RadioNet support for scientific events
Application form for organisers

EVENT INFORMATION	
TITLE	New Perspectives on Galactic Magnetism
PLACE	Newcastle University, Newcastle, UK
ORGANISER'S INSTITUTE NAME	Andrew Fletcher, Newcastle University (andrew.fletcher@newcastle.ac.uk); Sui Ann Mao, Max-Planck-Institute für Radioastronomie (mao@mpifr-bonn.mpg.de)
DATE	June 2019 (a 5-day meeting)
NO. OF PARTICIPANTS	50
TOTAL EVENT COST	15000 euros
RADIONET SUPPORT	10000 euros
OTHER SOURCES OF FUNDING	No other confirmed sources now, will seek additional support from Newcastle University & the Royal Astronomical Society.

REQUEST

(max. 2 pages)

Short abstract of the event	Rapid improvements in the observing capabilities of radio telescopes and in the physical realism of numerical simulations, as well as growing activities due to the Square Kilometre Array and its pathfinders all call for a timely meeting on galactic magnetism. **"New Perspectives on Galactic Magnetism"** aims to provide a platform to facilitate effective communication between observers, theorists and simulators to foster new collaborations and advance our field in new directions. We plan to have critical reviews accessible to all participants and presentations on new, ongoing studies in all aspects of galactic magnetism. We particularly welcome contributions on new observational techniques; the connection with other components of the interstellar medium, including cosmic rays; recent advances in numerical simulations; the use of numerical simulations to help interpret observations; and revisiting and addressing common assumptions in the field.
Relevance for RadioNet	To leverage the experience our colleagues have gained with SKA pathfinder telescopes and Radio-Net facilities such as Effelseberg, LOFAR, NOEMA, APEX and e-Merlin (e.g. on observing and analysis techniques, handling big data, the comparison of observational results and with theoretical expectations), and use that in planning future studies to be conducted with current facilities as well as next generation radio telescopes such as the Square Kilometre Array. To foster new collaborations between radio astronomers, theorists and simulators to advance our field in new directions in preparation for interpreting data from these future facilities. Several science working groups and projects have been formed to study astrophysical magnetic fields using the broadband polarization capabilities of the new generation of radio telescopes (e.g. the LOFAR Magnetism Key Science Project, the ASKAP Polarization Sky Survey of the Universe's Magnetism, the SKA Magnetism Science Working Group). All of these collaborations involve researchers from RadioNet institutions and regular users of RadioNet infrastructure. One consortium, the LOFAR Magnetism Key Science Project is directly connected to a RadioNet facility. The proposed event will seek to maximise the scientific output from these projects.

RadioNet has received funding from the EU's Horizon 2020 research and innovation programme under grant agreement No 730562

	Newcastle University is a member of the LOFAR UK consortium, is planning to recruit several astronomers to permanent positions in the near future to support the expansion of its Physics degree programme to include Astrophysics degrees and is easily accessible from all European cities. The research of Andrew Fletcher is currently supported by a grant from STFC, a RadioNet partner.
Impact on RadioNet	The event will catalyse the formation of new research collaborations, motivated by current problems in both the observational and theoretical study of galactic magnetic fields. This will be particularly useful for early career researchers. We will help this process by deliberately inviting early career (i.e. post-doc / research fellow) scientists to give review talks on the current topics in the field. More importantly, these new and innovative collaborative projects will push the envelope of current radio instruments and will further increase the scientific output from RadioNet facilities. We have also agreed to be guest editors of a special issue of the journal Galaxies, with the same title as the meeting, to be published in 2019. The combination of a focused journal volume and a meeting, with many researchers anticipated to participate in both, will maximise the impact of the event for RadioNet and our field.
Use of the RadioNet contribution	The requested RadioNet Support of 10000 euros will cover travel costs (hotel & flight) for 10 invited early-career scientist speakers (1,000 euros each).
Ethics	The organizers are committed to make the workshop productive and enjoyable for everyone where diversity and inclusion are valued and where everyone is entitled to be treated with courtesy and respect. We will have a code of conduct for this conference adopted from the code of conduct from AAS, ESO and ASTRON.

Privacy Policy: *With signing this template and applying for RadioNet funding, I accept the Privacy Policy of RadioNet, which is based on the EU General Data Protection Regulation (GDPR).*

: Signature of the applicant:

Andrew Fletcher,

School of Mathematics, Statistics and Physics,

Newcastle University.

1st July 2018

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