Cover legend: Slow activity transients (SATs) in infant rat visual cortex. SATs are the cortical activity induced in visual cortex by phase 3 retinal waves. Wide-band depth EEG recordings from layer 4 of a P10 rat show prominent infra-slow potentials containing beta-band (15-30 Hz) oscillations. A 120 s trace containing two SATs is shown in green. The background image is a Morlet-wavelet transform of the signal between 0.5 and 50 Hz (log scale) plotted using a black–red–yellow–white (low to high) color translation. This analysis shows the frequencies associated with neural events, including the prominent beta-band oscillations (red color surrounded by the green line) that exclusively occur during SATs. For exact x and y axes and for more information, see the article by Colonnese and Khazipov in this issue (pages 4325–4337).

Journal Club

4185 Weighting Pain Avoidance and Reward Seeking: A Neuroeconomical Approach to Pain
Mathieu Roy

4187 Eye Movement Artifact May Account for Putative Frontal Feedback-Related Potentials in Nonhuman Primates
David C. Godlove

Brief Communications

4256 The Functional Properties of Barrel Cortex Neurons Projecting to the Primary Motor Cortex
Takashi R. Sato and Karel Svoboda

4338 A Novel Role for Protein Synthesis in Long-Term Neuronal Plasticity: Maintaining Reduced Postburst Afterhyperpolarization
Sivan Ida Cohen-Matsliah, Helen Motanis, Kobi Rosenblum, and Edi Barkai

4503 Endogenous Purinergic Control of Bladder Activity via Presynaptic P2X, and P2X2/3 Receptors in the Spinal Cord

Articles

CELLULAR/MOLECULAR

4210 Two Modes of Release Shape the Postsynaptic Response at the Inner Hair Cell Ribbon Synapse
Lisa Grant, Eunyoung Yi, and Elisabeth Glowatzki

4246 Astrocyte-Produced Ephrins Inhibit Schwann Cell Migration via VAV2 Signaling
Fardad T. Afshari, Jessica C. Kwok, and James W. Fawcett

4353 Physiological Basis of Tingling Paresthesia Evoked by Hydroxy-α-Sanshool
Richard C. Lennertz, Makoto Tsunozaki, Diana M. Bautista, and Cheryl L. Stucky

4408 Preferential Localization of Muscarinic M1, Receptor on Dendritic Shaft and Spine of Cortical Pyramidal Cells and Its Anatomical Evidence for Volume Transmission
Miwako Yamasaki, Minoru Matsui, and Masahiko Watanabe
4449  Gating Modes in AMPA Receptors
       Martin Loynaz Prieto and Lonnie P. Wollmuth

DEVELOPMENT/PLASTICITY/REPAIR

4197  Gap Junctions/Hemichannels Modulate Interkinetic Nuclear Migration in the Forebrain Precursors
       Xiuxin Liu, Kazue Hashimoto-Torii, Masaaki Torii, Chen Ding, and Pasko Rakic

4221  Control of Postnatal Apoptosis in the Neocortex by RhoA-Subfamily GTPases Determines Neuronal Density

4325  “Slow Activity Transients” in Infant Rat Visual Cortex: A Spreading Synchronous Oscillation Patterned by Retinal Waves
       Matthew T. Coloneness and Rustem Khazipov

4419  Longitudinal Magnetic Resonance Imaging Study of Cortical Development through Early Childhood in Autism
       Cynthia M. Schumann, Cinnamon S. Bloss, Cynthia Carter Barnes, Graham M. Wideman, Ruth A. Carper, Natacha Akshoomoff, Karen Pierce, Donald Hagler, Nicholas Schork, Catherine Lord, and Eric Courchesne

BEHAVIORAL/SYSTEMS/COGNITIVE

4241  Transcranial Direct Current Stimulation Facilitates Decision Making in a Probabilistic Guessing Task
       David Hecht, Vincent Walsh, and Michal Lavidor

4261  Navigational Decision Making in Thermotaxis
       Linjiao Luo, Marc Gershow, Mark Rosenzweig, Kyeonglin Kang, Christopher Fang-Yen, Paul A. Garrity, and Aravinthan D. T. Samuel

4273  TASK Channels Contribute to the K⁺-Dominated Leak Current Regulating Respiratory Rhythm Generation In Vitro
       Hidehiko Koizumi, Stanley E. Smerin, Tadashi Yamanishi, Bindiya R. Moorjani, Ruli Zhang, and Jeffrey C. Smith

4285  Negative Blood Oxygen Level Dependence in the Rat: A Model for Investigating the Role of Suppression in Neurovascular Coupling
       Luke Boorman, Aneurin J. Kennerley, David Johnston, Myles Jones, Ying Zheng, Peter Redgrave, and Jason Berwick

4295  Stimulation of the Frontal Eye Field Reveals Persistent Effective Connectivity after Controlled Behavior
       Rei Akaishi, Yosuke Morishima, Vivian P. Rajeswaren, Shigeki Aoki, and Katsuyuki Sakai

4306  Somatostatin Signaling in Neuronal Cilia Is Critical for Object Recognition Memory
       Emily B. Einstein, Carlyn A. Patterson, Beverly J. Hon, Kathleen A. Regan, Jyoti Reddi, David E. Melnikoff, Marcus J. Mateen, Stefan Schulz, Brian N. Johnson, and Melanie K. Tallent
Cortical Networks Produce Three Distinct 7–12 Hz Rhythms during Single Sensory Responses in the Awake Rat
Adriano B. L. Tort, Alfredo Fontanini, Mark A. Kramer, Lauren M. Jones-Lush, Nancy J. Kopell, and Donald B. Katz

Encoding of Temporal Probabilities in the Human Brain
Domenica Bueti, Bahador Bahrami, Vincent Walsh, and Geraint Rees

Histamine Influences Body Temperature by Acting at H1 and H3 Receptors on Distinct Populations of Preoptic Neurons
Ebba Gregorsson Lundius, Manuel Sanchez-Alavez, Yasmin Ghochani, Joseph Klaus, and Iustin V. Tabarean

Essential Role of Dopamine D2 Receptor in the Maintenance of Wakefulness, But Not in Homeostatic Regulation of Sleep, in Mice
Wei-Min Qu, Xin-Hong Xu, Ming-Ming Yan, Yi-Qun Wang, Yoshihiro Urade, and Zhi-Li Huang

Estradiol-Induced Object Memory Consolidation in Middle-Aged Female Mice Requires Dorsal Hippocampal Extracellular Signal-Regulated Kinase and Phosphatidylinositol 3-Kinase Activation
Lu Fan, Zaorui Zhao, Patrick T. Orr, Cassie H. Chambers, Michael C. Lewis, and Karyn M. Frick

Reconsolidation of a Cocaine-Associated Stimulus Requires Amygdalar Protein Kinase A
Hayde Sanchez, Jennifer J. Quinn, Mary M. Torregrossa, and Jane R. Taylor

The Subthreshold Relation between Cortical Local Field Potential and Neuronal Firing Unveiled by Intracellular Recordings in Awake Rats
Michael Okun, Amir Naim, and Ilan Lampl

Opioid-Induced Long-Term Potentiation in the Spinal Cord Is a Presynaptic Event
Hong-Yi Zhou, Shao-Rui Chen, Hong Chen, and Hui-Lin Pan

Corticospinal Beta-Band Synchronization Entails Rhythmic Gain Modulation
Gijs van Elswijk, Femke Maij, Jan-Mathijs Schoffelen, Sebastiaan Overeem, Dick F. Stegeman, and Pascal Fries

Scaling of Neural Responses to Visual and Auditory Motion in the Human Cerebellum
Oliver Baumann and Jason B. Mattingley

Oscillatory Correlates of Vibrotactile Frequency Processing in Human Working Memory
Bernhard Spitzer, Evelin Wacker, and Felix Blankenburg

Asymmetric Transfer of Visuomotor Learning between Discrete and Rhythmic Movements
Tsuyoshi Iekagami, Masaya Hirashima, Gentaro Taga, and Daichi Nozaki

Deletion of M1 Muscarinic Acetylcholine Receptors Increases Amyloid Pathology In Vitro and In Vivo
Albert A. Davis, Jason J. Fritz, Jürgen Wess, James J. Lah, and Allan I. Levey

Mitofusin 2 Is Necessary for Transport of Axonal Mitochondria and Interacts with the Miro/Milton Complex
Albert Misko, Sirui Jiang, Iga Wegorzewska, Jeffrey Milbrandt, and Robert H. Baloh

Astrocytes Prevent Abnormal Neuronal Development in the Fragile X Mouse
Shelley Jacobs and Laurie C. Doering
Erratum: In the article “Multiple Modes of Network Homeostasis in Visual Cortical Layer 2/3” by Arianna Maffei and Gina G. Turrigiano, which appeared on pages 4377–4384 of the April 23, 2008 issue, the incorrect version of Figure 5 was published. The correct version, displayed here, corresponds to the published figure legend and contains three additional panels.

Persons interested in becoming members of the Society for Neuroscience should contact the Membership Department, Society for Neuroscience, 1121 14th St., NW, Suite 1010, Washington, DC 20005, phone 202-962-4000.

Instructions for Authors are available at http://www.jneurosci.org/misc/itoa.shtml. Authors should refer to these Instructions online for recent changes that are made periodically.

Brief Communications Instructions for Authors are available via Internet (http://www.jneurosci.org/misc/ifa_bc.shtml).

Submissions should be submitted online using the following url: http://jneurosci.msubmit.net. Please contact the Central Office, via phone, fax, or e-mail with any questions. Our contact information is as follows: phone, 202-962-4000; fax, 202-962-4945; e-mail, jn@sfn.org.