

A Python distribution for Astronomy



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Background

- Astronomers mainly using their own 20-30 year old platform (IRAF)
 - Based on its own Fortran-like programming language
 - Limited batch scripting language (no subroutines within a file!)
 - Very self contained
- STScI PyRAF
 - Bridge to using Python, NumPy etc.
 - Problem: suddenly have 20+ dependencies to install
 - Python, NumPy, Matplotlib, STScI Python, BLAS, Tk etc. (plus IRAF)
 - Similar problem to other fields, but with a number of different tools

AURA 'Unified Release'

- Collaboration between STScI and Gemini, two leading public observatories, run by AURA.
- Will provide a self-contained bundle of our user software and dependencies
 - cf. Sage, PythonXY, EPD.
- Past 1-2 years
 - Defining the project and securing resources to work on it in 2010
 - Technical discussion at SciPy
 - Maintaining Python installations in-house
- Status
 - Top-level requirements fixed recently
 - Beginning design and implementation

Strategy

- Initial support for Linux and MacOS X
 - Self-contained binary and source distribution
 - Core system plus some upgradeable add-on components
 - Start off with our key dependencies and add more as we progress
 - Can be installed without administrative privileges
 - BASH build scripts
 - Considering Sage/SPD packages with a few enhancements
 - Minimal dependency management
- Plan to support Windows later
 - Time-frame TBC
 - Will require a different approach

Strategy

- Common testing/integration framework
 - Automatically grab contributors' latest code (plus some dependencies) from SVN and test everything together on several OSs.
 - Based on STScI's Pandokia test system
<https://svn.stsci.edu/trac/ssb/etal/wiki/WikiStart>

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Alright, you talked me into it

