

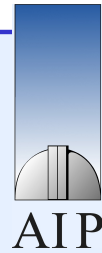
Integral field spectroscopy data reduction made easy with p3D

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Integral field spectrographs are well-suited instruments to observe extended and weak objects, such as planetary nebulae. A result of such observations are large quantities of raw data, which often requires an expert to convert it to scientific spectra. In order to speed up the data-reduction process, make it easier to comprehend, and also less error-prone, semi-automatic tools — or pipelines — become highly valuable assets. The goal of our data-reduction tool p3D has been to create a freely available tool that will help you reduce your IFS data easily, while also attaining high accuracy. We here present some of the features and versatility of our recently released data-reduction tool p3D.



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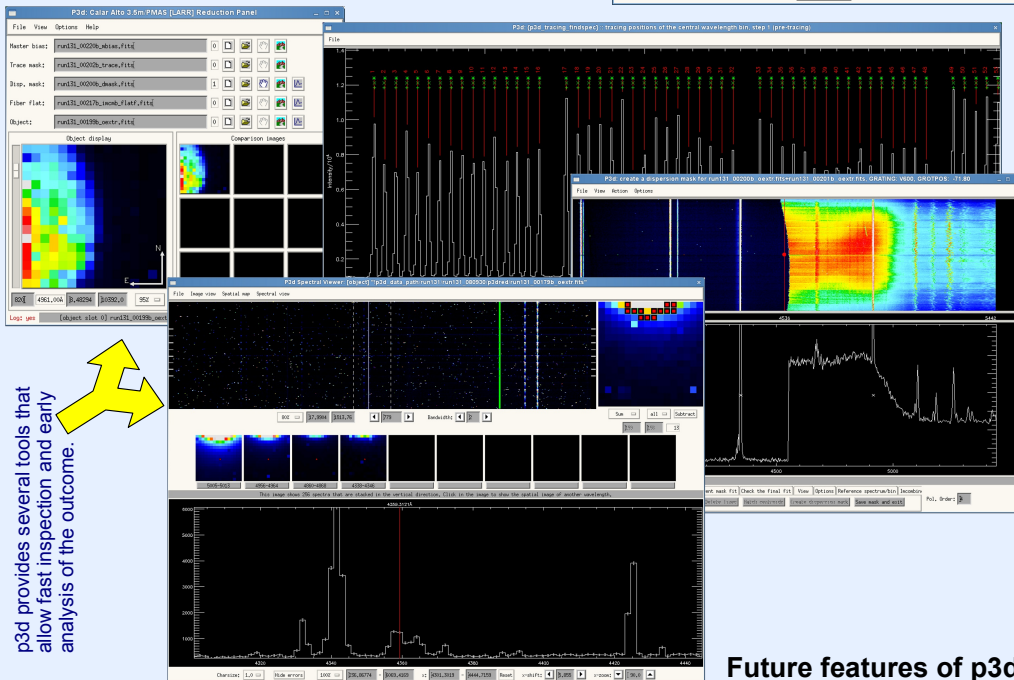
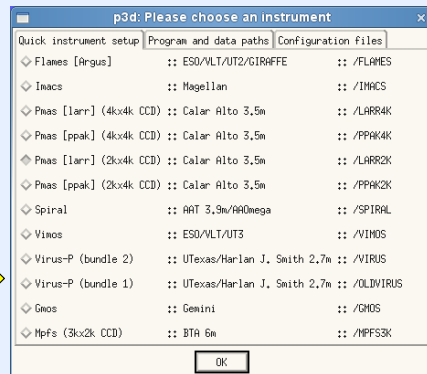
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Integral field spectrographs (IFS) are well suited instruments to observe extended and faint objects, such as planetary nebulae. A result of such observations are large quantities of raw data, which often requires an expert to convert it to scientific spectra. In order to speed up the data-reduction process, make it easier to comprehend, and also less error-prone, semi-automatic tools – or pipelines – become highly valuable assets. The goal of our data-reduction tool p3d has been to create a freely available tool that will help you reduce your IFS data easily, while also attaining high accuracy. We here present some of the features of our recently released data-reduction tool p3d.

Features of p3d

p3d is based on IDL – and thereby supports use on: Linux, OS X, Solaris, and Windows – and **can easily be used without an IDL license** with the help of the Virtual Machine. The tool is **released under GPL-v3** (©AIP) and is easy to install. Already integrated features include: cross-talk correction (to separate overlapping spectra), full error propagation, logging of all tasks, and custom configuration through a user parameter file. Currently tasks are included to create the following five products: master bias, trace mask (a fully automatic process – a unique feature of p3d), dispersion mask, flatfield, and extracted object spectra.

p3d is currently configured for PMAS (LARR and PPAK), SPIRAL, and VIRUS-P; work is also made to support MPFS-3k, GMOS, IMACS, INTEGRAL, VIMOS, and FLAMES-ARGUS.



p3d provides several tools that allow fast inspection and early analysis of the outcome.

Future features of p3d

Additional features that we could include in p3d in the future are: flux calibration, DAR correction, data-analysis tools for line fitting and binning, and tutorials for the different tasks and IFUs. What would you like to see in p3d?

For more details see Sandin et al. 2010, A&A, 515, pp.A35, and: <http://p3d.sourceforge.net>.

The further support and development of p3d has been secured with funding until the end of 2012.