

# Radio frequency interference measurements in Indonesia

## A survey to establish a radio astronomy observatory

Taufiq Hidayat · Achmad Munir · Budi Dermawan · Anton Timur Jaelani · Stéphane Léon · Dading Hadi Nugroho · Andriyan Bayu Suksmo · Putra Mahasena · Premana Wardayanti Premadi · Dhani Herdiwijaya · Chatief Kunjaya · Zdrach Ledoufij Dupe · Budi Brahmantyo · Denny Mandey · Muhammad Yusuf · Hesti Retno Tri Wulandari · Falahuddin Arief · Muhammad Irfan · Agus Triono Puri Jatmiko · Evan Irawan Akbar · Hery Leo Sianturi · Jehunias Leonidas Tanesib · Ali Warsito · Judhistira Aria Utama

Received: 17 September 2013 / Accepted: 9 December 2013  
© Springer Science+Business Media Dordrecht 2014

**Abstract** We report the first measurements of radio frequency spectrum occupancy performed at sites aimed to host the future radio astronomy observatory in Indonesia. The survey is intended to obtain the radio frequency interference (RFI) environment in a spectral range from low frequency 10 MHz up to 8 GHz. The measurements

---

T. Hidayat (✉) · B. Dermawan · A. T. Jaelani · D. H. Nugroho · P. Mahasena · P. W. Premadi · D. Herdiwijaya · C. Kunjaya · D. Mandey · M. Yusuf · H. R. T. Wulandari · F. Arief · M. Irfan · A. T. P. Jatmiko · E. I. Akbar  
Bosscha Observatory and Astronomy Research Division, FMIPA, Institut Teknologi Bandung, Jl. Ganesha 10, Bandung 40132, Indonesia  
e-mail: taufiq@as.itb.ac.id

A. Munir · A. B. Suksmo  
Laboratory of Radio Telecommunication and Microwave, School of Electrical Engineering and Informatics, Institut Teknologi Bandung, Jl. Ganesha 10, Bandung 40132, Indonesia

S. Léon  
Joint ALMA Observatory/ESO, Av. Alonso de Córdova 3107 Vitacura, Santiago, Chile

Z. L. Dupe · B. Brahmantyo  
Faculty of Earth Science and Technology, Institut Teknologi Bandung, Jl. Ganesha 10, Bandung 40132, Indonesia

H. L. Sianturi · J. L. Tanesib · A. Warsito  
Department of Physics, Faculty of Science and Technology, University of Nusa Cendana, Jl. Adisucipto, Penfui-Kupang 85001, Indonesia

J. A. Utama  
Department of Physics Education, FPMIPA, Indonesia University of Education, Jl. Dr. Setiabudhi 229, Bandung 40154, Indonesia