

autoPROC reference card	
set up	
Set up for csh or tcsh	<code>source /some/where/autoPROC/installed/setup.csh</code>
Set up for bash, ksh, zsh, or sh	<code>./some/where/autoPROC/installed/setup.sh</code>
autoPROC: most useful options	
Brief help message	<code>process -h</code>
Simple run (in directory containing images)	<code>process -d outputdir > log</code> - or - <code>process -d outputdir tee log</code>
Simple run (remote directory)	<code>process -d outputdir -I imagedir > log</code>
Read image header information	<code>imginfo test_0123.img</code>
Check beam centre conventions	<code>beam8.sh <beamX> <beamY> <sizeX> <sizeY></code>
Define direct beam transform	<code>process BeamCentreFrom="header:y,-x" -d outputdir > log</code>
Let autoPROC determine most likely direct beam transform	<code>process BeamCentreFrom="getbeam:init" -d outputdir > log</code>
Define direct beam position	<code>process beam="1556 1512" -d outputdir > log</code>
Identify image scans	<code>find_images -d imagedir -l</code>
Manual sweep definition	<code>process -Id "test,/where/ever/images,test_###.img,1,90" -d outputdir > log</code>
Define cell dimensions and symmetry	<code>process cell="a b c al be ga" symm="P21" -d outputdir > log</code>
Include "reference" file for symm, cell and test-set	<code>process -ref mtzfile -d outputdir > log</code>
List available "macros"	<code>process -M list</code>
Process in "fast" mode	<code>process -M fast -d outputdir > log</code>
Restrict number of "processors"	<code>process -nthreads <no> -d outputdir > log</code>
Restrict resolution range	<code>process -R 50.0 2.0 -d outputdir > log</code>
List known multi-axis goniostats	<code>x_kappa -list</code>
Process multi sweep data collected with different goniostat/2-theta settings	<code>process KapparatSite="siteID" -d outputdir > log</code>

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helper programs and options	
Scaling module: help message	aP_scale -h
Simple scaling of data set with 360 batches/images	aP_scale -mtz XDS_ASCII.mtz -P lyso test A -b 1-360 -id 01 > log
More detailed scaling of 'early' and 'late' batches	aP_scale -mtz XDS_ASCII.mtz -P lyso test early -b 1-180 -P lyso test late -b 181-360 -id 02 > log
Allowing different high-resolution limit for decaying crystal	aP_scale -mtz XDS_ASCII.mtz -P lyso test early -b 1-180,30 -P lyso test late -b 181-360,30 -id 03 > log
Compare indexing of datasets	check_indexing mtzfile1 mtzfile2 ... mtzfileN
Compare orientation matrices	cmpmat 01/XPARM.XDS 02/XPARM.XDS P21
Combine integrated intensities from several scans manually	combine_files -f 01/XDS_ASCII.mtz -P lyso test lowres -f 02/XDS_ASCII.HKL -P lyso test highres -o low-high.mtz
Calculate statistics on unmerged data	mrfana INTEGRATE.HKL - or - mrfana XDS_ASCII.mtz