Example OT script 2: A survey of Submillimetre Galaxies

1. **Enter the basic information**

Click on 'Proposal' to bring up the Proposal Information editor pane. Enter the Title, Abstract, Proposal Type, Scientific Category, Keywords, set yourself as PI, add any co-Is

2. **Attach supporting material**

Attach a .pdf file up to 5 pages long containing a scientific justification and technical justification

3. **Create a Science Goal**

Press the cross-hair icon or Edit -> New Phase 1 Science Goal. The Science Goal is where all the information on the source and the spectral setup will go.

4. **Add the source information**

Select the 'Field Setup' editor pane. 'Multiple Pointings' should be selected as Target Type. Press 'Load from File…' to load the text file sourcelist.txt (available on USB stick – ask one of the tutors) and select the 'Replace Source list' option, then Open. **Alternatively**, you can copy the field setup from the 'B7 continuum: COSMOS SMGs' project in the Template Library. Go to File -> Show Template Library, click on the project node 'B7 continuum: COSMOS SMGs', and copy the Field setup to your Science Goal either by copy-and-pasting (right click on Field Setup in the template project, select Copy, right-click on the Science Goal node for your project, select Paste) or by dragging-and-dropping (drag the Field Setup into the Science Goal node of your project).

5. **Configure the spectral setup**

Select the Spectral Setup editor pane and the Spectral tab. Set the Spectral Type to 'Single Continuum' with the radio button, which will bring up the 'Single Continuum' parameter box. Enter a Sky Frequency of 345 GHz. This will automatically compute four 2000-MHz wide spectral windows straddling the frequency entered. You can visualise your spectral setup in the Spectral Visualiser Tool. Notice that the representative frequency defaults to the centre of the first spectral window, which is fine for the case illustrated here.

6. **Finalise the spatial setup**

Since we are dealing with single pointings on point sources, the exact value of the antenna beamsize (which is determined by the Representative Frequency) does not play a big role, and we can skip this step as all the relevant information was already entered in step 4.

7. **Select the calibration strategy**

Keep the default option 'System-defined Calibration' in the Calibration Setup editor pane. We strongly discourage User-defined calibrations except for expert users whose projects have special calibration requirements.

8. **Enter the control and performance parameters**

Select the Control and Performance editor pane. Fill in the Desired Performance parameters (see project description):

Desired Angular Resolution: 0.25"

Largest Angular Structure in source: point source

Desired Sensitivity per Pointing: 0.2 mJy

Bandwidth used for Sensitivity: AggregateBandWidth (this is the only option anyway!)

Check whether the OT suggests ACA observations (press the ‘Suggest’ button – the OT should NOT recommend ACA observations) and view the Time Estimate.

9. **Validate your project**

Press the green tick icon or File -> Validate. If you have followed the instructions correctly, you should get no errors. If you do get errors you can double-click on the error message to go to the relevant pane.

10. **Submit and save your proposal**

File -> Submit Project will submit your project (should not be done for test projects!), after which you will also be prompted to save it locally. Upon submission your project will be assigned a Project Code, and you can re-submit edited versions until the proposal deadline, overwriting the previous version. You can save your project locally at any time by pressing the disk icon or File -> Save / Save As.