Notes from IACHEC HRWG meeting 2016

Progress:
Vinay has almost finished re-running his linelist extraction code. The previous version had some issues with the higher order data falling outside the detector region.

Adam has written a code which let's users patch the AtomDB files on the fly during a session, the goal is to use this during the line identificaiton part of the project.

Line ID is then next, and slowest, part of the project. Detection can be automated, but line ID will largely be handwork. Volunteers (students?) needed! Otherwise Adam will plough through this slowly.

Other items that came up:

- How to tell if adding a line improves your fit:
    - Use the F-test, but carefully. Read Protassev 2002 [2002ApJ...571..545P](#)
- Should we be using other instruments (i.e. RGS)
    - yes! We are manpower limited. But a comparison would be interesting. What is the RGS's longest observation and/or cal source?
- Should we do different objects?
    - Yes! Though it would have to be a line dominated object – no point in looking in detail at a powerlaw (or is there?)
- Should we look at absorption lines?
    - Yes! But it opens up a statistical can of worms, so be careful. Vinay had some ideas on this, so if in doubt, ask him.
- What's the difference between CHIANTI and AtomDB
    - I could tell you but I'd have to kill you. Realistically, they have a much stronger focus on the sun, so they have more tools built in for useful solar things (DEM analysis etc), while we are more integrated into the X-ray community. But the underlying atomic data is [largely] the same.

ACTION ITEMS

ADAM to find a webspace somewhere for uploading linelists.
VINAY to finish up the rerun of his code and upload the remaining lines
ANDY to upgrade Skype :) Also upload anything he can find from his old work to allow comparison
ADAM to finished and release AtomDB patch tool so others can play with it/use it to analyse spectra. Also to provide a demo for those who are interested.
EVERYONE to find anyone willing to help with the line identification. It is boring, but it needs to be done manually. Or, everyone to think of a way to automate the process.
EVERYONE to think of other objects they'd be interested in, why, and whether there are good spectra lying around.