**Horace Jobs list**

**Documentation**

Web: **[RAE]**

* Final tidy up of the Horace website
* Add dispersion\_plot documentation, making surface plot of dispersion
* Examples of overplotting dispersion relation on a 2D QE plot and surface plot of dispersion relation
* Explain Horace planner views
* ~~Remove documentation for mp~~
* ~~Change wiki regarding 2014a to refer to mexopts.xml, rather mexopts.sh~~

Matlab function help **[TGP]**

* Ensure consistent format across all functions
* Correct errors in function help. Specific places where attention needed to the help
  + disp2sqw\_plot, disp2sqw, dispersion\_plot and methods dispersion must have the dispersion documentation improved to account for cell array output i.e. multiple dispersion relations.
  + bragg\_positions, bragg\_positions\_view
  + multifit help updated to describe multiple foreground functions

Training worksheets and 'getting started' on the web **[RAE]**

* Add the fact that dispersion functions can return cell arrays of arrays
* Add bragg\_positions and bragg\_positions\_view to web documentation 'getting started'
* Introduce head\_sqw in the 'types of data...' to return header information from a file

**Major new functions**

* Dispersion plots from data, stitching together different symmetry directions in different zones (manual, and automatic construction) **[TGP]**
* ~~Animation-o-matic of split Horace cut (e.g. to identify runno that was spurious)~~ **[RAE]**
* Investigate generalisation of projection axes **[AB and TGP]**
  + Non-orthogonal axes (nearly done)
  + Facility to make cuts around the circumference of a circle
  + Radial cuts (average around a circle, and average around a sphere)

*(can also replace gen\_sqw\_powder\_test and gen\_sqw\_cylinder\_test if done properly)*

* gen\_sqw to get ei and psi from nxspe files. Need to have offset from wccr to psi as part of data reduction (i.e. ψ=σ\*wccr + wccr\_0, where wccr is the sample environment rotation, and σ=1 or -1). **[AB]**
* Symmetrisation with replication option, that is, if reflect the data in a mirror plane then have the symmetrised data appear on both size of the plane of reflection. Health warning to be added to titles. **[RAE]**

**Minor function, bug fixes**

* ~~Nice wrapper for mask\_pixels for nth run in an sqw object~~
* The method 'signal' should be written for dnd objects too **[TGP]**
* Correct replicate to work with sqw object as the reference object **[TGP]**
* Multiple bugs with section method **[TGP]**

**Graphics**

* acolor b – this screws up monumentally if you have a variable called b already in the workspace. Is there a sensible way to avoid this without breaking everything else?? See also aline, amark **[RAE]**
* Protect graphics from clear all (lock persistent variables). Mlock, or possibly singleton class, **[AB]**
* Plot error bars without caps using Greg Tucker's solution so only have one handle to the plot. Maybe not a full solution to the awkward handle problem however. **[AB]**
* Graphics to work with 2014b***. If can start before 21 February, complete within one week.*[AB]**

**Horace planner** **[RAE]**

* Investigate resizing plots if resize the window
* Investigate adding ability to change limits on individual plots

**Admin**

* Readonly access to SVN for selected individuals **[AB]** *Probably should discuss the best way to deal with people adding code. Greg Tucker said that all he wanted was readonly, and would send us code for our editorial scrutiny, but there may be a better way e.g. if ask for unit and system tests then we could allow checking-in)*
* Compilation of mex files on SNS machines (is that data analysis machines, macs, or both). See email from Stuart Campbell. (*Also bug reported by Greg Tucker in mslice)* **[AB]**
* Status of unit tests. Resolve multifit test problems. Temporarily switch off the testing of instrument and sample fields (these fields only used by Tobyfit protottype) **[AB]**
* Test fitting algorithm in multifit with NIST reference datasets **[TGP]**

**Tobyfit**

* Tobyfit proper manual (how to run, as well as set up) – not really a Horace job, but worth putting somewhere **[RAE]**
* Tobyfit to incorporate ARCS/Sequioa/CNCS parameters- see Ron **[TGP]**