

2004 AMSAT-NA Space Symposium and Annual Meeting
AMSAT 35th Anniversary Celebration
October 8-10, 2004
Held in Conjunction with the Amateur Radio on the International Space Station
(ARISS) International Delegates Meeting
October 10-13, 2004
Crowne Plaza Hotel
Arlington, Virginia

Thursday October 7, 2004

Morning

8 am-noon AMSAT Board Meeting, Alexandria 2
noon AMSAT Board Lunch Break

Afternoon

1 pm-5 pm AMSAT Board Meeting, Alexandria 2
5 pm-6 pm AMSAT Board Dinner Break

Evening

6 pm-9 pm AMSAT Board Meeting, Alexandria 2

Friday October 8, 2004

Morning

8 am-noon AMSAT Board Meeting, Alexandria 2
9 am Registration Opens Arlington Rooms Foyer
10 am-noon Poster Session and Commercial Vendor Setup, Arlington 1
9 am-noon Self-guided tours of DC on your own
noon AMSAT Board Lunch Break

Afternoon

Room: Arlington 2&3

1:00-1:10 AMSAT Symposium Kickoff, Presidents Welcome

1:10-1:40 AMSAT Eagle Project Fall 2004 Status Report
Richard M. Hambly, W2GPS

1:40-2:00 AMSAT Eagle Project
Dick Jansson, WD4FAB

2:00-2:20 Eagle's Radiation Environment
Steven R. Bible, N7HPR

- 2:20-2:40 A Simulator for the AMSAT Eagle Spacecraft
Ken Ernandes, N2WWD
- 2:40-3:00 C-C Rider Revisited
Tom Clark, W3IWI, Bob McGwier, N4HY, Phil Karn, KA9Q, and
Rick Hambly, W2GPS
- 3:00-3:20 Starting AMSAT's Lessons Learned Process
Lee McLamb, KU4OS
- 3:20-3:40 Break
- 3:40-4:00 Software Defined Radios – The Future is Now
Bob McGwier, N4HY, Gerald Youngblood AC5OG, Eric Wachsmann
- 4:00-4:20 The Easiest Satellites
Laura Halliday, VE7LDH
- 4:20-4:40 Bias Tees for Satellite Receiving Systems, Emphasis on GPS Receivers
John M. Franke, WA4WDL
- 4:40-5:00 From Sizzling Hot BBQ to Cool BUD-Lite, Taming the Grid Dish for
Space Communications
Anthony Monteiro, AA2TX
- 1-5 pm Poster Sessions, Arlington 1

Evening

- 5 pm-? Informal Dinner on your own
- 6:00-7:30 pm Poster Session, Arlington 1
- 7:30-10 pm Presidents Club Meeting, Jefferson

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Saturday October 9, 2004

Morning

Room: Arlington 2&3

8:00 am Registration Opens

8:00-8:10 Welcome

8:10-9:15 ECHO's Last Month on Earth (The ECHO Launch Campaign)
Chuck Green, NØADI

9:15-10:00 Echo Commissioning; Echo Command Team
Jim White, WDØE, and Mike Kingery, KE4AZN

10:00-10:15 Break

10:15-10:40 ECHO as an Educational Tool
Gould Smith, WA4SXM

10:40-11:00 Making Sense of Sensors
Alan Bloom, N1AL

11:00-11:45 P3E Status; Peter Guelzow, DB2OS

8 am-11:45 Poster Sessions; Arlington 1

Lunch

11:45am-1pm Lunch on own—Restaurant Buffet Special Available in Hotel

Afternoon

Room: Arlington 2&3

- 1:00-2:00 Amateur Radio on the International Space Station (ARISS)
International Delegates Panel Session
Larry Agabekov, N2WW, Frank H. Bauer KA3HDO, Gaston Bertels,
ON4WF, Joerg Hahn, DL3LUM, Robin Haighton, VE3FRH, Keigo
Komuro, JH1KAB, Ken Pulfer, VE3PU, Sergey Samburov, RV3DR,
Masanobu Tsuji, JH2PRZ, Rosalie White, K1STO, Alberto Zagni, I2KBD
- 2:00-2:20 Remember, We're Pioneers! The First School Contact with the
International Space Station
Rita L. Wright, KC9CDL
- 2:20-2:40 NA1SS, NA1SS, This is KA7SKY Calling
Carrie Cunningham, N7NFX
- 2:40-3:00 Voice/IP Communications for the ARISS Program
James Stefano, W2COP
- 3:00-3:20 SSETI Express—the New Mode U/S Satellite
Graham Shirville, G3VZV
- 1-3:30 pm Poster Sessions, Arlington 1 (Posters must be removed at 3:30)
- 3:30 pm-5 pm AMSAT Annual Meeting & Awards Ceremony, Arlington 2&3

Evening

- 6:00-7:00 pm Attitude Adjustment, Arlington Foyer
- 6:00-9:00 pm Cash Bar
- 7:00-10 pm Banquet, Keynote speaker, prize drawing, Special 35th Anniversary
Celebration (Cake, reminiscing, highlights of our accomplishments),
Arlington Ballroom

Sunday October 10, 2004

Morning

- 6:45-8 am Area Coordinators Breakfast, Jefferson
8 am-noon AMSAT Symposium, Arlington 2&3
- 8:00-8:20 The DoD Space Test Program, Free Launches for Amateur Satellites
Timothy J. Salo, ABØDO
- 8:20-8:40 University of Louisiana at Lafayette Starts a Satellite Program
Nick Pugh, K5QXJ
- 8:40-9:00 ANDE—Telemetry/Command and Comms
Bob Bruninga, WB4APR
- 9:00-9:20 An Experimental Space Surveillance RADAR Transponder for the RAFT1
CubeSat
Robert Bruninga, WB4APR, and Anthony Monteiro, AA2TX
- 9:20-9:40 The CanX-2 Nanosatellite: Expanding the Science Abilities of
Nanosatellites
Daniel Kekez, VA3KKZ
- 9:40-10:00 GPS, Distributed Communications, and Thruster Experiments on the
University of Texas FASTRAC Mission
G. Holt, T. Campbell, and E.G. Lightsey
- 10:00-10:20 Echo's New Transmitter—a Software-Centric View
John Teller, N4NUN
- 10:20-10:40 CAN-Do Project Update
Bdale Garbee, KB0G
- 10:40-11:00 Why Is Spaceflight So Difficult?—A Look at Kinetic Energy
Requirements for Orbital Flight
Daniel Schultz, N8FGV
- 11:00-11:20 Demonstration and Development of Amateur Radio Applications of
Natural Vacuum Electronics
Nickolaus E. Leggett, N3NL
- 11:20-11:40 Winning the SETI Olympiad: The Role of the Dedicated Amateur
H. Paul Shuch, N6TX
- 11:40-12:00 Proposal for an AMSAT Satellite with a Robot for Repair of the Satellite
Joseph Cotton, N3IQA

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Sunday October 10, 2004

Afternoon

Noon Bus for tour to Air and Space Museum/Dulles Annex Available for Boarding

12:15 pm Busses leave
Pre-Ordered Box Lunches on Bus

1:15 pm Arrive---Air and Space Museum/Dulles Annex

1:30-4 pm Air and Space Museum/Dulles Annex Tour

4 pm-5 pm Travel Back to Hotel

5 pm Arrive Crowne Plaza Hotel, Arlington, VA

Evening

6 pm-? Dinner on your own; self guided evening tour of Washington DC, including Lincoln Memorial, Vietnam Veterans Memorial, Jefferson memorial, etc.

Monday October 11, 2004

Morning

9 am-noon ARISS Meeting, Alexandria

9:00-9:20 Introductions and Welcome, All

9:20-9:40 Election Results, Robin Haighton, VE3FRH

International Team Reports

9:40-10:10 **1** ARISS Europe Report, Gaston Bertels, ON4WF

10:10-10:40 **2** ARISS Canada Report, Robin Haighton, VE3FRH

10:40-10:50 Break

10:50-11:20 **3** ARISS USA Report, Frank Bauer, KA3HDO & Rosalie White, K1STO

11:20-11:50 **4** ARISS Russia Report, Sergey Samburov, RV3DR

11:50-12:20 **5** ARISS Japan Report, Keigo Komuro, JA1KAB

12:20-1:15 pm Lunch

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Monday October 11, 2004

Afternoon

1:15 pm-4:30 pm ARISS Meeting, Alexandria

Committee Reports

- 1:15-1:30 6 Public Relations, Ken Pulfer, VE3PU, Scott Stevens, N3ASA
- 1:30-2:00 Administrative Committee
- 7 QSL Card status, Rosalie White, K1STO
- 8 3rd party traffic, Rosalie White, K1STO, Larry Agabekov,
N2WW
- 2:00-3:00 Hardware Committee
- a) On-Orbit Hardware Status, Sergey Samburov, RV3DR, Kenneth
 Ransom, N5VHO (30 min)
- b) Hardware Development Status
1. 10 Phase 2 Hardware, Lou McFadin, W5DID, Sergey
 Samburov, RV3DR (30 min)
- 3:00-3:15 Break
- 3:15-4:15 Hardware Committee (Continued)
- b) Hardware Development Status (Continued)
2. MISSE-5/PCSAT2, Bob Bruninga, WB4APR (15 min)
3. SSTV, Miles Mann, WF1F (15 min)
4. Columbus Module Antenna System Status, Gaston Bertels,
 ON4WF (30 min)
- 4:15-4:30 14 School Outreach/School Selection, Rosalie White, K1STO

Evening

4:30-9:00 pm Group Dinner; Optional Spy Museum Tour

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Tuesday October 12, 2004

Morning

9 am-noon ARISS Meeting, Alexandria

Committee Reports (Continued)

9-10:30 Operations Committee

- a) 15 School Group Operations, John Nickel, WD5EEV, Tim Bosma, W6MU (30 min)
- b) 16 General Operations, Kenneth Ransom, N5VHO (30 min)
- c) 17 Crew Training, Dave Taylor, W8AAS, Sergey Samburov, RV3DR (15 min)
- d) Astronaut & Cosmonaut Licensing, Kenneth Ransom, N5VHO, Sergej Samburov, RV3DR, Gaston Bertels, ON4WF (15 min)

10:30-10:45 Break

10:45-12:00 Project Selection & Use Committee, Lou McFadin, W5DID Moderates

- a) 18 Overview, Lou McFadin, W5DID, (15 min)
- b) 19 Fast Scan Television Proposal, Graham Shirville, G3VZV (30 min)
- c) 20 VOIP Status, Scott Stevens, N3ASA (30 min)

noon-1pm Lunch

Afternoon

1 pm-5 pm ARISS Meeting, Alexandria

1:00-2:00 Project Selection & Use Committee Continued, Lou McFadin, W5DID Moderates

- d) Ionospheric Research, Lou McFadin, W5DID (20 min)
- e) 22 Russian External Satellite Concept, Sergey Samburov, RV3DR (40 min)

2:00-2:15 Financial Discussion, Robin Haighton, VE3FRH

2:15-3:45 23 Moon, Mars and Beyond, Group Strategy Session, Frank Bauer, KA3HDO Moderates

3:45-4 pm Break

4:00-4:30 [24](#) 2005 Meeting Plans, Frank Bauer, KA3HDO
4:30-5:00 Final Discussions and Closing of ARISS Meeting, All
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Evening

5:30 pm Group Dinner

Wednesday October 13, 2004

Morning

9 am-noon ARISS Meeting, Alexandria

9-noon ARISS Hardware Splinter Meeting (as required)

noon-1pm Lunch

Afternoon

Self Guided tour of DC museums (Examples include: Art Gallery, American History Museum, Air & Space, etc)