

Author Index

- Alakoz, A. V. – 294, 504
Alcolea, J. – 252
Alekseev, E. V. – 294
Alves, F. – **292**, 74
Amiri, N. – 54, 79
Anglada, G. – 258, 377
Assaf, K. A. – 235

Bae, J.-H. – 284, 488
Báez-Rubio, A. – 460
Barkiewicz, A. – **146**, 117, 151
Bayandina, O. – **280**, 294
Bendjoya, P. – 230
Bergman, P. – 161, 252
Blanton, M. – 316
Boboltz, D. A. – 209
Booth, R. – 483
Bourke, S. – 146
Braatz, J. A. – 301, 311
Breen, S. – **275**, 156, 433
Britton, T. R. – 176, 282, 433
Brogan, C. L. – 127, 497, 502
Brunthaler, A. – 340, 368, 407, 423, 427
Bujarrabal, V. – 252
Byun, D.-Y. – 284, 488

Castangia, P. – 340
Caswell, J. – **275**, 433
Cesaroni, R. – 180, 396
Chandler, C. – **497**, 166
Chapman, J. M. – 250
Chen, X. – 288
Chibueze, J. O. – 141
Cho, S.-H. – 290
Choi, Y. K. – 260, 407
Chong, S.-N. – 141
Chrysostomou, A. – 194
Churchwell, E. – 127
Claussen, M. – 225
Condon, J. J. – 301, 311
Conway, J. – 186
Cotton, W. – 245
Curiel, S. – 377
Cyganowski, C. J. – 127, 497

Darling, J. – 333
Deacon, R. M. – 250
De Buizer, J. M. – 151
Deguchi, S. – 265
Delaa, O. – 245
Deshpande, A. A. – 93, 470
Desmurs, J.-F. – 79, 217, 252

de Villiers, H. M. – 194
Diamond, P. J. – 79, 235, 240
Doi, A. – 190, 288
Dunham, M. K. – 286

Eliav, D. – 180
Ellingsen, S. – **275**, 156, 433
Engels, D. – 254, 256
Esimbek, J. – 178, 296
Estalella, R. – 377
Etoka, S. – 171

Finkelstein, A. M. – 504
Friesen, R. – 497
Fujisawa, K. – 98, 103, 188, 190, 288
Fuller, G. A. – 171
Furuya, R. S. – 180

Gaylard, M. – **85**, 108, 110
Gérard, E. – 59, 254
Girart, J. M. – 74
Goddi, C. – 166, 184, 396, 401
Goedhart, S. – 85, 483
Gómez, Y. – 249, 258
Gómez, J. F. – 230, 258, 377
Gonidakis, I. – 240, 250
Goss, W. M. – 465, 470
Gray, M. D. – 13, 23, 171, 209, 235
Green, A. – 250
Green, J. A. – 433
Greenhill, L. J. – 166, 184, 316
Guerrero, M. A. – 230

Hachisuka, K. – 288
Hallet, N. – 254
Henkel, C. – 301, 311, 340
Hideyuki, K. – 415
Hirosa, T. – 103, 141, 288, 386, 415
Hoare, M. G. – 112
Hofner, P. – 161
Honma, M. – 98, 103, 188, 288, 386, 419, 421
Humphreys, E. – **184**, 292, 166, 209
Hunter, T. R. – 127, 497, 502

Imai, H. – 103, 141, 411
Immer, K. – 413
Impellizzeri, C. M. V. – **301**, 311, 340
Indebetouw, R. – 497
Ipatov, A. V. – 504

Jerkstrand A. – 186

- Jiménez-Serra, I. – 455
Johansson, L. E. B. – 161
Jonas, J. – **483**, 81
- Kalenskii, S. V. – 161
Kameya, O. – 141
Kang, H.-W. – 488
Karovicova, I. – 209
Kawaguchi, N. – 103, 386
Kemball, A. – **79**, 54, 81, 240
Kim, J. – 290
Kim, K.-T. – 284, 288, 488
Kim, M. K. – 103, 415
Kim, S. J. – 290
Kim, W.-J. – 488
Kobayashi, H. – 103
Koda, J. – 127
Konovalenko, A. A. – 294
Kostenko, V. I. – 504
Kramer, B. H. – 69
Kristensen, L. E. – 146
Kulishenko, V. F. – 294
Kuo, C. Y. – **301**, 311
Kurayama, T. – 417, 421
Kurtz, S. – **161**, 133
- Larionov, G. – **280**, 294
Laskar, T. – 465
Leal-Ferreira, M. L. – 79
Li, D. – 350
Li, J. J. – 180, 368
Lihachev, S. F. – 504
Lindqvist, M. – 252
Litovchenko, I. D. – 294, 504
Lo, K. Y. – 301, 311
- Martín-Pintado, J. – 460
Maswanganye, J. P. – 108
Matsumoto, N. – 386, 419
Matthews, L. D. – 166
McDonnell, K. – 441
McKean, J. P. – 340
Mendoza-Torres, J. E. – 470
Mennesson, B. – 245
Menten, K. M. – 180, 368, 407, 407,
 423, 425, 427, 506
Migenes, V. – 182, 192
Millan-Gabet, R. – 245
Miranda, L. F. – 230, 258
Mohamed, S. – 260
Morris, D. – 49
Morris, M. – 225
Moscadelli, L. – 180, 368, 396, 401
Moss, V. A. – 176
Motogi, K. – 98, 288
Mukha, D. V. – 294
Murata, Y. – 288
- Nabatov, A. S. – 294
Nagayama, T. – 386, 391
Nakanishi, H. – 421
Niederhofer, F. – 184
Nikolaenko, V. S. – 294
- Odincov, S. A. – 294
Ogawa, H. – 288
Oh, C. S. – 488
Olofsson, H. – 260
Omodaka, T. – 103, 141
Otto, S. – 110
- Patel, N. A. – 377
Perrin, G. – 245
Pérez-Sánchez, A. F. – 64
Pestalozzi, M. – 180, 186, 492
Pihlström, Y. M. – 449
Pittard, J. M. – 112
- Ramos-Larios, G. – 230
Ramstedt, S. – 260, 292
Reid, M. J. – 301, 311, 359, 368, 407,
 413, 423, 425, 427
Richards, A. M. S. – 199, 235
Richter, L. L. – 81
Rizzo, J. R. – 230
Rodríguez, I. T. – **182**, 192
Rogers, H. – 225
Rosolowsky, E. – 127
Roy, A. L. – 340
Rygl, K. L. J. – 368
- Sahai, R. – 225
Sakai, N. – 386, 421
Sakanoue, H. – 421
Sanna, A. – 368, 396, 401
Sarma, A. P. – 41
Sato, M. – 423
Sawada-Satoh, S. – 188, 288
Schisano, E. – 180
Scholz, M. – 209
Shen, Z.-Q. – 288
Shibata, K. M. – 103
Shimoikura, T. – 103
Shino, N. – 190
Singh, N. K. – 93
Sjouwerman, L. O. – 449
Slysh, V. I. – 161
Sobolev, A. M. – 13, 433
Sorai, K. – 98
Soria-Ruiz, R. – 252
Strelnitski, V. – 3
Sugiyama, K. – 98, 188, 190, 288
Surcis, G. – 69
Suárez, O. – 230, 258
Szymczak, M. – 59

- Tafoya, D. – 141, 258
Tang, X. D. – 178
Tarchi, A. – 323
Thompson, M. A. – 194
Thum, C. – 49
Titmarsh, A. – 275
Torrelles, J. M. – 74, 141, 258, 377
Torstensson, K. J. E. – 146
Towers, S. – 127
Trinidad, M. A. – 182, 192
Tsuboi, M. – 103

Uscanga, L. – 230
Usuda, T. – 180

Val'tts, I. – **280**, 294
van den Heever, S. P. – 112
van der Tak, F. F. S. – 146
van der Walt, D. J. – 112, 194
van der Walt, J. – 85
van Langevelde, H. J. – 54, 69, 117, 146
Vázquez, R. – 258
Vlemmings, W. – **64**, 260, 292, 31, 54,
 69, 74, 79, 146
Voronkov, M. – 282
Voronkov, M. A. – 176, 275, 433

Wajima, K. – 188
Walmsley, C. M. – 161

Walsh, A. J. – 433
Wang, J. Z. – 350
Wardle, M. – 354
Whitney, B. – 127
Wiesemeyer, H. – 49
Willett, K. W. – 345
Wittkowski, M. – 209
Wolak, P. – 59
Wootten, A. – 477
Wu, G. – 178, 296
Wu, Y. W. – 425
Wucknitz, O. – 340

Xu, Y. – 172, 351, 408 – 180, 368,
 425

Yonekura, Y. – 103, 288
Youn, S.-Y. – 488
Yusef-Zadeh, F. – 354

Zakharenko, V. V. – 294
Zauderer, B. A. – 465
Zaw, I. – 316
Zhang, B. – 351, 410, 368, 427
Zhang, J. S. – 350
Zhang, Q. – 127
Zheng, X. W. – 368, 425, 427
Zhou, J. J. – **178**, 296
Zhu, G. – 316

IAU Symposium No. 287

29 January – 3 February 2012
Stellenbosch, South Africa

Cosmic Masers – from OH to H₀

Cosmic masers, naturally occurring amplifiers of microwave emission from atoms and molecules in the Milky Way and other galaxies, provide important tools to investigate astrophysical environments. The first, Hydroxyl (OH) masers were discovered in 1965 and since that time several thousand sources of maser emission, from a variety of cosmic molecules, have been discovered and studied. Because this natural emission occurs at discrete frequencies, which depend upon specific atomic or molecular transitions, masers are also useful for studying the structure and dynamics of our own galaxy. Masers in other galaxies are now used for cosmological studies of the dynamics of massive black holes in galactic nuclei and to directly measure the Hubble constant, H₀. This volume contains a comprehensive, up-to-date review of cosmic masers, their nature, sources, environments and uses, as presented at IAU Symposium 287, the fourth international symposium on cosmic masers.

Proceedings of the International Astronomical Union

Editor in Chief: Prof. Thierry Montmerle

This series contains the proceedings of major scientific meetings held by the International Astronomical Union. Each volume contains a series of articles on a topic of current interest in astronomy, giving a timely overview of research in the field. With contributions by leading scientists, these books are at a level suitable for research astronomers and graduate students.

International Astronomical Union



MIX
Paper from
responsible
sources
FSC® C018575

Proceedings of the International Astronomical Union

Cambridge Journals Online

For further information about this journal please
go to the journal website at:
journals.cambridge.org/iau

CAMBRIDGE
UNIVERSITY PRESS

ISBN 978-1-107-03284-2



9 781107 032842 >