

**American Astronomical Society
Division on Dynamical Astronomy
32th Annual Meeting, April 22 to 25, 2001
Houston, Texas**

PROGRAM

Sunday, April 22

2:00pm — 5:00pm DDA Committee Meeting

6:00pm — 8:00pm Reception

6:00pm — 8:00pm Registration

Monday, April 23

8:15pm Registration

8:30am Opening Remarks

Session 1: Very Small Things Chaired by *A.A. Jackson*

8:40am (1.01) Planetary Rings

P. D. Nicholson (Invited)

9:30am (1.02) Rapid Instabilities in Narrow Self-Gravitating Rings

G.R. Stewart & K. Ohtsuki

9:50am (1.03) Adaptive Optics Observations of Saturn's Inner Moons

*B. R. Scharringhausen, P. D. Nicholson, T. L. Hayward, B. R. Brandl,
E. E. Bloemhof, R. G. Dekany, & M. Troy (Student Stipend)*

10:10am **Coffee Break**

10:30am (1.04) Dynamics of Interplanetary Dust: Modeling the Zodiacal Cloud

K. Grogan, S.F. Dermott, & T.J.J. Kehoe (Invited)

11:20am (1.05) Evolution of Asteroidal Dust Particles through Secular Resonances

T.J.J. Kehoe, S.F. Dermott, & K. Grogan

11:40am (1.06) Dynamical Models of Meteoroid Streams in Relation to Recent and
Upcoming Leonid and Ursid Showers

P. Jenniskens & E. Lytinen

12:00pm **Lunch**

Session 2: Very Big Things Chaired by *Harold Levison*

1:30pm (2.01) Radial Profiles of Collisionless Dark Matter Halos

E. Bertschinger (Invited)

2:20pm (2.02) Characterizing 3D Stellar Orbits with Correlation Integrals

E.I. Barnes (Student Stipend)

2:40pm (2.03) Integrals of Motion in Kuzmin-Like Galaxy Potentials

J. E. Tohline & K. Voyages

3:00pm (2.04) Spectral Analysis of Orbits

C. Hunter

3:20pm (2.05) Brownian Motion of Single and Binary Black Holes

D. Merritt

3:40pm **Coffee Break**

Session 3: Astrometry

Chaired by *Marc Murison*

- 4:00pm (3.01) Preliminary SPM Catalog of Positions in the Southern Hemisphere
I. Platais, T.M. Girard, W.F. van Altena, D.G. Monet, S.E. Urban, G.L. Wycoff, & N. Zacharias
- 4:20pm (3.02) An Analysis of the Scale of the USNO 26-inch Refractor
D. Pascu, L. Winter, N. Zacharias, & G. Wycoff
- 4:40pm (3.03) A New Astrometric Telescope
N. Zacharias, U. Laux, & C. de Vegt
- 5:00pm (3.04) Parallaxes with Hubble Space Telescope
G. F. Benedict, B. E. McArthur, T. E. Harrison, J. Lee, C. L. Slesnick, & HST Astrometry Science Team
- 5:20pm (3.05) Quasar Astrometry with the Space Interferometry Mission
S. C. Unwin, A. E. Wehrle, D. L. Jones, D. L. Meier, & B. G. Piner

Session 4: Posters

8:00pm

- (4.01) Status of the UCAC project
N. Zacharias, M.I. Zacharias, & T. Rafferty
- (4.02) Transport and Capture of Comets
S.D. Ross, W.S. Koon, M.W. Lo, & J.E. Marsden
- (4.03) Dust Stream Evolution from Long Period Comets
A.A. Jackson
- (4.04) First Light for USNO 1.3-meter Telescope
A.K.B. Monet, F.H. Harris, H.C. Harris, D.G. Monet, & R. Stone
- (4.05) Free Libration in the Motion of the Galilean Satellites and the Reassessment of Tidal Effects
S. Musotto, F. Varadi, G. Schubert, & W. Moore
- (4.06) Lower Bounds on Astrometric Errors from a Spinning, Precessing Astrometric Satellite due to the Geometry of the Observation Scanning Pattern
M.A. Murison
- (4.07) Long Term Integration Error of KS Regularized Orbital Motion
H. Arakida & T. Fukushima
- (4.08) The Orbits of the Recently Discovered Jovian and Saturnian Satellites
R. A. Jacobson
- (4.09) Solar System Astrometry at McDonald Observatory: Progress Report
J.G. Ries, R.L. Ricklefs, P.J. Shelus, & E.S. Barker
- (4.10) Parallaxes with Hubble Space Telescope II
G.F. Benedict, B.E. McArthur, T.E. Harrison, J. Lee, C.L. Slesnick, HST Astrometry Science Team
- (4.11) An Improved Distortion Solution for WFPC2
J. Anderson
- (4.12) 3 - 14 micron Spectroscopy of Comet C/1999 T1(McNaught-Hartley)
D.K. Lynch, R. W. Russell, & M.L. Sitko
- (4.13) Controlling the NGST Orbit
S.H. Lubow
- (4.14) Planet Formation Around Pulsars
D.P. Hamilton & M.C. Miller
- (4.15) (n:1) Resonances and Stability of Restricted Three-Body Systems
N. Haghighipour

- (4.16) Comparisons of High Order Störmer and Explicit Runge-Kutta Nyström Methods for N-body Simulations of the Solar System
P. W. Sharp
- (4.17) Semi-analytic Formulas for the Stirring Rates of Planetesimals
K. Ohtsuki, G.R. Stewart, & S. Ida

Tuesday, April 24

7:30am Breakfast for Young Things (Students and recent PhDs welcome)

Session 5: Satellites Chaired by *Luke Dones*

- 8:30am** (5.01) Europa's Habitability follows from Classical Dynamical Astronomy
R. Greenberg (Invited)
- 9:20am** (5.02) Irregular Satellites: Orbits and Origins
J.A. Burns, B.J. Gladman, P.D. Nicholson, R.A. Jacobson, V. Carruba, M.J. Holman, & JJ Kavelaars
- 9:40am** (5.03) Tidal Amplitude for a Self-gravitating, Compressible Sphere
T.A. Hurford & R. Greenberg
- 10:00am** (5.04) Simulations of Lunar-Forming Impacts
R. M. Canup & E. Asphaug

10:20am Coffee Break

Session 6: Reference Frames Chaired by *Alice Monet*

- 10:40am** (6.01) Global Rotation of Non-Rotating Origin
T. Fukushima
- 11:00am** (6.02) Practical Implications Of the Non-Rotating Origin
J.L. Hilton
- 11:20am** (6.03) The Second Generation Guide Star Catalog
J. E. Morrison, B. McLean, & GSC-II Catalog Construction Team
- 11:40am** (6.04) Washington Double Star Catalogs, 2001.0
W.I. Hartkopf & B.D. Mason

12:00pm Lunch

Session 7: Small Rocky Things Chaired by *Matthew Holman*

- 1:20pm** (7.01) Of Time, Tides, and Trojans
D.P. Hamilton
- 1:40pm** (7.02) Stability of Binary Asteroids
D.J. Scheeres
- 2:00pm** (7.03) A Dedicated NEO Follow-up Program for the Southern Hemisphere
W. F. van Altena, C. D. Bailyn, T. M. Girard, D. Rabinowitz, R. L. Branham, M. Hicks, & C. E. Lopez
- 2:20pm** (7.04) The NEAR-Shoemaker Radio Science Results for Asteroids Mathilde and Eros
D.K. Yeomans, P.G. Antreasian, S.R. Chesley, J.D. Giorgini, A.S. Konopliv, J.K. Miller, W.M. Owen, Jr., B.G. Williams, & D.J. Scheeres
- 2:40pm** (7.05) Debaised Orbital and Size Distributions of the NEOs
W.F. Bottke, A. Morbidelli, R. Jedicke, J.M. Petit, & H.F. Levison

3:00pm Coffee Break

Session 8: Unnatural Things Chaired by *Stephen Lubow*

- 3:20pm** (8.01) Low Energy Transfer to the Moon
W.S. Koon, M.W. Lo, J.E. Marsden, & S.D. Ross (Invited)
- 4:10pm** (8.02) Celestial Mechanics Aspects of Formation Flying Satellites
K.T. Alfriend, S.R. Vadali, & H. Schaub
- 4:30pm** (8.03) 2000 SG344: The Story of a Potential Earth Impactor
P.W. Chodas & S.R. Chesley

Session 9: Business Meeting

4:50pm — 5:50pm Lots of talk

Banquet (South Shore Harbour Resort, 7pm–11pm)

7:00pm Cash Bar

7:30pm Dinner

8:45pm Leaving the Cradle
John Connolly

Wednesday, April 25

Session 10: Building Things Chaired by *Joseph Hahn*

- 8:00am** (10.01) Dynamical Origin of Upsilon Andromedae: Disk-Planet Interaction?
P. Artymowicz (Invited)
- 8:50am** (10.02) Planetary Accretion in a Dissipating Gas Disk
Wm. R. Ward, C. B. Agnor, & H. Tanaka
- 9:10am** (10.03) The Tilt Stability of a Planet-Disk System
S. Lubow & G. Ogilvie
- 9:30am** (10.04) Oligarchic Growth Throughout the Protoplanetary Disk
E. W. Thommes, M. J. Duncan, & H. F. Levison
- 9:50am** Coffee Break

Session 11: Small Icy Things Chaired by *William Bottke*

- 10:10am** (11.01) Long-Term Dynamics and the Classical Kuiper Belt Inclination Distribution
M. J. Kuchner & M. J. Holman
- 10:30am** (11.02) Diffusive Dynamics of Scattered Disk Objects with Large Perihelia
M. Holman, T. Grav, & B. Gladman
- 10:50am** (11.03) The Oort Cloud: Alternative Lifestyles
L. Dones, H. F. Levison, M. J. Duncan, & P. R. Weissman
- 11:10am** (11.04) The Fate of Planetesimals and the Migration of the Jovian Planet
K.R. Grazier & F. Varadi

11:30am Lunch

Session 12: Planetary Dynamics Chaired by *Christopher Hunter*

- 1:00pm** (12.01) Galileo's Observations of Neptune
E. M. Standish (BROUWER LECTURE)
- 1:50pm** (12.02) Very Long-Term Stability of Extrasolar Planets in Binary Star Systems
D.B. Spencer & H. Yamato
- 2:10pm** (12.03) Earth's Orbital History Revisited
F. Varadi, B. Runnegar, & M. Ghil

Session 13: Extra Solar Planets Chaired by *Robin Canup*

2:30pm (13.01) Evolution of the GJ876 Planets into the 2:1 Orbital Resonance

M.H. Lee & S.J. Peale

2:50pm (13.02) The Role of Giant Planets in Terrestrial Planet Formation

H. Levison, L. Dones, C. Agnor, R. Canup, & M. Duncan

3:10pm (13.03) On the Nature of Extrasolar Planetary Candidates

D.C. Black & T.F. Stepinski (Invited)

4:00pm THE END