POSSUM
value added discussion

- Re-validate concept and contents of
  pipeline and value added catalogs

- Characterize relationship to EMU catalogs

- Establish a "big picture" view of how / when
  the POSSUM value added catalog will happen

- If time, connect with science goals

EMU products

EMU Source Catalog	EVACat (EMU value added catalog)
Name, position (<u>all</u> with errors) Size, Peak flux, Integrated flux Spectral index & curvature Beam size Time of observation Local rms Postage stamp links to images	Cross-ID **(and components → source)** Redshift +? number of pixels > some threshold flux-weighted moments (e.g. SExtractor), maximum/minimum extent/orientation, total flux estimates

PPC	PVACat
• Automated, based on EMU • Fixed product *(perhaps 1 iteration)* • Early, easy, fast public access • Acceptable to ASKAP/CSIRO **ART:: "PPC should be the best we can do in real time on the EMU objects" (nothing more and nothing less)**	Evolving Everything we've put blood and sweat into, and which can't be done in real time.

PPC

Polarised fraction, angle, V
   - **all** EMU sources

Catalogue of point-source RMs
   (for simple RM spectra)

Polarisation (and Stokes I) SEDs
   -   all sources (?)

RM synthesis spectrum
   - all EMU sources

Cubes of Q, U, RM, V around sources

RM spectrum annulus around EMU source
(at own risk)

Noise map in I, Q, U, V (for every
frequency channel?) for every EMU source
(to be used as a weight map)

PVAC

Dominant & secondary RMs for all EMU sources (unresolved)

Offsets and organisation of discrete Q, U, RM components into groups/clusters corresponding to the same EMU source
                              + opt. ID, redshift

RM , Q_0, U_0 images?

Catalogue of polarised sources that are not EMU sources

Cubes of Q, U, RM & zeroth moment RM & P for the whole sky (with and without single dish)

Gradient maps of (Q, U) over whole sky at 20'' resolution

RM statistics for defined classes

Questions:

- Is there anything requiring "real time"?
  (u,v data? or just original cubes?)

- What is the overall vision of how the PVACat gets constructed?
  (who, when, connection with research
  projects, etc)