EMU Pilot Summary

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EMU Management Team

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Evolutionary Map of the Universe

The EMU Project

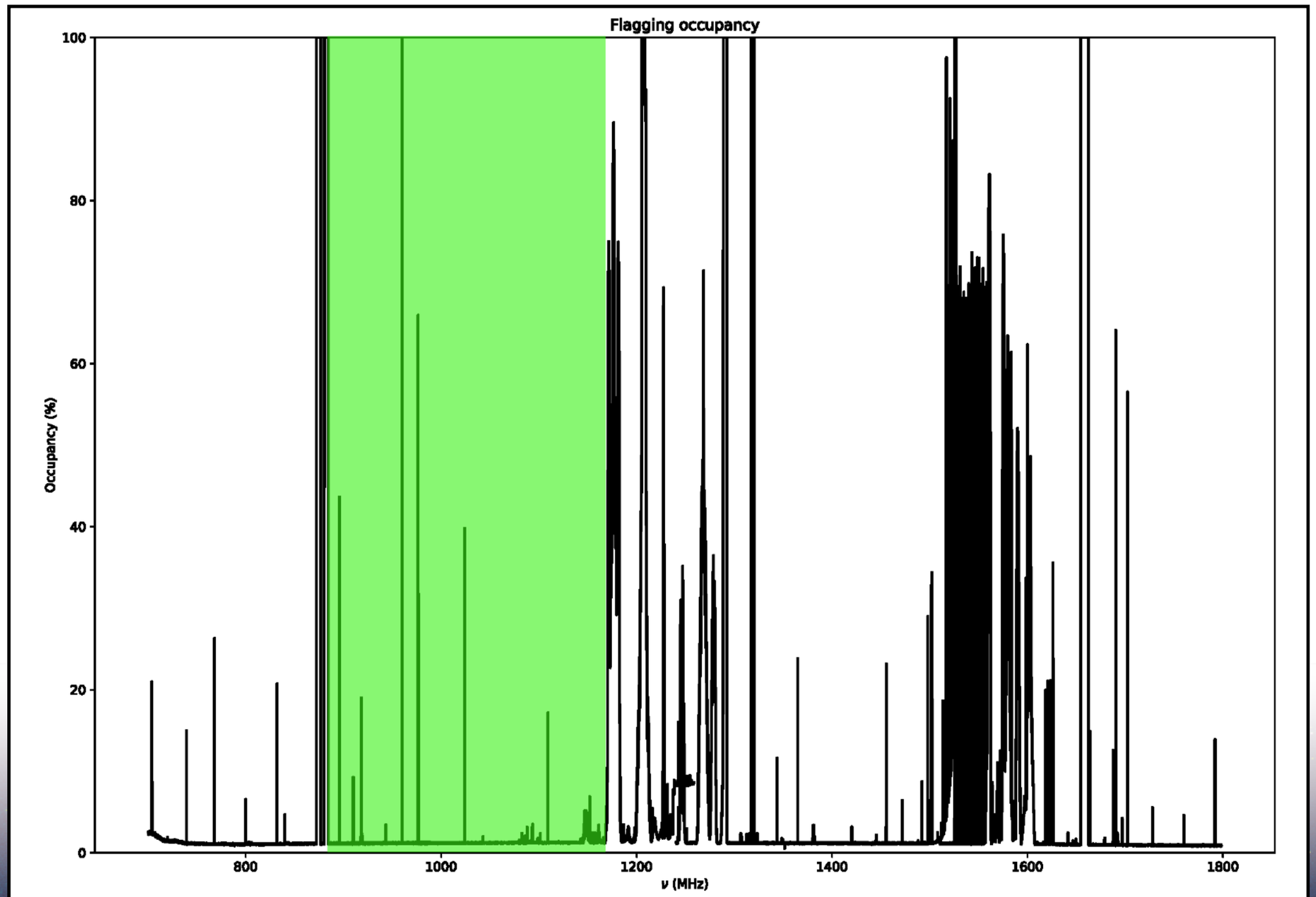
- All-sky continuum to 10 uJy/bm at 10 arcsecond resolution
- Galactic, extra-galactic and cosmology Key Science Projects
- EMU Development Projects: observing strategy, ASKAPsoft, CASDA, data validation, diffuse source extraction, classification, cross-id, redshift, machine learning
- EMU Collaboration Projects: eRosita, SkyMapper, Taipan, VHS, DES/Oz-DES, MWA, VLASS, POSSUM, WALLABY, FLASH

Pilot Survey Plans

- Primary goal is to test survey strategy and pipelines
- Survey a single area of about 250-300 square degrees
- ~10 hours/field x 9 fields arranged as a 3x3 grid
- Uniform beam-to-beam and tile-to-tile sensitivity (~10%)
- Avoid equator, Galaxy, solar interference
- Preference for fields well-studied at other wavelengths

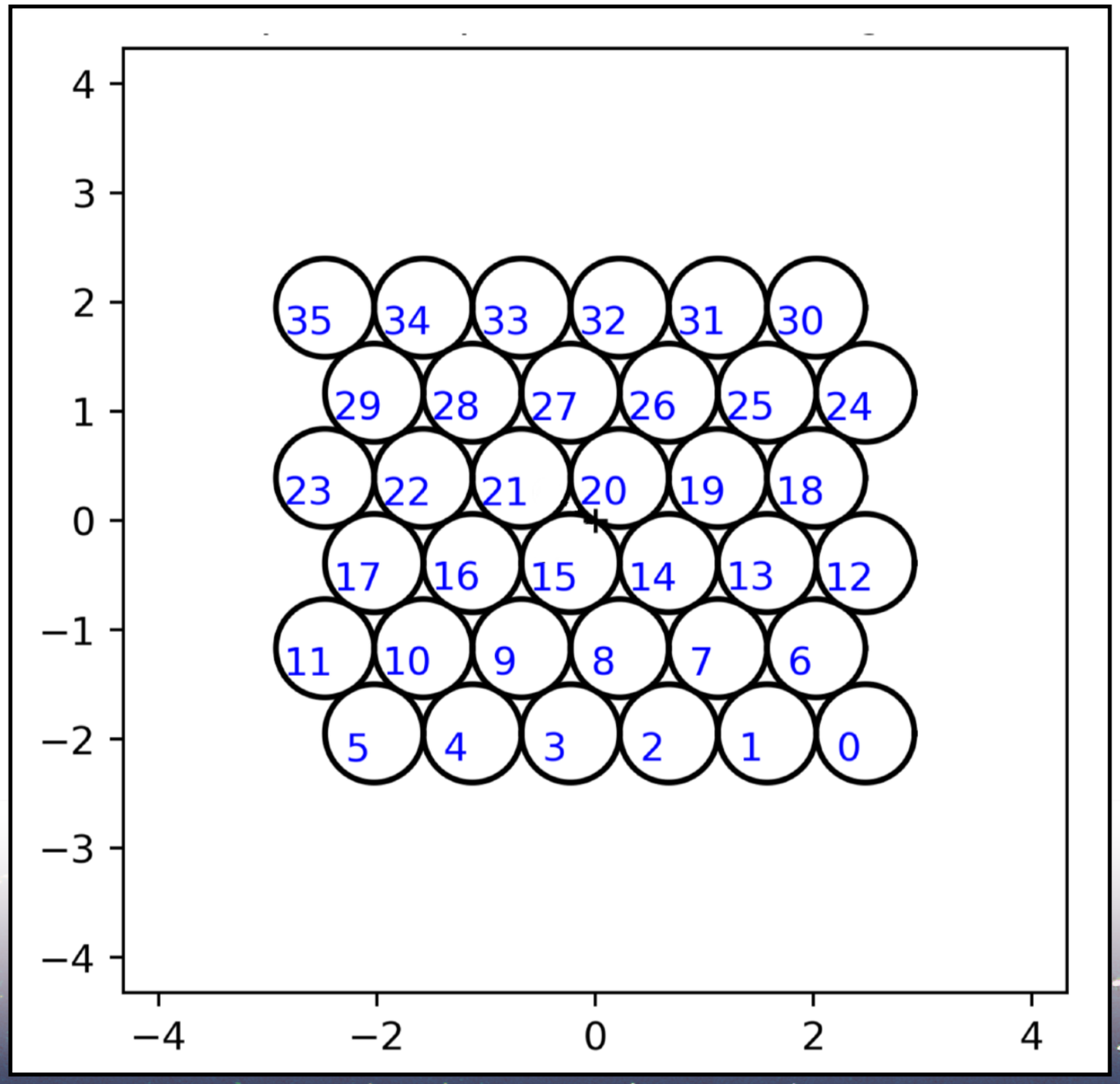
Frequency: ~ 840-1128 MHz

Avoid RFI > 1140 MHz; Avoid Tsys increase < 800 MHz



Beam footprint: closepack36 with pitch=0.9 degrees (no interleaving)

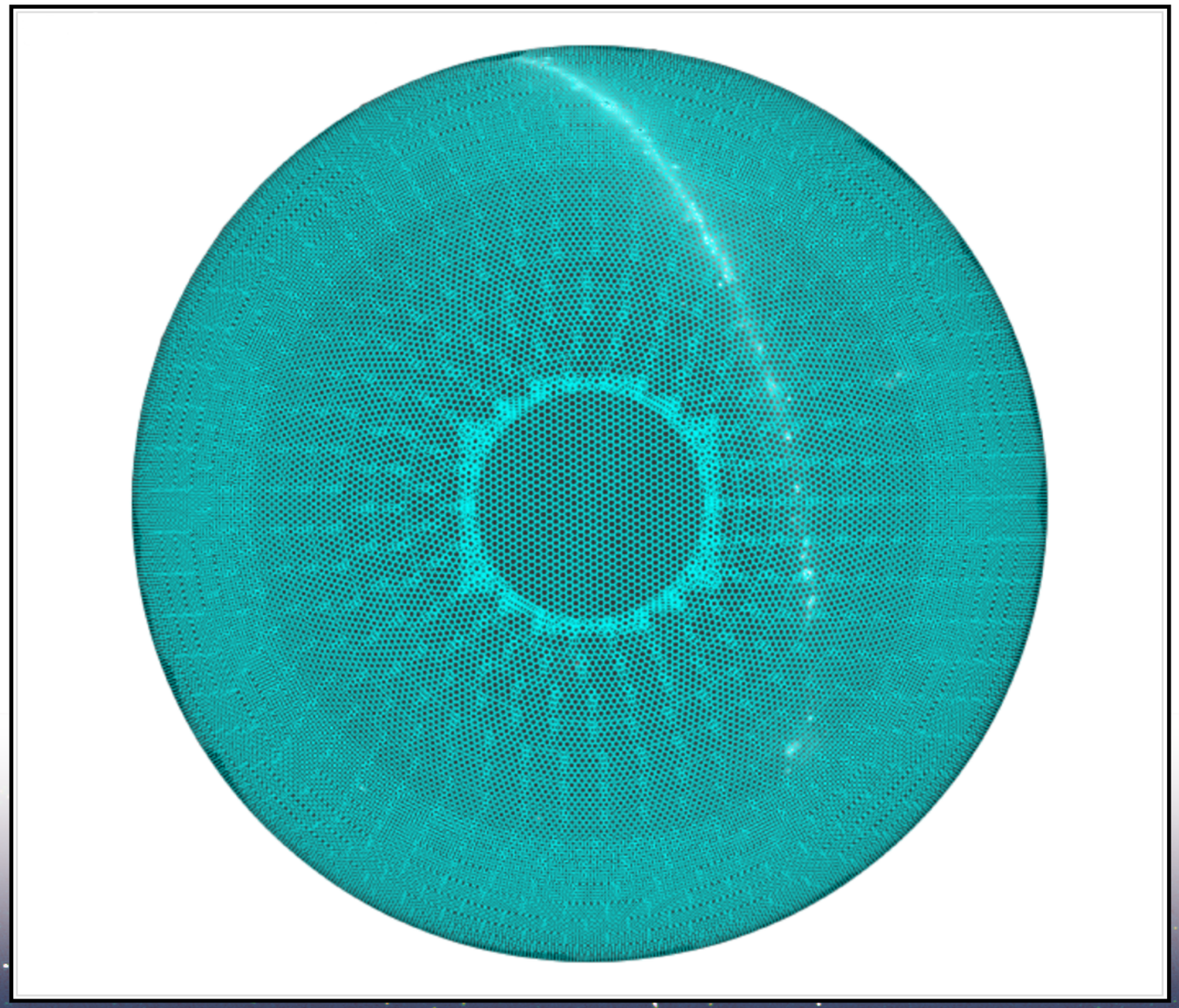
Balance of uniformity, simplicity, survey speed



Tiling scheme: **tile_trial.py -n closepack36 -f 960.0 -p 0.9 -X**

1719 tiles 41253.0 sq deg 2153.9 sq deg (5.2%) overlap

-75.51 dec Polar boundary tinyurl.com/emutiles



Target area: prefer region of DES/SPT, provided other constraints

if DES/SPT this would be roughly 23h30m and -55 degrees