

## A Dialing Excursion In Japan

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My Easter 1999 excursion to sundials around the Osaka-area of Japan was marked by the very large and the very small: the very large sundial in Minami-mura, built in 1997 by Prof. Dr. Akio Gotoh and a small paper-travel-sundial from the Edo era.

As everybody knows, dialists are friendly people. I was very lucky to get to know Mr. Sumi Yoichi (from Godo), who was kindly introduced to me by Fred Sawyer as a “sundial-enthusiast” and NASS member. Mr. Sumi organized the meetings with Prof. Eiichi Oshida (from Kobe), who showed me sundials in Akashi and Kobe. He also introduced me to the great sundial-man Prof. Dr. Gotoh Akio (from Nara city), to Mr. Minohara Shin (from Tokyo), architect of the Keihanna – Minohara sundial, who presented a rich material-collection of his sundial to me, and to Prof. Ono Yukio (from Tokyo), who joined the meeting in Gifu-prefecture and presented many photos of his own sundials to me. Mr. Kamakura Yoshimi, a sundial-friend from Osaka, brought me to the beautiful clock-museum and dials of the Ohmi-Shrine at Otsu.

My sundial-excursions started at Akashi. Prof. Oshida showed me several sundials there and in Kobe. He was very much disappointed, as two sundials he wanted to show to me no longer existed because they were damaged during the big Hanshin – earthquake of 1-17-1995. Akashi is very well known in Japan, as in 1886 the Japanese standard time was set at the 135° longitude-line, which passes through Akashi.

My next host was Prof. Gotoh from Nara city, a famous old town and cultural center in the past and present time. We were invited to his house and he showed us his charming little private Museum of Time (Do not miss it, if you go to Nara!). After having tea-time at his kotatsu-table, he brought us with two cars to the Keihanna-Minohara sundial, first in a little van which could pass through the narrow streets of the old center of Nara-city, than we changed the car and took a comfortable big van to Keihanna. It is a new town between Kyoto, Osaka and Nara. The name of the new town was taken from three Kanji-parts of these towns. Keihanna is something like the American silicon valley. There Mr. Minohara Shin, an architect from Tokyo, has designed a beautiful large sundial (3877.86 m<sup>2</sup>, gnomon: 35.02 m long, 19.94 m high; built in 1993).



The Keihanna-Minohara sundial

I was familiar with the large Keihanna-Minohara sundial from a photo in a Japanese clock-book and had thought it would just be one of those crazy giant monuments, where you always feel small and uncomfortable. However, when I was there, I changed my mind totally: It is a really great work! You can read the local time for three Japanese cities: Keihanna, Sasebo and Miyako. A fine creek runs from south to north and brings the sky and the clouds down to the earth and the moving shadow. I walked around and felt so comfortable and inspired, and I could imagine that there is always a good atmosphere when they celebrate their summer-festivals on the grounds around this beautiful and strong sundial.

Back from the Keihanna-Minohara sundial, we had another closer look at the sundial collection in Mr. Gotoh's Time Museum. A little paper-traveling-sundial, which Mr. Gotoh called Basho-sundial (after the great Japanese Poet Basho, who lived in the Edo-era, which is the time between 1603 and 1867) fascinated me most. Prof. Gotoh presented two replicas of them to me. To me this invention of a paper-sundial is a brilliant idea similar to the invention of the Sony Walkman in our century. The paper sundial could be combined with route-information, like a modern guidebook. I also saw such a sundial made of the traditional Japanese Washi-paper in the clock-museum of the Ohmi-Shrine near Otsu.

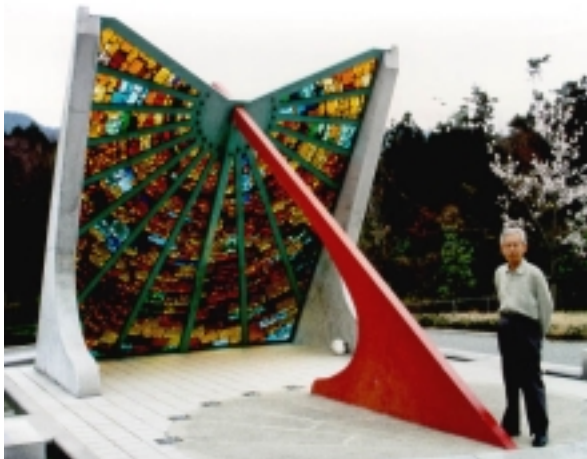
Two days later Prof. Gotoh also brought me to Higashi-Harima-Hill Park with his car. I think it is a brilliant idea to build sundials at a caravan-place, where people relax and have time to watch the shadow. Imagine every parking lot of your

American highways or our German Autobahn would have at least one sundial!...



Five dials for different cities at Higashi-Harima

Then Mr. Sumi Yoichi, my *spiritus rector*, invited us for a one-day sundial tour in Gifu-prefecture. He picked us and Prof. Ono up at Gifu Shinkansen-station and showed us a CITIZEN-sundial in a school-yard. The schoolyard dial was published in *The Horological International Correspondence* Vol. 33, No. 387 (1992).

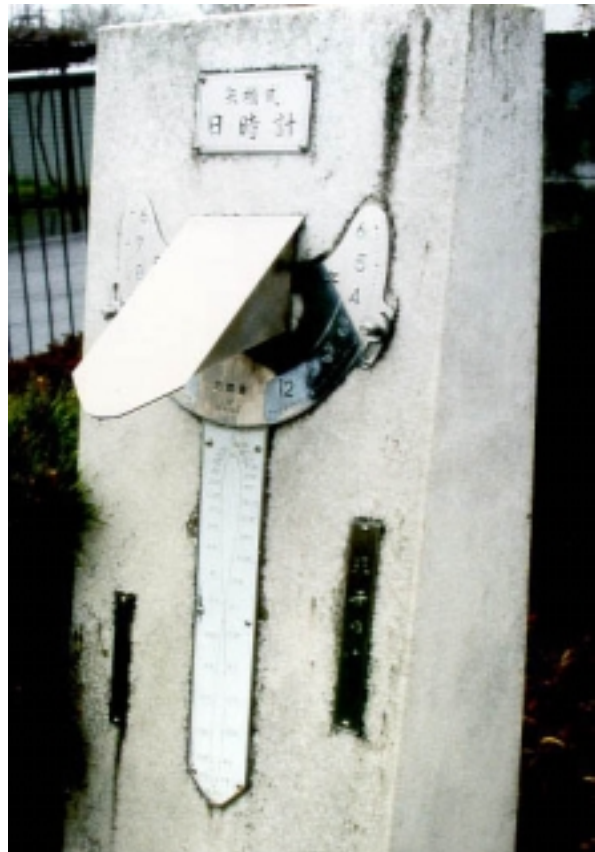


Prof. Gotoh & one of his dials at Higashi-Harima

Here we also saw the New Standard Time Sundial by Tokutaro Yabashi. This dial is the subject of U.S. Patents 3,616,538 and 4,050,161.



The Citizen sundial



Standard time sundial by Tokutaro Yabashi

[Ed. Note: The workings of this interesting dial deserve some explanation. They will be covered in an upcoming article by Fred Sawyer: "Kratzer Layout, Yabashi Point, & Sawyer Equant".]

Then we went to Minami-mura, a nice village in the hillside of Gifu-Prefecture, where Prof. Gotoh and the Mayor of Minami-mura were already

waiting for us. The gnomon on the dial we saw here includes a coded reference to the name of the village. In the Japanese language you can read the Kanji-signs in at least two ways, the Japanese version (kun) or the Chinese version (on): three is read mittsu, seven is read nanatsu. There exists also an abbreviation-form: hi, fu, mi, yo, itsu, mu, nana, ya, kokono, to (1,2,3...10). Referring now to the village's name, if you take the first three syllabi mi – na – mi (the ending "mura" means village), you get the size of the golden arrow in the end of the gnomon which passes through a glass roof down to the ground floor of the entrance hall of the big multifunctional convention hall: 37.3 meters.



Minami-mura Sundial and Conference Center

However it is not only the size of this sundial, which makes it exceptional! As you can imagine from the photo, the shadow of this huge sundial on top of a big convention hall often passes across only the roof-area of the building. If you want to know the time, you may have to hire a helicopter, as the photographer did, or alternatively you buy a little metal sundial, designed by Prof. Ono at the counter.

The mayor, Mr. Kawaai, came up with a lovely idea: They built a wooden outlook tower on a nearby hill. If you want to read the correct local time, you simply climb the hill, which is also good for your health, and have a look at the roof of the convention hall! Unfortunately it was raining throughout the whole day when I was there. So I only took a photo from the hall to the hill and had

to believe the carefully done drawings, which were handed over to me during an official reception by the mayor of Minami-mura, Mr. Kawaai. Honestly, have you ever seen a huge sundial in America or anywhere else in the world, where you first have to climb a hill, in order to ...

After the official reception we were invited to a private performance of the production of the traditional Washi-paper. This handmade paper, which is also used for the paper sundial, was produced in front of us by an 85 year old paper-maker.

On our final sundial-tour, a sundial-friend from Osaka, Mr. Kamakura Yoshimi took us to Otsu by car to the famous Ohmi-Shrine. In their lovely old-fashioned clock-museum they show a good collection of sundials and outdoors there are not only sundials, but also a water-clock and a fire-clock in a very beautiful surrounding.

In closing, I would like to quote Prof. Gotoh's essay on sundials in Japan (*Japanese Studies In The History Of Science* No.18):

1. "Sundials were made in Japan much later than in other countries (after the 17<sup>th</sup> century) and the water-clock was used for a long time before sundials were introduced.
2. In foreign countries there are many sundials in open places such as parks, but in Japan there are hardly any. Almost all of those remaining in Japan are portable sundials.
3. Japanese portable sundials are especially convenient for carrying and are very small. In addition, as an essential feature they were artistically crafted to be beautiful as well as functional.
4. Basically speaking precise time was not important except in the case of experts."

I have seen only a very little part of the Japanese sundial world and I think, as in Europe and North-America so also in Japan more and more outdoor sundials are being built. I hope that I have encouraged you to discover Japanese sundials on your own! Please let me know your opinion and your experiences!

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