



**2026 MWA Project  
Meeting  
Book of Abstracts**

# 2026 MWA Project Meeting

Tuesday, 28 July

## Welcome

**Steven Tingay – MWA Director report**

## Invited Speakers

**Cathryn Trott - EoR Overview: Phase 3 and its potential**

The first season of Phase 3 data has demonstrated excellent data quality across the full frequency range of the EoR experiments, encompassing  $6.2 < z < 9.0$ . I will present early results from the 2025A season, compared with Phase 1 and 2 data, and showcase some of the current work to prepare for 2026A and upcoming publications, on behalf of the MWA EoR Collaboration.

**Natasha Hurley-Walker - (Slow) Transient Science with MWA**

Recent radio surveys have demonstrated that the radio sky is far more dynamic and variable than previously thought, with a host of new transient discoveries rapidly following wide-area surveys conducted with SKA precursors such as LOFAR, ASKAP, and the MWA. In particular, the long-period radio transients (LPTs) have motivated searches of the time domain between seconds to hours, a timescale historically understudied.

In this talk I will report on the status of transient searches and follow-up with the MWA, highlighting some key recent papers, and describing ongoing work in this domain. This will include science outcomes in studies of pulsars and long-period radio transients, and spin-off benefits to studies of unintended satellite emission, the ionosphere, and the formation of deep mosaics through lucky imaging approaches.

**Chia Min Tan - Pulsar and Fast transient science in the MWA VCS era**

Over the past decade, the voltage capture system (VCS) has been an integral part of much of the pulsar and fast transient science with the Murchison Widefield Array (MWA). While the use of VCS posed substantial challenges in large scale data management and the inevitable bespoke software development, its capability to provide high-time resolution data over a large field of view has enabled a range of new science in the areas of pulsars, FRBs, cosmic-ray detections and passive radar applications, culminating with the Southern MWA Rapid Two-metre (SMART) pulsar

survey, an ambitious project to observe the whole Southern Sky at low frequencies and high time resolutions for pulsars and fast transients. VCS has also provided excellent opportunities for several students and ECRs to develop both their scientific and technical skills. With the commissioning of the real-time beamformer as part of MWA phase III upgrade, future pulsar and fast transient science will shift away from VCS, marking the end of an era. Here, I will review the various science projects that are enabled by the VCS, with a special emphasis on our flagship SMART pulsar survey, as the MWA moves into a new phase.

**Divya Oberoi – SHI status report**

**Christopher Riseley – GEG status report**

## **GEG and PFT**

**Kathryn Ross - GaLactic and Extragalactic All-Sky MWA eXtended (GLEAM-X): Entire survey results**

The GaLactic and Extragalactic All-sky MWA eXtended (GLEAM-X) survey boasts twice the resolution, and up to an order of magnitude higher sensitivity to its predecessor the GLEAM survey. Several parts have already been released, including a Galactic Plane release combining GLEAM and GLEAM-X, and the South Galactic Pole release. In this talk, I present the entire GLEAM-X survey covering the entire sky south of Dec+30, with a typical RMS of  $<1\text{mJy/beam}$ , and a catalogue of over 1 million sources with spectral fitting.

This talk will also demonstrate the rich potential of science with GLEAM-X, the complimentary possibilities with other radio surveys, including RACS and LOTSS, and long term uses as we head into the Science Verification stage of SKA-Low. In particular, it will focus on a specific use case, presenting a new classification system for peaked spectrum sources (PSS), believed to be early stages of typical radio loud active galactic nuclei. We showcase the capabilities of GLEAM-X presenting a new catalogue of PSS that increases known PSS by an order of magnitude and estimates completeness and reliability of this new classification schema. This talk will summarise the lessons learned, evolving scientific goals, and legacy value of the GLEAM-X survey.

**Christopher Lee - First measurements of pulse broadening for the double pulsar**

The double pulsar binary system (J07373039A/B) is a gold-standard laboratory for testing general relativity in the strong field regime, and as such has been the target of pulsar timing campaigns for over 20 years. Yet, despite the system's high profile within and outside of the pulsar community, there have been very limited observations below 300 MHz. Past observing campaigns above 800 MHz have studied scintillation in detail, identifying a single dominant scattering screen likely associated with the Gum nebula.

However, to date, no direct measurements have been made of the timescale or frequency scaling of pulse broadening at low frequencies, which can provide independent constraints on the properties of the scattering medium. Such measurements are of interest both for understanding the interstellar medium and improving precision in future timing observations. We have performed four targeted observations of the double pulsar with the MWA in a distributed channel configuration spanning 110 to 230 MHz. These observations have allowed us to make simultaneous measurements of pulse broadening over a ~70% fractional bandwidth on epochs separated by 1 month to over 1 year. I will present these results, along with other results from these observations including constraints on the flux density spectrum.

### **Cristian Di Pietrantonio - The first blind detection of a low-frequency fast radio burst with the Murchison Widefield Array**

Radio telescopes observing at frequencies above 400 MHz have been routinely detecting fast radio bursts (FRBs) over the past seven years, with the second CHIME catalogue presenting more than 4000 FRBs. In contrast, detections below 300 MHz are still extremely rare, with only one confirmed detection known in the literature. In this talk I will present the first-ever low-frequency (< 300 MHz) FRB detected in a non-targeted search with the Murchison Widefield Array (MWA), as opposed to LOFAR's targeted detections of FRB 20180916B. Only one burst of the MWA FRB has been detected at the time of writing, possibly making it the first non-repeating FRB at frequencies below 300 MHz. In addition to describing its properties, I will also briefly describe the strategies and technologies that led to find the first MWA FRB after 10 years of past attempts. I will discuss the inferred low-frequency FRB rates and compare with the extrapolations from higher frequencies. Finally, I will discuss the physical interpretation and implications of these results for FRB research with low-frequency telescopes such as the upcoming SKA-Low.

### **Christopher Riseley - A multi-frequency perspective on Cosmic Ray signatures in Nearby Galaxies**

It is well-established that radio continuum provides both an unobscured tracer of star formation as well as a window into the magnetic field strength in galaxies. In this context, understanding the injection and propagation of cosmic rays (CR) in the interstellar medium, and how these process couple to star formation activity — as well as a galaxy's star formation history — is crucial to completing the picture of galactic feedback processes.

Low-frequency radio observations provide a unique view onto the non-thermal ISM of galaxies, tracing aged CR electrons and diffuse synchrotron emission that are largely inaccessible at GHz frequencies. However, it is only through the union of different

instruments across the radio and optical/UV/IR windows that we can explore the injection and propagation of CR associated with star formation.

In this vein, the MWA's broad spectral coverage and unique sensitivity to low surface brightness emission, combined with higher-frequency observations from ASKAP and MeerKAT, provides unparalleled information into the non-thermal component of the ISM of nearby galaxies. In this talk, I will present several recent and upcoming highlights from the MWA in several nearby and well-resolved galaxies. I will discuss how these observations shape our understanding of the connection between the thermal and non-thermal components of the ISM, how star formation activity couples to the magnetic field, as well as what we can learn about the transport of CR in the ISM.

## **Invited Speakers, EoR and Other**

### **Greg Sleep - Archive, MWAX and MWA ASVO Systems Update**

In this presentation, I will provide an update on the status of the MWA archive, backend systems, MWA ASVO enhancements and introduce the real-time beamformer for the MWA.

In May 2026, we released a beta version of an imaging feature for the MWA ASVO data portal. The main use case for this feature is to allow non-expert researchers to generate quick look images of MWA observations. Users can opt to generate basic images from raw visibility observations. The MWA ASVO will select the most appropriate calibration solution, then convert and correct the visibilities and apply the calibration solution before executing André Offringa's WSClean imaging tool. The user can opt to just download the FITS image, all WSClean output or all WSClean output plus the intermediate CASA measurement set. This beta version will keep being refined over the coming months based on user feedback. This part of the presentation will give a brief introduction to the feature, describe how it works, its limitations and show some sample output.

The MWAX Real-time Beamformer is operational and progressing through a science commissioning phase in this semester of observing. A multi-disciplined team that designed and developed the system included members of the MWA Operations team (Christopher Phillips, Andrew Williams, Jake Jones and myself), The MWA Pulsars and Fast Transients team (Ramesh Bhat, Oscar Gordon, Christopher Lee), Ian Morrison from AstroSignal and Bradley Meyers (via the "AusSRC Science Enabling Projects"). This presentation will provide a description of the beamformer, show some sample output, describe its current status and future enhancements planned for the next release.

## **Danny Jacobs, Sara Jones - A long term study of Over the Horizon propagation in Western Australia**

Interference arriving from over-the-horizon (OTH) is a known systematic for 21cm cosmology and other MWA science cases, but no predictive model or systematic survey exists. It is most easily seen in TV channels in the 175–200 MHz band. EDGES has logged continuous 24-hr power spectra since 2010, providing a unique long-baseline record of the RFI environment at the MRO. The daily format of the archive is well suited to rapid classification. We visually inspected two years of EDGES data and developed a four-tier classification scheme for OTH propagation channel quality. Any event classified lasted long enough to rule out the better understood short duration effect of airplane/satellite reflections. We have so far classified 2016-2017 finding 16 events and 13 in 2024-2025, out of approximately 300 nights of data in each period. We find a repeatable seasonal trend of events during Austral summer which suggests an atmospheric mechanism. Day-to-day variability within seasons could reflect meteorological modulation. If it does, a model based on weather data could supplement current flagging methods.

## **Mitchell Burdorf - External Verification of the FHD-epsilon Analysis Pipeline using a Simulated Flat Power Spectrum**

MWA observations simulated with the radio interferometry simulator pyuvsim are passed through the FHD-epsilon analysis pipeline to verify behavior on known sky models. These simulations use a power spectrum that is logarithmically flat in power generated from sampling white Gaussian noise. We examine how the output power spectrum amplitude varies across frequency ranges, internal pipeline configurations, and between uvf and HEALPix cubes with respect to the ground truth. We additionally test if the ground truth power spectrum amplitude is recovered with the integration of multiple HEALPix cubes. This study is an external follow up of the analysis approach used by Line et al. (2024) to determine the MWA Phase I's gridding density correction factor.

# 2026 MWA Project Meeting

Wednesday, 29 July

## HPC, SHI and EoR

### **Adrien Devresse – MWA Days**

The Radio-astronomy domain is currently facing a challenge commonly referred to as 'The data deluge'. The next generation of instruments are envisioned to generate an unprecedented amount of data (>100PiB) that will imply a significant investment in terms of infrastructure for buffering, processing and archiving. One obvious solution to mitigate this problem is data compression. Compression has been used in many scientific domains outside of radio-astronomy to reduce the useful data volumes by several orders of magnitude. However, Compression in radio-astronomy domain is challenging. The datasets are inherently noisy which make traditional lossless compression rather ineffective. On the other side, lossy compression exposes to the risk of compression generated artifacts and to loss of valuable scientifically relevant signals. We will expose in this presentation the work that has been done at EPFL, and as part of the ODISSEE project. That work is decomposed in two parts: (1) an evaluation of traditional and radio-astronomy specific of both lossless and lossy compression algorithms and their port on GPU hardware. (2) And an experimentation with several A.I based compression methods on radioastronomy data.

### **Piyush Panchal - Distributed Fourier Domain Dedispersion on GPUs**

The single-node, single-GPU implementation of the FDD algorithm surpassed Presto's CPU based implementation by several orders of magnitude. We extend it to a multi-node, multi-GPU implementation using MPI and the overlap-add technique. It enables faster processing of long timeseries data, too big for single compute nodes, by leveraging modern multi-GPU compute nodes and distributed filesystems for high I/O throughput.

### **Kenil Ajudiya - Identifying “bad” channels from calibration solutions**

Inyarrimanha Ilgari Bundara, CSIRO's Murchison Radioastronomy Observatory, is a radio quiet zone that reduces “local” RFI observed by the MWA. However, it is vulnerable to several types of RFI - satellite signals, RFI ducted by the ionosphere, television signals from far away, etc. The effect of RFI is to increase the background noise level, decreasing the S/N ratio of astronomical signals of interest, effectively reducing the

sensitivity of the telescope. Much of the RFI that the MWA is exposed to is persistent and band-limited. We present a working approach to identify and flag “bad” (RFI-contaminated) channels in a very inexpensive way using calibration solutions derived using hyperdrive which can be applied directly to the visibilities, without requiring to flag them in the measurement set, avoiding a significant amount of disk I/O operation. The gain amplitudes output by hyperdrive are proportional to the visibility amplitudes. Since RFI is almost always the most dominant contributor to linearly polarised signals that are observed by all the baselines (astronomical transients are well localised in the sky), it is easier to identify bad channels using use only the sum of the calibration gain amplitudes of XY and YX polarisations from all the tiles. We show that simple, statistical outlier rejection algorithms are very effective in identifying the bad channels, leading to improvements in the image quality, for example, an image in which RFI dominated the total flux and only bright sources were detected could not be easily distinguished from an image that one would get from an RFI-free observation post flagging and re-imaging. The results are particularly useful for searching long period transients since the background noise levels of the images drop significantly. Such an approach is also suitable for science goals like studying the epoch of reionisation, where data quality is more important than data quantity (i.e. systematics dominate).

### **John Morgan - Enabling routine daytime observation via temperature compensation**

While MWA calibration solutions can usually be applied successfully to nighttime observations over several hours, the same is not true for daytime observations. This is particularly problematic for observations of the Sun, since the Sun's emission can change rapidly with frequency and time, meaning that there is no sky model to calibrate against.

Through the use of a large archive of daytime IPS observations that have been successfully calibrated, we show that the behaviour with frequency rules out an ionospheric effect, and that the change in phase with time is instead consistent with thermal expansion of the cables from beamformer to receiver.

We use this information to compensate for thermal expansion, meaning that solar observations can now be calibrated using standard calibration solutions. We explain this new calibration scheme, and provide some suggestions for future work.

### **Angie Waszewski - MWA Solar Quick Look Pipeline**

The MWA has a growing archive of dedicated solar observing campaigns, with existing data already spanning over a full solar cycle. However, processing solar observations can be both resource intensive and time consuming, and some early observations lack robust daytime calibration observations.

To address these problems we have developed a lightweight data reduction pipeline

that focuses on producing a flux-calibrated solar image using an appropriate nighttime calibrator observation as efficiently as possible.

The primary goal of this pipeline is to quickly produce an image of the Sun, to allow us to rapidly assess whether there was any significant solar activity present in a given observation. Applying this pipeline, we have already processed one month of observations from a dedicated solar observing campaign in 2013. These observations have shown that even brief snapshots in time are able to capture a variety of activity within the solar corona, ranging from long-lived features to transient radio bursts, hinting at the amount of scientific value that is hidden in the archives.

In this talk we will give an overview of the pipeline, the results from the 2013 observing campaign, and the plans to use and update the pipeline moving forward.

### **Satyapan Munshi - MWA vs. LOFAR: Analyzing MWA data using LOFAR software**

One of the foremost challenges in detecting the 21-cm signal from the high-redshift Universe is the astrophysical foreground emission, which obscures the faint background signal. MWA and LOFAR, being similar instruments by design, share broadly similar philosophies for modelling and subtracting known foreground contributions from visibilities, and for estimating the 21-cm signal power spectrum. However, the treatment of unmodelled foregrounds differs between the two experiments. MWA analyses adopt a foreground avoidance strategy, in which the spherical power spectrum is estimated by excluding foreground-contaminated modes. In contrast, LOFAR analyses employ a foreground subtraction approach, where unmodelled foregrounds are statistically separated from the 21-cm signal using Gaussian process regression (GPR) and subsequently removed from the data. This study investigates the applicability of GPR as a foreground subtraction tool for MWA observations, using the software developed by the LOFAR-EoR collaboration over the past decade. We present initial results from this study and demonstrate the opportunities this approach provides, both in reducing foreground contamination in MWA power spectrum upper limits and in understanding the underlying systematics from a different perspective. This work complements the study presented in the talk by Nichole Barry, which explores the converse problem of analysing LOFAR data using MWA software pipelines.

### **Yuxiang Qin - Inferring properties of the first galaxies and intergalactic medium using MWA observations**

The cosmic 21-cm signal provides a powerful window into the unseen galaxies that shaped the thermal and ionization history of the intergalactic medium (IGM), the reservoir of neutral hydrogen responsible for the emission itself. At present, the Murchison Widefield Array (MWA) stands among the leading low-frequency interferometers dedicated to this pursuit, alongside LOFAR and HERA. While HERA currently delivers the most stringent upper limits on the 21-cm power spectrum, MWA's

wide field of view and mature calibration pipeline make it uniquely suited for robust statistical studies and cross-validation across independent experiments.

Using the latest MWA observations, complemented by existing HERA constraints, our study performs a comprehensive Bayesian inference analysis capable of forward-modeling full 4D realizations of the cosmic 21-cm lightcone. Combined with complementary galaxy and CMB observations, our results reveal statistical evidence suggesting that the IGM experienced partial heating in the early Universe. If this heating is attributed to galaxies and their high-mass X-ray binaries, their luminosities must exceed those observed in the local Universe, hinting at a potentially significant contribution from metal-free Population III stars.

### **Zhenghao Zhu - A scaled-array common-uv testbed for foreground control in EoR delay-power measurements**

Chromatic instrumental response is a major source of foreground leakage in 21-cm Epoch-of-Reionization measurements. We explore a conceptual scaled-array strategy in which antenna coordinates are scaled with observing frequency so that, in the WODEN simulations, the frequency-normalised uvw sampling is common across channels to numerical precision. This removes one source of instrumental chromaticity and provides a controlled testbed for foreground separation.

Using point-source foregrounds plus an EoR-like signal, together with image-domain and visibility-domain diagnostics, we test this idea with several scaled-array configurations. The current results show successful narrow-band visibility-domain recovery: the foreground-only high-delay residual is strongly suppressed, while the recovered total delay power remains close to the EoR-only control. Image-domain recovery is more fragile, and poorer-PSF layouts require denser spectral sampling or give weaker recovery.

These early tests suggest that common-uv sampling could be a useful foreground-control component for future low-frequency EoR experiments, provided PSF quality, beam chromaticity, layout precision, and thermal-noise averaging requirements are controlled. I will present the simulation setup, the main recovery tests, and the remaining feasibility questions.

### **Jade Ducharme - Improved Modeling for Moving Sources of Radio Frequency Interference and Impact on Flagging Strategies**

Moving sources of radio-frequency interference (RFI), such as airplanes and satellites, can contaminate interferometric data in ways that are difficult to identify and mitigate with standard flagging approaches. We introduce a new modeling scheme for moving sources of radio frequency interference based on the characteristic imprint they leave in the  $u$ -plane. Given a known source trajectory in image space, we show that the

corresponding sinc-like structure traced in  $uv$ -space can be solved for analytically and simulated efficiently. Such fast and accurate RFI models are essential for ultimately subtracting these contaminants from interferometric data directly rather than simply flagging and discarding affected visibilities, thereby preserving a higher fraction of usable data.

We then investigate how the structure of moving-source contamination affects baseline-dependent flagging. Because the sinc-like  $uv$ -plane response suppresses the RFI signal on some  $uv$ -modes, per-baseline flagging algorithms may struggle to identify contamination on some baselines. We find that the maximum attenuation between the most and least contaminated baselines only approaches three orders of magnitude, suggesting that sufficiently faint partially flagged moving RFI could leave residual contamination capable of biasing an EoR power spectrum analysis.

As a first case study, we simulate a 12-second, 10 kJy aircraft-reflection event using `pyuvsim` and inject it into three MWA Phase II EoR0 datasets containing 10, 3.3, and 0.3 hours of otherwise clean data. For each dataset, we compare four different flagging cases: no additional flagging, a manual flag mask targeting the exact contaminated times and frequencies on all baselines, an extended flag mask that flags all frequencies during contaminated times on all baselines, and a baseline-dependent mask produced by `AOFlagger`. Power spectra are then generated using the FHD/epsilon pipeline and compared against power spectra from the corresponding clean datasets without injected RFI.

We find that all flagging strategies introduce some level of power spectrum bias relative to the clean-data case, even when the RFI is accurately identified. This bias is strongest in the 0.3-hour dataset, suggesting that reduced  $uv$ -coverage plays an important role in the observed flagging bias. However, comparisons with the unflagged case show that any flagging strategy is still preferable to allowing unmodeled RFI to remain in the data.

Direct comparisons between flagging strategies show that the extended mask produces the smallest power spectrum bias, consistent with Wilensky et al. (2022). In contrast, the manual and `AOFlagger` masks perform similarly for the event considered here, likely because the 10 kJy source is bright enough to be captured effectively by `AOFlagger`. While this simulation does not provide a stringent test of the faint-residual-RFI scenario suggested by the analytic attenuation estimate, it demonstrates that the modeling framework developed here can be used to quantify the power spectrum impact of moving RFI and compare mitigation strategies. Future work can extend this approach to a larger amount of fainter events spanning a range of brightnesses.

### **Lauren Dressler - Characterizing Instrumental Effects in MWA Phase III Data**

The recent MWA Phase III upgrade included the deployment of new receivers and a new correlator, which has significantly improved data quality for 21 cm cosmology. In

particular, data taken in the new oversampled mode does not suffer major spectral contamination due to coarse channelization, making it possible to observe subtle instrumental effects that were previously difficult to isolate.

I will present ongoing commissioning work using observations from the 2025 season. I will focus on characterizing residual spectral structure arising from effects in the signal processing chain, such as cable reflections. These investigations aim to improve our understanding of the upgraded instrument response and provide the foundation for accurate calibration of instrumental systematics in future scientific analyses.

### **Aidan LaBella - An Improved ML Method for RFI Identification in MWA EoR Data**

We investigate a strategy for improving radio frequency interference (RFI) flagging using roughly 60 hours of observations from the 2016 EoR high-band observing run of the Murchison Widefield Array. We develop a novel machine learning-based `\textit{weak supervision}` method where traditional flagging methods such as AOFlagger, SSINS, X-RFI and EAVILS are used to generate stronger labels for training. Visibilities in observations are aggregated into statistical summaries and treated as tabular data for a transformer-based classifier. To evaluate our classifier we create a large, 10-hour, human-annotated ground-truth dataset enabled by novel annotation software. We find that our models outperform the traditional RFI flagging methods on F1 score and are able to flag a wide variety of RFI events.

### **Morgan Lee - RFI Mitigation and Power Spectrum Analysis of Newly Upgraded 2025 MWA Phase III High-Band EoR0 Data**

The 2025 Phase III upgrade offers the highest-quality EoR data from the MWA to date, but the critical challenge of locating clean data from this season remains. I will present the analysis of all 2025 MWA Phase III high-band EoR0 observations with a focus on RFI detection and a study of RFI flagging strategy on the power spectrum. To-date, we have used two distinct RFI flagging methods, namely Chi-Squared and Sky-Subtracted Incoherent Noise Spectra (SSINS). Initial investigations with these approaches used in tandem show that the subset of completely clean observations is very small. Thus, I will also discuss the analysis and removal of specific recurring RFI to recover potentially clean data.

### **Nichole Barry - MWA vs. LOFAR: Analyzing LOFAR data using MWA software**

The Epoch of Reionisation (EoR) is one of the prime science directives for many current and future low-frequency radio interferometers, including the Murchison Widefield Array (MWA) and the Low Frequency Array (LOFAR). This elusive signal has yet to be measured, despite over a decade of measurements. Up until this point, analysis of MWA and LOFAR EoR data has been entirely separate, even though they share a similar instrumental foundation. In this work, we seek to learn about our current analytical

systematic floor in MWA pipelines by analyzing LOFAR data. This is aided in part by WODEN, the GPU-enabled visibility simulator, which provides instrumentally accurate simulations of the sky for both LOFAR and the MWA. Given the shared instrumental history between the two instruments, this parallel study investigates noise propagation, calibration, observation strategies, integration methods, and foreground mitigation between the analysis pipelines of each community in an effort to open up the degrees of freedom to shed light on unknown causes of contamination. We will provide an update on the parallel study, particularly from the standpoint of analyzing LOFAR data using MWA software. This work is complementary to a talk submitted by Satyapan Munshi, which focuses on the converse problem of analyzing MWA data using LOFAR techniques.

### **Jonathan Pober - Understanding the Model Dependence of Reionization Constraints Derived from 21 cm Observations**

While a detection of the 21 cm power spectrum continues to elude us, a growing body of research seeks to provide tools that can turn future 21 cm observations into constraints on the physics of reionization. 21CMMC, an MCMC driver of 21cmFAST, has become the standard approach for calculating parameter likelihoods, although Machine Learning (ML) techniques have seen significant development in the last few years. Both approaches rely on using simulations of reionization as points of comparison with the real data. Although simulations of reionization have largely converged on a general phenomenology of reionization (inside-out, with "bubbles" of ionized gas growing around the first galaxies), there are differences in the details. This talk will present the results of two studies -- one using 21CMMC and one using ML methods -- seeking to understand how differences in the underlying simulation approach translate into differences in the derived parameter constraints. We find that the underlying model affects the constraints significantly more than naively anticipated, although ML approaches present a potentially more straightforward strategy for mitigating this effect.

# **2026 MWA Project Meeting**

**Thursday, 30 July**

## **Phase III Science Workshop**

**Natasha Hurley-Walker – Transients Science: A look forward**

**Ramesh Bhat – Pulsars and Fast Transients Science: A look forward**

**Surajit Mondal – Solar, Heliosphere and Ionosphere Science: A look forward**

**Christopher Riseley – Galactic and Extra Galactic Science: A look forward**

## **Epoch of Reionization Workshop**

**Jonathan Pober**

**Bryna Hazelton**

**Danny Jacobs**

**Group discussion**