

## Station GPS permanente

IPG Paris

DGF Uchile

UNAP Iquique

Site Name: Punta Urcu (Coastal Route Tocopilla – Iquique° )	Author : <b>Carrizo / Bejar</b>
Site Code : <b><u>URCU</u></b>	Date installation : <b>2007 12 04</b>
Coordinates : URCU : -21.763750 - 70.152917	

### DESCRIPTION

North Chile II region, semi-permanent GPS station IPGP / DGF network installed during Dec- 2007.

### MONUMENTATION

Station located in the coastal platform, implanted in bedrock (Jurassic andesitic lavas). Inox 30 cm rod (Delmont type) sealed in bedrock with epoxy-glue. Receptor TRIMBLE NetRS, Antenna TRIMBLE Zephyr geodetic and autonomous energy (battery and solar panel).

### HISTORIC

Semi-permanent GPS station installed since 04 -DEC- 2007.  
Tying measurements between CO6 and CO5 performed during the Tocopilla intervention by Marta Béjar and Daniel Carrizo in Dec. 2007

### PRACTICAL INFORMATIONS

state property		<b>NO</b>	
private property		<b>NO</b>	
access restricted		<b>NO</b>	Located in outcrops
telephone nearby		<b>NO</b>	
Electric power nearby		<b>NO</b>	
equipment storage available	<b>YES</b>		
possibility of leaving the equipment without watching	<b>YES</b>		possible risk during the summer time, related to floating population.
person in charge	<b>YES</b>		Prof. Manuel Olcay ( UNAP Iquique) 093701220 (cel.), (57) 310716 , (57) 394369, <i>molcay@unap.cl</i>

person to contact	<b>YES</b>	Nora Collao and Raul Ahumada (El Gringo) President of local fisherman community - Caleta Urcu cell number 81439311
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## COORDINATES

### URCU \_ Site Information Form \_ International GPS Service for Geodynamics

#### 0. Form

Prepared by (full name) : Daniel Carrizo, Marta Béjar  
Date Prepared : 20-JAN-2008  
Report Type :

#### 1. Site Identification of the GPS Monument

Site Name : Caleta Urcu tracking station  
Four Character ID : **URCU**  
Monument Inscription :  
IERS DOMES Number :  
CDP Number : (XXXX)  
Date Installed : 04-DEC-2008  
Geologic Characteristic : ANDESITIC LAVAS  
Bedrock Type : IGNEOUS  
Bedrock Condition : moderated weather, principal joint set N70E/90  
Fracture Spacing : 1-10 cm  
Notes : Was installed on the top of hill located in the Coastal platform, closely to Coastal Cliff toe.  
Local correspondent:  
No auxilliary point ;  
Additional Information : Geological Province: Coastal Cordillera-northern Chile  
: Local Geology: basement Jurassic Lavas; coverture Plio-Pleist. marine deposits.  
: Geological information from  
: Program:.

#### 2. Site Location Information

City or Town : Caleta Urcu  
Country : Chile  
Tectonic Plate : South American but in the convergence area of Nazca/ SOAM plates.  
Approximate Position  
X coordinate (m) :  
Y coordinate (m) :  
Z coordinate (m) :  
Latitude (deg) :  
Longitude (deg) :  
Elevation (m) :  
Additional Information : Latitude, Longitude and Elevation derived from Gamit calculation

#### 3. GPS Receiver Information

3.1 Receiver Type : TRIMBLE / NetRS  
Serial Number : 60145334  
Firmware Version :  
Date Installed : 04-DEC-2007  
Date Removed : (dd-MMM-yyyy hh:mm UT)  
Additional Information : (multiple lines)

3.2 Receiver Type :  
Serial Number :  
Firmware Version : 0  
Date Installed :  
Date Removed : (dd-MMM-yyyy hh:mm UT)

4. GPS Antenna Information

4.1 Antenna Type : TRIMBLE / Zephyr geodetic  
Serial Number : 60145334  
Antenna Height (m) : 0.000 (to be verified)  
Antenna Reference Point : ARP = dhpab  
Degree Offset from North : 0.0  
Antenna Radome Type :  
Date Installed : 04-DEC-2007 hh:mm UT  
Date Removed : (dd-MMM-yyyy hh:mm UT)

4.2 Antenna Type :  
Serial Number :  
Antenna Height (m) :  
Antenna Reference Point :  
Degree Offset from North :  
Antenna Radome Type :  
Date Installed : hh:mm UT  
Date Removed :

5. Local Site Ties :

5.1 Monument Name :  
Site Ref CDP Number :  
Site Ref Domes Number :  
Differential Components from GPS Mark to Site Reference (ITRS)  
dx (m) :  
dy (m) :  
dz (m) :  
Accuracy (mm) : (mm)  
Date Measured : (dd-MMM-yyyy hh:mm UT)  
Additional Information :

6. Frequency Standard : NO

6.1 Standard Type :  
Frequency :  
Effective Dates :

7. Collocation Information

7.x Instrumentation Type : No  
Status : SEMI-PERMANENT  
Effective Dates : (dd-MMM-yyyy - dd-MMM-yyyy)

8. Meteorological Instrumentation : No

8.1 Humidity Sensor Model :  
8.2 Pressure Sensor Model :  
8.3 Temperature Sensor Model :  
8.4 Water Vapor Radiometer :  
8. Other Instrumentation : (multiple lines) pm

9.

9. On-Site, Point of Contact Agency Information

Agency : Department of Physics\_ Universidad Arturo Prat, Iquique, Chile  
Mailing Address :  
Primary Contact : Contact Name : Manuel Olcay, David Lazo  
Telephone (primary) : 447070 Fax :  
E-mail : molcay@cavanha.cec.unap.cl  
Secondary Contact : Contact Name : Socquet Anne  
Telephone (primary) : 0 33 1 44 27 24 99 Telephone (secondary) :  
Fax : 0 33 1 44 27 38 94 E-mail : socquet@ipgp.jussieu.fr

10. Responsible Agency (if different from 9.)

11. More Information

URL for More Information :  
Hardcopy on File  
Site Map : Site Diagram : Horizon Mask  
Monument Description : Site Pictures : Additional Information : (multiple lines)  
Antenna Graphics with Dimensions

## ADDITIONAL INFORMATION

Battery :

Antenna cable

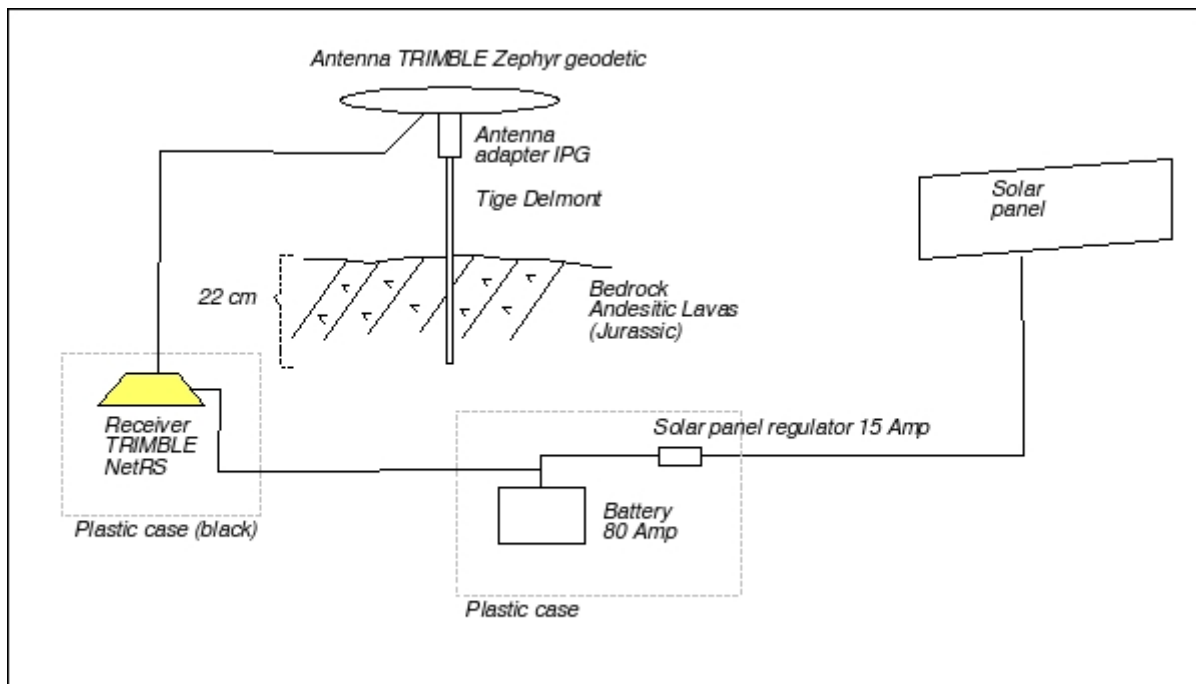
Dual power connection : A préciser

→ A préciser aussi :

longueur de cable, situation de la connexion Internet, adresse Ip

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### Satation Sketch

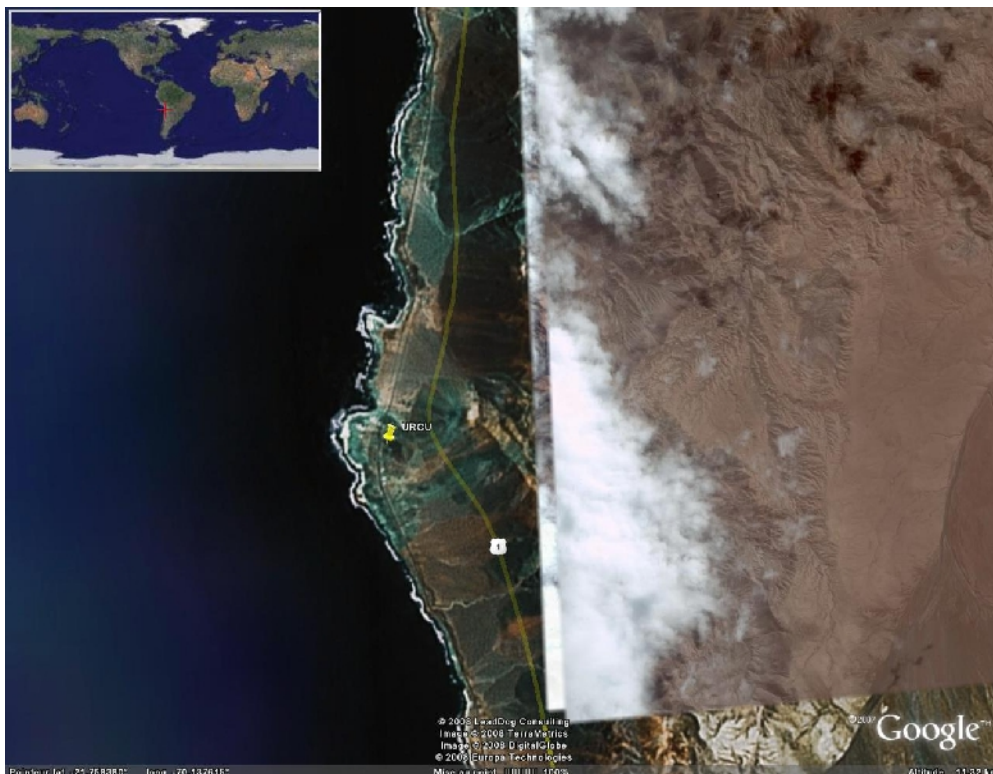


## Locations

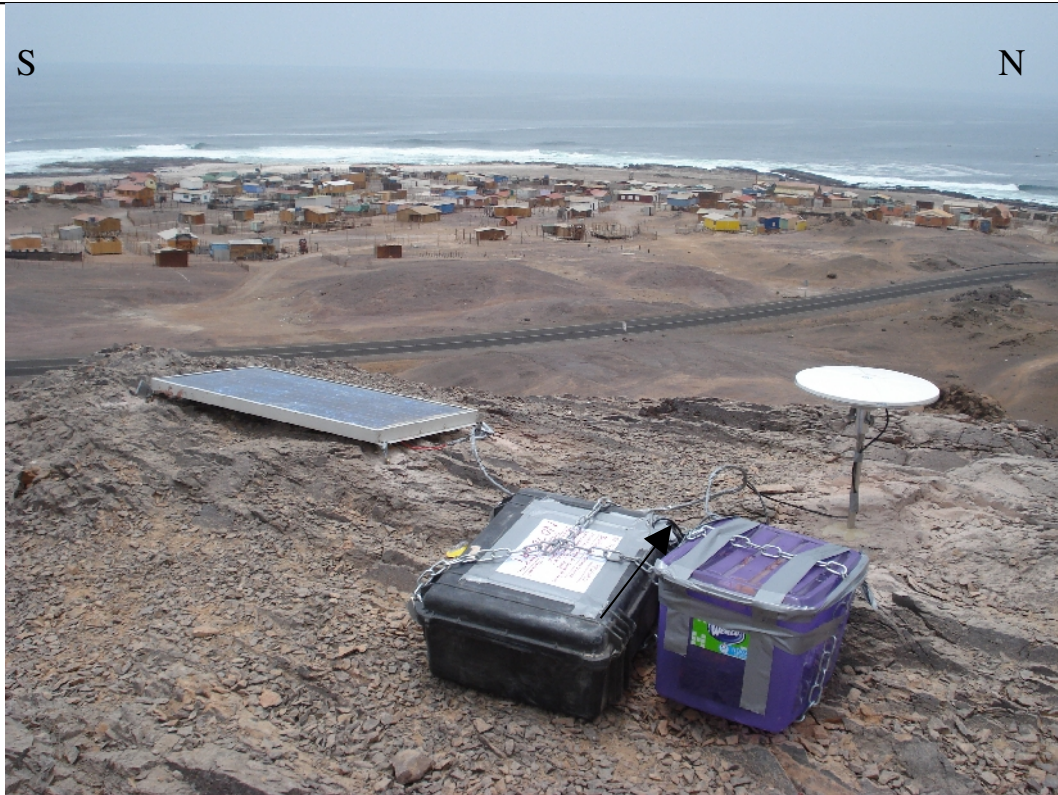
<http://www.turistel.cl/v2/secciones/mapas/ruteros/tarapaca.htm>



## Locations from Google Earth







Photography N°1 : View of URCU semipermanent station. The cases and solar panel are fixed to the bedrock.



Photography N°2 : The Coastal Cliff (1200 m a.s.l) is located to the east of station producing a relevant shield in the satellite constellation window.



NNE

SSW



Photography N°3 : Detail of the antenna placement in Jurassic lavas (tige Delmont + adapter).



Photography N°4 : Details of the station. Receiver NetRS and battery liquid – 80 AMP

## PROCEDURE DE COMMUNICATION & DOWNLOAD (RECEIVER - PC\_WINDOWS)

1. Make a Intranet between the receiver and the laptop.

- check the internet configuration in the receiver cover (IP, mask and Gateway)
- configure the laptop communication parameters with the same receiver parameters (just the last number of the laptop-IP must be major than receiver-ip last number)  
expl.

	RECEIVER	LAPTOP
IP	192.168.53.34	192.168.53.40
Mask	255.255.0.0	255.255.0.0
GW	192.168.0.1	192.168.0.1

2.1 Establish the communication via http (data downloading)

- One time configured the laptop ip, connect the receiver with the laptop LAN port (using an crossover cable).
- Reboot the laptop for update the configuration. Then make the connection using internet explorer software or similar. Make the connection to the address:

http://<receiver-ip>

expl.

<http://192.168.53.34>

The receiver web page graphic interface will be open (see NetRS manuals).

- For download the GPS data go to "Data Logging/Data Files"\*

\* Do not forget that the data directory was organized for two sampling rates (1Hz and 30 s) identifying the daily files as

????YYYYMMDD0000s.T00

URCU200801120000y.T00 ~8900 kb (session 1 Hz)

URCU200801120000z.T00 ~430 kb (session 30 s)

The receiver makes a monthly directory also:

Data Logging/Data Files/YYYYMM/

Data Logging/Data Files/200801 (for data registered during 2008-Janvier )

- Always check the connection parameter in the receiver (IP – FTP – TELNET) before to make the communication. (See NetRS communication manual in INSU webpage).