sprint

Post your ideas for possible projects to work on during the coding sprint here:

- Improving performance of the tools
  - Monitoring changes to performance
- Implementation of variability tool
- Analysis of current IACT data with ctools (H.E.S.S.)

## Issues created during the coding sprint

This coding sprint has concluded. As a testament to just how successful and involved the coding sprint was, here is a collection of all the ctools and GammaLib related issues that were found and/or worked on during the sprint:

<https://cta-redmine.irap.omp.eu/issues/2710>  
<https://cta-redmine.irap.omp.eu/issues/2711>  
<https://cta-redmine.irap.omp.eu/issues/2712>  
<https://cta-redmine.irap.omp.eu/issues/2713>  
<https://cta-redmine.irap.omp.eu/issues/2714>  
<https://cta-redmine.irap.omp.eu/issues/2715>  
<https://cta-redmine.irap.omp.eu/issues/2720>  
<https://cta-redmine.irap.omp.eu/issues/2721>  
<https://cta-redmine.irap.omp.eu/issues/2722>  
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<https://cta-redmine.irap.omp.eu/issues/2724>  
<https://cta-redmine.irap.omp.eu/issues/2725>  
<https://cta-redmine.irap.omp.eu/issues/2731>  
<https://cta-redmine.irap.omp.eu/issues/2732>  
<https://cta-redmine.irap.omp.eu/issues/2733>

## Next sprint

Contact Jürgen if you would like to host a future coding sprint!

### Files

variability_presentation.pdf	8.04 MB	11/01/2018	Bonnefoy Simon
9th-coding-sprint.pdf	9.44 MB	11/04/2018	Knödseder Jürgen
hess-project.pdf	2.24 MB	11/05/2018	Knödseder Jürgen
dinner.pdf	943 KB	11/06/2018	Tibaldo Luigi