



# Overview of software activities

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[XV FOOT Collaboration Meeting](#)



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# The last months..

➔ .. have been “still” busy ...

\*more details: <https://agenda.infn.it/event/37748/>

– Many bug fixes and code improvements\*:

- **New calibration file for VTX for pixel efficiency per quadrant**
- **Add run file for CNAO2023**
- **Check included detectors with run file, disable detector in case, do not exit anymore**
- **Decode data on tier1 with condor (see next talk of R. Zarrella)**
- Ancillary and TOE packages are default wise not in compilation scheme
- Automatic naming of output file (-out auto)
- Re-Implemented night build checking: pull, compile, run & test with ref. histograms (sending mail when error occurs)

# Status (i)

- ➔ We are near the Goal:
  - All detectors are in shoe with all the interfaces (finally)
  - The developments on the detector side
    - Calibration ongoing for CAL
    - Eta function study ongoing for MSD
  
- ➔ Data taking of CNAO2023:
  - Calibration on-going BM, VT, IT, etc...
  - Geometry survey/debugging
  - Updated simulation parameters
  - Alignment of BM, VT, MSD and TW (IT and DI not completed)

# Status (ii)

- ➔ Doxygen documentation ongoing, server hosted in Roma (ST, MSD, CA not done)
- ➔ Update doc automatically from master branch to baltig [site](#)
- ➔ Possibility to add the documentation directly in git under study

## SHOE documentation

Main Page | Related Pages | Modules | Namespaces | Classes | Files

### TAVTactNtuVertex Class Reference

NTuplizer for VTX vertices. [More...](#)

Inheritance diagram for TAVTactNtuVertex:

```
graph TD; TNamed --> TAGnamed; TAGnamed --> TAGaction; TAGaction --> TAVTactBaseNtuVertex; TAVTactBaseNtuVertex --> TAVTactNtuVertex;
```

#### Public Member Functions

|   |
|---|
| <code>TAVTactNtuVertex</code> (const char *name=0, TAGdataDsc *p_ntutrack=0, TAGdataDsc *p_ntuvertex=0, TAGparaDsc *p_config=0, TAGparaDsc *p_geomap=0, TAGparaDsc *p_geomapG=0, TAGdataDsc *p_bmtrack=0) |
| <code>virtual ~TAVTactNtuVertex ()</code><br>Destructor.  |
| <code>void SetEps (Double_t q)</code><br>Set tolerance.   |
| <code>Double_t GetEps () const</code><br>Get tolerance.   |
| <code>void SetMinimumZ (Double_t min)</code><br>Set minimum Z for vertices search.  |
| <code>Double_t GetMinimumZ () const</code><br>Get minimum Z for vertices search.  |
| <code>void SetMaximumZ (Double_t max)</code><br>Get maximum Z for vertices search.  |
| <code>Double_t GetMaximumZ () const</code><br>Set maximum Z for vertices search.  |

Public Member Functions inherited from `TAVTactBaseNtuVertex`

Public Member Functions inherited from `TAGaction`

Public Member Functions inherited from `TAGnamed`

## Detailed Description

NTuplizer for VTX vertices.

## Constructor & Destructor Documentation

### ◆ TAVTactNtuVertex()

```
TAVTactNtuVertex::TAVTactNtuVertex ( const char * name = 0,
                                     TAGdataDsc * pNtuTrack = 0,
                                     TAGdataDsc * pNtuVertex = 0,
                                     TAGparaDsc * pConfig = 0,
                                     TAGparaDsc * pGeoMap = 0,
                                     TAGparaDsc * pGeoMapG = 0,
                                     TAGdataDsc * pBmTrack = 0
                                     )
```

Default constructor.

#### Parameters

- [in] **name** action name
- [in] **pNtuTrack** track container descriptor
- [out] **pNtuVertex** vertex container descriptor
- [in] **pConfig** configuration parameter descriptor
- [in] **pGeoMap** geometry parameter descriptor
- [in] **pGeoMapG** target geometry parameter descriptor
- [in] **pBmTrack** input BM track container descriptor

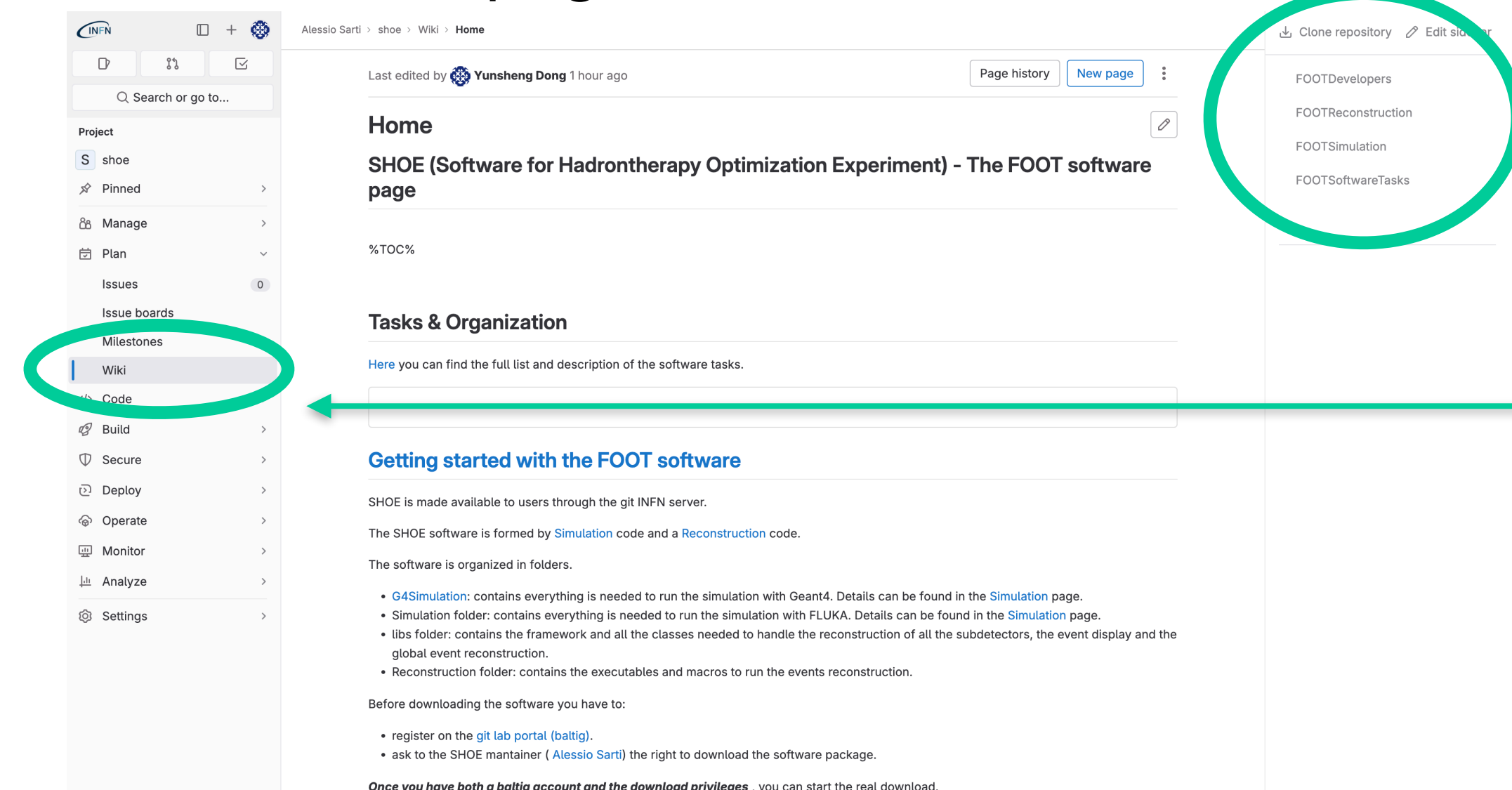
# Status (iii)

➔ Twiki server hosted in Roma

- <http://arpg-serv.ing2.uniroma1.it/twiki/bin/view/Main/FOOTSoftware>

➔ Migration and update of the twiki directly on git **ongoing**

- <https://baltig.infn.it/asarti/shoe/-/wikis/>
- **Possibility for all the shoe developers to modify and update the twiki ([how to do it](#))**
- As for the doxygen documentation, the baltig/git server is more stable than the server in Rome
- The old twiki page is maintained at least until the end of the migration/update



- List of twiki pages created
- How to access to the twiki from git

# 'final' considerations

Local/Global Reconstruction is available:

- ➔ Please use the latest version (master or **newgeom**) for reconstruction (N.B.: The configuration/calibration/geometrical parameter files for CNAO2023 campaign are available only in newgeom)
- ➔ Please push your changes in the newgeom branch to make them available for everybody and advertise the collaboration about relevant changes

Pb of recurrent man power, need at least one guy per detector

Calibration/alignment done by the core team !

# What's ahead of us..

## ➔ Improve documentation:

- Possibility to move the twiki on git under study
  - <http://arpg-serv.ing2.uniroma1.it/twiki/bin/view/Main/FOOTSoftware>
- Update the twiki page, now all the shoe developers can do it
- We still need to update the Doxygen documentation
- Possibility to export the documentation directly on git under study
  - <http://arpg-serv.ing2.uniroma1.it/FOOTshoe/shoe/html/index.html>

## ➔ Analyse GSI2021 - HIT2022 - CNAO2022/23 data:

- Alignment of detectors ongoing for HIT and CNAO
- Example of analysis macro template will be provided soon



Thanks for your attention