

# PROGRAM

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## 29<sup>th</sup> Review of Atmospheric Transmission Models Meeting

*13-14 June 2007  
Museum of Our National Heritage  
Lexington Massachusetts*

*SPONSORED BY ...*



*technical sponsors ...*



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# ORGANIZING COMMITTEE

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## WORKSHOP LOCATION

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The 29<sup>th</sup> *Review of Atmospheric Transmission Model Meeting* is being held 13-14 June 2007 at the Museum of Our National Heritage in historic Lexington, Massachusetts.

Located nine miles northwest of Boston, Lexington is a country village turned prosperous suburb. The town is notable as the site of the opening shots (“the shot heard round the world”) of the Battle of Lexington and Concord, the first engagement of the American Revolutionary War. British troops marched from Boston to Lexington late on April 18, 1775. Patriots Paul Revere and William Dawes rode ahead to sound warning which came around midnight, followed about 5 hours later by some 700 British troops, en route to Concord, where they planned to destroy the rebels’ military supplies. Ordered to disperse, the colonists — fewer than 100 — stood their ground.

Guests may wish to tour the historical downtown area on foot, stopping at shops along the way, or visit recommended attractions which include **Lexington Green** (site of the first battle between the Minutemen and the Redcoats during the Revolutionary War), **Buckman Tavern**, and the **Hancock-Clarke House** (the residence in which Samuel Adams and John Hancock awoke to hear Paul Revere’s famous warning that British troops were on their way).

## AIRLINE TRAVEL

Lexington is serviced by Boston’s Logan International Airport. Multiple rental car companies are located at the airport, or taxi service may be secured from the airport to the hotel of your choice (information on area hotels is provided on page 6).

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## MEETING VENUE

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### **The Museum of Our National Heritage**

33 Marrett Rd. (Route 2A)

Lexington, MA 02421

#### ***From Route I-95/128 ...***

Take Exit 30A. This exit will put you onto Route 2A East (also known as Marrett Road). The Museum is located approximately 3 miles from the exit. The entrance is on your left — a brick wall and large iron gates.

#### ***From Route 495 ...***

Take Route 2 East to Exit 55 Pleasant Street, Waltham and Lexington. At the end of the ramp, take a left onto Pleasant Street. Merge left onto Routes 4/225. At the end of the road, turn left onto Massachusetts Avenue. At the junction of Rte. 2A and Mass. Ave., take a left onto Route 2A West. The Museum entrance is your first right — a brick wall and large iron gates.

#### ***From Boston ...***

Take Route 2 West to exit 56 (toward Lexington and Bedford). Turn right at the end of the ramp, following the sign for Routes 4/225. Turn right onto Routes 4/225, which then merges right onto Pleasant St. At the rotary, turn left onto Massachusetts Ave. At the junction of Rte. 2A and Mass. Ave., take a left onto Route 2A West. The Museum entrance is your first right — a brick wall and large iron gates.

#### ***From the Massachusetts Turnpike ...***

Get on Route I-95/128 and take Exit 30A. This exit will put you onto Route 2A East (also known as Marrett Road). The Museum is located approximately 3 miles from the exit. Our entrance is on your left — a brick wall and large iron gates.

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# ACCOMMODATIONS

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Individuals attending the *29th Review of Atmospheric Transmission Models Meeting* are responsible for securing personal hotel accommodations. Following are hotels located in the immediate Lexington area. Additional accommodations may be found in neighboring towns which are minutes from the conference venue. Those attending from outside the Boston area should note that all area hotels, including those in Lexington, are not within walking distance of the conference venue. Therefore, individuals will need either to secure a rental car for the duration of their stay or make arrangements with an attending colleague for daily transportation.

The rates quoted below reflect those available via an on-line search of each hotel. These are not guaranteed nor are they group rates. Online travel sources may be helpful in obtaining the best rate for the hotels suggested.

## **Lexington, Massachusetts**

Quality Inn & Suites  
440 Bedford Street, Lexington  
(781) 861-0850  
\$99.00 per night

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## **Burlington, Massachusetts**

*(3 miles northeast of conference venue)*

Candlewood Suites  
130 Middlesex Turnpike, Burlington  
(781) 229-4300  
\$115.00 per night

Hilton Garden Inn  
5 Wheeler Road, Burlington  
(781) 272-8800  
\$135.00 per night

Boston Marriott Burlington  
1 Mall Road, Burlington  
(781) 229.6565  
\$199.00 per night

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# ACCOMMODATIONS

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Staybridge Suites  
11 Old Concord Road, Burlington  
(781) 221-2233  
\$169.00 per night

Hyatt Summerfield Suites  
2 Van de Graaff Drive, Burlington  
(781) 270-080  
\$179.00 per night

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## **Waltham, Massachusetts** *(4 miles southwest of conference venue)*

Courtyard by Marriott  
387 Winter Street, Waltham  
(781) 419-0900  
\$161.00 per night

Doubletree Guest Suites  
550 Winter Street, Waltham  
(781) 890-6767  
\$198.00 per night

Hilton Garden Inn  
420 Totten Pond Road, Waltham  
(781) 890-0100  
\$99.00 per night

Holiday Inn Express  
385 Winter Street, Waltham  
(781) 890-2800  
\$119.00 per night

The Westin Waltham-Boston  
70 Third Avenue, Waltham  
(781) 290-5600  
\$209.00 per night

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## RESTAURANTS

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The following restaurant list was acquired via an online search engine and may not be complete or accurate at time of printing. Please check with the hotel staff to determine which restaurants are open and/or recommended.

Aesop's Bagels ... 1666 Massachusetts Avenue

Alexander's Pizza ... 180 Bedford St.  
Pizza, subs, salads. Eat in or take out.

Athenian Restaurant (*Greek*) ...  
177 Massachusetts Avenue

Bertucci's Brick Oven Pizzeria ...  
1777 Massachusetts Avenue  
World class Pizzeria - specialities include homemade pizzas, slow roasted veggies, fresh pasta and salad.

Bollywood Cafe ... 135 Massachusetts Avenue

Breuggers Bagel ... 413 Waltham Street

Cafe Jazmin ... 420 Bedford Street

Carey's Catch ... 46 Massachusetts Avenue  
Seafood and sushi.

Changhai Restaurant (*Chinese*) ...  
321 Woburn Street

Cracker Barrel Restaurant & Tavern ...  
727 Marrett Road (@ Sheraton Hotel)

Dabin Restaurant ... 10 Muzzey Street

Dagwood's Deli ... 32 Waltham Street

Dennys ... 438 Bedford

Dominos Pizza ... 137 Massachusetts Avenue



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# RESTAURANTS

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Dunkin Donuts

*various locations ...*

141 Massachusetts Avenue

1707 Massachusetts Avenue

373 Waltham Street

317 Woburn Street

Emack & Bolios ... 32 Waltham Street

Ice cream shop.

Friendlys ... 1060 Waltham

Gingerbread Construction Company ...

10 Woburn Street

Coffee and pastries.

Gourmet Air Limited Deli ... 32 Hartwell Avenue

Gourmet Farms Kitchen Deli ... 53 Bedford Street

Hartwell House ... 94 Hartwell Avenue

[www.thehartwellhouse.com](http://www.thehartwellhouse.com)

Fine dining restaurant located off Rte 128. We specialize in lunch, dinner, & private functions (20-300). The Hartwell House recently sold to the One World Cuisine Group. All menus are being overseen by Executive Chef Thomas John of Mantra Restaurant.

Kushboo (*Indian*) ... 1709 Massachusetts Avenue

L'Alouette Inc. ... 182 Bedford St.

Web: [www.lalouettelexington.com](http://www.lalouettelexington.com)

Gourmet store specializing in full catering and French cuisine. Fresh daily: croissant, baguettes, fine French pastry, entrees, salads, cheese and pate.

Lemon Grass Thai Cuisine ...

844 Massachusetts Avenue

Lexington Deli Mart ...

844 Massachusetts Avenue

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## RESTAURANTS

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Lexington House of Pizza ... 399 Lowell Street

Mario's Italian Restaurant ...  
1733 Massachusetts Avenue  
Marrett Square Deli ... 321 Marrett Road

New Asian Restaurant ...  
211 Massachusetts Avenue

Nick's Place ... 197 Massachusetts Avenue  
Pizza and sub shop.

Peet's Coffee & Tea, Inc. ...  
1749 Massachusetts Avenue  
[www.peets.com](http://www.peets.com)

Offering a wide selection of coffees, teas and pasteries. Bulk teas and coffee and associated hardware.

Peking Garden (*Chinese*) ... 27 Waltham Street

Scoops Ice Cream ... 1666 Massachusetts Avenue

Seattles Best Coffee ... 321 Marrett Road

Shanghai (*Chinese*) ... 321 Woburn Street

Starbucks ... 1729 Massachusetts Avenue

Via Lago Gourmet Foods ...  
1845 Massachusetts Avenue  
[www.restaurant.com/vialago](http://www.restaurant.com/vialago)

Vinny Testa's Bar Ristorante (*Italian*) ...  
20 Waltham Street  
[www.vinnytestas.com](http://www.vinnytestas.com)

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# GENERAL INFORMATION

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## **CURRENCY**

The unit of currency is the US dollar divided into 100 pennies. All conference payments must be made in US currency. Traveler's checks are honored in most banks, hotels and shops. Major credit cards are also widely accepted.

## **CURRENCY EXCHANGE**

Guests are encouraged to exchange foreign currency at the arrival airport prior to securing ground transportation to Lexington.

## **MEALS**

Continental breakfast, breaks and lunches are included each day as part of the registration fee.

## **MESSAGES**

Guests should provide hotel contact information to the appropriate persons for receiving telephone messages and faxes. See ACCOMMODATIONS.

## **PARKING**

For those renting or driving personal vehicles, complimentary parking is available at the Museum of Our National Heritage.

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# REGISTRATION

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Individuals who have been accepted to present a paper(s), including poster presentations, must be registered to participate.

## METHODS OF PAYMENT

*Credit Cards* — American Express, Mastercard and VISA will be accepted. Please note that if your credit card is declined or is invalid, an alternate means of payment must be used to remit fees.

*Checks* — Checks must be payable in US\$ and drawn on a US bank. Checks should be made payable to the **2007 Transmission Meeting**.

†*Collective payments must be accompanied by a list of participant names and the details of payment for each person.*

††*Bank charges may not be deducted from the registration fee; attendees will be responsible for all fees deducted by both the sending and receiving financial institutions.*

## REGISTRATION FEES

IEEE Member	\$245.00
Non-Member	\$295.00
Student	\$150.00

## INCLUSIONS

The participant registration fee includes:

- admission to workshop sessions
- continental breakfast (both days)
- coffee breaks
- lunch (both days)
- *Proceedings* on CD ROM (1 copy).

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# REGISTRATION

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## ON-SITE REGISTRATION AND CHECK-IN

All attendees are required to check-in at the Registration Desk upon arrival at the workshop site. The Registration Desk is located just outside the Farr Conference Center, which is to the right of the Museum main entrance. Materials, including a name badge which must be worn at all times while in attendance, certificate of participation, and a receipt of payment will be included in the registration packet provided each registered participant.

## REGISTRATION DESK

The Registration Desk will be open at the following times to assist you:

Wednesday June 13 07:30 - 17:00  
Thursday June 14 08:00 - 15:00

## CANCELLATION POLICY

Cancellations received prior to 01 June 2007 are entitled to a full refund less a \$50.00 processing fee. No refunds will be granted thereafter.

## QUESTIONS

Questions may be directed to the meeting coordinator via telephone to 281.251.5422 or via email to [steintammy@sbcglobal.net](mailto:steintammy@sbcglobal.net) .



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# Wednesday, June 13

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**07:30 REGISTRATION/CHECK-IN AND  
CONTINENTAL BREAKFAST**  
*Farr Conference Center*

## MAXWELL AUDITORIUM

08:30 Welcome

08:40 Introduction/Overview

### *Session 1: Hyperspectral Understanding*

09:00 *Invited Presentation ...*  
**An Atmospheric Transmission  
Development**  
*Crosiar, C., and G. Boer*

09:50 LWIR Hyperspectral Imagery Simulation  
of 3-D Vehicle Tracks in Soils  
*Berk, A., D. Kelch, G. Mason, P. Vujkovic-Cvijin  
and S.C. Richtsmeier*

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10:10 Break — Farr Conference Center

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10:40 Using Simulated and Measured NASA  
Satellite Data as Validation for  
MODTRAN<sup>TM</sup>5: AIRS and SORCE  
*Anderson, G., A. Berk, H.E. Snell, E. Shettle,  
R. Saunders, J. Harder, J. Fontenla,  
P. Pilewski, B. Kindel, J. Chetwynd, J. Gardner,  
M. Hoke, G. Felde, R. Lockwood and P. Archaya*

11:00 Channel Selection for Hyperspectral  
Sensors: Application to AIRS  
*Lynch, R., and H.E. Snell*

11:20 Using Modtran for Atmospheric  
Parameters Retrieval Under the  
ASCOPE Framework  
*Scriven, G., N. Gatl and J. Burke*

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# Wednesday, June 13

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## *Session 1 continued*

- 11:40 Atmospheric Correction of Off-Nadir  
Hyperspectral Imagery  
*Adler-Golden, S., L. Bernstein, M. Fox,  
M. Matthew, R. Sundberg and A. Ratkowski*

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12:00 Lunch — Farr Conference Center

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## *Session 2: LIDAR*

- 13:10 *Invited Presentation ...*  
**Chemical Species Measurements in the  
Atmosphere Using Lidar Techniques**  
*Philbrick, C.R.*
- 14:00 White Light Lidar (WLL) Simulation and  
Measurements of Atmospheric  
Constituents  
*Brown, D.M., P.S. Edwards, Z. Liu and  
C.R. Philbrick*
- 14:20 Multistatic Lidar Measurements of  
Aerosol Multiple Scattering  
*Park, J.H., C.R. Philbrick and G. Roy*

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14:40 Break — Farr Conference Center

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# Wednesday, June 13

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## *Session 3: Optical Properties*

- 15:10 Multiresolution Optical Characteristics of Sea Surface in the Infrared for MATISSE-v2.0  
*Caillault, K., S. Fauqueux, C. Bourlier, P. Simoneau and L. Labarre*
- 15:30 An Algorithm for the Retrieval of Net Heat Flux and Ocean Albedo  
*Hogan, D., C. Richard, K. Cady-Pereria, S. Zaccheo and T. Kennelly*
- 15:50 Inversion of Atmospheric Parameters from Sky Radiance Measurements with a Sun Photometer  
*Borel, C.C.*
- 16:10 Analytic Conversion of Spectral Band Radiance into Brightness Temperature  
*Berk, A.*
- 16:30 End Day One

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# Thursday, June 14

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**08:00 REGISTRATION/CHECK-IN AND  
CONTINENTAL BREAKFAST**  
*Farr Conference Center*

## MAXWELL AUDITORIUM

### *Session 4: Aspects of Polarized Radiative Transfer*

08:30 *Invited Presentation ...*  
**A Vector Version of the 6S Radiative  
Transfer Code for Atmospheric  
Correction of Satellite Data**  
*Kotchenova, S.Y., and E.F. Vermote*

09:20 PPACS — A System to Provide Measured  
Atmospheric Aerosol/Molecular Field  
Conditions for MODTRAN Users  
*Conant, J., F. Iannarilli, F. Bacon, H. Scott,  
S. Jones, D. Robertson, F. Hawes,  
D. Bowers and D. Wellems*

09:40 The Fast Two Orders of Scattering  
Linearized Vector Radiative Transfer  
Model: A Case Study of CO<sub>2</sub> Retrieval  
from Simulated Orbiting Carbon  
Observatory Measurements  
*Natraj, V., H. Bosch, R.J.D. Spurr and Y.L. Yung*

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10:10 Break — Farr Conference Center

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### *Session 5: High Altitude Phenomena*

10:30 Systematic Extraction of Auroral Inputs  
from DMSP SSJ Electron Particle Data  
for Use with the Air Force Standard  
Atmospheric Radiative Transmittance  
Models  
*Griffin, J.M., T.C. Connor, W.O. Gallery,  
C. Paxson, H.E. Snell, M.J. Kendra  
and J.H. Brown*

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## Thursday, June 14

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10:50 Properties of Polar Mesospheric Clouds  
*Shettle, E.P.*

11:10 Evaluation of MSIS Temperature Profiles:  
Application to Stratospheric Warming  
*Gallery, W.O., H.E. Snell, J.M. Griffin,  
M.J. Kendra and J.H. Brown*

11:30 Calculating Infrared Background  
Radiance and Atmospheric Clutter at all  
Altitudes Using a Correlated-K Algorithm  
in SAMM-2  
*Panfili, R., H. Dothe, J. Gruninger,  
J.W. Duff and J.H. Brown*

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11:50 Lunch — Farr Conference Center

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### ***Session 6: Radiative Transfer Modeling — LBL and Broad-Band***

13:00 Status of the AER Line-By-Line Radiative  
Transfer Model  
*Payne, V., M. Shephard, K. Cady-Pereira,  
J. Delamere, E. Mlawer, J-L. Moncet  
and S.A. Clough*

13:30 Recent Developments in Optimal Spectral  
Sampling Radiative Transfer Method  
*Moncet, J-L., G. Uymin, T. Connor  
and H.E. Snell*

14:00 A Wideband Correlated-k Approach for  
Fast Propagation Plane Analysis  
*Ross, V., and D. Dion*

14:30 Correlated-k-Based Method for Fast  
Generation of Bandpass Radiance  
and Transmittance Look-Up-Tables  
*Acharya, P., A. Berk, R. Panfili,  
S.M. Adler-Golden, A. Wetmore and R. Shirkey*

15:00 Session Summary

15:30 Conference Close

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