

DIRECTION GENERALE

PARIS, LE 06/11/01

Dear Dr. Takashi Iida,

As you may know, I am chairing the ITRF Product Center which is in charge of the comparison and combination of global results from Space Geodesy Techniques (VLBI and Satellite Systems including Satellite Laser Ranging) to produce the International Terrestrial Reference Frame (ITRF) in the framework of the International Earth Rotation Service (IERS). Recommended by the International Union of Geodesy and Geophysics in 1991, the ITRF is the world standard for Earth Science applications (Solid Earth, Oceanography, Atmospheric Science, etc.) and it is constantly improved requiring the highest precision attainable by Space Geodesy techniques.

Since the beginning of these activities in the mid 80's, solutions provided by the IERS analysis centers have been a key element in the unification of terrestrial references coming from SLR and VLBI, and later from GPS and DORIS. The ITRF, as a combined frame benefiting from the strengths of all these techniques, could not be realized without collocation sites where two or more geodetic instruments are operated. The distribution of collocation sites over the globe is a key element for ITRF combination and is a critical issue for a proper link between the different techniques.

The effort of Communications Research Laboratory (CRL) of Japan in this international activity is of great importance and in particular through the following two major contributions:

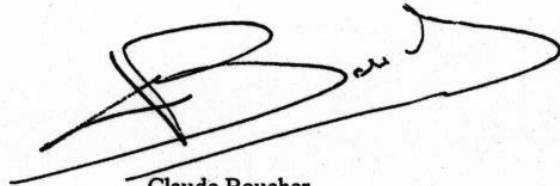
- The Keystone project which comprise four sites where three major Space Geodesy techniques (VLBI, SLR and GPS) are collocated. The valuable data of this project heavily contributes to improving the performance of the individual techniques and to their comparisons and combinations, needed to improve the International Terrestrial Reference Frame. Moreover, the local tie data provided by Keystone project, connecting the three techniques at the four sites, is of high importance. The confrontation between the local tie values provided by CRL and the ITRF2000 coordinates of VLBI and SLR stations at the four sites of Keystone project led to 1-3 cm agreement. We don't doubt that the Keystone data of the three techniques provided to the IERS Analysis Centers together with the local ties will certainly contribute to the improvement of the future ITRF combinations in terms of collocations and and to balance their distribution between the east and west part of the globe.

D I R E C T I O N G E N E R A L E
I N S T I T U T G E O G R A P H I Q U E N A T I O N A L
1 3 6 B I S R U E D E G R E N E L L E - 7 5 7 0 0 P A R I S 0 7 S P
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- The International workshop on Geodetic Measurements by the collocation of Space Techniques ON Earth (GEMSTONE), sponsored by the Science and Technology Agency of Japan (STA), held at an organized by CRL on January 25-28, 1999, gathered about 100 participants from twelve countries, and my co-worker Zuheir Altamimi was among them, as representative of the ITRF group. GEMSTONE workshop was an important occasion to highlight and emphasize the importance of collocations of Space Geodesy techniques leading to the improvement of the terrestrial reference frame.

In conclusion, my colleagues and myself want to express our acknowledgment of the products of Keystone project which were made available to IERS Analysis Centers and ITRF Combination and hope that STA and CRL will maintain their contribution to the present global activity for the benefit of the international community.

Sincerely yours

A handwritten signature in black ink, appearing to read 'Claude Boucher', written in a cursive style with a long horizontal stroke extending to the right.

Claude Boucher

Head of the ITRF Product Center of the
International Earth Rotation Service

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Zuheir Altamimi

Bernd Richter IERS Secretary

Patrick Sillard

Jan Vondrak IERS President