

Table of Contents

Preface	xviii
Dedication	xx
Acknowledgements	xxii
Scientific Organizing Committee	xxiii

KEYNOTE ADDRESS

The Co-Evolution of Galaxies and Black Holes: Current Status and Future Prospects	3
<i>Timothy M. Heckman</i>	

PRESENTATIONS

1. The First Galaxies and Black Holes

Chair: P. Lira

The Role of Quasars in Galaxy Formation	17
<i>D. Elbaz (invited)</i>	

The Early Evolution of Massive Black Holes	26
<i>M. Volonteri (invited)</i>	

Co-Evolution of Supermassive Black Holes and Their Host Galaxies	34
<i>J. K. Kotilainen, R. Decarli, R. Falomo, A. Treves, M. Labita, & R. Scarpa (contributed)</i>	

QSONG: Supermassive Black Holes of Quasars at World's End	40
<i>M. Im & the QSONG Team (contributed)</i>	

OSIRIS View of Submillimeter Galaxies: A 2-D Spectroscopic Insight to Starburst Galaxies in the High-Redshift Universe	46
<i>K. Menéndez-Delmestre, A. W. Blain, M. Swinbank, I. Smail, S. C. Chapman, & R. J. Ivison (contributed)</i>	

Detecting the First Quasars with ALMA	52
<i>Dominik R. G. Schleicher, Marco Spaans, & Ralf S. Klessen (poster)</i>	

2. Multiwavelength Properties of AGNs and Their Hosts

Chair: S. Komossa

The Quasar Continuum	55
<i>M. Elvis (review)</i>	

Emission-Line Taxonomy and the Nature of AGN-Looking Galaxies in the SDSS <i>Roberto Cid Fernandes, Grażyna Stasińska, Natalia Vale Asari, Abílio Mateus, Marielli S. Schlickmann, & William Schoenell, for the SEAGal collaboration (invited)</i>	65
Metallicity Evolution of AGNs	73
<i>T. Nagaoka, R. Maiolino, A. Marconi, K. Matsuoka, & Y. Taniguchi (invited)</i>	
X-Ray Selected Type 2 QSOs and Their Host Galaxies	80
<i>V. Mainieri & the COSMOS Collaboration (contributed)</i>	
PCA Tomography and Its Application to Nearby Galactic Nuclei	85
<i>J. Steiner, R. B. Menezes, T. V. Ricci, & A. S. de Oliveira (contributed)</i>	
X-Ray, Optical, and Near-IR Long-Term Monitoring of AGN	90
<i>Paulina Lira, Patricia Arévalo, Phil Uttley, Ian McHardy, & Elme Breedt (contributed)</i>	
A Complete Census of AGN and Their Hosts from Optical Surveys?	96
<i>Vivienne Wild, Timothy Heckman, Paule Sonnentrucker, Brent Groves, Lee Armus, David Schiminovich, Benjamin Johnson, Lucimara Martins, & Stephanie LaMassa (contributed)</i>	
Astrometric and Photometric Variability in Quasars	103
<i>A. H. Andrei, S. Bouquillon, J. L. Penna, F. Taris, S. Anton, J. Souchay, J. I. B. Camargo, D. N. da Silva Neto, R. Vieira Martins, M. Assafin, & S. dos Reis Carvalho Pinto (poster)</i>	
Dramatic Change in the Spectrum of FeLoBAL SDSS J163255.46+420407.7 ...	104
<i>Kentaro Aoki & Toru Misawa (poster)</i>	
Post-Starburst Quasars	105
<i>Michael Brotherton, Sabrina Cales, Rajib Ganguly, Zhaozhi Shang, Gabriela Canalizo, R. Stoll, C. Paul, & A. M. Diamond-Stanic (poster)</i>	
Environmental Effects on Properties of Type 2 QSO	106
<i>Lin-wen Chen & Li-Ting Hsu (poster)</i>	
Modeling the Orientation of AGN	107
<i>Emily Down (poster)</i>	
Resolved Mid-Infrared Imaging of AGN: An Isotropic Measure of Intrinsic Power	108
<i>P. Gandhi, H. Horst, A. Smette, S. F. Höning, A. Comastri, R. Gilli, C. Vignali, & W. J. Duschl (poster)</i>	
Evolution of AGN Space Densities and the Fanaroff–Riley Dichotomy	109
<i>Melanie A. Gendre, Jasper V. Wall, & Philip Best (poster)</i>	

Co-Evolution of Brightest Cluster Galaxies and Galaxy Activity in the Host Clusters.....	110
<i>Mei-Ling Huang & Lin-wen Chen (poster)</i>	
Study of Polarization in OJ 287	111
<i>U. C. Joshi, Junhui H. Fan, Shashikiran Ganesh, & K. S. Baliyan (poster)</i>	
Multiwavelength Detection of Cluster AGN	112
<i>Alison J. Klesman & Vicki L. Sarajedini (poster)</i>	
Properties of Quasar and AGN Candidates Detected in the 2MASS/ <i>ROSAT</i> Catalogs	113
<i>Shinjiro Kouzuma & Hitoshi Yamaoka (poster)</i>	
Radio Structures of Compact Quasars with Broad Absorption Lines	114
<i>Magdalena Kunert-Bajraszewska & Marcin P. Gawroński (poster)</i>	
Alignment of Stellar and AGN Accretion Disks from SDSS Data	115
<i>Claudia del P. Lagos, Nelson D. Padilla, Michael A. Strauss, & Lei Hao (poster)</i>	
Buried AGNs and Starbursts in Luminous and Ultra-Luminous Infrared Galaxies	116
<i>João Rodrigo S. Leão, Patrícia Hepp, & Claus Leitherer (poster)</i>	
The Power of Deconvolution for Study of QSO Host Galaxies.....	117
<i>Géraldine Letawe, Yannick Letawe, & Pierre Magain (poster)</i>	
Host Galaxies of Obscured Quasars: Infant Starbursts Caught in Action.....	118
<i>Xin Liu, Nadia L. Zakamska, Jenny E. Greene, Michael A. Strauss, Julian H. Krolik, & Timothy M. Heckman (poster)</i>	
PRONGS: Powerful Radio Objects Nested in Galaxies with Star Formation....	119
<i>Minnie Y. Mao, Ray P. Norris, Rob Sharp, & Jim E. J. Lovell (poster)</i>	
Extended Near-IR Spectra of NGC 1068	120
<i>Lucimara Martins, Alberto Ardila, Ruth Gruenwald, & Ronaldo de Souza (poster)</i>	
The Ying and Yang of the M 83 Nucleus	121
<i>Damián Mast, Rubén J. Díaz, Horacio A. Dottori, María P. Agüero, Irapuán Rodrigues, & Juan F. Albacete-Colombo (poster)</i>	
The Coronal Emission-Line Region in AGNs: A <i>Hubble Space Telescope</i> View ..	122
<i>X. Mazzalay, A. Rodríguez-Ardila, & S. Komossa (poster)</i>	
The Active Nucleus in NGC 4579.....	123
<i>Roberto B. Menezes, João E. Steiner, Tiago V. Ricci, & Alexandre S. Oliveira (poster)</i>	

Byurakan– <i>IRAS</i> Galaxy Pairs as Indicators of Starburst and Galaxy Evolution	124
<i>A. M. Mickaelian, L. A. Sargsyan, & G. A. Mikayelyan (poster)</i>	
Dusty Structure Around Type 1 AGNs	125
<i>Rivay Mor, Hagai Netzer, & Moshe Elitzur (poster)</i>	
The Structure of the BLR in 3C 390.3	126
<i>L. S. Nazarova, N. G. Bochkarev, & C. M. Gaskell (poster)</i>	
The TANGO Project: Thorough ANalysis of radio-Galaxies Observations	127
<i>Breezy Ocaña Flaquer, Stephane Leon Tanne, Francoise Combes, & Jeremy Lim (poster)</i>	
Massive Dense Nuclei in Young Starbursts: Progenitors of Early-Type Galaxy Cusps?	128
<i>Roderik Overzier (poster)</i>	
<i>AKARI</i> Infrared Views of AGNs	129
<i>Shinko Oyabu (poster)</i>	
Submillijansky Radio-Quiet and Radio-Loud AGN in the <i>Chandra</i> Deep Field South	130
<i>Paolo Padovani, Ken Kellermann, Edward Fomalont, Neal Miller, Paolo Tozzi, Vincenzo Mainieri, & Piero Rosati (poster)</i>	
Radio-Optical Analysis of Extended Radio Sources in the First Look Survey Field	131
<i>C. M. Paulo, I. Prandoni, R. Morganti, & C. M. Cress (poster)</i>	
The Infrared Nuclear Emission of Seyfert Galaxies on Parsec Scales: Testing the Clumpy Torus Models	132
<i>C. Ramos Almeida, N. A. Levenson, J. M. Rodríguez Espinosa, A. Alonso Herrero, A. Asensio Ramos, J. T. Radomski, C. Packham, R. S. Fisher, & C. M. Telesco (poster)</i>	
Distinguishing Between AGN and Star-Forming Galaxies in ATLAS	133
<i>Kate E. Randall, Andrew M. Hopkins, & Ray P. Norris (poster)</i>	
The AGN Properties of the Starburst Galaxy NGC 7582	134
<i>T. V. Ricci, J. E. Steiner, R. B. Menezes, A. Garcia-Rissmann, and R. Cid Fernandes (poster)</i>	
Near-Infrared Spectral Energy Distributions of Seyfert Galaxies: Stellar Population, Active Nucleus, and Hot Dust	135
<i>Rogério Riffel, Miriani G. Pastoriza, Alex Carciofi, Alberto Rodríguez-Ardila, & Charles Bonatto (poster)</i>	
FeII Emission in the NLS1 galaxy I Zw 1: Results from NIR Spectroscopy	136
<i>Alberto Rodríguez-Ardila & Aurea Garcia Rissmann (poster)</i>	

A 5.5–35 μm Spectral Analysis of Active Galactic Nuclei	137
<i>D. A. Sales, M. G. Pastoriza, & R. Riffel (poster)</i>	
Kinematics and Principal Component Analysis from IFU Spectroscopy of the Post- Starburst Quasar SDSS J0210–0903	138
<i>David Sanmartim, Thaisa Storchi-Bergmann, & Michael S. Brotherton (poster)</i>	
AGN in the GOODS Fields: Variability and Multiwavelength Detection	139
<i>Vicki L. Sarajedini, David C. Koo, & Alison J. Klesman (poster)</i>	
Dust Masses in Early-Type AGN and Inactive Galaxies	140
<i>Ramiro D. Simões-Lopes, Paul Martini, & Thaisa Storchi-Bergmann (poster)</i>	
Beware of Fake AGNs	141
<i>G. Stasińska, N. Vale Asari, & R. Cid Fernandes (poster)</i>	
The OPTX Project: Comparing the Optical and X-Ray Spectral Properties of Active Galactic Nuclei	142
<i>Laura Trouille & Amy Barger (poster)</i>	
Spectral Energy Distributions of LIRGs	143
<i>Vivian U, D. B. Sanders, & the GOALS Team (poster)</i>	
The Evolution of the Mass–Metallicity Relation in Seyferts	144
<i>N. Vale Asari, G. Stasińska, R. Cid Fernandes, J. M. Gomes, M. Schlickmann, A. Mateus, & W. Schoenell (poster)</i>	
Nuclear IR SED of Type 2 Seyfert Galaxies	145
<i>L. Videla, P. Lira, A. Alonso-Herrero, D. M. Alexander, & M. Ward (poster)</i>	
Discrimination Between Quasars and Stars by Support Vector Machines	146
<i>Yanxia Zhang & Hongwen Zheng (poster)</i>	
Automated Classification of Quasars and Stars	147
<i>Yanxia Zhang, Yongheng Zhao, & Hongwen Zheng (poster)</i>	
3. Black Hole Masses, Scaling Relationships, and Their Evolution	
<i>Chair: T. Storchi-Bergmann</i>	
Toward Precision Measurement of Central Black Hole Masses	151
<i>Bradley M. Peterson (review)</i>	
What Do Statistics Reveal About the $M_{\text{BH}} - M_{\text{bulge}}$ Correlation and Co-Evolution?	161
<i>Chien Y. Peng (invited)</i>	

On the Relation Between Black Hole Mass and Velocity Dispersion in Type 1 and Type 2 AGN	172
Kalliopi M. Dasyra, Bradley M. Peterson, Linda J. Tacconi, Hagai Netzer, Luis C. Ho, George Helou, Lee Armus, Dieter Lutz, Richard Davies, & Linda Watson (contributed)	
A Survey of Seyfert AGN: Nuclear Gas Disks and Direct Black Hole Mass Estimates	177
E. K. S. Hicks, R. I. Davies, M. A. Malkan, R. Genzel, & L. J. Tacconi (contributed)	
Evolution of the $M_{\text{BH}}-\sigma$ and $M_{\text{BH}}-L_{\text{bulge}}$ Relations	183
J.-H. Woo, N. V. Bennert, T. Treu, M. Malkan, & R. Blandford (contributed)	
Determination of the Intrinsic Scatter in the $M_{\text{BH}}-\sigma$ and $M_{\text{BH}}-L_{\text{bulge}}$ Relations	189
K. Gultekin (contributed)	
Searching for the Supermassive Black Hole in NGC 1265 (3C 83.1B)	195
Alessandra Beifiori, Marc Sarzi, Roger L. Davies, Michele Cappellari, & Ryan C. W. Houghton (poster)	
Fossil SMBHs in the Milky Way Halo	196
Jillian Bellovary, Fabio Governato, & Tom Quinn (poster)	
New Reverberation Mapping Results from the Lick AGN Monitoring Project	197
Misty C. Bentz & the LAMP Collaboration (poster)	
High-Redshift Quasar Monitoring Campaign: Preliminary Results	198
Ismael Botti, Paulina Lira, Hagai Netzer, & Shai Kaspi (poster)	
The Ultraviolet Flare at the Center of the Elliptical Galaxy NGC 4278	199
A. Cardullo, E. Dalla Bontà, E. M. Corsini, A. Beifiori, L. Buson, L. Morelli, A. Pizzella, & F. Bertola (poster)	
Limits on the Masses of Supermassive Black Holes in 105 Nearby Galaxies	200
E. M. Corsini, A. Beifiori, M. Sarzi, E. Dalla Bontà, A. Pizzella, L. Coccato, and F. Bertola (poster)	
Reverberation Mapping Results from MDM Observatory	201
Kelly D. Denney, B. M. Peterson, R. W. Pogge, M. C. Bentz, C. M. Gaskell, T. Minezaki, C. A. Onken, S. G. Sergeev, & M. Vestergaard (poster)	
Evolution of Supermassive Black Holes	202
Charline Filloux, J. A. de Freitas Pacheco, Fabrice Durier, & Joseph Silk (poster)	
Accurate AGN Black Hole Masses and the Scatter in the $M_{\text{BH}}-L_{\text{bulge}}$ Relationship	203
C. Martin Gaskell (poster)	

Investigating the High-Luminosity End of the Active Galaxy $M_{\text{BH}}-\sigma_*$ Relation	204
<i>C. J. Grier, L. C. Watson, B. M. Peterson, P. Martini, M. C. Bentz, K. M. Dasyra, K. D. Denney, M. Dietrich, L. Ferrarese, R. W. Pogge, & L. J. Tacconi (poster)</i>	
An H α Dynamical Mass for HE 0047–1756	205
<i>K. J. Inskip, K. Jahnke, H.-W. Rix, & C. Y. Peng (poster)</i>	
No Evolution in the $M_{\text{BH}}-M_{*,\text{total}}$ Relation Over the Last 9 Gyrs	206
<i>Knud Jahnke, Mauricio Cisternas, Katherine J. Inskip, & the COSMOS Collaboration (poster)</i>	
Black Hole Masses and Accretion Rates in Nearby AGN	207
<i>Stuart Lumsden, Jonathan Digby-North, Olivia Jones, Hazel Rogers, Sam Rushforth, & Mark Whittaker (poster)</i>	
Adaptive Optics-Based Measurements of the Black Hole in Abell 2162–BCG	208
<i>Nicholas J. McConnell, James R. Graham, Chung-Pei Ma, Karl Gebhardt, & Tod R. Lauer (poster)</i>	
On BLR Size Estimates in Reverberation Models	209
<i>Alexander V. Melnikov & Ivan I. Shevchenko (poster)</i>	
The Arkansas Galaxy Evolution Survey: Supermassive Black Holes in the Universe	210
<i>M. S. Seigar, D. Kennefick, J. Kennefick, C. H. S. Lacy, J. C. Berrier, P. Treuthardt, I. A. Al-Baidhany, R. S. Barrows, B. Davis, J. A. Hughes, A. Schilling, D. W. Shields, & A. D. Sierra (poster)</i>	
4. Quasar and Supermassive Black Hole Demographics	
<i>Chair: R. Somerville</i>	
Black Hole Demographics: Statistical Characteristics of Accreting Black Holes	213
<i>Hagai Netzer (review)</i>	
Quasar and Supermassive Black Hole Evolution	223
<i>Scott M. Croom, Stephen Fine, & the 2SLAQ Survey Team (invited)</i>	
AGN Evolution from Large and Deep X-Ray Surveys	231
<i>Marcella Brusa (invited)</i>	
Quasar Mass Functions Across Cosmic Time	239
<i>Marianne Vestergaard (invited)</i>	
Merger-Induced Quasars, Their Light Curves, and Their Host Halos	248
<i>Francesco Shankar (contributed)</i>	

Mid-IR Properties of Seyferts: <i>Spitzer</i> IRS Spectroscopy of the <i>IRAS</i> 12 μm Seyfert Sample	254
<i>Vassilis Charmandaris, Yanling Wu, Jiasheng Huang, Luigi Spinoglio, & Silvia Tommasin (contributed)</i>	
Using Ark 564 and I Zw 1 as Laboratories for Modeling the Fe II Pseudo-Continuum in QSOs	260
<i>R. T. Eufrasio, F. Bruhweiler, E. Verner, B. Wills, & D. M. Crenshaw (poster)</i>	
The Clustering Properties of Intermediate X-ray Luminosity AGN at $z \sim 3$	261
<i>Harold Francke, Eric Gawiser, Paulina Lira, Leopoldo Infante, & the MUSYC Collaboration (poster)</i>	
Simulations of Recoiling Massive Black Holes	262
<i>Javiera Guedes, Piero Madau, Lucio Mayer, Michael Kuhlen, Jürg Diemand, & Marcel Zemp (poster)</i>	
The Distribution and Evolution of Black Hole Mass in Broad Line Quasars	263
<i>Brandon C. Kelly, Marianne Vestergaard, Xiaohui Fan, Lars Hernquist, Philip Hopkins, & Aneta Siemiginowska (poster)</i>	
The Australia Telescope 20 GHz (AT20G) Survey	264
<i>Elizabeth Mahony, Ron Ekers, Marcella Massardi, Tara Murphy, and Elaine Sadler, on behalf of the AT20G Team (poster)</i>	
Detecting Quasars by Their Variability	265
<i>Kasper B. Schmidt, Hans-Walter Rix, Sebastian Jester, Phil Marshall, Gregory Dobler & Joseph F. Hennawi (poster)</i>	
An Estimate of the Local Active Black Hole Mass Function and the Distribution Function of Eddington Ratios	266
<i>Andreas Schulze & Lutz Wisotzki (poster)</i>	
AGN and Galaxy Clustering at $z = 0.3\text{--}3.0$ using the Japanese Virtual Observatory	267
<i>Yuji Shirasaki, Masahiro Tanaka, Masatoshi Ohishi, Yoshihiko Mizumoto, Tadafumi Takata, & Naoki Yasuda (poster)</i>	
<i>Spitzer</i> IRS Observations of Low-Mass Seyfert Galaxies.	268
<i>Carol E. Thornton, Aaron J. Barth, Luis C. Ho, & Jenny E. Greene (poster)</i>	
Probing the Evolution of Black Hole Mass Through Cosmic Time	269
<i>Benny Trakhtenbrot, Hagai Netzer, Paulina Lira, & Ohad Shemmer (poster)</i>	
Mergers of Luminous Early-Type Galaxies	270
<i>Z. L. Wen, J. L. Han, & F. S. Liu (poster)</i>	

5. Accretion and Feeding

Chair: T. Heckman

Accretion and Outflow in Active Galaxies	273
<i>Andrew King (review)</i>	
The Impact of Nuclear Star Formation on Gas Inflow to AGN	283
<i>R. I. Davies, E. Hicks, M. Schartmann, R. Genzel, L. J. Tacconi, H. Engel, A. Burkert, M. Krause, A. Sternberg, F. Mueller Sánchez, & W. Maciejewski (invited)</i>	
Inflows and Outflows in Nearby AGN from Integral Field Spectroscopy	290
<i>T. Storchi-Bergmann (invited)</i>	
The Structure of AGNs from X-Ray Absorption Variability	299
<i>G. Risaliti (invited)</i>	
Obscuring and Feeding Supermassive Black Holes with Evolving Nuclear Star Clusters	307
<i>M. Schartmann, A. Burkert, M. Krause, M. Camenzind, K. Meisenheimer, & R. I. Davies (contributed)</i>	
Advection-Dominated Accretion, Jets, and the Spectral Energy Distribution of LINERs	313
<i>Rodrigo S. Nemmen, Thaisa Storchi-Bergmann, Michael Eracleous, & Feng Yuan (contributed)</i>	
Near-Eddington Luminosity Flares from Quiescent Supermassive Black Holes . .	319
<i>Suvi Gezari (contributed)</i>	
Precession in Extragalactic Parsec-Scale Accretion Disks	325
<i>Anderson Caproni, Mario Livio, Zulema Abraham, & Herman J. Mosquera Cuesta (poster)</i>	
Quasars Do Not Live in Merging Systems: No Enhanced Merger Rate at $z \lesssim 0.8$	326
<i>Mauricio Cisternas, Knud Jahnke, Katherine J. Inskip, & the COSMOS Collaboration (poster)</i>	
Origin of the Gas in the Extended Narrow-Line Region of Nearby Seyfert Galaxies: The Case of Mrk 6	327
<i>V. Cracco, S. Ciroi, F. Di Mille, L. Vaona, P. Rafanelli, A. V. Moiseev, & A. A. Smirnova (poster)</i>	
Dynamics of Black Holes in Rotating Cores	328
<i>Jose A. Fiestas & Rainer Spurzem (poster)</i>	
Star Cluster Migration Near the Galactic Center	329
<i>Michiko Fujii, Masaki Iwasawa, Yoko Funato, & Junichiro Makino (poster)</i>	

On the Origin of the Galactic Center S Stars	330
<i>Evgeny Griv (poster)</i>	
The Circumnuclear Spiral Pattern of NGC 5427	331
<i>J. A. Hernandez-Jimenez, H. Dottori, P. Grosbøl, & N. Vera-Villamizar (poster)</i>	
Gravitating Disks Around Black Holes	332
<i>Vladimír Karas & Ladislav Šubr (poster)</i>	
Growing Supermassive Black Holes Inside Cosmological Simulations	333
<i>Robyn Levine, Nickolay Y. Gnedin, & Andrew J. S. Hamilton (poster)</i>	
Integral Field Spectroscopy of $z \sim 0.1$ QSO Host Galaxies	334
<i>Dading Nugroho, Knud Jahnke, Bernd Husemann, Katherine Inskip, Sebastian F. Sánchez, & Lutz Wisotzki (poster)</i>	
Gaseous Streaming Motions Around the Nucleus of M 81	335
<i>Allan Schnorr Müller, Thaisa Storchi-Bergmann, Rogemar André Riffel, & Fabricio Ferrari (poster)</i>	
SMBH Luminosity in the Starburst Environment	336
<i>Sergiy Silich, Guillermo Tenorio-Tagle, Filiberto Hueyotl-Zahuantitla, Jan Palouš, & Richard Wünsch (poster)</i>	
Optical Flares from the Tidal Disruption of Stars by Massive Black Holes	337
<i>Linda E. Strubbe & Eliot Quataert (poster)</i>	
Low-Mass AGN at High Accretion Rates	338
<i>Dawei Xu & S. Komossa (poster)</i>	
6. Outflows and Feedback	
<i>H. Dottori</i>	
Cosmic Feedback from AGN	341
<i>A. C. Fabian (review)</i>	
The Impact of BAL Outflows on Cosmological Structure Formation	350
<i>Nahum Arav (invited)</i>	
Large-Scale Outflows from AGN: A Link Between Central Black Holes and Galaxies	354
<i>Daniel Proga, Ryuichi Kurosawa, & Kentaro Nagamine (invited)</i>	
Feedback in the Dark Domain	362
<i>Keiichi Wada (invited)</i>	
The Variable High-Velocity Outflows Seen in X-Ray Spectra	370
<i>Shai Kaspi (contributed)</i>	

Radio-Mode Feedback in Massive Galaxies at Redshift $0 < z < 1$	377
<i>Elaine M. Sadler, Scott M. Croom, John H. Y. Ching, Helen M. Johnston, Russell D. Cannon, & Tom Mauch (contributed)</i>	
Highly Ionized Gas as a Diagnostic of the Inner NLR	383
<i>M. J. Ward, J. Mullaney, C. Jin, & R. Davies (contributed)</i>	
Velocity Offsets Due to Mass Outflows in Active Galaxies	387
<i>D. M. Crenshaw, S. B. Kraemer, H. R. Schmitt, R. F. Mushotzky, and J. P. Dunn (contributed)</i>	
Black Hole Motion as a Trigger of Orbital Resonances	393
<i>Christian M. Boily, Nicolas Gaudin, & Sabine Richard (poster)</i>	
Variability in Quasar Broad Absorption Line Outflows	394
<i>Daniel M. Capellupo, Fred Hamann, Joseph C. Shields, Tom A. Barlow, & Paola Rodriguez (poster)</i>	
GMOS IFU Observations of the Gas Kinematics in the Radio Galaxy Arp 102B	395
<i>Guilherme d. S. Couto, Thaisa Storchi-Bergmann, Rogemar A. Riffel, D. J. Axon, & A. Robinson (poster)</i>	
On the Physical Mechanism Underlying PC1 and the Baldwin Effect in Quasars	396
<i>Xiao-Bo Dong, Ting-Gui Wang, Jian-Guo Wang, Xiaohui Fan, Huiyuan Wang, Hongyan Zhou, & Weimin Yuan (poster)</i>	
Complex X-Ray Spectral Variability in Mini-BAL QSOs	397
<i>Margherita Giustini, Massimo Cappi, George Chartas, Michael Eracleous, Giorgio G. C. Palumbo, & Cristian Vignali (poster)</i>	
Modeling Line Emission from Disk Winds	398
<i>Patrick B. Hall & Laura S. Chajet (poster)</i>	
New Results on Quasar Outflows	399
<i>Fred Hamann, Nissem Kanekar, Jason X. Prochaska, Michael T. Murphy, Nikola Milutinovic, Sara Ellison, Wim Ubachs, & Gary Ferland (poster)</i>	
Long-Term Variability of the Broad H α and H β Emission-Line Profiles of NGC 4151	400
<i>D. Ilić, A. I. Shapovalova, L. Č. Popović, A. N. Burenkov, V. H. Chavushyan, A. Kovačević, N. G. Bochkarev, & J. León-Tavares (poster)</i>	
Exploring the Inner Narrow-Line Regions of Seyfert Galaxies	401
<i>S. B. Kraemer, D. M. Crenshaw, M. L. Trippe, H. R. Schmitt, & M. Meléndez (poster)</i>	
Feedback from AGN: The Kinetic/Radio Luminosity Function	402
<i>Gabriele Melini, Fabio La Franca, & Fabrizio Fiore (poster)</i>	
Outflows of Low and High Ionization Gas in Nearby AGN	403
<i>F. Müller Sánchez, A. Prieto, R. I. Davies, & E. K. S. Hicks (poster)</i>	

Multi-Zone Warm and Cold Clumpy Absorbers in Three Seyfert Galaxies	404
<i>Claudio Ricci, Volker Beckmann, Marc Audard, & T. J.-L. Courvoisier (poster)</i>	
Feeding Versus Feedback in AGNs from Near-Infrared IFU Observations: The Case of Mrk 1066	405
<i>Rogemar A. Riffel & Thaisa Storchi-Bergmann (poster)</i>	
Tracing Outflows in High-Redshift Quasars.	406
<i>Leah E. Simon & Fred Hamann (poster)</i>	
Direct Evidence for AGN-Driven Winds in a $z = 1.5$ Radio Galaxy	407
<i>Eric Steinbring (poster)</i>	
Environment or Outflows? New Insight into the Origin of NALs	408
<i>Vivienne Wild & Paul Hewett (poster)</i>	
7. The Big Picture: Large-Scale Effects of Feedback on Galaxies and Their Environment	
<i>Chair: M. Elvis</i>	
Black Hole Feeding and Feedback in the Context of Galaxy Formation	411
<i>Rachel S. Somerville (review)</i>	
Quasars, Feedback, and Galaxy Formation	421
<i>P. Hopkins (invited)</i>	
Cold and Warm Gas Outflows in Radio AGN	429
<i>Raffaella Morganti, Joanna Holt, Clive Tadhunter, & Tom Oosterloo (invited)</i>	
Black Hole Growth and Host Galaxy Morphology	438
<i>Kevin Schawinski, C. Megan Urry, Shanil Virani, Paolo Coppi, Steven P. Bamford, Ezequiel Treister, Chris J. Lintott, Marc Sarzi, William C. Keel, Sugata Kaviraj, Carolin N. Cardamone, Karen L. Masters, Nicholas P. Ross, & the Galaxy Zoo Team (contributed)</i>	
GALEX Constraints on AGN Feedback in Early-Type Galaxies	442
<i>Sukkyoung K. Yi (contributed)</i>	
Growing Supermassive Black Holes in Cosmological Simulations of Structure Formation	445
<i>Debora Sijacki, Volker Springel, & Martin G. Haehnelt (contributed)</i>	
Electromagnetic Signatures of Recoiling Black Holes	451
<i>S. Komossa (contributed)</i>	

On the Evolutionary Connection Between AGNs and <i>GALEX</i> UV-Excess Early-Type Galaxies	458
<i>Hyun-Jin Bae, Kiyun Yun, Yumi Choi, & Suk-Jin Yoon (poster)</i>	
Stellar Populations of the Most Massive Galaxies	459
<i>Alexander Fritz, Michael D. Hoenig, & Ricardo P. Schiavon (poster)</i>	
Development of the Red Sequence in Galaxy Clusters	460
<i>Noelia Jiménez, Sofía A. Cora, Analía Smith Castelli, & Lilia P. Bassino (poster)</i>	
Equal and Unequal-Mass Mergers of Disk and Elliptical Galaxies with Black Holes	461
<i>Peter H. Johansson, Thorsten Naab, & Andreas Burkert (poster)</i>	
The X-Ray AGN Bias Factor at Zero Redshift	462
<i>Roman A. Krivonos & Mikhail G. Revnivtsev (poster)</i>	
FUV Emission in Cool-Core Clusters	463
<i>J. B. R. Oonk, W. Jaffe, M. N. Bremer, & N. Hatch (poster)</i>	
A New Catalog of Isolated Galaxies	464
<i>J. A. Vázquez-Mata, H. M. Hernández-Toledo, Changbom Park, & Yun-Young Choi (poster)</i>	
Author index	465