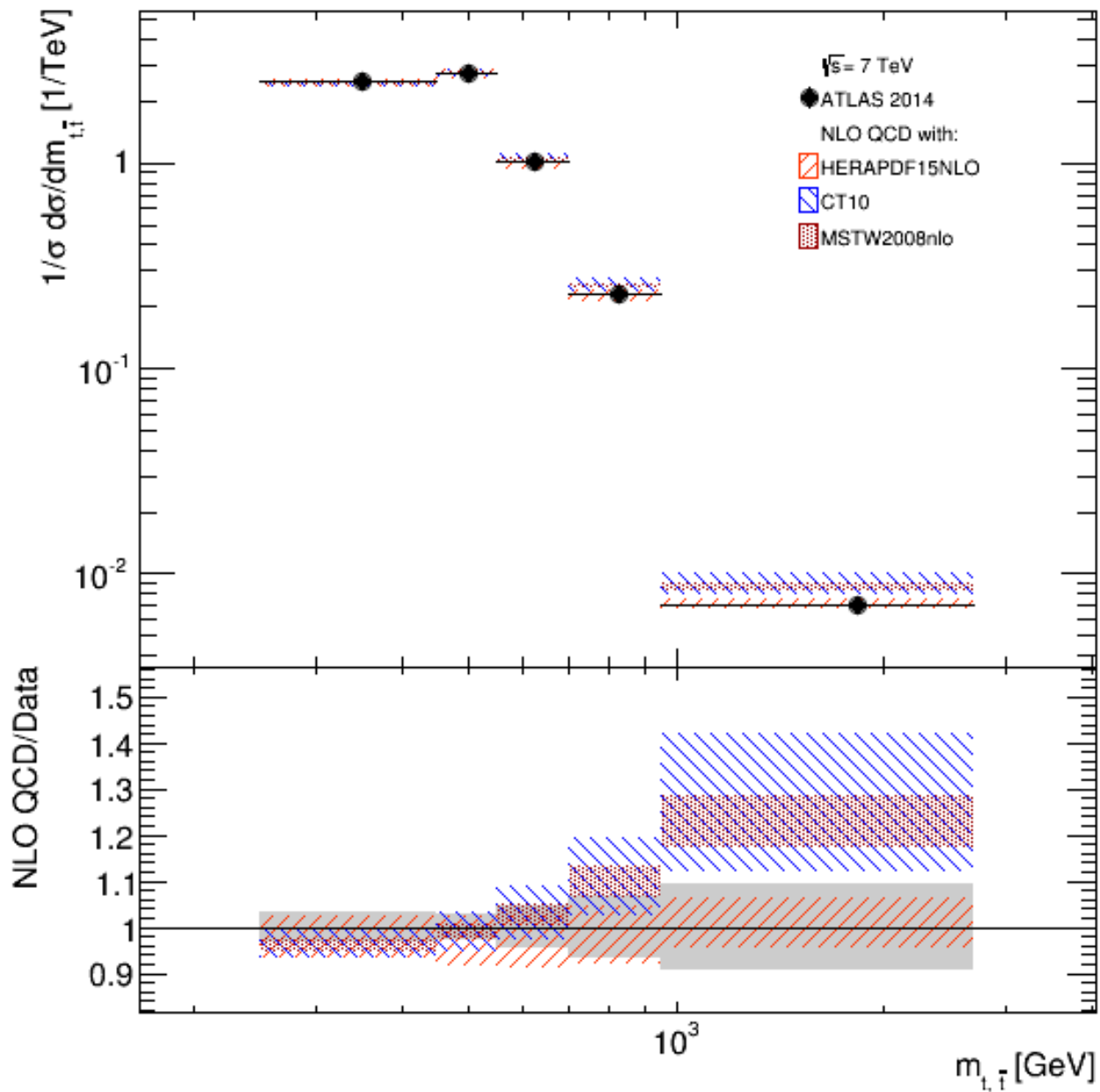


SPECTRUM

CERN – ATLAS Research Semester: Fall '14

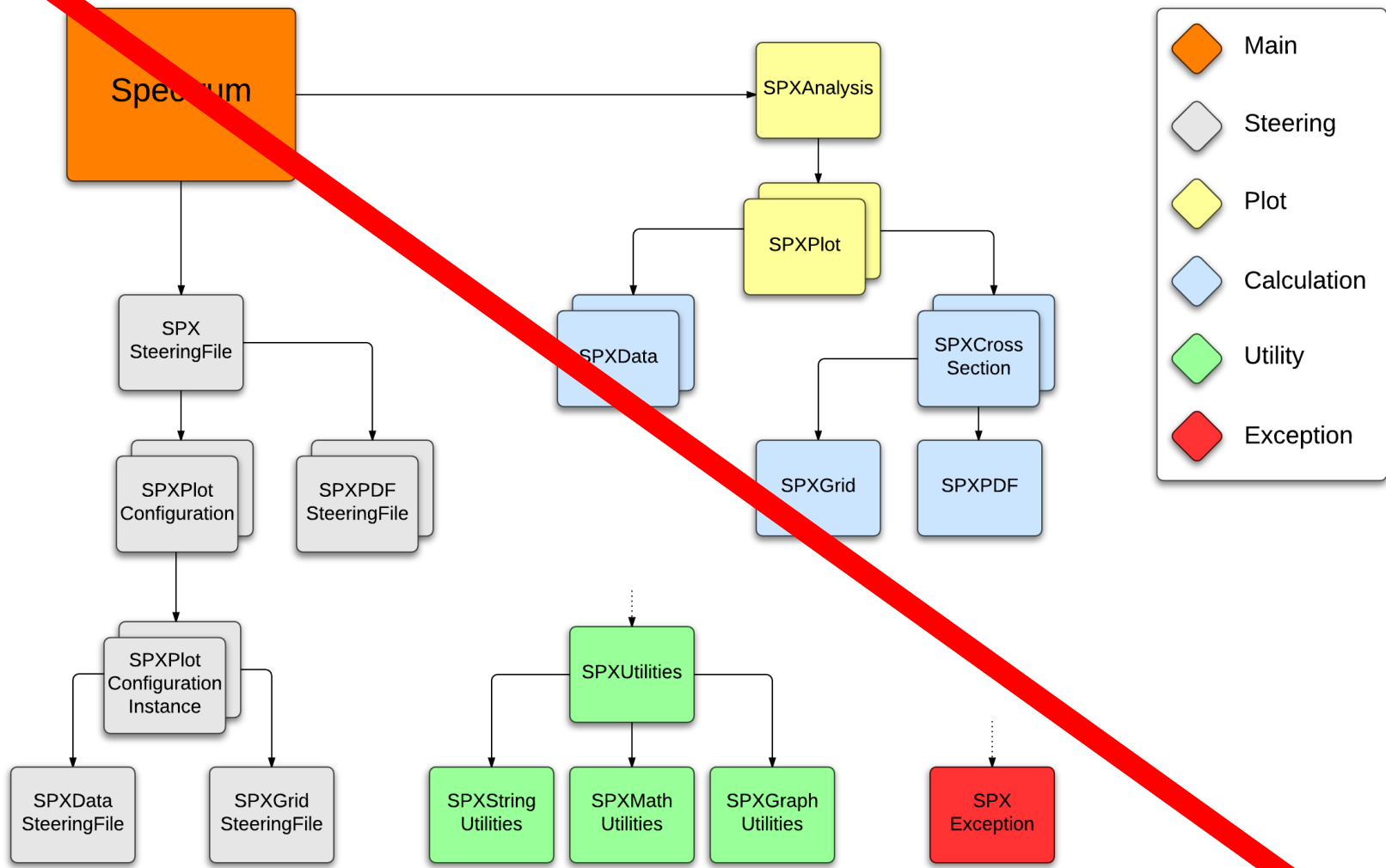
Joe Gibson, Computer Engineering

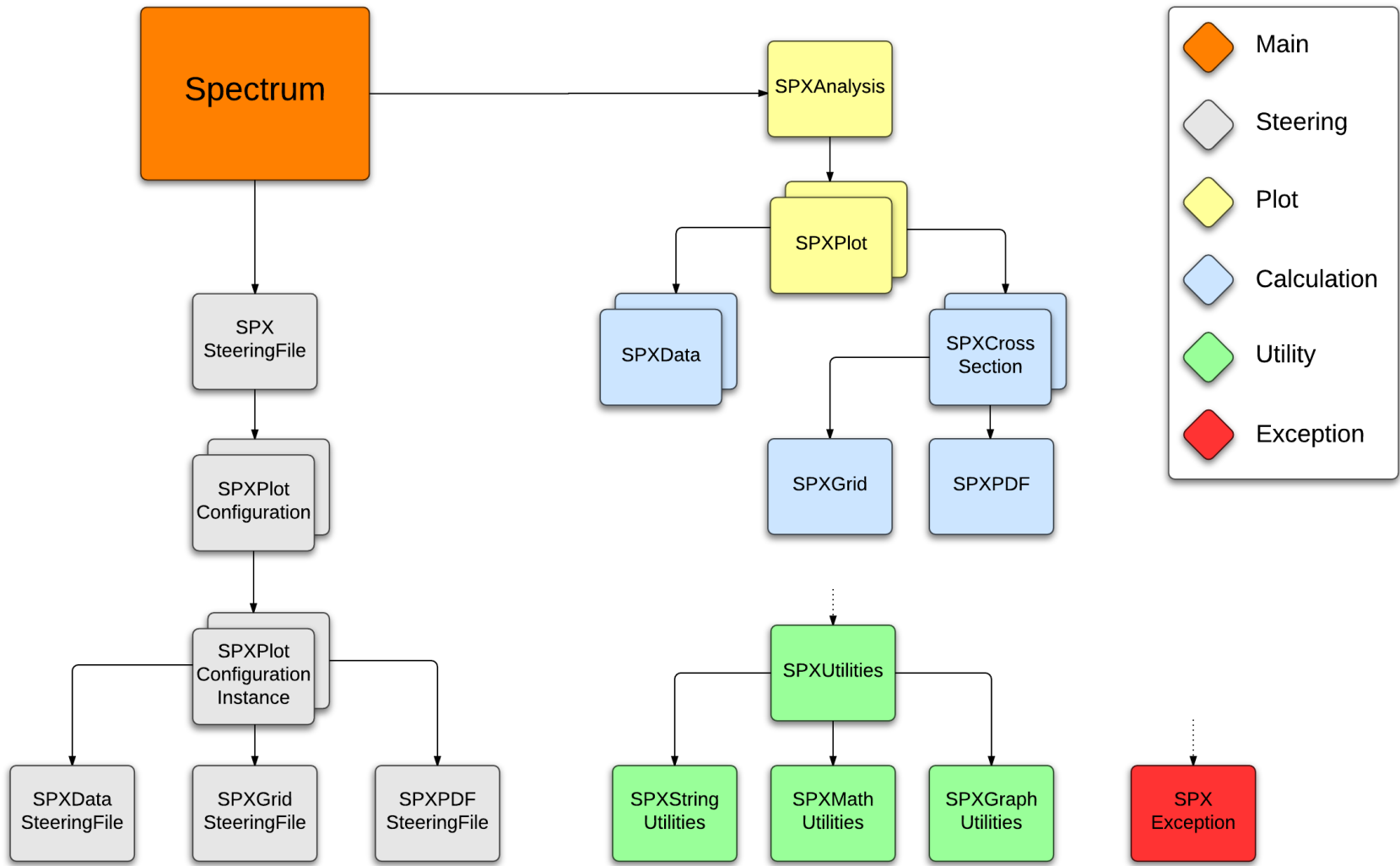
Grand Valley State University



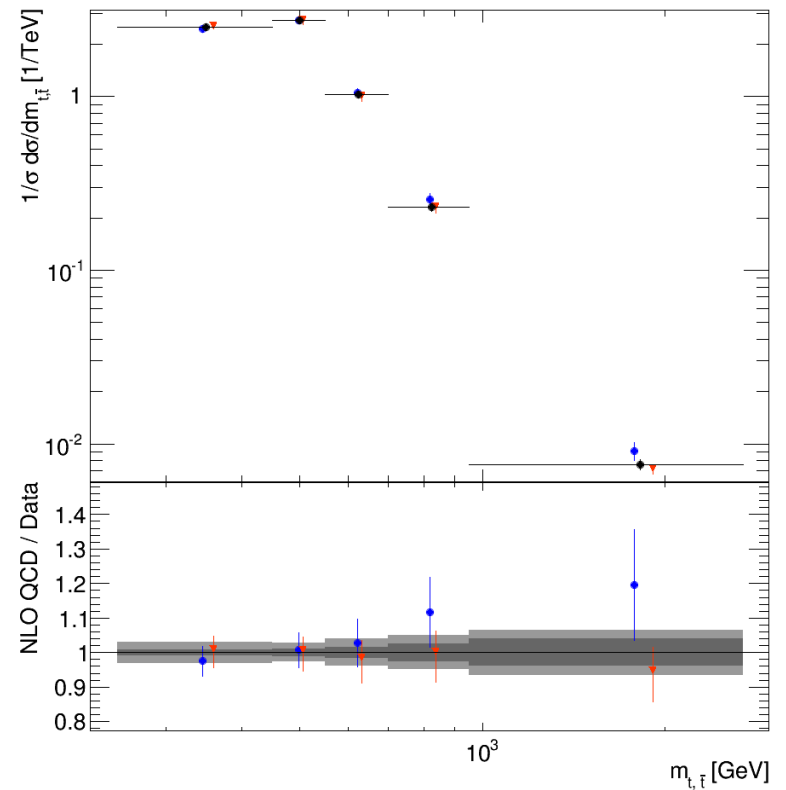
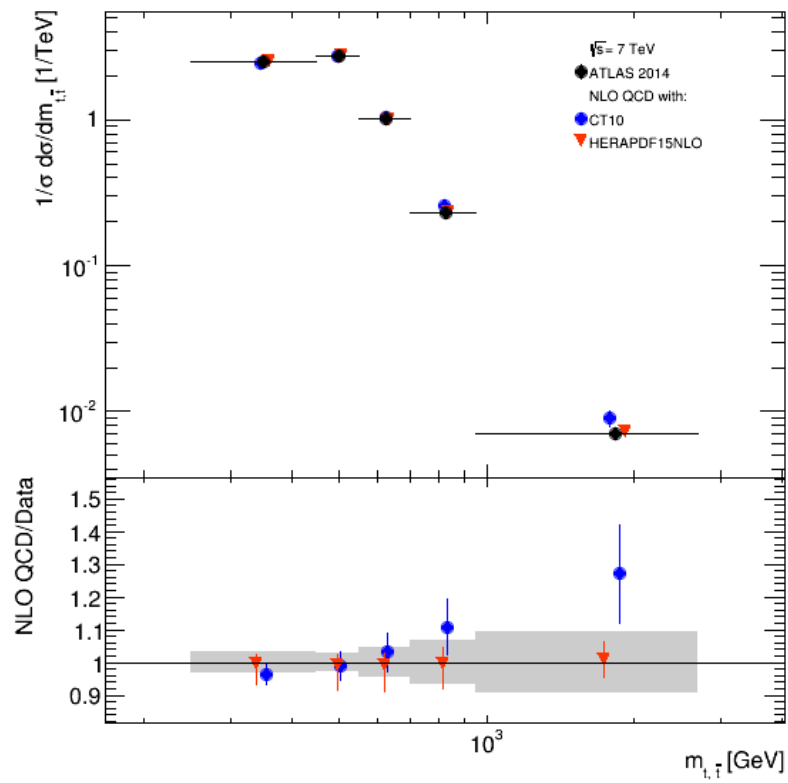
Experimental Data

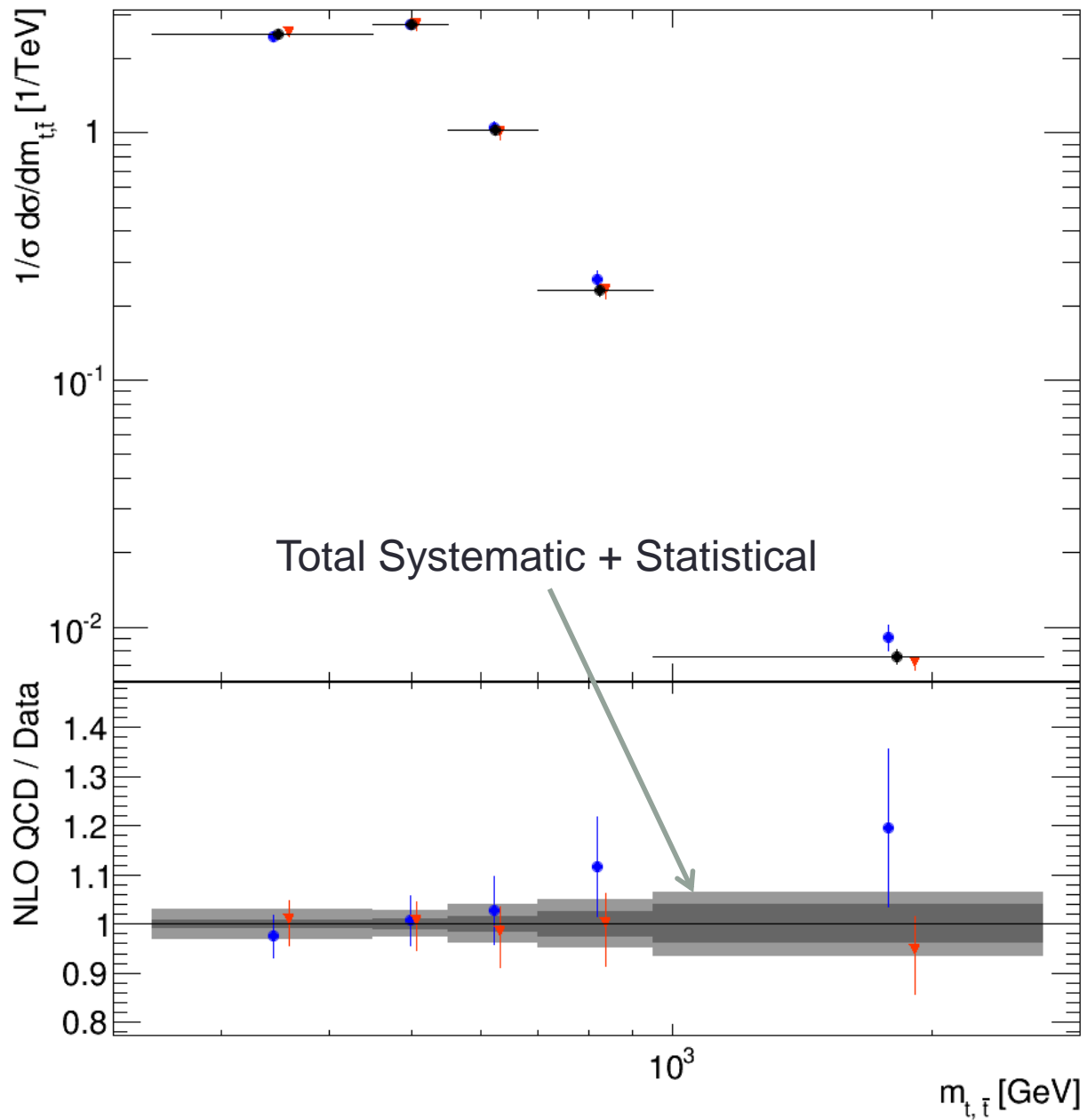
- Data formats
 - Spectrum T1S
 - Spectrum T1A
 - Spectrum T2S
 - Spectrum T2A
 - **Spectrum T3S**
 - **Spectrum T3A**
 - HERAFitter
- Systematic Errors
 - Symmetric or Asymmetric (S/A)
 - Total or Total + Individual (T1/T2)
 - **Individual Systematic Errors (T3)**
 - Explicit (HERAFitter)





Spectrum Plots





Test Website (Plot)

- <http://hep-project-applgrid.web.cern.ch/hep-project-applgrid/spectrum/spectrum.php>

Test Website (UI)

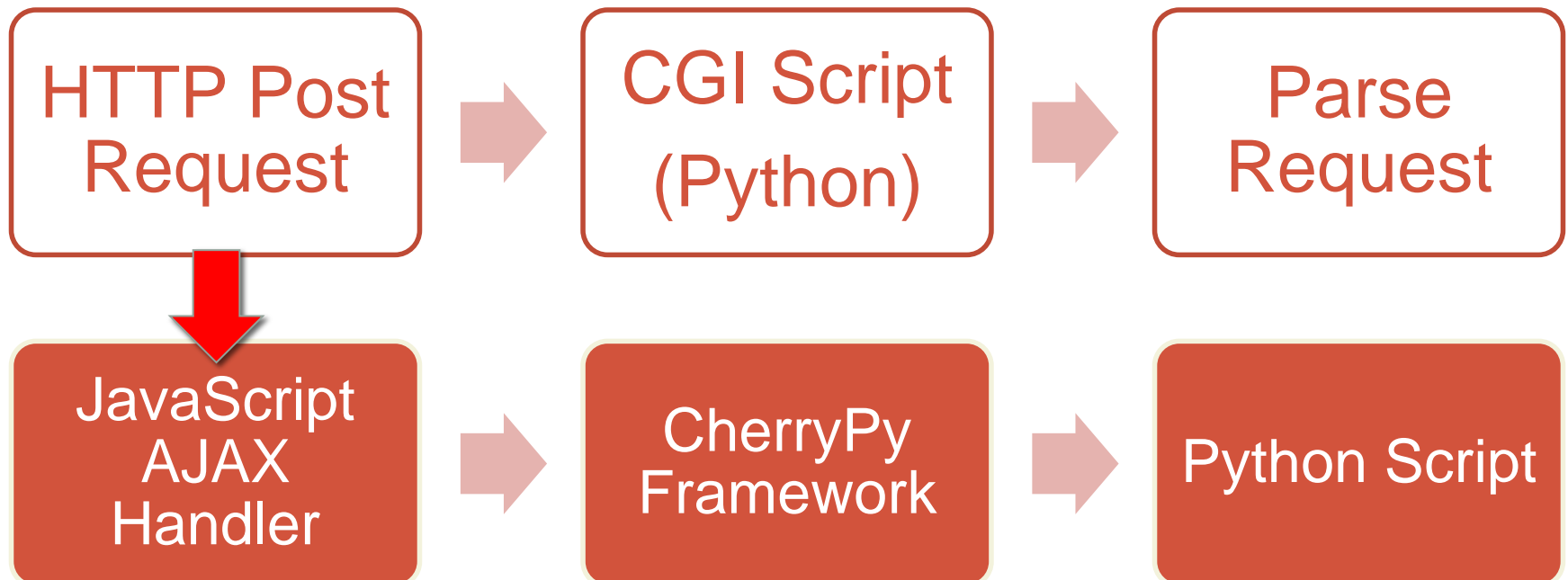
- <http://spectrum.web.cern.ch/spectrum/>

Spectrum Technologies

- C++
- Python
- JavaScript
- HTML
- CSS
- PHP
- CGI
- AJAX
- CherryPy
- jQuery
- REST
- Pure
- Bootstrap
- Node.js

HTML Forms

- HTML Forms
 - `<form action="cgi-bin/script.py" method="POST">`
- HTTP Requests (invented here at CERN...)









Spectrum