SAS WEB CALC UPDATES

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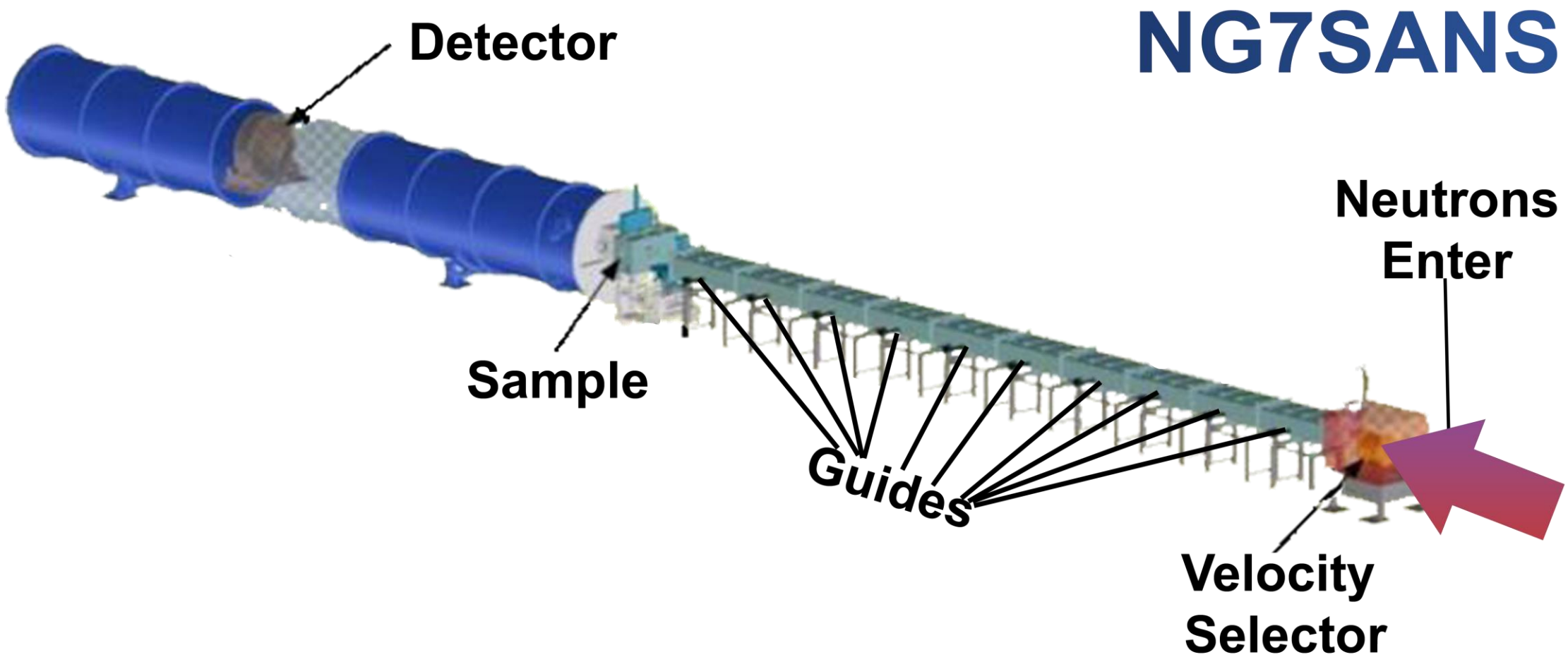
INSTRUMENT BASICS



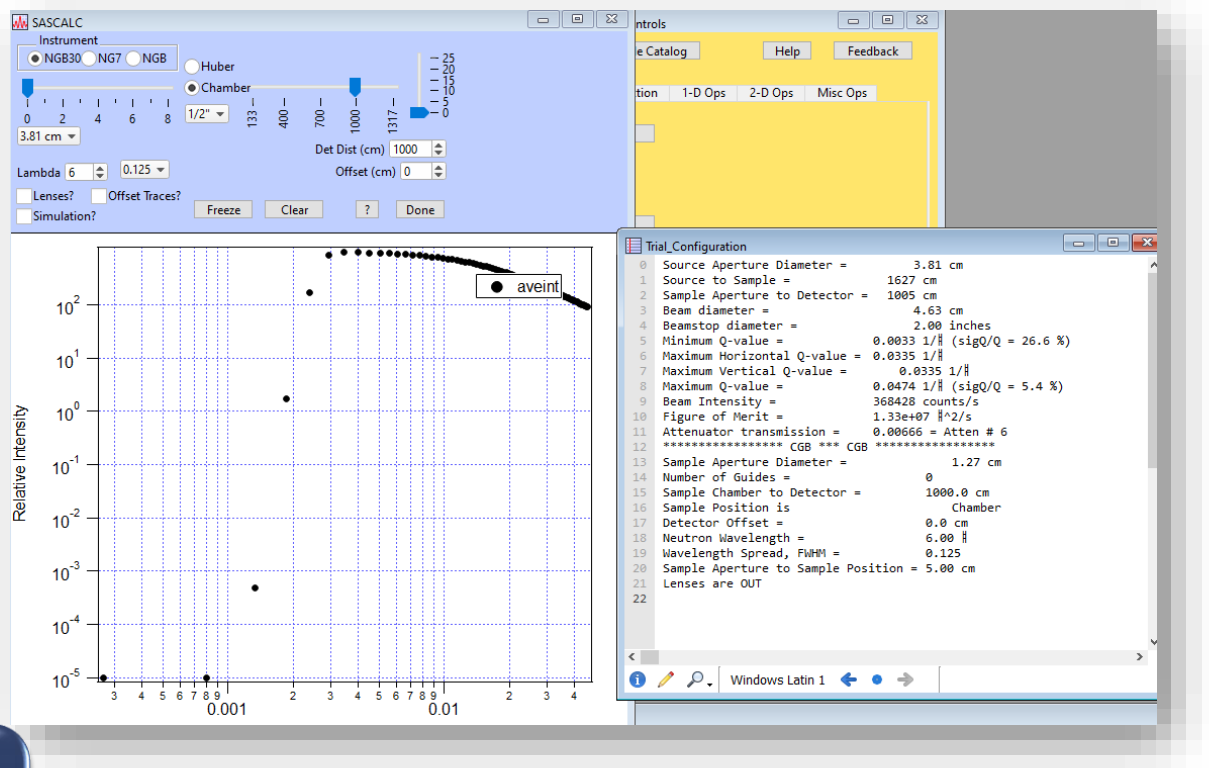
PROJECT GOALS

Plan more efficient experiments

Allow anyone to access

Connect directly with instruments

Optimize Q range

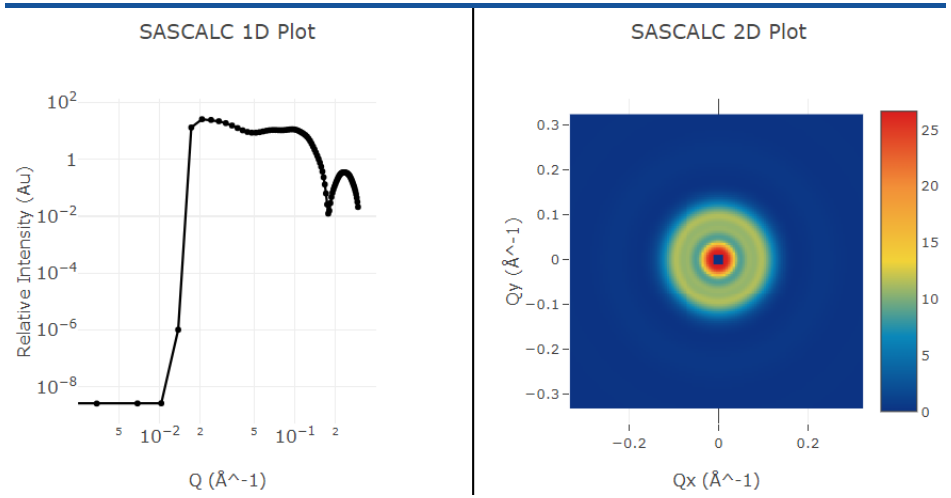


Existing Planning tool

EXISTING TOOL VS SASWEBCALC

Existing Planning Tool	SasWebCalc
Desktop Only 	Access Anywhere(Website) 
Multistep installation 	No installation 
3 SANS Instruments	4 SANS Instruments + ∞ more 
1-dimensional graph	1- and 2-dimensional graph
Complicated model application 	Simple selection of any model 
No averaging method 	Select an averaging method

Website



Parameter Changes

Results Displayed

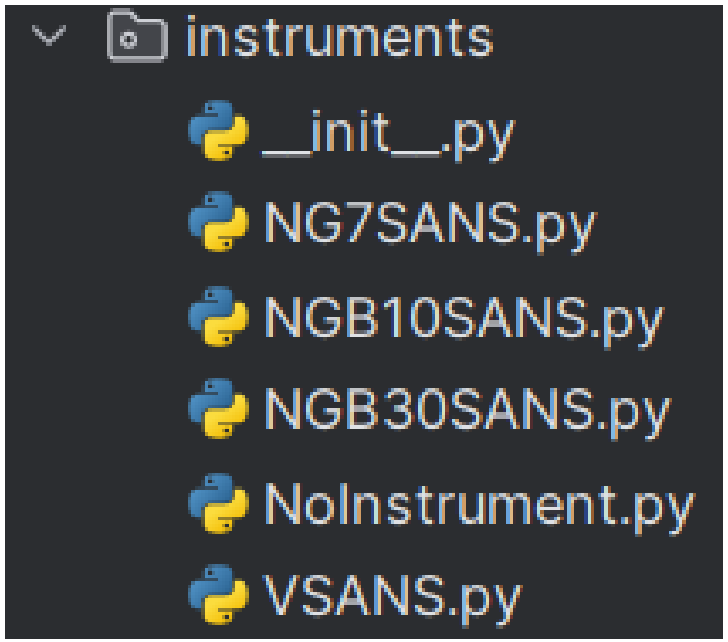
Internet

Server

Parameters imported

Calculations

Modularity



Website

File

Page Loading → Gets name_shown from file

Instrument:

- NG7 SANS
- NGB 10m SANS
- NGB 30m SANS
- User-Defined Q-Range and Resolutions
- VSANS

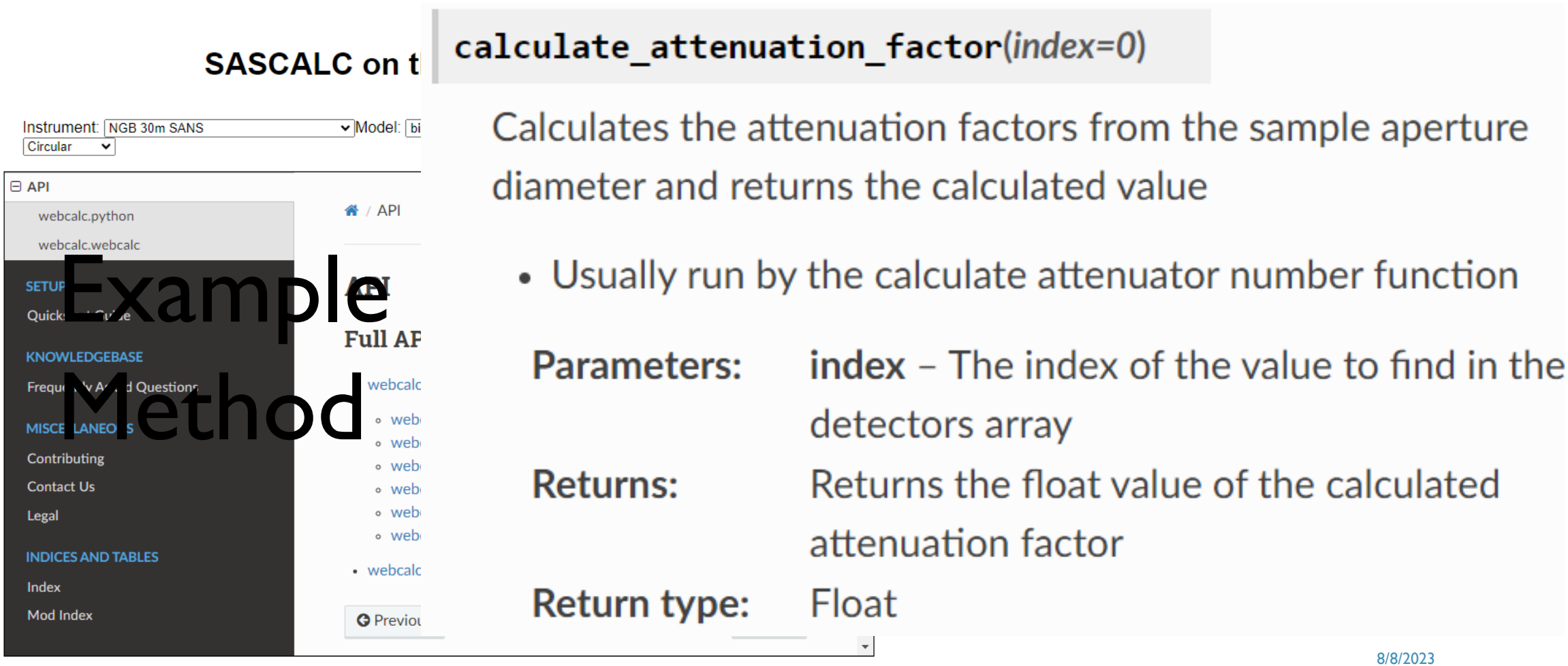
Front Carriage Right Panel:

Lateral Offset (cm): 6.766 Q_left (1/Å): 0.01875

Q_right (1/Å): 0.1188 Match right edge to of MR:

```
def calculate_objects(self):
```

DOCUMENTATION



Example Method n

MY CONTRIBUTION

- Transferred original code from JavaScript to Python
- Added all instruments
- Created the modular interface
- Documentation of files
- Setup the server and docker container

Live Demo!

Webcalc.ncnr.nist.gov

NEXT STEPS

Q Range Optimization

Connect to the instruments directly to give them configs

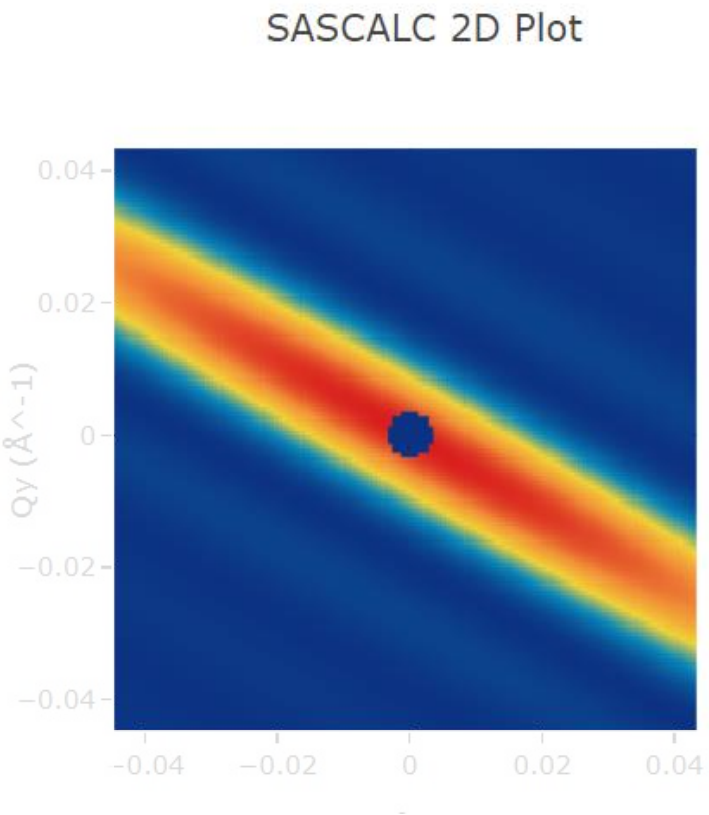
More instruments

Polydispersity and magnetism

Beta approximation

SPECIAL THANKS

- Jeff Krzywon
- Alan Munter
- Julie Borchers
- Leland Harriger




SASCALC 1D Plot
SASCALC 2D Plot
QUESTIONS/
COMMENTS
NSF
CHRNS
CENTER FOR HIGH RESOLUTION NEUTRON SCATTERING
NIST
Q (Å^-1)
Qx (Å^-1)