

Second Circular – January 2003

28th International Cosmic Ray Conference

July 31- August 7, 2003 – Tsukuba, Japan



Hosted by

Institute for Cosmic Ray Research (ICRR),
University of Tokyo

and

Physical Society of Japan (JPS)

Under the auspices of

International Union of Pure and Applied Physics (IUPAP)

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1 Hosts and Supports

**The 28th International Cosmic Ray Conference
is hosted by**

Institute for Cosmic Ray Research (ICRR),
University of Tokyo
and
Physical Society of Japan (JPS),

under the auspices of
International Union of Pure and Applied Physics (IUPAP).

This conference is also supported by

Astronomical Society of Japan (ASJ),
High Energy Accelerator Research Organization (KEK),
Institute of Space and Astronautical Science (ISAS),
Japan Society of Applied Physics (JSAP),
National Space Development Agency of Japan (NASDA),
Science Council of Japan,
Society of Geomagnetism and Earth, Planetary and Space Sciences (SGEPSS),
and
University of Tokyo.

2 Committees

**International Advisory Committee
and
Cosmic Ray Commission (C4)
of the International Union of Pure and Applied Physics**

K.-P. Wenzel (chairman)

R.J. Protheroe (vice-chairman)

M.S. Potgieter (secretary)

| | | |
|---------------------------|--------------------------|-------------------------|
| B. Barish* | K. Kudela | M. Simon |
| A. Bettini* | P. Lipari | S. Swordy |
| R. Cowsik [†] | Y.-Q. Ma | S. Tonwar |
| L.O'C. Drury [†] | Y. Muraki | Y. Totsuka [†] |
| L. Ding [†] | O.G. Ryazhskaya | J.F. Valdés-Galicia |
| T.K. Gaisser [†] | O. Saavedra [†] | H. Völk* |
| M. Giller [†] | G.M. Simnett* | E. Zas |

[†]C4 members until October 2002. *C4 associate members.

Scientific Program Committee

| | | |
|--------------------|-------------|-------------------|
| J. Arafune | K. Kuroda | Y. Suzuki |
| M. Fukushima (OG)* | M. Matsuoka | F. Takahara |
| M. Hoshino | K. Munakata | T. Terasawa (SH)* |
| H. Inoue | Y. Muraki | S. Torii |
| T. Kajita | K. Nakamura | Y. Totsuka |
| K. Kasahara | T. Nakamura | S. Yanagita |
| M. Kawasaki | H. Sakurai | T. Yuda (HE)* |
| T. Kifune | K. Sato | |
| T. Kosugi | T. Shibata | |

* Chairman of the sessions.

Local Organizing Committee (LOC)

| | | |
|-----------------|-------------|---------------|
| J. Hisano | M. Mori | M. Teshima |
| Y. Itow | (secretary) | (secretary) |
| T. Kajita | S. Ogio | T. Yoshida |
| (vice-chairman) | M. Ohashi | T. Yoshikoshi |
| K. Kaneyuki | M. Sasaki | M. Yoshimura |
| A. Kawachi | M. Takita | (chairman) |
| Y. Matsubara | T. Tanimori | |

3 Important Dates

| | |
|----------------|---|
| Feb. 28, 2003 | Deadline for submission of abstracts |
| Apr. 4, 2003 | Notification of acceptance of abstracts |
| May 16, 2003 | Deadline for submission of contributions to proceedings |
| May 16, 2003 | Deadline for pre-registration |
| May 30, 2003 | Deadline for registration of accommodations and optional tours |
| July, 16, 2003 | Contributed papers and schedule of contributed talk available on the 28th ICRC Web site |
| July 31, 2003 | Opening ceremony |
| Aug. 7, 2003 | Closing ceremony |

4 Addresses

Conference Secretariat:

All inquiries concerning scientific aspects of the conference should be sent to:

Mailing Address:

28th ICRC Local Organizing Committee
Institute for Cosmic Ray Research
University of Tokyo
Kashiwa, Chiba 277-8582, Japan

Telephone:+81-4-7136-5104

TeleFax:+81-4-7136-3115

Email: icrc2003@icrr.u-tokyo.ac.jp

WWW : <http://www.icrr.u-tokyo.ac.jp/icrc2003/>

Detailed information on procedures to register, submit abstracts and papers, etc. is given in the relevant paragraphs of this Circular. A copy of this Circular can also be found on the 28th ICRC Web site (<http://www.icrr.u-tokyo.ac.jp/icrc2003/>).

Registration Office:

All inquiries concerning registration should be sent to:

Mailing Address:

Registration Office of ICRC 2003
c/o International Communications Specialists, Inc.
Sabo Kaikan-bekkan, 2-7-4, Hirakawa-cho,
Chiyoda-ku, Tokyo 102-8646, Japan

Telephone:+81-3-3263-6474

TeleFax:+81-3-3263-7537

Email: icrc2003reg@ics-inc.co.jp

All inquiries concerning details of hotel accommodation and tours should be sent to the official conference travel agent, **JTB Corp. (JTB)**:

Mailing Address:

JTB Corp.
International Travel Division
Convention Center (CD100720-177)
2-3-11 Higashi-Shinagawa, Shinagwa-ku,
Tokyo 140-8604, Japan

Telephone:+81-3-5796-5445

TeleFax:+81-3-5495-0685

Email: icrc2003@itd.jtb.co.jp

5 General Information

The 28th International Cosmic Ray Conference will be held in Tsukuba, Japan from July 31 to Aug.7, 2003. All people interested in cosmic ray physics and the related topics are welcome to join in this conference.

5.1 Location and Climate

The 28th International Cosmic Ray Conference will be held in the Epochal Tsukuba International Congress Center in Tsukuba City, Japan, from Thursday, July 31 to Thursday, August 7, 2003. Tsukuba City is situated about 50 km north-east of Tokyo, and is a center of advanced research and technology in Japan. Epochal Tsukuba is located about 1 km south of the Tsukuba Center Bus Terminal and the "Tsukuba Center Building".

Tsukuba City has a subtropical climate from the end of July to August. By the end of July, the rainy season is usually over. It is sunny but humidity and temperature are high. The highest daily temperature is 30-35⁰C, the lowest one 23-30⁰C. The humidity is about 70%.

More information on Tsukuba City can be found at the official Tsukuba City Web site <http://www.city.tsukuba.ibaraki.jp/english/index.htm> or at links in the 28th ICRC Web site. <http://www.icrr.u-tokyo.ac.jp/icrc2003/>

5.2 Visas

A valid passport is required for entry into Japan. Delegates from some countries will also need a visa. Detailed information is available through the Web site of the Ministry of Foreign Affairs of Japan (http://www.mofa.go.jp/j_info/visit/visa/).

Invitation letters for the visa application will be provided from the organizers. Delegates who need invitation letters should contact the LOC by email or Fax providing full name, nationality, affiliation, current address, place and date of birth. To identify their activities in the cosmic-ray field, applicants are kindly asked to send the submission numbers of the ICRC2003 abstracts including their name as one of the authors or a list of three major recent publications.

The 28th International Comic Ray Conference will be conducted in accordance with IUPAP principles as stated in ICSU Document “Universality of Science” (sixth edition, 1989) regarding free circulation of scientists for international purposes. In particular, no bona fide scientist will be excluded from participation on the grounds of national origin, nationality, or political considerations unrelated to science.

5.3 Transportation to and from Tsukuba City

- From/To New Tokyo International Airport in Narita

The easiest way to reach Tsukuba City from the New Tokyo International Airport in Narita is to take the Airport Liner NATT's, which connects Tsuchiura Station to the Narita Airport via the Tsukuba Center Bus Terminal. It takes about 1 hour 40 minutes from the airport to Tsukuba City, with currently 9 services from 7:00 AM to 8:00 PM, every 1 to 2 hours. A one-way ticket costs JPY (Japanese Yen) 2,540 for adults and JPY1,270 for children. You can buy tickets to Tsukuba, without reservation, at the bus ticketing counters in the arrival lobbies of both Terminal 1 and 2 at the airport. The services to the airport depart Tsukuba Center Bus Terminal from 6:20 AM to 5:30 PM, every 1 or 2 hours. The bus stop is No. 13. Tickets to the airport need to be reserved at least 3 days before departure, and can be reserved at the travel desk in the conference venue.

You can also go by taxi, but it will cost you about JPY14,000.

- From/To Tokyo Station

The highway buses (Tsukuba-Go) to the Tsukuba Center Bus Terminal in Tsukuba City depart from Tokyo Station. The first and the last bus of a day leaves Tokyo at 6:00 and 23:00, respectively. The expressway bus is frequent. The first and the last bus of a day leaves Tsukuba at 5:20 and 21:00, respectively. The arrival time depends on traffic condition of the highway, but, it takes 1 hour or 1 hour and a half normally from Tokyo Station to Tsukuba City.

Tokyo bus terminal is located at Yaesu-Minami-Guchi (South Yaesu entrance). Before getting on the bus, you need to purchase a ticket (JPY1250) at the vending machine, just behind the bus stop inside the building. The bus can be taken from the bus stop No. 2

(by 9:00 PM) or No. 4 (after 9:00 PM). Since buses to several destinations depart from the same bus stop, make sure you choose the proper lane.

The bus stop to the Tokyo Station at Tsukuba Center Bus Terminal is No. 5. You can get a ticket at the vending machine inside the central bus terminal building. It takes about 1.5 hours, sometimes more than 2 hours.

- From/To Tokyo International Airport in Tokyo, Haneda

Highway buses also connect the Tokyo International Airport in Haneda to the Tsukuba Center Bus Terminal. Twelve daily services are available in both directions. A one-way ticket costs JPY1,800 for adults. It takes 1.5 to 2 hours between Haneda and Tsukuba.

Buses depart from the bus stop No. 12 at the Haneda Airport located in front of the terminal building. In Tsukuba, they depart from the bus stop No. 13 at the Tsukuba Center Bus Terminal.

In case you would like to come to the conference venue by Japan Railway (JR), public bus services to the Tsukuba Center Bus Terminal are available from JR stations (Tsuchiura, Arakawa-oki, or Hitachino-Ushiku of Joban Line). You can also take a taxi from JR stations, but it costs JPY2000~3000.

If you wish to have your luggage sent to your hotel, there are several forwarding agencies at the airport, with many outlets near the arrival gate. In addition, some airlines provide free baggage pickup and delivery.

5.4 Transportation inside Tsukuba City

During the conference, pickup service by bus at hotels is provided every morning and evening for participants whose hotel is far from the conference venue. The schedule will be posted in the 28 ICRC Web site later.

Regular local buses are also available. The major bus stop is the Tsukuba Center Bus Terminal. Bus stops for major bus lines are following.

- No. 1 : KEK, Tsukuba Univ.
- No. 2 : Arakawa-oki Station, Hitachino-Ushiku Station
- No. 3 : Tsuchiura Station

Since buses to several destinations depart from the same bus stops, make sure you choose a proper one.

5.5 Electric Appliances

Electric current is provided through two prong sockets, at 100VAC/50Hz in East Japan and 100VAC/60Hz in West Japan. If you use your laptop computers for presentation on this conference, you will need AC plug adapter or in some special case may need a transformer.

5.6 Banking

Only Japanese Yens are accepted at regular stores and restaurants. Some foreign currencies may be accepted at a limited number of hotels, restaurants and souvenir shops. Do not expect to use your credit cards at shops or restaurants while major credit cards, VISA, MasterCard, Diners Club, and American Express, are accepted at hotels. Traveler's checks are not popular in Japan and are accepted only by leading banks and major hotels in principal cities.

Major Foreign currencies can be converted into Japanese Yens as you arrive at the Narita Airport. There are currency exchange counters located in the first floor of the arrival lobby of the airport. They are open from 6:30 to 23:00. See Web site of the Narita Airport (http://www.narita-airport.or.jp/airport_e/index.html).

In the post offices around the conference venue, international Automatic Teller Machine (ATM) service is provided. You can withdraw Japanese Yens using your credit cards or cash cards. Notice that you are not necessarily able to convert your currency to Japanese Yens at Hotel.

Currency exchange from Australian dollar, British pound, Canadian dollar, Euro, and US dollar to Japanese Yen can be made in the central area of Tsukuba City at the following location:

Joyo Bank
(The first floor of Tsukuba Center Building)
phone: 0298-51-2151

5.7 Shopping

Shops and other sale outlets in Japan are generally open on Saturdays, Sundays and national holidays as well as weekdays from 10:00 to 20:00. Department stores are, however, closed one day per week, (different for different types of stores) and certain specialty shops may not open on Sundays and national holidays.

5.8 Tipping

In Japan, tips are not necessary anywhere, even at hotels and restaurants.

5.9 Insurance

The ICRC Organizing Committee will not be responsible for any medical expenses, loss, or accidents during the conference. We recommend that participants take out the necessary coverage from their local insurance if they are not already covered by existing policies.

5.10 Registration Desk

The registration area will be located at the entrance lobby of the conference venue. At registration, delegates will receive a conference bag containing a CDROM of the conference proceedings, a conference identification badge, an invitation to the Welcome Reception, and a booklet of the conference program. Registered accompanying persons will receive a conference identification badge and an invitation to the Welcome Reception. Tickets for the optional tours and the conference banquet will also be provided at the registration desk. Opening hours of the registration desk will be posted later in the 28th ICRC Web site.

5.11 Refreshment Breaks

Two coffee/tea breaks per day will be provided, to which also accompanying persons are invited.

5.12 Lunch

Several restaurants are located within walking distance. A restaurant map will be distributed at the conference venue. Lunch box service will be available under request through the registration Web page linked from the 28th ICRC Web site.

5.13 Official Language

The official language of the conference is English.

6 Registration

6.1 Registration Fee

The registration fee includes the complete set of proceedings on CDROM, hardcopy proceedings of the invited/highlight/rapporteur sessions, a conference bag, and ticket to the Welcome Reception on July 31. (The student price does not include hardcopy proceedings.) To submit contribution papers, the delegates are required to register before their submission. The following table gives the registration fee structure for the conference. All fees are quoted in Japanese Yen (JPY).

| | Before/On May 16, 2003 | After May 16, 2003 |
|---------------------|------------------------|--------------------|
| Delegates | JPY40,000 | JPY48,000 |
| Students | JPY20,000 | JPY25,000 |
| Accompanying Person | JPY4,000 | JPY5,000 |

Additional copies of the CDROM proceedings and printed copies of the contributed paper volumes can be purchased. Prices and the deadline will be posted later in the 28th ICRC Web site, and you are required to order those copies through a registration Web page linked from the 28th ICRC Web site. Your additional CDROMs and printed copies will be available for pickup at the registration desk. For your convenience, postal service will be available at the conference venue.

6.2 Paper Submittal Fee

Since registration to the conference is required to submit contributed papers, no paper submittal fee will be applied. No paper without registration will be accepted.

6.3 How to Register

To register, use Internet. Visit the 28th ICRC Web site, and follow the link of the registration.

All payment must be made in Japanese Yen. Acceptable forms of payment include major credit cards and bank checks for the pre-registration. When making the payment by check,

please have the check made out to JTB Corp.. Personal checks are NOT accepted. The registration fee will be charged on the acceptance of your registration by the LOC, and your registration is to be completed on your payment of your registration fee. In case you have some difficulties to pay your registration fee in advance of the conference, please contact with the Registration Office.

6.4 Financial Support

Some limited funds may be available to provide partial relief on the payment of your registration fee and local accommodation for individuals from abroad who otherwise would be unable to attend the conference. Persons who can demonstrate that support of this nature is necessary for them to attend the conference should apply. Applications should be sent to the LOC before May 16, 2003 in order to be considered.

Applications for aid must justify the request for support. They should describe what specific contributions the applicant plans to make to the conference. A brief list of recent publications, research interests and position held should also be included. Applicants should describe what other sources of funding would be available to them, since any support that can be provided by the conference will not be sufficient by itself to cover the entire conference cost.

In addition, the LOC has reserved a limited number of relatively inexpensive rooms at the dormitory of KEK (High Energy Accelerator Research Organization) that is located 12 km from the conference venue. We give priority to provide these rooms to those who need support and to students. Those who would like to stay in KEK should notify the LOC.

6.5 Cancellation

All cancellations must be placed through the registration Web page by the specified date. A confirmation will be sent to individuals who request registration cancellation. The following cancellation fees will be deducted before refunding.

| | |
|---|--------------------------------|
| Before and on May 16, 2003, | no cancellation fee. |
| After May 16, 2003 and before and on June 30, 2003, | 25 % of the registration fee. |
| After July 1, 2003, | 100 % of the registration fee. |

7 Scientific Program for 28th ICRC

SH: Solar and Heliospheric Phenomena

SH1: Sun and Corona

- SH 1.1 Energetic photons and neutrons
- SH 1.2 Energetic charged particles: composition, spectra, charge state
- SH 1.3 Particle acceleration on/near Sun
- SH 1.4 Ground level enhancements
- SH 1.5 Coronal mass ejections
- SH 1.6 Instrumentation and new projects

SH2: Acceleration and Transport Phenomena in the Heliosphere

- SH 2.1 Interplanetary transport of solar energetic particles
- SH 2.2 Forbush decreases / Effects of coronal mass ejections
- SH 2.3 Propagating interaction regions/shocks
- SH 2.4 Co-rotating interaction regions/shocks
- SH 2.5 Merged interaction regions
- SH 2.6 General acceleration and transport phenomena
- SH 2.7 Instrumentation and new projects

SH3: Galactic and Anomalous Cosmic Rays in the Heliosphere

- SH 3.1 Origin and acceleration of anomalous cosmic rays
- SH 3.2 Modulation models
- SH 3.3 Gradients, anisotropies
- SH 3.4 Spectra, composition, charge state
- SH 3.5 Long-term variations
- SH 3.6 Terrestrial effects and cosmogenic nuclides
- SH 3.7 Instrumentation and new projects

OG: Cosmic Ray Origin and Galactic Phenomena

OG1: Direct Measurements and Origin of Cosmic Rays

OG 1.1 Cosmic rays observed with balloons and satellites

OG 1.2 Cosmic ray source composition

OG 1.3 Cosmic ray propagation

OG 1.4 Acceleration of cosmic rays

OG 1.5 Instrumentation and new projects

OG2: X-Ray and Gamma Ray Measurements

OG 2.1 Diffuse galactic emission

OG 2.2 Galactic sources (e.g. supernova remnants, pulsars, binaries)

OG 2.3 Extra-galactic sources (e.g. active galactic nuclei, clusters of galaxies)

OG 2.4 Gamma ray bursts

OG 2.5 Instrumentation and new projects

OG3: Gravitational Waves

OG 3.1 Gravitational wave sources

OG 3.2 Observation and data analysis

OG 3.3 Current status of ground based detectors

OG 3.4 R&D for advanced detectors

OG 3.5 Other related topics to gravitational wave

HE: High Energy Phenomena

HE1: Extensive Air Showers and UHE Cosmic Rays

HE 1.1 Air shower observation for energy $< 10^{17}$ eV

HE 1.2 Theory and simulations (including origins of knee)

HE 1.3 Air shower observation for energy $> 10^{17}$ eV

HE 1.4 Theory and simulations on UHE cosmic rays

HE 1.5 Instrumentation and new projects

HE2: Muons and Neutrinos

HE 2.1 Muon experiments

HE 2.2 Solar, atmospheric and related neutrino experiments

HE 2.3 Neutrino telescopes

HE 2.4 Theory and calculations

HE 2.5 Instrumentation and new projects

HE3: Interactions, Particle Physics Aspects, Astroparticle Physics and Cosmology

HE 3.1 Hadron interactions (accelerator and cosmic ray experiments)

HE 3.2 Proton decay and new phenomena: experiments and theory

HE 3.3 Dark matter, astroparticle physics and cosmology

HE 3.4 Instrumentation and new projects

8 Tentative Program

The conference program will include several invited plenary talks, highlight talks, rapporteur talks, the Hess Lecture and the Hess Public Lecture. We are planning the Hess Lecture on July 31, 2003 and the Hess Public Lecture on August 8, 2003. The Hess Public Lecture will be held in Kashiwa City. Invited speakers as well as rapporteurs will be announced on the 28th ICRC Web site. Highlight topics will be determined on the basis of the received abstracts. The SH, OG, and HE sessions will run in parallel each day. Each presentation in the SH, OG, and HE sessions will be either oral or poster.

| | Morning | Afternoon | Evening |
|------------------|--|--|--------------|
| July, 30th (Wed) | | | Registration |
| July, 31th (Thu) | Registration Opening ceremony HESS Lecture Plenary session Highlight session | Parallel sessions | Reception |
| Aug., 1st (Fri) | Plenary session Highlight session Parallel sessions | Parallel session | |
| Aug., 2nd (Sat) | Plenary session Highlight session Parallel sessions | Parallel sessions | |
| Aug., 3rd (Sun) | Plenary session Highlight session Parallel sessions | Parallel sessions | |
| Aug., 4th (Mon) | Excursion | Excursion | |
| Aug., 5th (Tue) | Plenary session Highlight session Parallel sessions | Parallel sessions | Banquet |
| Aug., 6th (Wed) | Plenary session Highlight session Parallel sessions | Parallel sessions | |
| Aug., 7th (Thu) | Rapporteur session | Rapporteur session Closing ceremony | |
| Aug., 8th (Fri) | | Public HESS Lecture | |

9 Instructions for Preparing Abstracts

Abstracts of papers will be used for assigning papers to session codes and for generating the program and the author index for papers. Abstracts will be processed electronically. Delegates are strongly encouraged to submit their abstracts via the Internet, using the 28th ICRC Web site. Electronic submission of your abstract will avoid possible errors that can occur in the transcription of a hardcopy abstract to electronic form. A maximum of three papers may be presented at the conference by a delegate. Consequently, there will be a maximum of three abstracts allowed for each presenting author.

All abstracts should be submitted as plain text (ASCII), but HTML tags are allowed for super/subscripts and Greek letters etc. (See the abstract submission page of the 28th ICRC Web site for instructions.) Your full paper may include the same abstract in word-processed form with Greek letters, mathematical symbols, superscripts and subscripts, etc. For the purpose of processing abstracts, however, they must be submitted without fine formatting allowed in TeX or word-processors.

The following information will be extracted from every abstract submission:

- Presenter's name and Affiliation
- Title of the paper
- Presentation style
- Suggested session codes (up to 2)
- Ordered list of authors with institution affiliations
- Abstract text (max. 200 words)
- Equipment request

How to Submit Abstracts

Abstracts must reach the LOC no later than February 28, 2003. The preferred method for submission is through the 28th ICRC Web site. Note that abstracts sent to the general ICRC

email address will not be processed. You can check the Web site to see if your abstract has been received and processed.

If you are unable to submit your abstract electronically, please contact the LOC by email, normal mail or Fax.

10 Instructions for Preparing Camera-Ready papers

Only submission of Portable Document Format (PDF) electronically processed to the end by the author will be accepted. Each manuscript should not exceed four pages. For writing the manuscript, LaTeX and Microsoft Word templates can be obtained later at the 28th ICRC Web site.

11 Workshops and Meetings

The workshop/meetings during or after the conference will be scheduled by the LOC in the conference venue at the request of individuals or groups within the community. The responsibility of the LOC will be limited to arranging the venues and the audio-visual requirements. Workshop organizers will be responsible for all other aspects, i.e., the workshop format, program, printing, promotion, and communication. Workshop/meeting rooms and equipments are to be subject to charge to the workshop/meeting organizer.

Potential workshop/meeting organizers should write to the LOC by May 16, 2003, stating all the details of their planned workshop/meeting, their requirements, as well as the estimated attendance.

12 Accommodation and Tours

Registration for hotel accommodation and tours is possible at the registration Web page linked from the 28th ICRC Web site. The official conference travel agent, JTB, will handle hotel accommodation and tours. Confirmation will be sent by JTB after the registration. Application will become valid upon receipt of confirmation from JTB.

Application should be accompanied by a remittance covering the hotel deposit (one night room charge) and/or total tour fare plus the handling charge of JPY500 due to JTB. (The hotel deposit will be credited to your bill. All hotel expenses deducting the hotel deposit should be paid directly to the hotel.) No reservation will be confirmed in the absence of this payment.

12.1 Accommodation

JTB has booked rooms at hotels in Tsukuba for the conference period. Reservations will be made in order of receipt of application. List and map of hotels are shown in the next pages.

In addition, the LOC has reserved a limited number of relatively inexpensive rooms at the dormitory of KEK (High Energy Accelerator Research Organization) that is located 12 km from the conference venue. Those who would like to stay in KEK should notify the LOC. Notice that the rooms are not necessary single rooms, and the applicants may need to share the rooms with other persons.

12.2 Tours

Optional tours are planned on August 4, 2004. The list is following.

- **OP-1: Tokyo Tour**

Time: 8:00-19:00

Fare: JPY11,650 per person

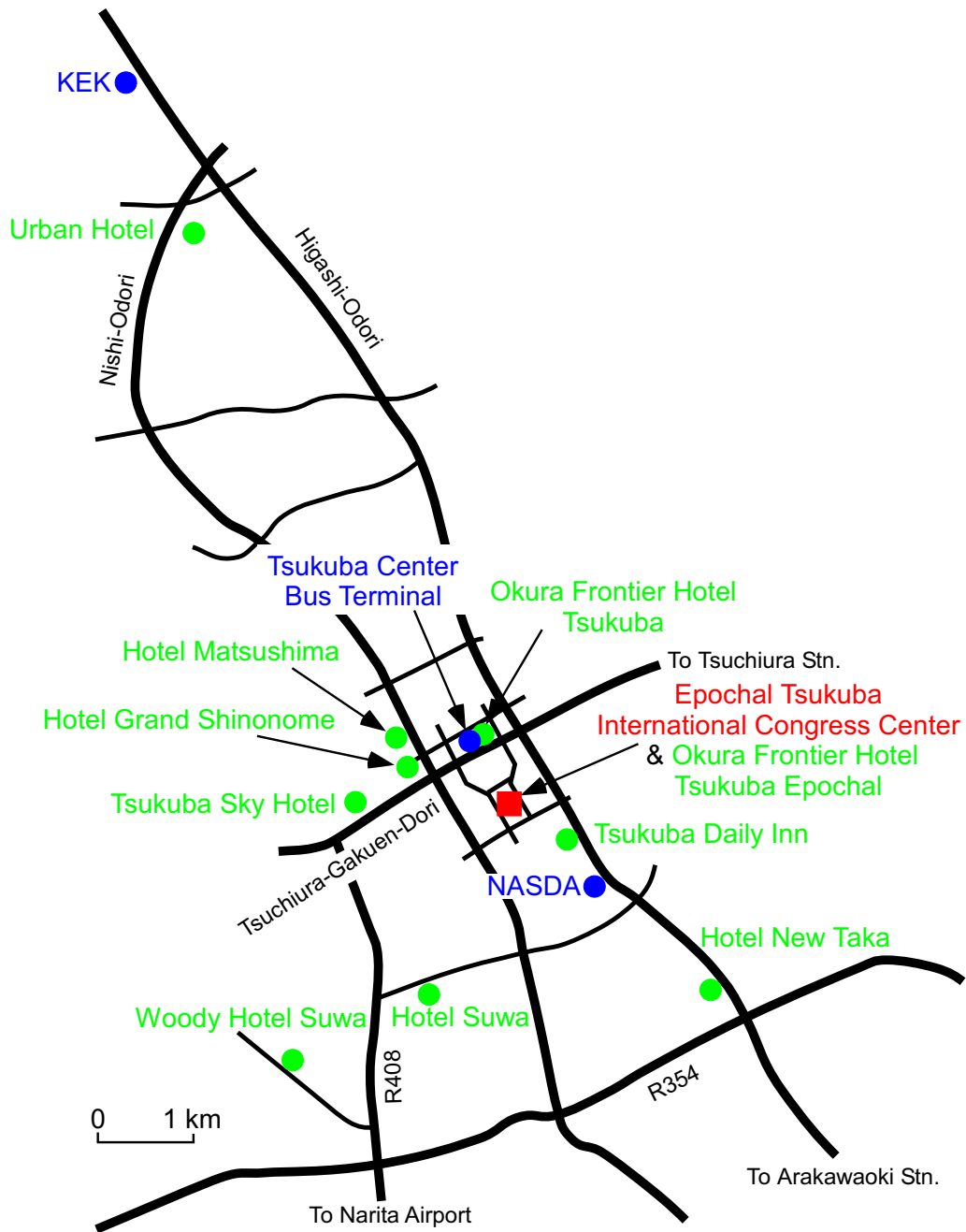
Tour Highlights:

Asakusa: Tokyo's most popular Buddhist Temple having a history more than 1,300 years. Its gate has the two famous figures named "The guardian of Thunder" and "God of Wind".

| No. | Hotel Name (Check-in & out time) | Room Type | Rates | | Address Phone Access to the Site Access to the nearest station |
|-----|--|--|------------------|------------------|--|
| | | | Single occupancy | Double occupancy | |
| ① | Okura Frontier Hotel Tsukuba (14:00 / 11:00) | Single (18 m ²) | ¥10,000 | - | 1, Azuma Tsukuba-shi, Ibaraki +81-298-52-1112 8min. walk 2min. walk + 25min. by bus to JR Tsuchiura sta. |
| | | Twin (26-30 m ²) | ¥14,000 | ¥18,000 | |
| | | Double (23 m ²) | ¥13,000 | ¥18,000 | |
| ② | Okura Frontier Hotel Tsukuba Epochal (14:00 / 11:00) | Single (18 m ²) | ¥10,000 | - | 2-20-1, Takezono, Tsukuba-shi, Ibaraki +81-298-60-7700 1min. walk 8min. walk + 25min. by bus to JR Tsuchiura sta. |
| | | Twin (25 m ²) | ¥14,000 | ¥18,000 | |
| ③ | Hotel Suwa (16:00 / 10:00) | Single (14.6 m ²) | ¥7,300 | - | 302 Teshirogi, Tsukuba-shi, Ibaraki +81-298-36-4011 25min. walk or 7min. by car 20min. by car to JR Arakawaoki sta. |
| ④ | Hotel Grand Shinonome (15:00 / 10:00) | Single A (16 m ²) <Main Bldg> | ¥6,000 | - | 488-1, Onozaki, Tsukuba-shi, Ibaraki +81-298-56-2211 15min. walk 20min. by car to JR Tsuchiura sta. |
| | | Single B (18 m ²) <Main Bldg> | ¥6,500 | - | |
| | | Single (15 m ²) <New bldg> | ¥7,000 | - | |
| ⑤ | Hotel New Taka (15:00 / 10:00) | Single (12 m ²) | ¥6,500 | - | 2-31-27 Baien, Tsukuba-shi, Ibaraki +81-298-51-4788 10min. by car 10min. by car to JR Arakawaoki sta. |
| | | Twin (18 m ²) | - | ¥11,000 | |
| ⑥ | Hotel Matsushima (15:00 / 10:00) | Single (13.5 m ²) | ¥6,500 | - | 35 Onozaki, Tsukuba-shi, Ibaraki +81-298-56-1191 20min. walk 20min. by car to JR Hitachino Ushiku sta. |
| ⑦ | Urban Hotel (15:00 / 10:00) | Single A (16 m ²) | ¥6,500 | - | 2-1-2 Tsukuho, Tsukuba-shi, Ibaraki +81-298-77-0001 18min. by car 25min. by car to JR Tsuchiura sta. |
| | | Single B (16.07 m ²) | ¥7,000 | - | |
| | | Twin (22.1 m ²) | ¥9,000 | ¥12,000 | |
| ⑧ | Hotel Marroad Tsukuba (16:00 / 10:00) | Single (15 m ²) | ¥6,200 | - | 2-24 Johoku-machi, Tsukuba-shi, Ibaraki +81-298-22-3000 20min. by car 5min. by car to JR Tsuchiura sta. |
| | | Twin (20 m ²) | - | ¥10,400 | |
| ⑨ | Tsukuba Sky Hotel (16:00 / 10:00) | Single (13.7 m ²) | ¥6,000 | - | 283-1, Onozaki, Tsukuba-shi, Ibaraki +81-298-51-0008 10min. by car 25min. by car to JR Tsuchiura sta. |
| ⑩ | Woody Hotel Suwa (16:00 / 10:00) | Single (10.5 m ²) | ¥5,600 | - | 436-7 Kamiyokoba, Tsukuba-shi, Ibaraki +81-298-36-7123 15min. by car 30min. by car to JR Hitachino Ushiku sta. |
| ⑪ | Tsukuba Daily Inn (16:00 / 10:00) | Single (12.1 m ²) | ¥5,300 | - | 1-12-4 Sengen, Tsukuba-shi, Ibaraki +81-298-51-0003 20min. walk 25min. by car to JR Tsuchiura sta. |

Notes:

- u Room rates include service charge. A 5% tax will be added to your bill.
- u Room rates include no meals.



You may be charmed by the traditional souvenir shops along Nakamise Shopping Street.
Sumida River Cruise: Enjoy a boat ride down on the Sumida River running through the city area.

Tokyo Tower: With a height of 333 m, Tokyo Tower is the world's tallest self supporting tower.

Imperial Palace Plaza: The plaza is located in front of Imperial Palace, the home of the Emperor and Empress, surrounded by high stone-walls and a moat.

- **OP-2: Kamakura Tour**

Time: 8:00-18:15

Fare: JPY11,900 per person

Tour Highlights:

Tsurugaoka Hachimangu: Founded in 1063, it is Kamakura's most important Shinto shrine.

Great Image of Buddha: Popularly called Daibutsu, and it is a seated bronze figure of Amitabha. It remains in the open since 1393, when a storm damaged the hall in which the statue had been enclosed.

Hase Kannon: Located near the Daibutsu, it is celebrated for its eleven-headed gilt statue of Kannon, the Goddess of Mercy. It is one of the tallest wooden images in Japan.

- **OP-3: Nikko Tour**

Time: 7:30-19:45

Fare: JPY12,000 per person

Tour Highlights:

Lake Chuzenji: The lake was created when Mt.Nantai's eruption dammed Oya River.

Kegon Waterfall: This is one of the three well-known waterfalls in Japan. The sparking water, thundering down 97 meters high, is impressive.

Toshogu Shrine: Toshogu Shrine in Nikko is the most famous among Toshogu Shrines dedicated to Tokugawa Ieyasu, founder of the Tokugawa Shogunate. It is a magnificent building elaborately ornamented in gold, with 50 massive stone lanterns.

- **OP-4: Hiking on Mt.Tsukuba**

Time: 9:00-12:30

Fare: JPY7,000 per person

Tour Highlight;

Mt.Tsukuba: Visit Tsukuba Shrine, which is an excellent example of Japanese shrine architecture. Enjoy a short hiking on Mt.Tsukuba, which a cable car ride up to Tsukubasancho station and walking to the summit of Mt.Nantai.

● **OP-5: Tsuchiura Tour**

Time: 9:00-13:00

Fare: JPY6,600 per person

Tour Highlights:

Tsuchiura Machikado Kura (Warehouses): There are two merchant Kura (warehouse) have been redecorated into a place for Tourist Information, sale of special products, touring of city sights and the exhibition of local materials.

Kijo Park: The park is on the site of the ancient Tsuchiura Castle in the heart of Tsuchiura City.

Tsuchiura Municipal Museum: Built on the site of the second donjon of the ancient Tsuchiura Castle, introducing history of the city of Tsuchiura.

Kasumigaura Cruise: The area is surrounded by the ample water sources such as the Pacific Ocean, Lake Kasumigaura, and Lake Kitaura. Enjoy a half an hour cruise on Lake Kasumigaura, which is also one of the best marine recreational spots.

● **OP-6: Technical tour in Tsukuba**

Time: 8:30-12:30 / 13:00-17:00

Fare: JPY3,000 per person

Tour Highlights:

High Energy Accelerator Research Organization(KEK) and Tsukuba Space Center.

- * All tours may be cancelled when the number of participants fail to reach 35.
- * OP-6 tour has limited capacity and reservation will be confirmed on first-come, first-served basis.
- * Tours are by chartered motorcoach with English speaking guide.
- * Lunch is included in tours OP-1,2,3.
- * Places to visit are subject to change with or without notice.

12.3 Cancellation

All cancellations must be placed through the registration Web page by the specified date. The following cancellation fees will be deducted before refunding.

| | | |
|---------|---|--|
| Hotels: | Up to 10 days before the first night of stay | JPY500 |
| | 2 to 9 days before | 20% of daily room charge (minimum JPY500) |
| | 1 day before | 80% of daily room charge |
| | On the day of arrival or no notice given | 100% of daily room charge |
| Tours: | 8 to 20 days before the departure day of tours including hotel accommodations, or 8 to 10 days before the departure day of one day tours | 20% of tour fare |
| | 2 to 7 days before | 30% of tour fare |
| | 1 day before | 40% of tour fare |
| | Prior to starting time on the departure day | 50% of tour fare |
| | After departure or failure to show without notice | 100% of tour fare |

13 Evening Social Program for Delegates and Accompanying Persons

Evening social program will consist of the Welcome Reception and the Conference Banquet. Registered accompanying persons are welcome to participate in these activities.

The Welcome Reception will be held at the conference venue on July 31, 2003. All delegates and accompanying persons are invited to the Welcome Reception. The Conference Banquet will be held at Hotel Grand Shinonome on August 5, 2003. The expense is JPY6,000 for a person. Hotel Grand Shinonome is in walking distance (about 1 km from the conference venue). Bus to the hotel is also served before the banquet. The registration for the banquet is possible at the registration Web page linked from the 28th ICRC Web site.

14 Accompanying Person's Programs

The LOC is planning some accompanying person's programs, such as tours, Japanese tea ceremony, Japanese flower arrangement, kimono dressing (Japanese traditional dress), and Indian-ink drawing. The registration will be possible at the registration Web page linked from the 28th ICRC Web site. Please visit the site for the details of the programs.

15 Awards, Medals, and Prizes

You are invited to suggest candidates for the following awards to be presented during the Opening & Award Ceremony of the 28th International Cosmic Ray Conference in Tsukuba, Japan.

15.1 Shakti P. Duggal Award

The Shakti P. Duggal Award was established in 1983 to recognize outstanding work by a young scientist in the field of cosmic ray physics. The award consists of a prize of \$1200, to be presented at the 28th International Cosmic Ray Conference at Tsukuba, Japan July 31 - August 7, 2003. In addition, the winner will be invited to visit the Bartol Research Institute, University of Delaware to present a colloquium at some time during the following year.

The intent of this award is to recognize and inspire young cosmic ray scientists at an early stage of their careers. The recipient will not have attained the age of thirty-six on January 1, 2003. Subject to this limitation, any person from anywhere in the world who has contributed to the field of cosmic ray physics or particle astrophysics is eligible for consideration. Selection of the prize winner will be made by an international committee.

Nominations of potential recipients are now being solicited. Nominators are requested to send to the committee secretariat at the Bartol Research Institute their nominee's curriculum vitae and publication list, a supporting letter, and, if possible, copies of one or two of the candidate's most significant publications. The sponsor may also wish to ask one or two co-sponsors to send letters supporting the nomination.

Nominations should be sent, to reach the address below, not later than February 1, 2003:

Duggal Award Committee
Bartol Research Institute
University of Delaware
Newark, DE 19716
U.S.A.

15.2 O’Ceallaigh Medal

The O’Ceallaigh Medal was established by the estate of the late Prof. Cormac O’Ceallaigh and the Dublin Institute for Advanced Studies to honour “outstanding contributions to cosmic ray physics” and is awarded by the IUPAP Commission on Cosmic Rays. The Commission wishes to use this award to recognize significant contributions to our field over an extended career.

Suggestions for suitable recipients of the medal, together with supporting information, should be sent (email preferred) by 1 February 2003 to R. Protheroe, Chair of the Awards Subcommittee of the Commission, (Email: rprother@physics.adelaide.edu.au). If necessary, hard copy can be mailed or Faxed to

R.J. Protheroe
Department of Physics
University of Adelaide
Adelaide, SA 5005, AUSTRALIA
TeleFax: +61 8 8303 4380

15.3 Yodh Prize

The Yodh Prize was established in 1998 to recognize a scientist whose research career has made substantial contributions to understanding in the field of Cosmic Rays. The research should have had a major impact in the field. There is no age restriction. The Prize was endowed by Gaurang and Kanwal Yodh to the University of California Irvine Foundation. The award consists of a prize of \$2000, to be presented at the 28th International Cosmic Ray Conference at Tsukuba, Japan in July-August, 2003. The winner will be invited to visit the University of California, Irvine, to present a colloquium to the faculty and students in the Department of Physics and Astronomy at some time during the following year. The awardee

will be selected by an international committee of distinguished scientists in the field of Cosmic Ray and Astroparticle physics. Nominations supporting the case, including the nominee's curriculum vitae and publication list of the important publications, should be submitted to the Secretary of the Yodh Prize Committee. The sponsor may also wish to ask two co-sponsors to send letters supporting the nomination.

Nominations should be sent to reach the following address by February 1, 2003.

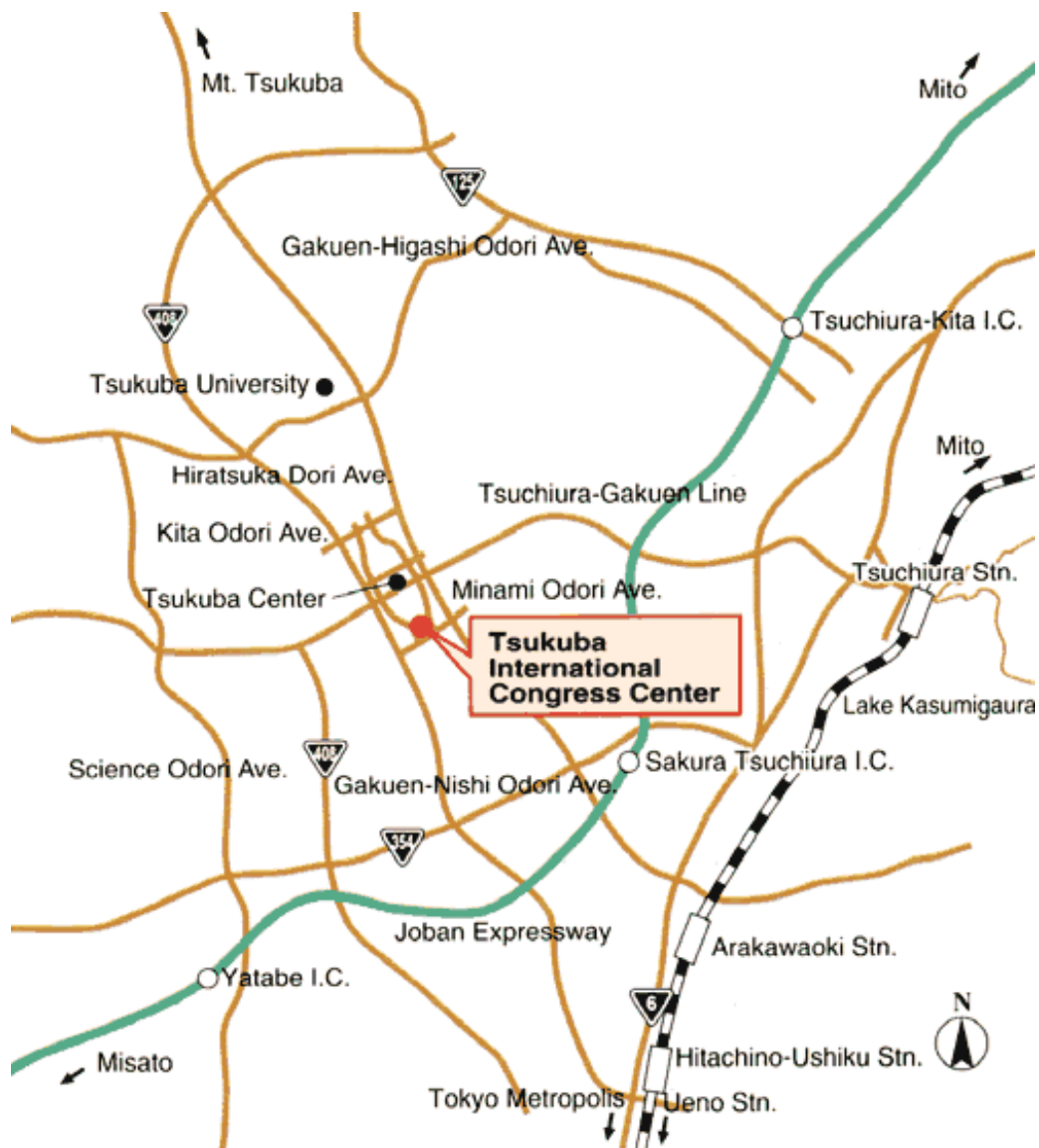
Secretary of the Yodh Prize Committee
Department of Physics and Astronomy
University of California
Irvine, CA, 92697

16 Internet/email access during the Conference

About 20 laptops (10 English Windows and 10 Japanese Windows) will be prepared in the network room in the conference venue. Those laptops will be equipped with at least a Web-browser. To connect carry-in laptops/mobiles to the Internet, a number of 10BaseT/100BaseTX RJ-45 ports will provided in the network room. Wireless LAN services based on the IEEE802.11b standard will also be provided in the conference rooms. The Internet connection from the conference venue is established only by a 1 Mbps connection.

In the several hotels, you can connect to the Internet using your modem. Please ask front desks how to connect your modem to the line. Be careful that local calls are subject to charge by the time basis in Japan. UUnet, iPass and GRIC provide several access points in the local call area.

17 Wide area map around Tsukuba City



18 Map around the Conference Venue

