



Granada, 15 August 2026

Prof Michele Dougherty, Executive Chair, STFC

Sir Ian Chapman, Chief Executive, UKRI

Chris Macdonald, MP, Minister of State (Minister for Science, Innovation and Investment)

The Rt Hon Jonathan Reynolds MP, Secretary of State for Business, Innovation, Science and Trade

Dear Professor Dougherty, Sir Ian, Minister, and Secretary of State,

As Director of the Instituto de Astrofísica de Andalucía (IAA-CSIC), I am writing to express my deep concern at the prospect that e-MERLIN and the Jodrell Bank telescopes, including the 76-m Lovell Telescope, will cease participating in the European VLBI Network (EVN) after 2028. The loss of the Lovell Telescope and the e-MERLIN antennas would substantially weaken the scientific capabilities of the EVN and undermine a long-standing and highly successful UK partnership with the European and international radio-astronomy community.

e-MERLIN makes a distinctive contribution to radio interferometry. Its combination of high sensitivity, angular resolution and intermediate baselines of hundreds of kilometres bridges the gap between connected-element arrays and continental-scale VLBI. These capabilities strengthen the imaging performance, scientific reach and resilience of the EVN and future global VLBI arrays, including the planned SKA-VLBI.

IAA-CSIC scientists are frequent users of e-MERLIN, both as a stand-alone array and as part of the EVN. Its capabilities have played an important role in a number of high-impact results led by or involving our scientists. The following examples illustrate the scientific value that would be put at risk by the loss of e-MERLIN from the EVN:

- **e-MERLIN played an important role in the radio follow-up of the first ever binary neutron-star merger GW170817 detected in the electromagnetic spectrum**, detecting its compact radio emission more than 200 days after the merger and contributing to global VLBI observations of this landmark gravitational-wave source (Ghirlanda et al. 2019, *Science*, 363, 968).
- **e-MERLIN observations of the stellar black hole MAXI J1820+070 contributed to the detection and characterisation of an exceptionally powerful, long-lived superluminal ejection into the interstellar medium**. These observations enabled researchers to constrain the size of the emitting region and the energy content of the ejecta (Bright et al. 2020, *Nature Astronomy*, 4, 697).



- **e-MERLIN made the first-ever radio detection of a Type Ia supernova, SN2020eyj**, detecting radio emission more than 500 days after the stellar explosion. This result provides important information for modelling Type Ia supernova progenitor systems, which are fundamental to measurements of the cosmic distance scale and the expansion of the Universe (Kool et al. 2023, *Nature*, 617, 477).
- **e-MERLIN, together with the EVN, revealed for the first time a radio plasma jet moving at approximately one quarter of the speed of light in the dust-enshrouded tidal disruption event in Arp 299.** The event was completely obscured at optical wavelengths, demonstrating the power of high-resolution radio observations to uncover energetic phenomena that would otherwise remain hidden (Mattila & Pérez-Torres et al. 2018, *Science*, 361, 482).
- **e-MERLIN also underpins LIRGI, an e-MERLIN Legacy Project led by IAA-CSIC scientists**, which targets 42 of the most luminous northern infrared galaxies in the nearby Universe. Its high-resolution radio observations allow us to investigate systems whose star-formation, gas and radiation densities resemble those found in star-forming galaxies at high redshift. This programme represents a substantial scientific investment by IAA-CSIC in e-MERLIN and its unique capabilities.

These examples illustrate not only the scientific quality of e-MERLIN, but also the extent to which international institutions such as IAA-CSIC have built important research programmes around continued access to this infrastructure.

Jodrell Bank was one of the founding members of the EVN and has played a pioneering role in European VLBI for decades. The UK helped develop the technologies required to connect radio telescopes over very long distances and has subsequently played a leading role in real-time VLBI. In recent years, the integration of e-MERLIN into the EVN has further strengthened the network, adding both significant collecting area and strategically important intermediate baselines. The 76-m Lovell Telescope remains an exceptionally important component of this capability.

Jodrell Bank has also played a fundamental role in training successive generations of radio astronomers and building the European radio astronomy community. It hosted the first European Radio Interferometry School (ERIS) in 2005 and has continued to contribute its expertise to subsequent editions, including the 2024 edition hosted at the IAA-CSIC, to which Jodrell Bank experts made an invaluable contribution. Its role in bringing the community together is equally longstanding: Jodrell Bank hosted the first EVN Symposium in 1993, again in 2010, and the 17th EVN Symposium will return to Manchester this September. These activities illustrate that Jodrell Bank's contribution extends well beyond its facilities: its



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DE ANDALUCÍA (IAA)

scientists and engineers have helped to develop, transmit and sustain the expertise and collaborative networks on which European radio astronomy depends.

The UK's contribution to the EVN has therefore been central to the development, technical capability and scientific success of European VLBI. This contribution also rests on specialised scientific and engineering expertise developed at Jodrell Bank over many decades, an expertise that constitutes an important asset for both UK and international radio astronomy.

The strategic importance of e-MERLIN will increase, rather than diminish, in the SKA era. Future collaboration between SKA-Mid, currently under construction in South Africa, and European and global VLBI facilities will be essential to achieve the very high angular resolution required to address major scientific questions. In this context, the Lovell Telescope could provide exceptional collecting area, while the intermediate baselines supplied by e-MERLIN would significantly improve the capability and resilience of the global array. IAA-CSIC is deeply involved in the SKAO endeavour at the highest level, and we firmly believe that SKAO and strong national facilities such as e-MERLIN and Jodrell Bank are complementary and necessary components of the future radio-astronomy landscape. Sustaining e-MERLIN is therefore not simply a matter of preserving an extraordinarily successful existing facility; it is an investment in the scientific exploitation of the SKA and in the future of global high-resolution radio astronomy.

I therefore strongly urge UKRI, STFC and the UK Government to work with the University of Manchester and international partners to secure a sustainable long-term solution that preserves the participation of e-MERLIN and the Lovell Telescope in the EVN and in future global VLBI observations.

Their loss would weaken not only UK radio astronomy, but also a European and international scientific infrastructure in which the UK has played a defining role for decades. Continued support for e-MERLIN would preserve that leadership while enabling major scientific opportunities in the coming SKA era.

Yours sincerely,

Dr. Olga Muñoz
Director IAA-CSIC

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