

Final Circular – July 2003

## The 28th International Cosmic Ray Conference

July 31 – August 7, 2003 — Tsukuba, Japan



**Hosted by**

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

**Under the auspices of**

International Union of Pure and Applied Physics (IUPAP)

This circular deals with aspects of the final information for the conference, including addresses, workshop and meeting schedules, invited/rapporteur speakers, and transportation. Details concerning all other aspects of the conference may be found in the second circular. We encourage delegates to keep this circular during the conference.

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# 1 Hosts and Support

**The 28th International Cosmic Ray Conference**

**is hosted by**

the Institute for Cosmic Ray Research (ICRR),

the University of Tokyo

and

the Physical Society of Japan (JPS),

**under the auspices of**

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

**This conference is also supported by**

the Astronomical Society of Japan (ASJ)

the High Energy Accelerator Research Organization (KEK),

the Institute of Space and Astronautical Science (ISAS),

the Japan Society of Applied Physics (JSAP),

the National Space Development Agency of Japan (NASDA),

the Science Council of Japan,

the Society of Geomagnetism and Earth, Planetary and Space Sciences (SGEPSS).

## 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 <sup>†</sup>	Y-Q. Ma	S. Tonwar
L.O'C. Drury <sup>†</sup>	Y. Muraki	Y. Totsuka <sup>†</sup>
L. Ding <sup>†</sup>	O.G. Ryazhskaya	J.F. Valdés-Galicia
T.K. Gaisser <sup>†</sup>	O. Saavedra <sup>†</sup>	H. Völk*
M. Giller <sup>†</sup>	G.M. Simnett*	E. Zas

<sup>†</sup>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)

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

### 3 Important Dates

July 30, 2003	Registration starts
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:**

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

**Telephone:**+81-4-7136-3138

**TeleFax:**+81-4-7136-3115

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

**WWW :** <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, Shinagawa-ku,  
Tokyo 140-8604, Japan

**Telephone:**+81-3-5796-5445**TeleFax:**+81-3-5495-0685**Email:** icrc2003@itd.jtb.co.jp

After the registration page in the ICRR Web page is closed, please send a mail or Fax to JTB directly for the inquiries.

## 5 Conference Venue

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. The entrance to the conference venue is opened at 8:00 AM, and the conference rooms are available from 9:00 AM during the conference.

### 5.1 Conference Office

During the conference, the ICRC Headquarters is located at conference room 404 of the conference venue. All inquiries during the conference should be sent to:

**Telephone:** 029-861-0606**TeleFax:** 029-861-0601**Email:** icrc2003@icrr.u-tokyo.ac.jp

(In the region around Tsukuba, you can dial 861-xxxx directly, removing the area code (029). From abroad, please include the country code for Japan and the Tsukuba area code: +81-29-861-xxxx. )

The office will be open from 9:00 AM to 5:00 PM during the conference.

Messages for delegates will only be accepted by FAX, not by email or phone. The messages will be put on the Notice Board, which is placed near the registration desk.



## 5.2 Registration Desk at the Conference

The registration area will be located in the entrance hall 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 if they are applied before the conference. The opening hours of the registration desk are as follows:

Wednesday, July 30	15:00–19:00
Thursday, July 31	8:00–17:00
Friday, August 1 to Thursday, August 7	9:00–17:00

Hardcopy Proceedings are distributed at conference room 202 on July 31st and the cloak-room from August 1st to 7th.

## 5.3 Notice Board

The Notice Board will be placed near the registration desk. Important information, such as schedules for the conference bus and courtesy buses of hotels and changes of program, will be put on the board. Faxes to delegates, which arrive at the conference office, will also be put there.

## 5.4 Computer Room

We will prepare computer terminals (Windows PC) connected to the Internet at conference room 201, which are available from July 31st to August 6th. The opening hours for the room from 9:00 AM to 8:30 PM. The number of terminals will be limited to about 10. Instead, 10–20 LAN cables (RJ45) connected to a switching HUB are available. Wireless LAN (IEEE 802.11b, SSID:tsukuba) is also available in the open areas around the halls. Connection in the conference rooms is not guaranteed. No LAN cards will be provided. On August 7th, only wireless LAN is available.

LCD projectors are available for presenters to test the connection between their laptop PCs and the projectors.

## **5.5 Travel Desk**

The Travel Desk of the Travel Agency, JTB, will be open in the conference venue. They can be consulted about travels, transportation, and any problems with hotel accommodation. Some optional tours, technical visits, and programs for accompanied person may be reserved at Travel Desk if they still have the available seats. Tickets to Narita Airport can be also reserved there.

## **5.6 Post Office**

A Post office will be open in the conference venue at lunch time on July 31st and August 7th. It is limited to the mail service.

# **6 Information for Speakers and Poster Presenters**

In every conference room LCD and OHP projectors are prepared, except for the main convention hall, where a LCD projector and a document camera (projects their presentation even if it is printed on plain papers) are available. If presenters plan a LCD presentation, they have to bring their own laptop PC. LCD projectors are compatible with VGA, SVGA, XGA and two display cables with D-sub 15-pin mini-connectors are prepared. If necessary, power plug adapters should be brought, too. Note that electric power in (northern) Japan is 100 Volt/50 Hz. The plug is type-A (American 2 pin socket). It is strongly recommended that presenters test the connection between their laptop PC and the LCD projector in the computer room prior to their presentation. Any delays caused by trouble with their PC will be subtracted from their presentation time. We also suggest that yellow and green colors not be used in computer presentations since they are not clear.

In parallel sessions, 12 minutes, including 2(3) minutes for discussion, are given to a talk. In the plenary/highlight/rapporteur talks, the last 5 minutes should be also spent for discussion.

Each poster will be provided with a display area of 85 cm width by 180 cm height. Each poster will be posted for three days, either July 31st, August 1st and 2nd, or August 3rd, 5th and 6th. Poster exhibitors should find the time of their poster session schedule on the ICRC web site. They are encouraged to follow the recommendations below :

- Put up posters early in the morning of the first day, either July 31st or August 3rd, of their poster sessions.
- Drawing pins are supplied in the session rooms.
- Remove posters by 8:00 PM on the last day of their session, either August 2nd or 6th.
- Attend their posters during the poster sessions.

## 7 Conference Program

July 30th (Wed)	15:00–19:00	Registration
July 31st (Thu)	8:00– 9:20–10:20 10:30–11:10 11:40–12:10 12:10–12:40 14:30– 16:30–17:30 18:00–20:00	Registration Opening Ceremony Award Ceremony Hess Lecture: M. Koshiba, “Birth of Neutrino Astrophysics” Coffee Highlight: L. Koepke, “Recent Results from the AMANDA neutrino telescope” Highlight: R.P. Lin, “Latest RHESSI Results on Particle Acceleration and Energy Release in Solar Flares” Lunch HE1.1, OG1.1, SH1.2 Poster Reception (at Epochal Tsukuba)
August 1st (Fri.)	9:10– 11:05–11:45 11:45–12:15 12:15–12:45 14:30– 16:30–17:30 17:30–	HE 1.1, OG1.1, SH1.1 Coffee Plenary: T. Kosugi, “New Understanding of the Sun” Highlight: A. Yamamoto, “Latest Results from BESS and Related Topics” Highlight: J. Beer, “Long-Term Solar Variability by Cosmogenic Isotopes and Response of the Climate System” Lunch HE1.1, OG1.1, OG1.5, SH1.1, SH1.3 Poster HE1.1, HE1.2, OG1.5, SH1.3, SH1.4

August 2nd (Sat.)	9:10– HE1.3, HE2.1, OG1.5, SH2.3 Coffee 11:05– HE1.3, HE2.1, OG1.2, OG1.5, SH2.1 Lunch 14:30– HE1.3, OG1.3, OG2.4, SH3.2 16:30–17:30 Poster 17:30– HE1.5, HE2.2, OG1.3, OG1.4, SH1.5, SH3.2
August 3rd (Sun.)	9:10– HE 1.5, HE2.2, HE2.3, OG2.2, SH2.2 Coffee 11:05–11:45 Plenary: B.S. Sathyaprakash, “Gravitational Radiation: Observing the Dark and Dense Universe” 11:45–12:15 Highlight: E.C. Stone, “The Solar Wind Terminating Shock and the Outer Heliosphere” 12:15–12:45 Highlight: J. Bluemer, “Highest Energy Cosmic Rays and the Pierre Auger Project” Lunch 14:30– HE1.5, HE2.3, OG2.2, SH2.2, SH3.4 16:30–17:30 Poster 17:30– HE1.5, HE2.4, OG2.2, SH3.4
August 4th (Mon.)	Excursions
August 5th (Tue.)	9:10– HE1.4, HE2.4, HE2.5, OG2.5, SH3.3 Coffee 11:05–11:45 Plenary: Y. Suzuki, “Neutrino Oscillation” 11:45–12:45 Plenary: T.C. Weekes, T. Kifune, and H. Voelk, “TeV Gamma Ray Observation and the Origin of Cosmic Rays” Lunch 14:30– HE1.4, OG2.5, OG3.2, OG3.5, SH3.3 16:30–17:30 Poster 18:30–20:30 Banquet (at Hotel Grand Shinonome) After-Dinner-Address: M.M. Shapiro, “Fifty Years of Cosmic Ray Science — A Personal Retrospective —”

August 6th (Wed.)	9:10–	HE1.4, HE3.1, OG2.1, SH3.1 Coffee
	11:05–11:45	Plenary: M.S. Turner, “Cosmology Update: Dark Energy, Inflation, and Dark Matter”
	11:45–12:15	Highlight: N. Kawai, “Contribution of HETE-2 to the Progress in Understanding Gamma Ray Bursts” Lunch
	14:00–	HE3.1, HE3.2, HE3.3, HE3.4, OG2.3, OG3.3, OG3.4, SH3.5, SH3.6
	16:00–17:00 17:00–	Poster HE1.4, HE3.3, OG2.3, SH3.6
August 7th (Thu.)	9:10–17:30	Rapporteur Seasons
	9:10– 9:50	C.M.S. Cohen, SH1, SH2.1
	9:50–10:30	T. Montaruli, HE2, HE3.2–HE3.4 Coffee
	10:55–11:35	M. Mori, OG2
	11:35–12:15	I.V. Moskalenko, OG1.3, OG1.4, HE1.2
	12:15–12:55	I.G. Usokin, SH3.5, SH3.6, (SH3.7) Lunch
	14:20–15:00	M. Takita, HE1.1–HE1.2, HE1.5, HE3.1
	15:00–15:40	R. Battiston, OG1.1, OG1.2, OG1.5 Coffee
	16:10–16:50	K. Munakata, SH2.2–SH2.7, SH3.1–SH3.4. (SH3.7)
	16:50–17:30 17:30–17:45	A. Olinto, HE1.3-HE1.5 Closing Ceremony
August 8th (Fri.)	18:00–19:30	Public Hess Lecture (at Kashiwa, Chiba) W. Hofman, “The Quest for the Origin of Cosmic Rays”

## 8 Scientific Program for the 28th ICRC

The preliminary Scientific Program for the 28th ICRC is displayed on the 28th ICRC Web site. In the program, several sub-sessions in “Solar and Heliospheric Phenomena (SH)” are merged in new sub-sessions. This comes from limited numbers of the applicants to these sub-sessions. Following is the current list of sub-sessions in SH in comparison with the original sub-sessions.

## Solar and Heliospheric Phenomena (SH)

New sub-session code and name		Original sub-session code and name	
SH 1	Sun and Corona		
SH 1.1	Energetic photons and neutrons	SH 1.1	Energetic photons and neutrons
SH 1.2	Energetic charged particles: Composition, spectra, and charge state	SH 1.2	Energetic charged particles: Composition, spectra, and charge state
SH 1.3	Particle acceleration on/near Sun	SH 1.3	Particle acceleration on/near Sun
SH 1.4	Ground level enhancements	SH 1.4	Ground level enhancements
SH 1.5	Instrumentation and new projects	SH 1.6	Instrumentation and new projects
		SH 2.7	Instrumentation and new projects
		SH 3.7	Instrumentation and new projects
SH 2	Acceleration and Transport Phenomena in the Heliosphere		
SH 2.1	Interplanetary transport of solar energetic particles	SH 2.1	Interplanetary transport of solar energetic particles
SH 2.2	Coronal mass ejections and Forbush decreases	SH 1.5	Coronal mass ejections
		SH 2.2	Forbush decreases /Effects of coronal mass ejections
SH 2.3	Interaction regions, shocks, transport, and acceleration	SH 2.3	Propagating interaction regions/shocks
		SH 2.4	Co-rotating interaction regions/shocks
		SH 2.6	General acceleration and transport phenomena
SH 3	Galactic and Anomalous Cosmic Rays in the Heliosphere		
SH 3.1	Anomalous cosmic rays and outer heliosphere	SH 2.6	General acceleration and transport phenomena
		SH 3.1	Origin and acceleration of anomalous cosmic rays
SH 3.2	Modulation models	SH 3.2	Modulation models
SH 3.3	Gradients, anisotropies, spectra, and composition	SH 3.3	Gradients, anisotropies
SH 3.4	Long-term variations	SH 3.4	Spectra, composition, charge state
SH 3.5	Long-term variation of cosmic rays studied by cosmogenic nuclides	SH 3.5	Long-term variations
		SH 3.6	Terrestrial effects and cosmogenic nuclides
SH 3.6	Terrestrial effects and cosmogenic nuclides	SH 3.6	Terrestrial effects and cosmogenic nuclides

## 9 Tours

We are happy to inform you free admission charge now for Technical Visit to KEK and NASDA on August 4 (OP-6, OP-7), kindly supported by the Tsuchiura-Tsukuba Convention Bureau. There are

still many seats available. Please check the ICRR Web page (<http://www.icrr.u-tokyo.ac.jp/icrc2003/>) and contact to JTB if you are interested in. There are also still a few ten of available seats for some of Accompany Person Tours and Optional Tours. Please check the Web page also.

## 10 Evening Social Program

The 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 entrance lobby of the conference venue from 6:00 PM to 8:00 PM 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 5th, 2003. Hotel Grand Shinonome is within walking distance (about 1 km) from the conference venue. Although registration on the ICRC Web page finished on July 25th, tickets can be also purchased at the registration desk or the banquet venue. The cost is JPY 6,000 per person.

Courtesy buses provided by the Hotel Grand Shinonome are available for transport to the banquet venue. Since the number of the buses is limited, check the schedule on the Notice Board. After the banquet, the courtesy buses of hotels (except for the Hotel Matsushima, Tsukuba Sky Hotel and Tsukuba Daily Inn) will take guests to their hotels. Courtesy buses of the Hotel Grand Shinonome will take guests of the Tsukuba Sky Hotel, Tsukuba Daily Inn, and KEK dormitory to their accommodation.

## 11 Workshops and Meetings

Date, Time:	Sunday, August 3rd at 7:00 PM – 9:00 PM
Place:	Main Convention Hall
Title:	Northern-Auger Forum
Organizer:	Pierre-Auger Collaboration
Contact person:	Katsushi Arisaka
Web site:	<a href="http://www.physics.ucla.edu/~arisaka/auger/northern/">http://www.physics.ucla.edu/~arisaka/auger/northern/</a>

## 12 Transportation to and from Tsukuba City

On July 30th, guides will be waiting around Bus stop No. 13 at the Tsukuba Center Bus Terminal from 3:00 PM to 10:00 PM to help guide participants to the conference venue or their hotels. Please follow their suggestions.

### 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 (土浦 駅) to Narita Airport via Shin-Tonegawa-Machi (新利根町), Hitachino-Ushiku Station (ひたち野うしく 駅), and the Tsukuba Center Bus Terminal (つくばセンター). It takes about 1 hour 40 minutes from the airport to Tsukuba City, with currently 9 services from 7:20 AM to 8:00 PM, every 1 to 2 hours. A one-way ticket costs JPY (Japanese Yen) 2,540 for adults and JPY 1,270 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 5:35 PM, every 1 or 2 hours. 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. Bus stops are located as follows:

- Tsuchiura Station (土浦 駅): Bus terminal is located at the east side of the Tsuchiura Station. Bus stop is No. 1.
- Tsukuba Center Bus Terminal (つくばセンター): Bus stop is No. 13.
- Narita Airport (成田空港): Bus stops are No. 15 and 12, respectively, at Terminal 1 and 2.

Narita Airport Terminal 2	Hitachino-Ushiku Station	Tsukuba Center Bus Terminal	Tsuchiura Station
7:20	8:40	9:00	9:20
9:05	10:25	10:45	11:05
10:35	11:55	12:15	12:35
12:50	14:10	14:30	14:50
14:35	15:55	16:15	16:35
16:15	17:35	17:55	18:15
17:20	18:40	19:00	19:20
18:40	20:00	20:20	20:40
20:00	21:20	21:40	22:00



Tsuchiura Station	Tsukuba Center Bus Terminal	Hitachino-Ushiku Station	Narita Airport Terminal 2
6:00	6:20	6:40	8:00
7:00	7:20	7:40	9:00
8:30	8:50	9:10	10:30
10:00	10:20	10:40	12:00
11:35	11:55	12:15	13:35
13:05	13:25	13:45	15:05
14:15	14:35	14:55	16:15
15:30	15:50	16:10	17:30
17:15	17:35	17:55	19:15

Guests at the **Hotel Marroad Tsukuba** are recommended to go directly to Tsuchiura Station and not to get off bus at Tsukuba City Bus Terminal, unless their departure times from Narita Airport are before 5:20 PM between July 30th to August 3rd or on August 5th or 6th.

### **From/To Tokyo Station**

The highway buses, Tsukuba-Go (つくば号), to the Tsukuba Center Bus Terminal in Tsukuba City depart from Tokyo Station (東京駅). The first and the last buses each day leave Tokyo at 6:00 and 23:00, respectively. The expressway bus is frequent. The first and the last bus each day leaves Tsukuba at 5:20 and 21:00, respectively. The arrival time depends on traffic conditions on the highway, but, it takes 1 hour or 1 hour and a half normally from Tokyo Station to Tsukuba City. The bus stops in Tsukuba City are Namiki-Oho-Hasi, Namiki-Ichi-Chome, Sengen-Ichi-Chome and Takezono-Ni-Chome in addition to Tsukuba Center Bus Terminal which is the destination.

Tokyo bus terminal is located at Yaesu-Minami-Guchi (South Yaesu entrance, 八重洲南口). Before getting on the bus, you need to purchase a ticket (JPY 1250) 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 board the correct bus.

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. The buses to Tokyo Station will also stop at Ueno Station before Tokyo Station on weekdays.

### From/To Tokyo International Airport in Tokyo, Haneda

Highway buses also connect the Tokyo International Airport in Haneda (羽田 空港) to the Tsukuba Center Bus Terminal (つくばセンター). Twelve daily services are available in both directions. A one-way ticket costs JPY 1,800 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 City, they depart from the bus stop No. 13 at the Tsukuba Center Bus Terminal. Bus schedule is following:

Tsukuba Center Bus Terminal	Takezono Ni-Chome	Sengen Ichi-Chome	Namiki Ichi-Chome	Namiki Oho-Hasi	Haneda Airport
5:30	5:32	5:33	5:34	5:37	7:10
6:20	6:22	6:23	6:24	6:27	8:20
7:00	7:02	7:03	7:04	7:07	9:00
8:00	8:02	8:03	8:04	8:07	10:00
9:30	9:32	9:33	9:34	9:37	11:30
11:40	11:42	11:43	11:44	11:47	13:40
13:00	13:02	13:03	13:04	13:07	14:40
14:00	14:02	14:03	14:04	14:07	15:40
15:00	15:02	15:03	15:04	15:07	16:40
16:00	16:02	16:03	16:04	16:07	17:40
16:40	16:42	16:43	16:44	16:47	18:20
17:40	17:42	17:43	17:44	17:47	19:10

Haneda Airport	Namiki Oho-Hasi	Namiki Ichi-Chome	Sengen Ichi-Chome	Takezono Ni-Chome	Tsukuba Center Bus Terminal
8:40	10:23	10:26	10:27	10:28	10:30
9:30	11:13	11:16	11:17	11:18	11:20
10:35	12:18	12:21	12:22	12:23	12:25
11:35	13:18	13:21	13:22	13:23	13:25
13:00	14:43	14:46	14:47	14:48	14:50
14:20	16:03	16:06	16:07	16:08	16:10
15:20	17:03	17:06	17:07	17:08	17:10
16:30	18:13	18:16	18:17	18:18	18:20
17:55	19:38	19:41	19:42	19:43	19:45
19:20	20:43	20:46	20:47	20:48	20:50
20:20	21:33	21:36	21:37	21:38	21:40
21:20	22:33	22:36	22:37	22:38	22:40

## 13 Transportation around Tsukuba City Area

Conference bus, Courtesy buses served by each hotel, and public bus transportation are available during the conference.

### Conference bus

The conference bus (free) is available from July 30th to August 8th. Since number of the buses is limited, it is not guaranteed that all delegates can get on the buses. The routes are

- Route A1: The conference venue → Tsukuba Daily Inn → Hotel New Taka → Hotel Suwa → Woody Hotel Suwa → Tsukuba Sky Hotel → Hotel Grand Shinonome → The conference venue
- Route A2: Tsukuba Center Bus Terminal ( bus stop No 6) → Tsukuba Daily Inn → Hotel New Taka → Hotel Suwa → Woody Hotel Suwa → Tsukuba Sky Hotel → Hotel Grand Shinonome → Tsukuba Center Bus Terminal
- Route B1: The conference venue → KEK → Urban Hotel → Hotel Matsushima → The conference venue
- Route B2: Tsukuba Center Bus Terminal ( bus stop No 6) → KEK → Urban Hotel → Hotel Matsushima → Tsukuba Center Bus Terminal
- Route C1: The conference venue → Tsukuba Daily Inn → Hotel New Taka → Hotel Suwa → Woody Hotel Suwa → Tsukuba Sky Hotel → Urban Hotel → KEK → The conference venue (Bus will skip hotels whose residents do not get off.)
- Route C2: Tsukuba Center Bus Terminal ( bus stop No 6) → Tsukuba Daily Inn → Hotel New Taka → Hotel Suwa → Woody Hotel Suwa → Tsukuba Sky Hotel → Urban Hotel → KEK → Tsukuba Center Bus Terminal (Bus will skip hotels whose residents do not get off.)
- Route D1: KEK → The conference venue
- Route D2: KEK → Tsukuba Center Bus Terminal

You cannot get off at any other places (i.e. those which are not designated in the above routes). The temporal schedule at the starting points is as follows:

	A1	A2	B1	B2	C1	C2	D1	D2
7/30	16:00 18:00	20:00	15:00 17:00 19:00	21:00		22:00		
7/31	9:00 11:00 14:00 16:00 19:00		10:00 13:00 15:00 17:00 20:00		21:00		7:20 8:20	
8/1	9:00 11:00 14:00 16:00 19:00		10:00 13:00 15:00 17:00 20:00		21:00		7:20 8:20	
8/2	9:00 11:00 14:00 16:00 19:00		10:00 13:00 15:00 17:00 20:00		21:00		7:20 8:20	
8/3	9:00 11:00 14:00 16:00 19:00		10:00 13:00 15:00 17:00 20:00		21:00		7:20 8:20	
8/4								
8/5	9:00 11:00 14:00 16:00		10:00 13:00 15:00 17:00		18:00 19:30		7:20 8:20	
8/6	9:00 11:00 14:00 16:00 19:00		10:00 13:00 15:00 17:00 20:00		21:00		7:20 8:20	
8/7	9:00 11:00 14:00 16:00 19:00		10:00 13:00 15:00 17:00 20:00		21:00		7:20 8:20	
8/8	7:30 9:30		8:30 10:30					7:00

## Courtesy Buses by Hotels

From July 31st to August 8th, hotels far from the conference venue will serve courtesy buses between the hotels and the conference venue for the residents every morning and evening. Please ask the front desks of the hotels about the bus schedules.

On July 30th, courtesy buses to **Hotel Marroad Tsukuba** is available to the residents. The departure times are 5:00 PM and 7:00 PM.

## Public Bus Transportation

Tsukuba City is a little isolated, and the only form of public transportation are buses. Since buses to several destinations depart from the same bus stops, make sure you choose the correct one. When you get on bus, take a ticket with a number printed. The number corresponds to the bus stop where you got on the bus. When you get off, check the price board and put the money into the pay box. The price board shows the price for the corresponding number on the ticket. In the following we show the routes and the present schedules for the related public buses on July 10th. Notice that the schedules might be changed without notice.

- **From/To Tsuchiura Station (土浦駅)**

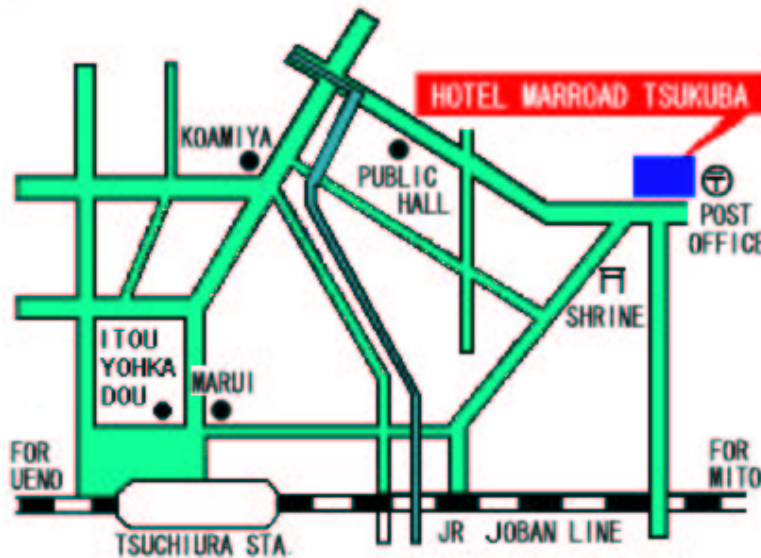
Buses from/to Tsukuba Center Bus Terminal to Tsuchiura Station are frequent and available for residents on **Hotel Marroad Tsukuba**. It takes about 20 to 30 minutes. Bus stop to Tsuchiura Station at Tsukuba Center Bus Terminal is No. 3. Take on bus whose destination is Tsuchiura Station (土浦駅, “Tsuchiura Eki”). Bus stop at Tsuchiura Station to Tsukuba Center Bus Terminal is No 2, which is located at the west side of the Station. Take on bus whose destination is Tsukuba University (筑波大学, “Tsukuba Daigaku”) or Tsukuba Center Bus Terminal (つくばセンター, “Tsukuba Center”). The cost from Tsukuba Center to Tsuchiura Station is JPY 510. Note that the schedules are different on weekdays and weekends.

	Tsuchiura Station to Tsukuba Center	Tsukuba Center to Tsuchiura Station
6	0, 10, 20, 30, 40*, 50	24
7	0, 20, 30*, 40, 55*	4, 24, 34*, 54**, 59*
8	0**, 10*, 15**, 20*, 30, 45	14, 34, 54
9	0, 15, 20, 30, 45	9, 19**, 24, 39, 54
10	0, 15, 20, 30, 45	9, 24, 39, 54
11	0, 15, 20, 30, 45	9, 19, 24, 39, 54
12	0, 15, 20, 30, 35**, 45	9, 19, 24, 39, 54
13	0, 15, 20, 30, 45	9, 19, 24, 39, 45*, 54
14	0, 15, 20, 30, 45	9, 19, 24, 30*, 39, 54
15	0, 15, 20, 30, 45	6**, 9*, 19, 24, 39, 54
16	0, 15, 20, 30, 45	9, 19, 24, 39**, 40*, 54**, 55*
17	0, 15, 20, 25*, 30**, 45	9**, 10*, 19**, 20*, 24**, 25*, 39**, 40*, 54**, 55*
18	0, 15, 20, 30, 50	9**, 10*, 19**, 20*, 29**, 30*, 49
19	5**, 10*, 30, 47	4**, 9*, 19**, 21*, 29, 49
20	15, 40	4, 20*, 24, 39
21	15, 45	9, 39
22	15, 40*	0*, 9, 39*

(\*: This service does not operate on the weekend. \*\*: This service only operates on the weekend.

)

### Tsuchiura Station area



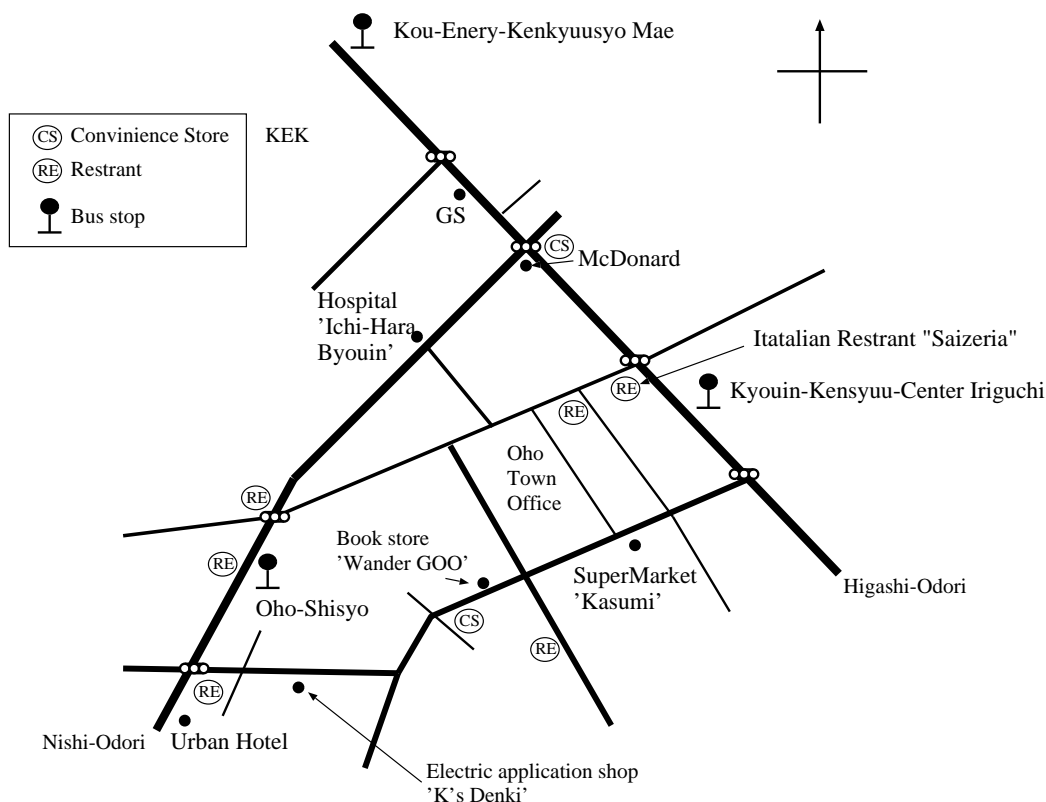
- From/To Oho (大穂) area

Buses from/to Oho area are available for residents on **Urban Hotel** and **the KEK dormitory**.

Bus stop to this area at Tsukuba Center Bus Terminal is No. 1. The nearest bus stops to KEK and Urban Hotel are Kou-Energy-Kenkyuusyo-Mae (高エネルギー研究所前) and Kyouin-Kensyuu-Center-Iriguchi (教員研修センター入り口) or Oho-Shisyo (大穂支所), respectively. The destinations for buses via Kyouin-Kensyuu-Center-Iriguchi (教員研修センター入り口) are Techno-Park-Oho (テクノパーク大穂), Tsukuba-Eki (筑波駅) while that for buses via Oho-Shisyo (大穂支所) is Shimotuma-Eki (下妻駅). All of them go to the destination via KEK. It takes about 20 to 30 minutes. Both the prices to KEK and Kyouin-Kensyuu-Center-Iriguchi/Oho-Shisyo are JPY 390. Note that schedules are different on weekdays and weekends. The bus schedule is as follows. (\*: This service does not operate on the weekend. \*\*: This service only operates on the weekend. )

Tsukuba Center to KEK via Kyouin-Kensyuu-Center-Iriguchi
7:14, 8:07*, 8:30, 8:50, 9:30*, 10:15, 10:55*, 12:00, 12:27, 13:20**, 13:25*, 14:20**, 14:25*, 14:27*, 15:15, 16:05, 16:40, 17:00*, 17:20, 18:10, 18:10**, 18:30*, 18:40*, 20:00
Tsukuba Center to KEK via Oho-Shisyo
8:40, 9:20, 10:50, 12:00, 14:00, 15:30, 16:40, 17:45, 19:40.
KEK to Tsukuba Center
7:39, 7:43, 8:09, 8:38, 9:06*, 9:42, 9:49, 10:18, 10:31*, 11:30, 11:34, 11:42*, 12:39**, 12:54*, 13:26, 13:28, 13:49**, 13:54*, 14:48, 15:21*, 15:34, 15:43, 16:11, 16:29*, 16:44**, 17:08, 17:29**, 17:41*, 17:59*, 18:11*, 19:02, 19:08, 19:31*, 20:52*
Kyouin-Kensyuu-Center-Iriguchi to Tsukuba Center
7:42, 8:12, 9:09*, 9:45, 9:52, 10:34*, 11:37, 11:45*, 12:42**, 12:57*, 13:29, 13:52**, 13:57*, 15:24*, 15:37, 16:14, 16:32, 16:47**, 17:32**, 17:44, 18:02*, 18:14*, 19:05, 19:34*, 20:55*
Oho-Shisyo to Tsukuba Center
7:45, 8:40, 10:20, 11:32, 13:30, 14:50, 15:45, 17:10, 19:10

## Oho area



### ● From/To Tsukuba Center Bus Terminal to Arakawa-Oki Station (荒川沖駅)

Buses from/to Arakawa-Oki Station are available for guests at **Hotel Suwa** and **Hotel New Taka**. (For guests at the Hotel Suwa, see also the public bus to Ushiku Station.) Bus stop to Arakawa-Oki Station at Tsukuba Center Bus Terminal is No. 2. The nearest bus stop for Hotel Suwa is Teshirogi-Chugakukou (手代木中学校) and that for Hotel New Taka is Namiki-Danchi-Minami (並木団地南). Buses via Teshirogi-Chugakukou are limited to those via Teshirogi-Danchi (手代木団地). It takes about 10 to 20 minutes from Tsukuba Center Bus Terminal from both bus stops. The expenses to Teshirogi-Chugakukou and Namiki-Danchi-Minami are JPY 220 and JPY 260, respectively. Notice that schedule is different on weekdays and weekends. The bus schedule is as follows. (\*: This service does not operate on weekends. \*\*: This service only operates on weekends. (···) is for bus via Teshirogi-Danchi.)

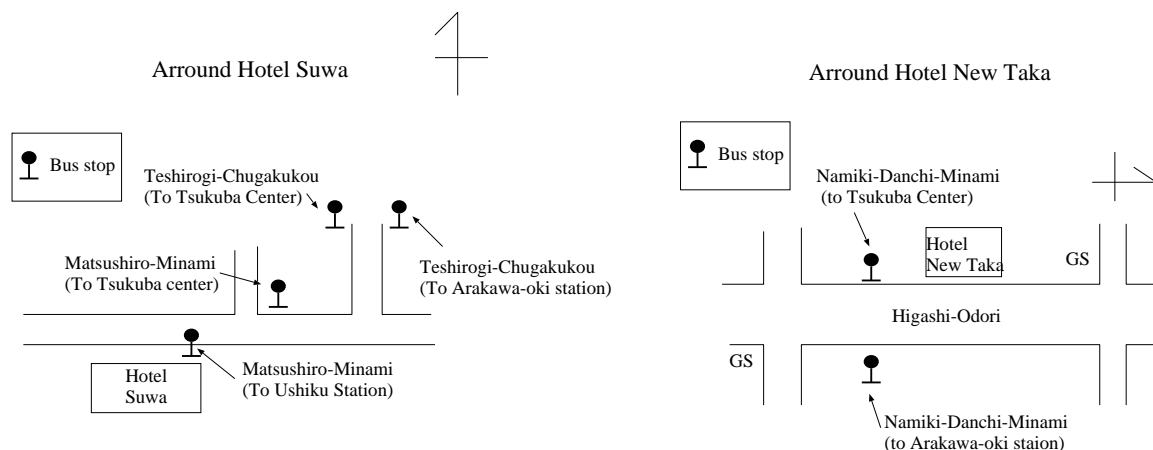


	Tsukuba Center to Arakawa-Oki Station
6	10*, 35, (45)*, 50
7	9, (20)**, 30, 54
8	19, (45)*, 54, (55)**
9	24, 54
10	(10)*, 19, (25)**, 50
11	19, (20)*, 45
12	(0)**, 19, (30)*, 50
13	(10)*, 19, (30)**, 50
14	(10)*, 19, 50
15	(0)**, 19, 45, (52)*
16	14, (20)**, 40, (50)*
17	15, (30)*, 40
18	0*, (5)**, 28*, 30**, (30)*, 45
19	19, (25)*, 35*, (40)**, 55
20	(15)*, 24, 45
21	19, 40

	Namiki-Danchi-Minami to Tsukuba Center	Teshirogi-Chugakukou to Tsukuba Center
7	4*, 11*, 24, 29**, 31*, 42, 46	
8	3*, 4, 5*, 9**, 24, 31*, 36**, 49	18*, 20**
9	13*, 24, 26, 43*, 48**, 49	25*, 37**, 42*, 55*
10	16, 19, 49	2**, 52**
11	9, 10, 28**, 39, 56	22*, 42, 47**
12	9, 15*, 39, 56**	27*, 47**
13	9, 30*, 39, 46	7*, 10**, 37**, 42*
14	9, 10*, 28**, 39	22*, 42**
15	9, 10*, 21, 39, 56**	7**, 22*, 55*
16	0*, 6, 9, 26*, 39, 50*	10**, 12*, 32**
17	14, 16**, 39, 45*, 56	2*, 27**, 30**, 34*, 57*
18	14, 34, 35**, 51*, 54*, 58**	27**, 47*
19	19, 30*, 34	12**, 42*, 47**, 49*
20	1*, 4**, 19*, 30*, 33**, 41*, 44	32*, 47**
21	10*, 19, 39, 59	22
22	19	

● **From/To Tsukuba Center Bus Terminal to Ushiku Station (牛久 駅)**

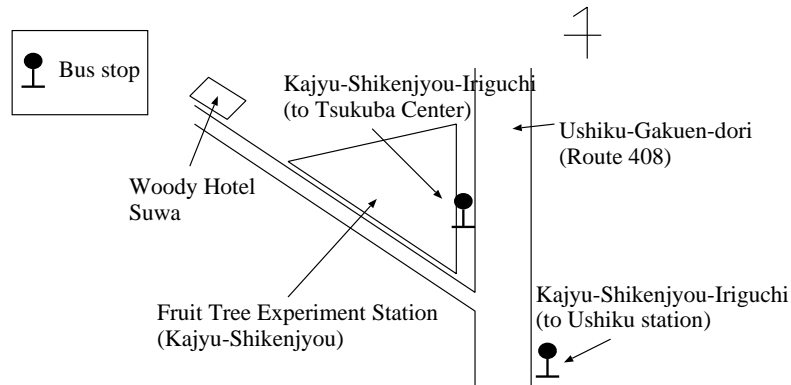
Buses from/to Ushiku Station via Teshirogi-Danchi (手代木 団地) are available for guests of **Hotel Suwa** and **Woody Hotel Suwa**. For guests of Hotel Suwa, see also the public bus to



Arakawa-Oki Station (荒川沖 駅). Bus stop to Ushiku Station at Tsukuba Center Bus Terminal is No. 2. The nearest bus stops are Matsushiro-Minami (松代 南) for Hotel Suwa and Kajyu-Shikenjyou-Iriguchi (果樹 試験場入口) for Woody Hotel Suwa. However, we recommend guests of Woody Hotel Suwa to use the conference bus or courtesy buses by hotels as possible, since it takes about 30 minutes from the nearest bus stop to Woody Hotel Suwa on foot. It takes about 10 to 20 minutes from Tsukuba Center Bus Terminal to Matsushiro-Minami and Kajyu-Shikenjyou-Iriguchi. The expenses to Matsushiro-Minami and Kajyu-Shikenjyou-Iriguchi are 220 and JPY 290, respectively. Note that the schedules are different on weekdays and weekends. The bus schedule is as follows. (\*: This service does not operate on weekends. \*\*: This service only operates on weekends. )

Tsukuba Center to Ushiku Station via Teshirogi-Danchi
7:40*, 8:05**, 10:15**, 10:20*, 11:25**, 12:10*, 12:15**, 13:30**, 13:45*, 14:35**, 14:58*, 15:55**, 17:00**, 17:20*, 18:05**, 18:20*, 19:15**, 19:35*, 20:20
Matsushiro-Minami to Tsukuba Center
9:41*, 9:36**, 10:51**, 11:41*, 11:46**, 12:46**, 13:06*, 13:36**, 14:21*, 15:06**, 15:54*, 16:31**, 17:26**, 17:33*, 18:26**, 19:46**, 19:48*
Kajyu-Shikenjyou-Iriguchi to Tsukuba Center
9:32**, 9:37*, 10:37*, 10:47**, 11:42**, 12:42**, 13:02*, 13:32**, 14:17*, 15:02**, 15:50*, 16:27**, 17:22**, 17:30*, 18:22**, 19:42**, 19:45*

## Arround Woody Hotel Suwa



## 14 Banking

Only Japanese Yen is 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 be able to use credit cards at shops or restaurants. Major credit cards — VISA, MasterCard, Diners Club, and American Express — are accepted at hotels except for Woody Hotel Suwa. Traveler's checks are not popular in Japan and are accepted only by leading banks and major hotels in principal cities. Note that you will not necessarily be able to convert your currency to Japanese Yen at Hotels.

Major foreign currencies can be converted into Japanese Yen at 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 the Website of the Narita Airport ([http://www.narita-airport.or.jp/airport\\_e/index.html](http://www.narita-airport.or.jp/airport_e/index.html)).

In post offices, international Automatic Teller Machine (ATM) services are provided. The nearest one to the conference venue is Tsukuba Gakuen Post Office. You may withdraw Japanese Yen using your credit cards or cash cards.

Currency exchange from Australian dollars, British pounds, Canadian dollars, Euros, and US dollars 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

## 15 Survival Japanese

### • When you can not find your hotel

Some hotels (ホテル) have only Japanese signs, not English ones, in front of the hotels, which may make them a little difficult to find at first. The following is a list of the Japanese names of each hotel.

English name	Japanese name
Okura Frontier Hotel Tsukuba (Phone) 029-852-1112	オークラ フロンティア ホテル つくば (Address) 1-1364-1 Azuma Tsukuba City
Okura Frontier Hotel Tsukuba Epochal (Phone) 029-860-7700	オークラ フロンティア ホテル つくば エポカル (Address) 2-20-1 Takezono Tsukuba City
Hotel Suwa (Phone) 029-836-4011	ホテル スワ (Address) 302 Teshirogi, Tsukuba City
Hotel Grand Shinonome (Phone) 029-856-2211	ホテル グランド 東雲 (Address) 488-1 Onozaki, Tsukuba City
Hotel New Taka (Phone) 029-851-4788	ホテル ニュー 鷹 (Address) 2-1-19 Umezono Tsukuba City
Hotel Matsushima (Phone) 029-856-1191	ホテル 松島 (Address) 35 Onozaki, Tsukuba City
Urban Hotel (Phone) 029-877-0001	アーバン ホテル (Address) 2-1-2 Tsukuho, Tsukuba City
Tsukuba Sky Hotel (Phone) 029-851-0008	つくば スカイ ホテル (Address) 283-1 Onozaki Tsukuba City
Woody Hotel Suwa (Phone) 029-836-7123	ウッディ ホテル スワ (Address) 436-7 Kamiyokoba Tsukuba City
Tsukuba Daily Inn (Phone) 029-851-0003	つくば デイリー イン (Address) 1-12-4 Sengen Tsukuba City
Hotel Marroad Tsukuba (Phone) 029-822-3000	ホテル マロウド 筑波 (Address) 2-24 Johoku-machi, Tsuchiura City

### • Expressions all you need to know

Thank you.	ありがとう。	A-ri-ga-tou.
Hello.	こんにちは。	Kon-ni-chi-wa.
Excuse me?	すみません。	Su-mi-ma-sen.
Will this bus go to ...?	このバスは...に行きますか?	Ko-no bus wa ... ni iki-masu-ka?
How much is this?	これはいくらですか?	Ko-re wa i-ku-ra de-su-ka ?
Where is ...?	...はどこですか?	... wa do-ko de-su-ka ?

- Numbers

	Chinese character	Pronunciation
1	一	ichi
2	二	ni
3	三	san
4	四	yon
5	五	go
6	六	ro-ku
7	七	na-na
8	八	ha-chi
9	九	kyuu
10	十	jyuu
11	十一	jyuu ichi
20	二十	ni jyuu
21	二十一	ni jyuu ichi
100	百	hya-ku
101	百一	hya-ku ichi
1000	千	sen
10000	万	man

- Daily Japanese

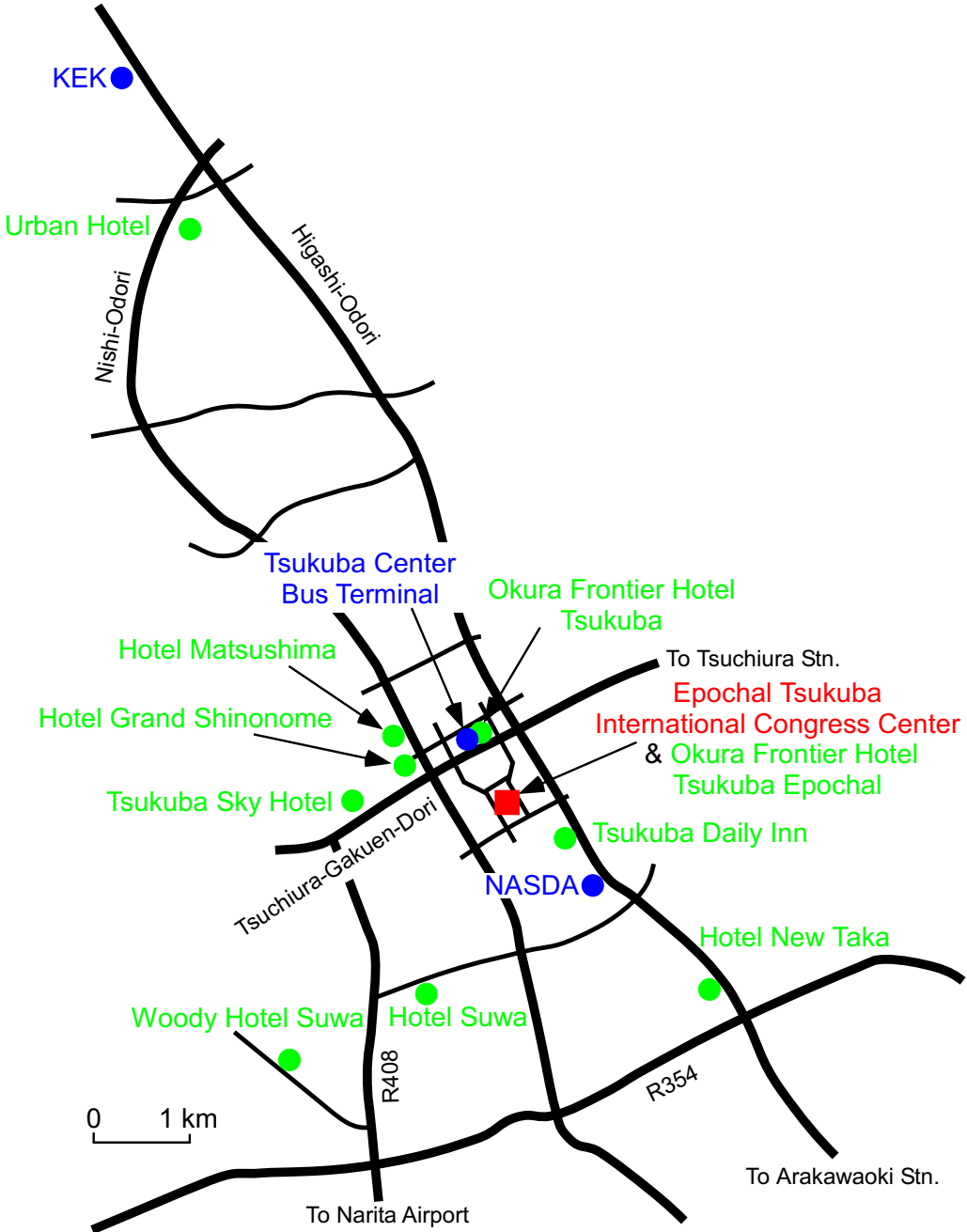
円	Yen
非常口	Emergency Exit
出口	Exit
便所、お手洗い、洗面所	Restroom
地下鉄	Subway
バス停	Bus stop
JR	Japan Railway
つくば	Tsukuba
ホテル	Hotel

# 16 Maps

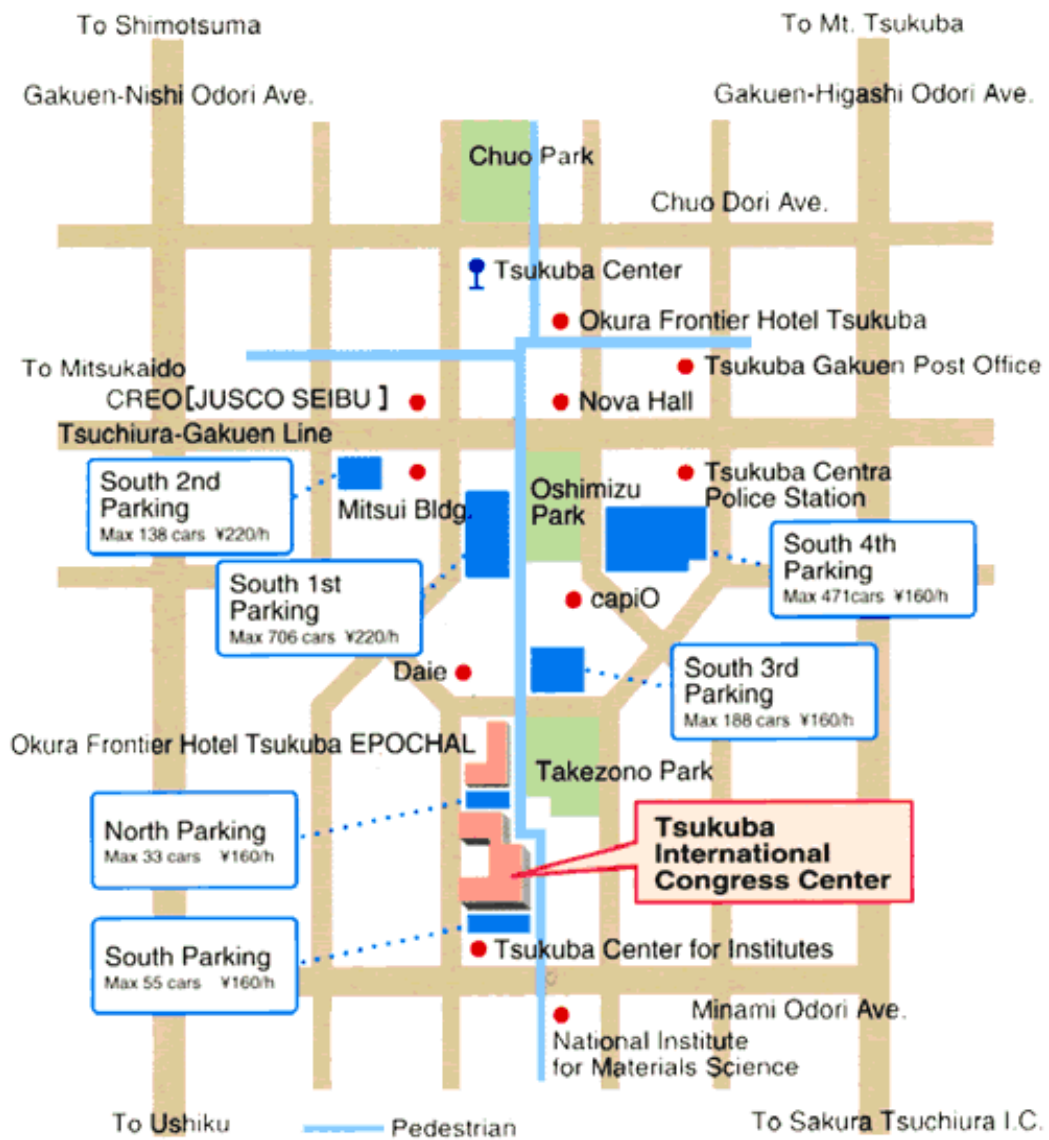
## Wide area



Tsukuba City



## Around the Conference Venue





## 17 Telephone Numbers

Conference office (from 9:00 AM to 5:00 PM)	029-861-0606
Emergency call to police	110
Emergency call to fire service (fire, ambulances)	119
Okura Frontier Hotel Tsukuba	029-852-1112
Okura Frontier Hotel Tsukuba Epochal	029-860-7700
Hotel Suwa	029-836-4011
Hotel Grand Shinonome	029-856-2211
Hotel New Taka	029-851-4788
Hotel Matsushima	029-856-1191
Urban Hotel	029-877-0001
Tsukuba Sky Hotel	029-851-0008
Woody Hotel Suwa	029-836-7123
Tsukuba Daily Inn	029-851-0003
Hotel Marroad Tsukuba	029-822-3000

In the region around Tsukuba, you can dial numbers directly, e.g., 861-xxxx, without having to dial the area code (029). From abroad, please include the country code and Tsukuba area code: +81-29-861-xxxx.