The PFIS team will commission 7 modes of operation. The majority of the data reduction for these modes will be accomplished by scripted IRAF procedures. A short summary of each follows.

**Imaging (OCCD mode 1; Code OIUN; State S1; CCD readout: Normal)**

Standard imaging data reduction of the mosaic of the 3 CCD readouts will be achieved through well established imaging reduction procedures. The IRAF package MSCRED is well suited for these needs. By using IRAF scripts to insert keywords into the fits file headers and using the MEF (multiextension FITS) format basic CCD instrumental calibrations will be completed within the MSCRED package. The IRAF MSCRED package is specifically designed to process mosaic image CCD data. Display software such as DS9 are fully capable of displaying mosaic data provided the data exist in the MEF format with specific keywords. Experience from the WIYN Mosaic and MiniMo imaging data should prove helpful in developing effective automated IRAF scripts to accomplish the various tasks. Standard image reduction include biasing, flat fielding, dark correction, pixel registration, cosmic ray detection and bad pixel masking among others.

**Long Slit Spectroscopy (OCCD mode 11; Code SGUN; State S2; CCD readout: Normal)**

Long slit spectroscopy by PFIS will also be processed primarily by IRAF scripted reduction. The IRAF GEMINI package has specific tasks designed for mosaic spectroscopy data. Data from PFIS will be formatted to be similar to the Gemini GMOS (Gemini Multi-Object Spectrograph) instrument data. A "prepare" script which adds the required keywords to the headers of PFIS FITS files will be required. Once this "prepare" script has been run the PFIS spectroscopic data will be processed by IRAF scripts which will utilize the specific GEMINI package task required for spectroscopic reduction and wavelength calibration.

**Multi-slit Spectroscopy (OCCD mode 17; Code MGUN; State S2; CCD readout: Normal)**
Multi-slit spectroscopy by PFIS will be processed in nearly the same fashion as long slit spectroscopy. The addition of multiple spectra on a single mosaic image will also be handled by the IRAF GEMINI package.

**Long Slit Linear Spectropolarimetry (OCCD mode 13; Code SGLN; State S5; CCD readout: Normal)**

Long slit linear spectropolarimetry will require a two step data reduction process. Initial processing will mimick the long/multi slit spectroscopy procedure from above. A single source will produce 2 spectra (the two orthogonal polarimetric components) which will be processed into a format applicable to a higher level polarimetric application software (TBD). There are several polarimetric reduction software which can be utilized to analyse these data, e.g. the University of Wisconsin's HPOL REDUCE software package as well as the UK's Starlink POLMAP package. These packages are fully capable of analysing and calibrating polarimetric data.

**Multi-slit Linear Spectropolarimetry (OCCD mode 19; Code MGLN; State S5; CCD readout: Normal)**

Multi-slit linear spectropolarimetry will be processed similarly to long slit linear spectropolarimetry, there should be no added complications.

**High Time Resolution Long Slit Spectroscopy (OCCD mode 12; Code SGUH; State S2; CCD readout: High speed)**

High time resolution spectroscopy is relatively new. Examples of how to deal with this type of data are limited. However we plan to treat these data in a similar fashion as was done by Jeffery and Pollacco (*MNRAS, 318, p974-982, 2000*) with their WHT (William Herschel Telescope) intermediate dispersion spectrograph ISIS data taken in low-smear drift mode. Data is readout continuously in a fashion which will produce a FITS file that will resemble a multi-slit spectroscopic mosaic image. Each spectra however now represents a temporal history of the source's spectrum. Data stored in this fashion is referred to by Jeffery and Pollacco as a "data cube". This data cube can be reduced by scripted standard IRAF and IRAF GEMINI routines as implemented by the multi-slit spectroscopy data reduction procedures indicated above.

**Fabry-Perot Imaging (OCCD mode 6; Code OFUN; State S3; CCD readout: Normal)**

Fabry-Perot imaging data reduction will be performed as directed by the Rutgers team and software they deem appropriate.