







# LINEA 6 – METROPOLITANA DI NAPOLI

				(PRIMA EMISSIONE) – NOVEMBRE 2013	NOV 13						
Albinati	De Risi	Manferlotti	Di Luccio								
REDATTO	CONTROLLATO	APPROVATO	AUTORIZZATO	DESCRIZIONE REVISIONE DOCUMENTO	DATA	REV					
 <b>Ansaldo STS</b> A Finmeccanica Company CONCESSIONARIA				 <b>COMUNE DI NAPOLI</b> CONCEDENTE		PROG      IMP      NUMERO					
						L	M	6	7	F	X
				CODICE PRODOTTO		AREA	TIPO	FASE			
						2	C		E	S	
A termini di legge è rigorosamente vietato riprodurre e comunicare a terzi il contenuto del presente documento	<b>TITOLO DOCUMENTO:</b> LINEA 6 METROPOLITANA DI NAPOLI PROGETTO ESECUTIVO <b>OPERE CIVILI – MONITORAGGIO GEOTECNICO GEOREFERENZIATO                  REPORT DELLE MISURE (INTERNO) – STAZIONE CHIAIA</b>										
	<b>EMITTENTE</b>  METROPOLITANA DI NAPOLI S.p.A. RESPONSABILE PROGETTAZIONE OPERE CIVILI				<b>A.T.I. LM6</b>			<b>CODICE ENTE</b> 			
	 Monitoraggio delle gallerie e prove di laboratorio per la qualifica dei materiali e loro controllo Monitoraggio opere civili e monitoraggio ambientale				<b>FORMATO</b> A4		<b>SCALA</b> /		<b>FOGLIO</b> 1 DI 138		

 <p><b>Ansaldo STS</b> A Finmeccanica Company</p>	<p>LINEA 6 METROPOLITANA DI NAPOLI - PROGETTO ESECUTIVO</p> <p><i>OPERE CIVILI - MONITORAGGIO GEOTECNICO GEOREFERENZIATO</i> <i>REPORT DELLE MISURE - STAZIONE CHIAIA</i></p>	<p>LM6 7FX 2C I 27 Data: 29/11/13 Metropolitana di Napoli A.T.I. LM6 TreEsse Engineering S.r.l.</p>
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## INDICE

<b>1.PREMESSA</b>	<b>3</b>
<b>2.DATI GENERALI</b>	<b>4</b>
<b>3.STRUMENTAZIONE INTERNA INSTALLATA</b>	<b>5</b>
<b>4.PLANIMETRIA STRUMENTAZIONE MONITORAGGIO</b>	<b>7</b>
<b>5. PLANIMETRIA E SEZIONI ANDAMENTO TETTO DEL TUFO</b>	<b>9</b>
<b>6.FASI LAVORATIVE</b>	<b>11</b>
<b>7.MISURE GEOTECNICHE INCLINOMETRICHE</b>	<b>16</b>
<b>8.MISURE GEOTECNICHE - BARRETTE ESTENSIMETRICHE</b>	<b>45</b>
<b>9.MISURE GEOTECNICHE - CELLE DI CARICO TOROIDALI</b>	<b>64</b>
<b>10.MISURE TOPOGRAFICHE - MIRE OTTICHE</b>	<b>73</b>
<b>ALLEGATO 1 – MANUTENZIONE</b>	<b>134</b>


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## 1. PREMESSA

Nell'ambito della realizzazione della nuova Metropolitana di Napoli (**Linea 6, tratta Mergellina - Municipio**) è prevista una rete di monitoraggio e controllo finalizzata alla periodica registrazione delle grandezze fisiche di maggiore interesse e agli effetti legati alle attività di cantiere.

In generale, per le stazioni il sistema di monitoraggio prevede i seguenti strumenti:

- Capisaldi di livellazione, posti sul terreno e sui marciapiedi degli edifici adiacenti il pozzo di stazione;
- Staffe livellometriche, poste sugli edifici adiacenti il pozzo di stazione;
- Piezometri Casagrande o a tubo aperto, realizzati in prossimità delle paratie del pozzo di stazione;
- Piezometri elettrici, realizzati all'interno del pozzo di stazione;
- Inclinatori ed estenso-inclinatori, realizzati in prossimità delle paratie del pozzo di stazione;
- Inclinatori, realizzati nelle paratie perimetrali del pozzo di stazione;
- Mire ottiche, poste sulle paratie all'interno del pozzo di stazione
- Celle di carico, disposte sui puntoni metallici di contrasto;
- Barrette estensimetriche, disposte sui puntoni metallici di contrasto e/o all'interno delle paratie perimetrali del pozzo di stazione.

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L'installazione di tale strumentazione impiegata lungo le aree di cantiere (stazione Chiaia, S. Pasquale, Arco Mirelli e Municipio) risulta completa all'interno ed all'esterno dei pozzi di stazione; diversamente, quella relativa alla Galleria di linea è ad oggi in fase d'installazione.

Di seguito saranno restituiti i grafici frutto delle letture svolte nel cantiere, relativi alla sola strumentazione interna:

- Inclinatori, Estensimetri, Piezometri, acquisizione elaborazione restituzione dati competenza Tre Esse.
- Staffe di livellazione, Capisaldi acquisizione competenza ATI, elaborazione restituzione dati competenza Tre Esse.


## **2. DATI GENERALI**

Commessa: Linea 6 – Metropolitana Di Napoli

Impresa esecutrice: Chiaia S.c.a.r.l.

Monitoraggio: Tre Esse Engineering S.r.l.



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### 3. STRUMENTAZIONE INTERNA INSTALLATA

La nomenclatura della strumentazione di monitoraggio ha subito una variazione rispetto all'installazione, necessaria per rendere uniforme ed univoco il nome di ogni strumento installato lungo tutta la tratta.

**Esempio:**                    **CH\_P50\_S1;**

la prima serie di simboli identifica la stazione di monitoraggio (in questo caso San Pasquale),

la seconda è identificativa del numero di pannello monitorato,

la terza corrisponde al tipo di barretta estensimetrica installata (S sta per Strain gauge – corda vibrante) e al numero progressivo della barretta (1,2,..).

#### Elenco strumentazione installata e funzionante.

- n°4 Inclinometri

CH\_IN\_P13

CH\_IN\_P50

CH\_IN\_P67

CH\_IN\_P81

- n°24 Barrette Estensimetriche a corda vibrante per metallo


CH\_P13\_S1-6

CH\_P50\_S1-6

CH\_P67\_S1-6

CH\_PU1\_S1-4

CH\_PU2\_S5-8

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- n°11 Celle di Carico

Primo Ordine di Tiranti

CH\_CC1-4

Secondo Ordine di Tiranti

CH\_CC5-9

Puntoni

CH\_PU1\_CC

CH\_PU2\_CC

- n°64 Mire Ottiche

Primo Ordine

CH\_MO1-16

Secondo Ordine

CH\_MO17-32

Terzo Ordine


CH\_MO33-40

Quarto Ordine

CH\_MO36-44

Supplementari

CH\_MO45-64

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#### **4. PLANIMETRIA STRUMENTAZIONE MONITORAGGIO**

Nella figura successiva viene rappresentata la planimetria del cantiere e la disposizione degli strumenti previsti per il monitoraggio geotecnico installati internamente al pozzo stazione.

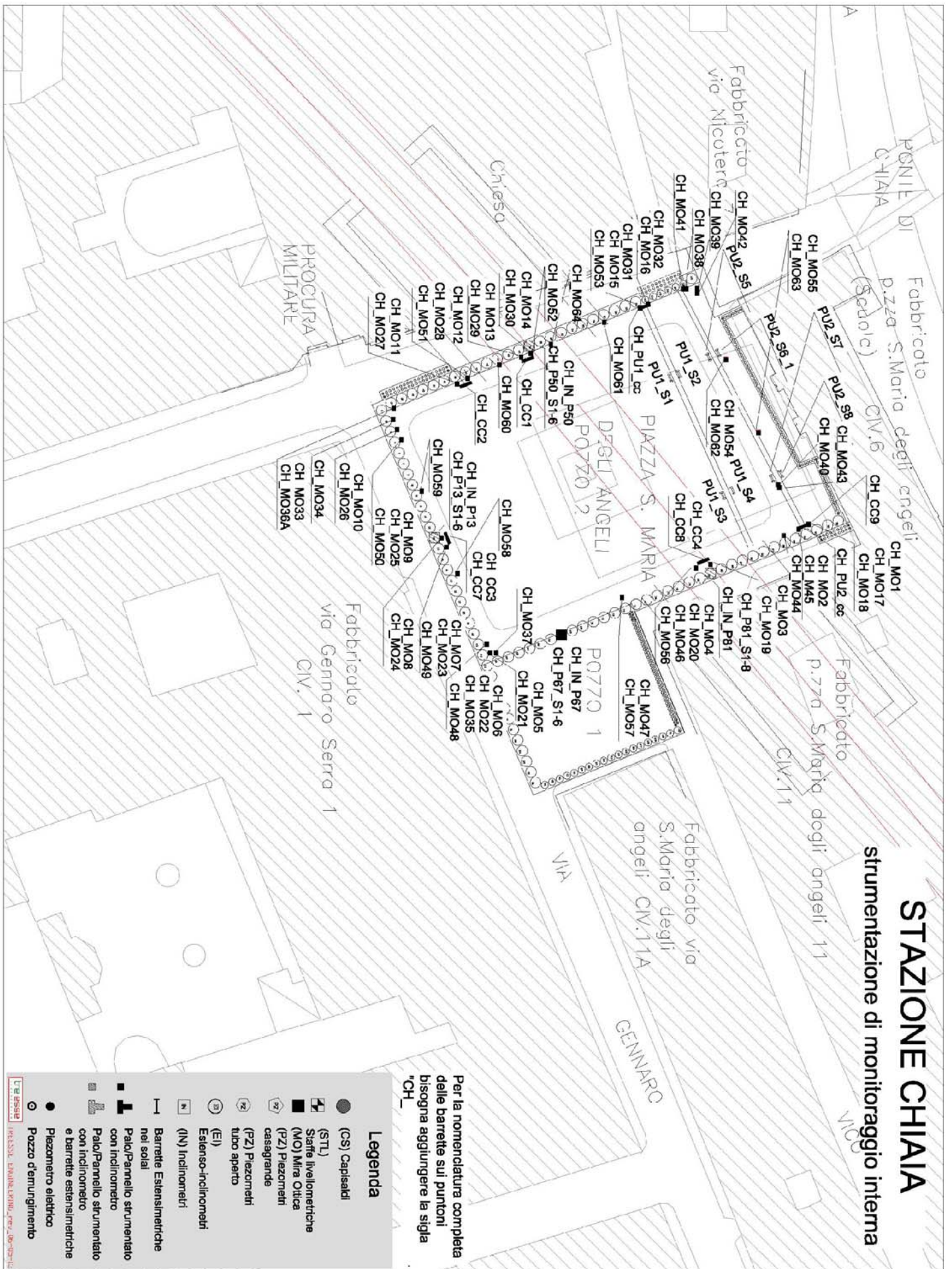



Figura 4.1.: Planimetria pozzo stazione, raffigurante la disposizione della strumentazione di monitoraggio geotecnico interno installata.

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## 5. PLANIMETRIA E SEZIONI ANDAMENTO TETTO DEL TUFO

Nella figura 5.1 viene rappresentata la Planimetria pozzo stazione, nella quale è riportata la collocazione di alcuni sondaggi effettuati per la campagna propedeutica alla stesura del Progetto Definitivo (2005).

Nella figura 5.2 viene rappresentato l'andamento del tetto del Tufo (lato monte e lato mare) con uno stralcio tratto dall'elaborato grafico del Progetto Definitivo (Stazione Chiaia) allegato alla Relazione Geologica (cod. doc.:LM67F2C0159 – ANNO 2005).



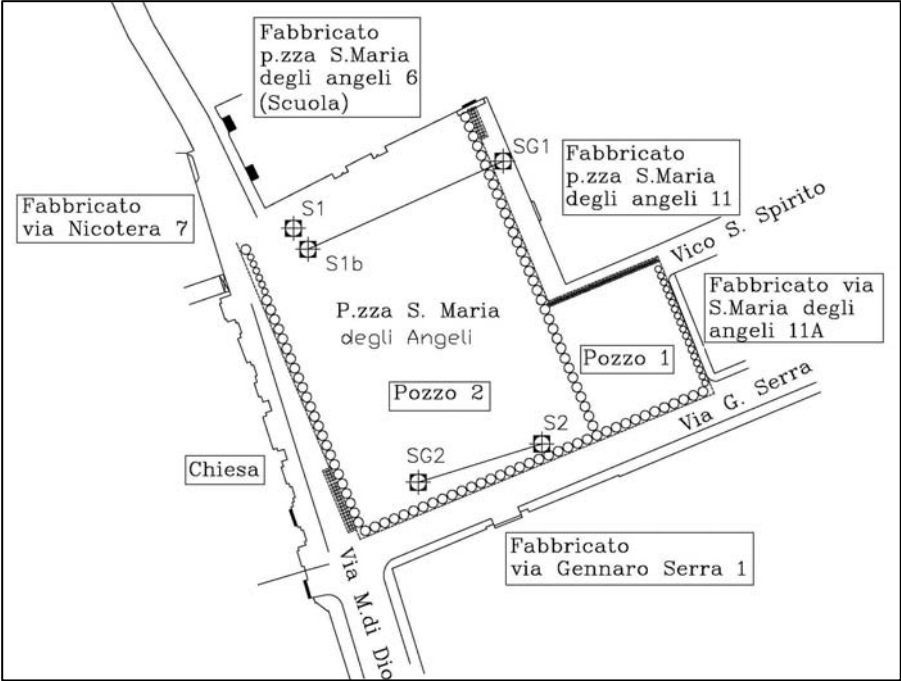


Figura 5.1.: Planimetria pozzo stazione, raffigurante la collocazione di alcuni sondaggi effettuati per la campagna propedeutica alla stesura del Progetto Definitivo (2005).

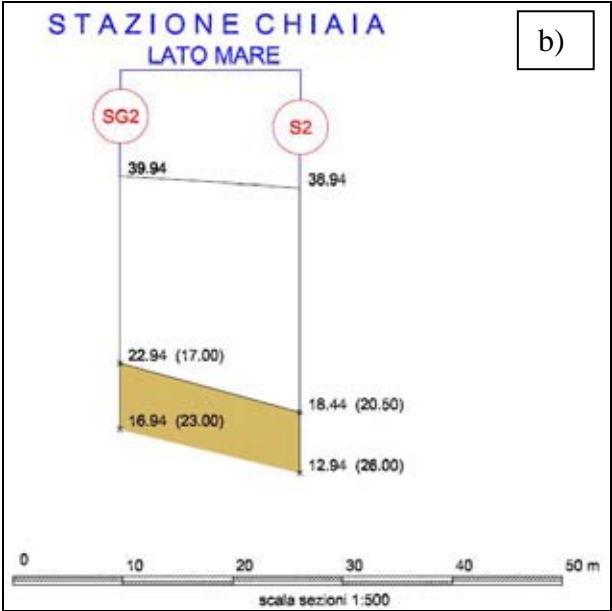
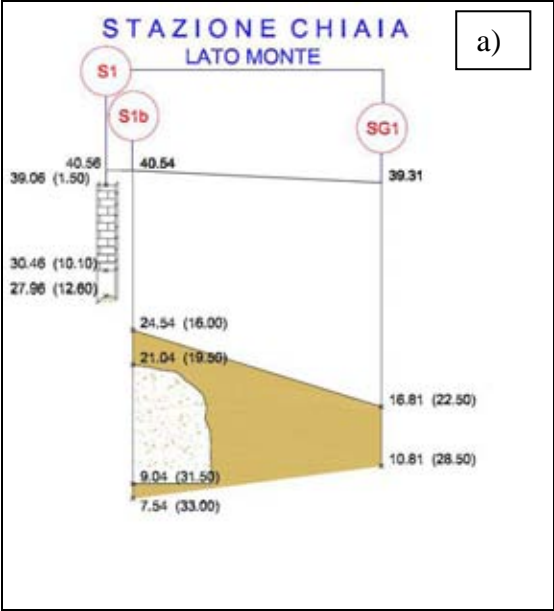



Figura 5.2a e5.2b.: Andamento del tetto del Tufo (lato monte e lato mare) - Stralcio da Elaborato grafico Progetto Definitivo Stazione Chiaia allegato alla Relazione Geologica (cod. doc.: LM67F2C0159 – ANNO 2005).


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## **1. 6. FASI LAVORATIVE**

Nel presente capitolo vengono espone le principali lavorazioni in svolgimento nel cantiere di Chiaia (Metropolitana di Napoli - Linea 6).

Le indicazioni riportate, aggiornate al periodo di riferimento del presente report, sono frutto sia delle osservazioni in sito dei tecnici Tre Esse sia delle informazioni comunicateci dall'Impresa Esecutrice.

Nella planimetria e nelle sezioni realizzate dalla Scrivente, di seguito riportate, sono state individuate e stimate qualitativamente le aree interessate dalle lavorazioni ritenute significative ai fini del monitoraggio, che rispetto al periodo d'osservazione precedente non hanno subito variazioni rilevanti. La planimetria in figura 6.1 raffigura il pozzo stazione, con la suddivisione in aree di lavoro. Riferendoci alle sezioni A-A'(fig.6.2), B-B'(fig.6.3), si osserva quanto di seguito riportato. Le principali fasi lavorative hanno riguardato il proseguimento degli scavi per l'approfondimento del pozzo stazione, la conclusione dei lavori per l'allargamento della galleria lato san Pasquale e il prosieguo degli scavi per l'allargo lato Municipio. Sul lato prossimo alla scuola, longitudinalmente alla facciata principale dell'edificio sono presenti 2 puntoni in acciaio di contrasto fra le paratie di pannelli. Le paratie di pannelli sono inoltre collegate fra di loro a varie quote grazie all'utilizzo di travi in acciaio tirantate.

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La strumentazione geotecnica prossima alle sezioni è la seguente:

- tubi inclinometrici CH\_IN1, CH\_IN\_P67, tubo piezometrico (a tubo aperto) CH\_PZ2, per la sezione A-A'
- tubo estenso-inclinometrico CH\_EI1/ES1 e inclinometrico CH\_IN3, CH\_IN4, CH\_PZ3 per la sezione B-B'



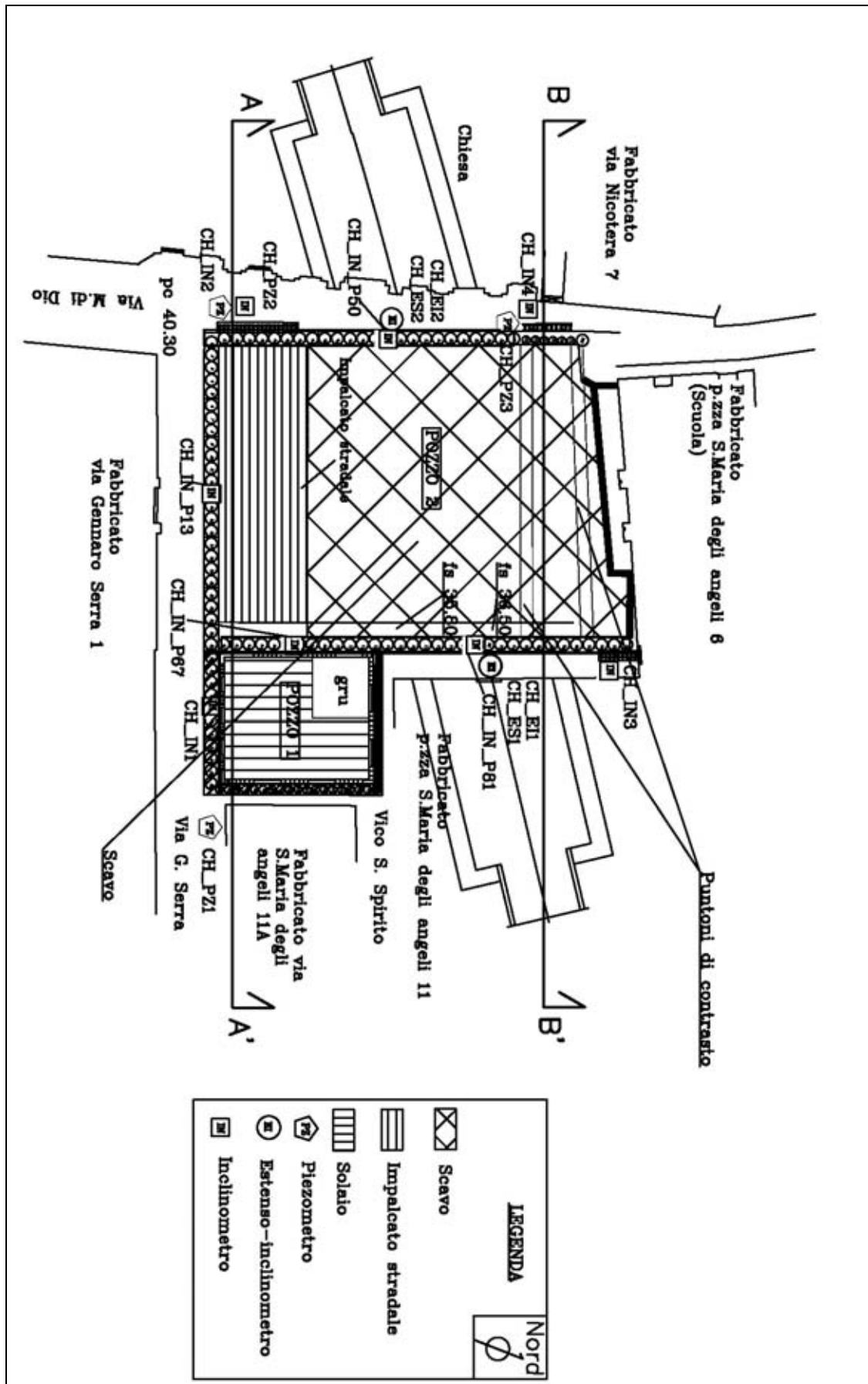


Figura 6.1.: Planimetria pozzo stazione, raffigurante la suddivisione in aree di lavoro.

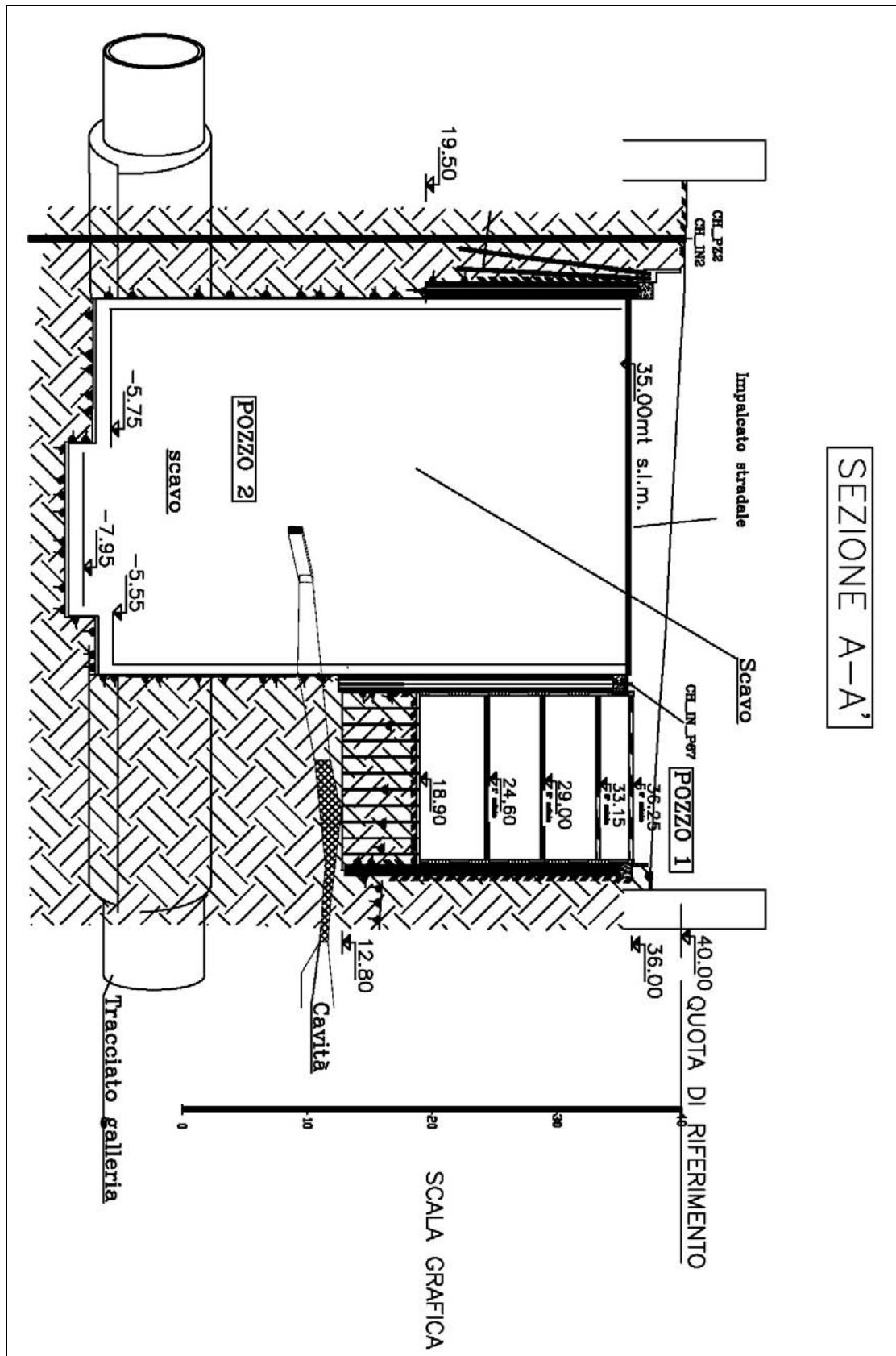


Figura 6.2.: Sezione A-A' pozzo stazione, raffigurante la suddivisione in aree di lavoro.

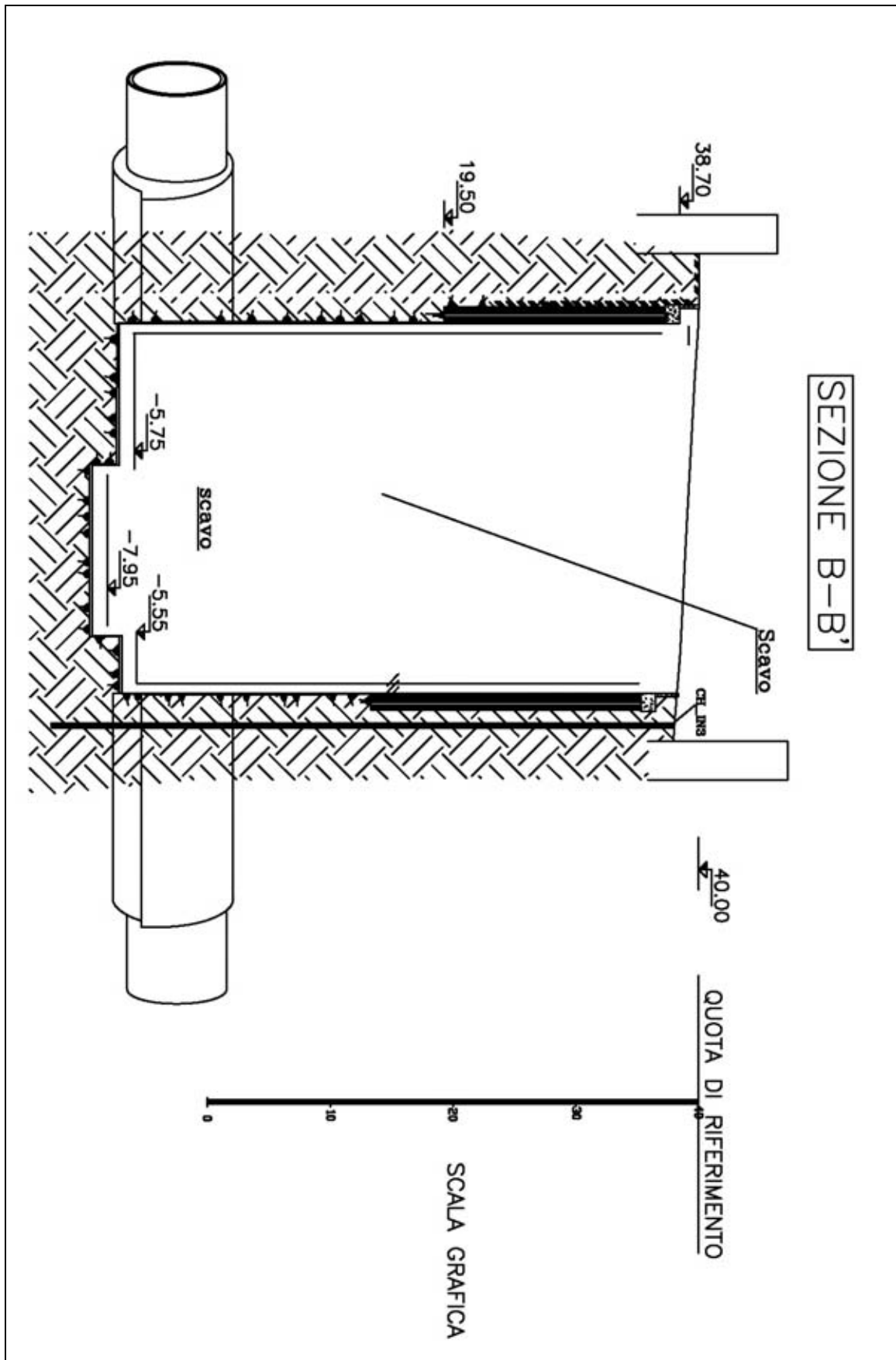



Figura 6.3.: Sezione B-B' pozzo stazione, raffigurante la suddivisione in aree di lavoro.

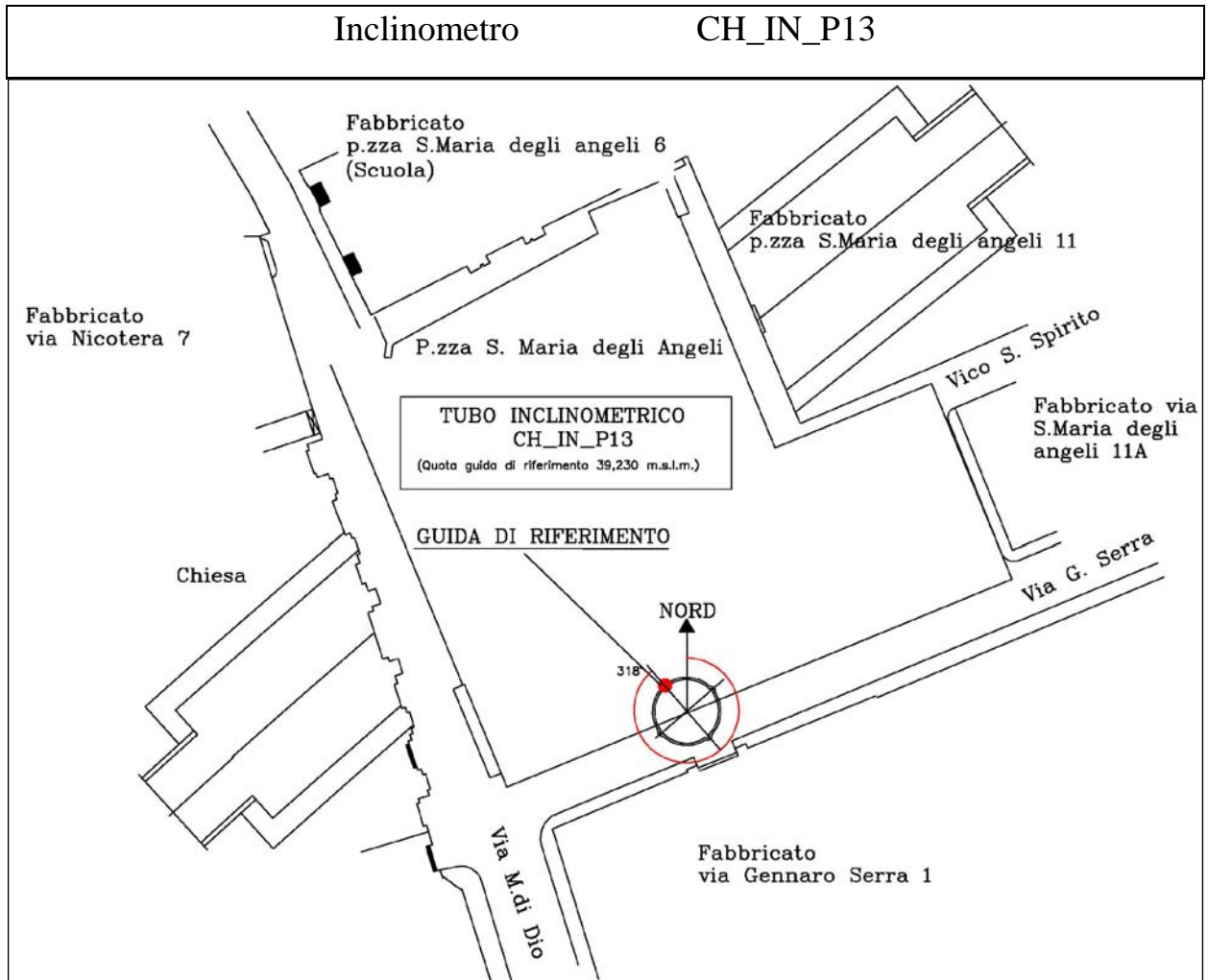
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## 7. MISURE GEOTECNICHE – INCLINOMETRICHE

Gli inclinometri sono strumenti di controllo dei movimenti e delle deformazioni dei terreni nonché delle variazioni di assetto delle strutture. I rilievi consistono nella misura della variazione delle inclinazioni rispetto alla verticale di punti significativi, dall'inclinazione, mediante integrazione numerica si risale agli spostamenti sul piano x-y. La strumentazione di base è composta da tubo inclinometrico a sezione circolare provvisto di scanalature con funzione di guida per la sonda, sonda inclinometrica, cavo e centralina di misura.

Tabella riepilogativa per gli inclinometri installati in cantiere

NOME	TIPOLOGIA STRUMENTO	DATA INSTALLAZIONE	DISPONIBILITA' LETTURA			NOTE
			DATA LETTURA DI ZERO	PERIODO INTERRUZIONE	DATA FINE ATTIVITA'	
CH_IN_P13	INCLINOMETRO	06/12/10	22/12/10			
CH_IN_P50	INCLINOMETRO	21/12/10	21/01/11			
CH_IN_P67	INCLINOMETRO	18/11/09	25/11/09			
CH_IN_P81	INCLINOMETRO	21/12/10	21/01/11			



<b>Affidabilità strumentale</b> A.T.I. LM6 – TreEsse	<b>Congruenza progettuale</b> C.T. ATI LM6 – C.T. Monitoraggio
buono <input type="checkbox"/>	congruente <input type="checkbox"/>
da rivedere <input type="checkbox"/>	non congruente, da valutare <input type="checkbox"/>
da scartare <input type="checkbox"/>	non congruente con implicazioni sulla sicurezza <input type="checkbox"/>

NOTE

Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P13**  
 Azimut di riferimento **318**  
 Quota guida rif. (m.s.l.m.) **39,23**  
 Data lettura di zero **22/12/2010**  
 Data posa in opera **06/12/2010**

Misura **79** in data **19/11/2013 10.41**

SPOSTAMENTI LOCALI (mm)				
PROFONDITA (m.s.l.m.)	EST	NORD	RISULTANTE	AZIMUT
38,7	0,254	0,164	0,302	57,202
37,7	0,223	-0,170	0,280	127,364
36,7	0,185	-0,390	0,432	154,588
35,7	0,037	-0,259	0,261	171,795
34,7	0,075	-0,191	0,206	158,489
33,7	0,024	-0,188	0,190	172,846
32,7	-0,139	-0,054	0,149	248,907
31,7	-0,220	-0,186	0,288	229,869
30,7	-0,211	-0,080	0,226	249,329
29,7	-0,289	-0,071	0,298	256,236
28,7	-0,318	-0,010	0,318	268,245
27,7	-0,320	-0,109	0,338	251,254
26,7	-0,397	0,144	0,422	289,894
25,7	-0,338	0,234	0,412	304,680
24,7	-0,496	0,374	0,621	307,064
23,7	-0,535	0,336	0,632	302,187
22,7	-0,479	0,477	0,675	314,876
21,7	-0,501	0,320	0,594	302,530
20,7	-0,490	0,489	0,692	314,958
19,7	-0,372	0,461	0,592	321,094

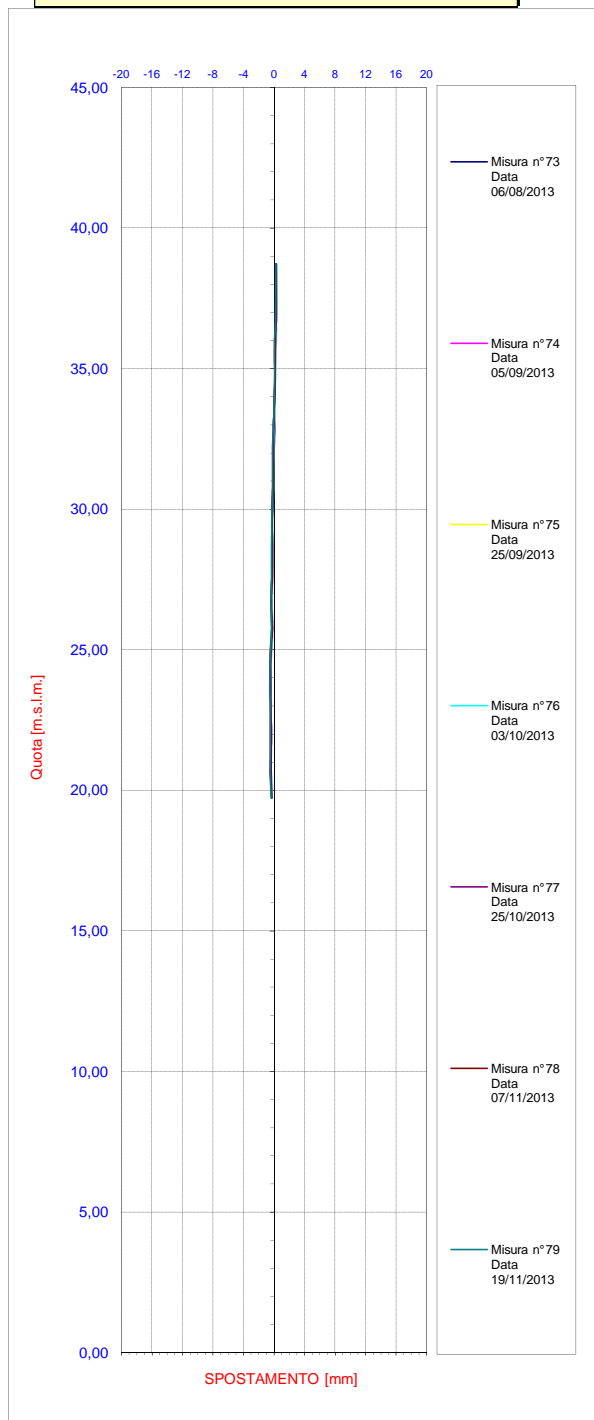
SPOSTAMENTI INTEGRALI (mm)				
PROFONDITA (m.s.l.m.)	EST	NORD	RISULTANTE	AZIMUT
38,7	-4,307	1,292	4,496	286,694
37,7	-4,561	1,128	4,698	283,890
36,7	-4,784	1,298	4,957	285,181
35,7	-4,969	1,688	5,248	288,766
34,7	-5,006	1,947	5,372	291,249
33,7	-5,082	2,138	5,513	292,820
32,7	-5,105	2,326	5,610	294,497
31,7	-4,967	2,380	5,507	295,602
30,7	-4,746	2,566	5,395	298,394
29,7	-4,535	2,645	5,250	300,257
28,7	-4,246	2,716	5,040	302,611
27,7	-3,927	2,726	4,781	304,765
26,7	-3,607	2,835	4,588	308,164
25,7	-3,210	2,691	4,189	309,974
24,7	-2,872	2,457	3,779	310,550
23,7	-2,376	2,083	3,160	311,235
22,7	-1,842	1,746	2,538	313,477
21,7	-1,363	1,270	1,863	312,970
20,7	-0,862	0,950	1,283	317,786
19,7	-0,372	0,461	0,592	321,094



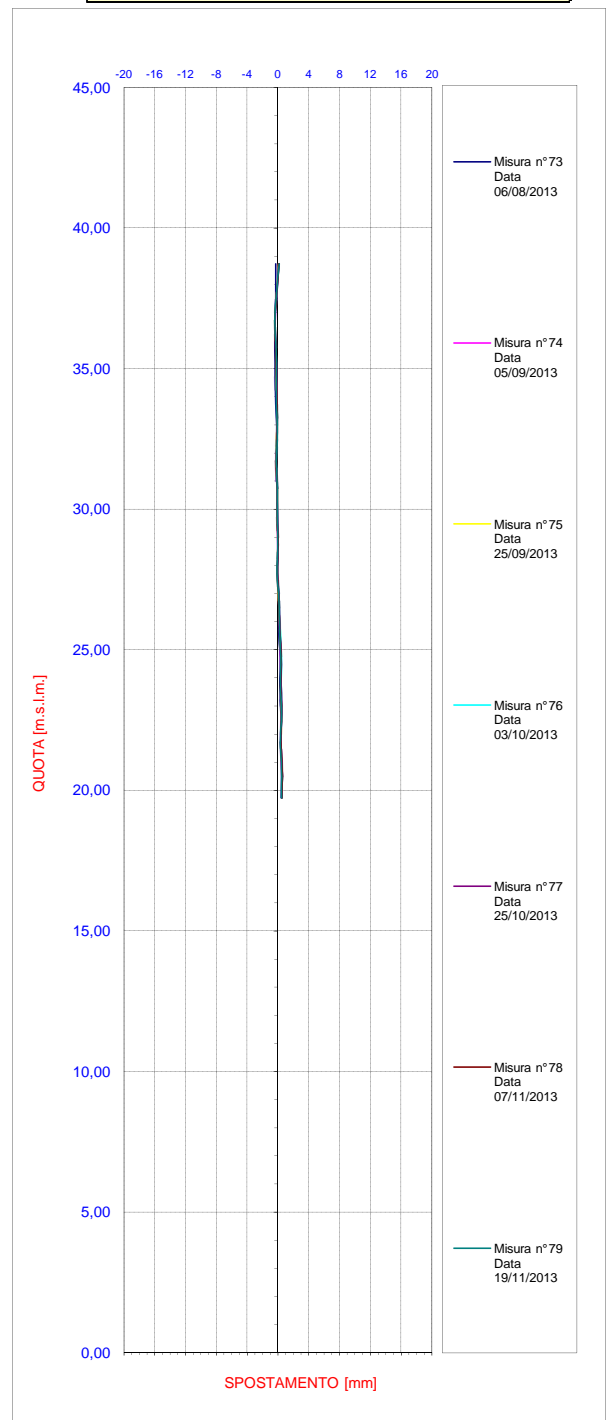
Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P13**  
 Azimut di riferimento **318**  
 Quota guida rif. (m.s.l.m.) **39,23**  
 Data lettura di zero **22/12/2010**  
 Data posa in opera **06/12/2010**

Ultima Misura **79** in data **19/11/2013 10.41**

**Spostamenti Differenziali Locali  
OVEST- (valori negativi) / EST + (valori positivi)**

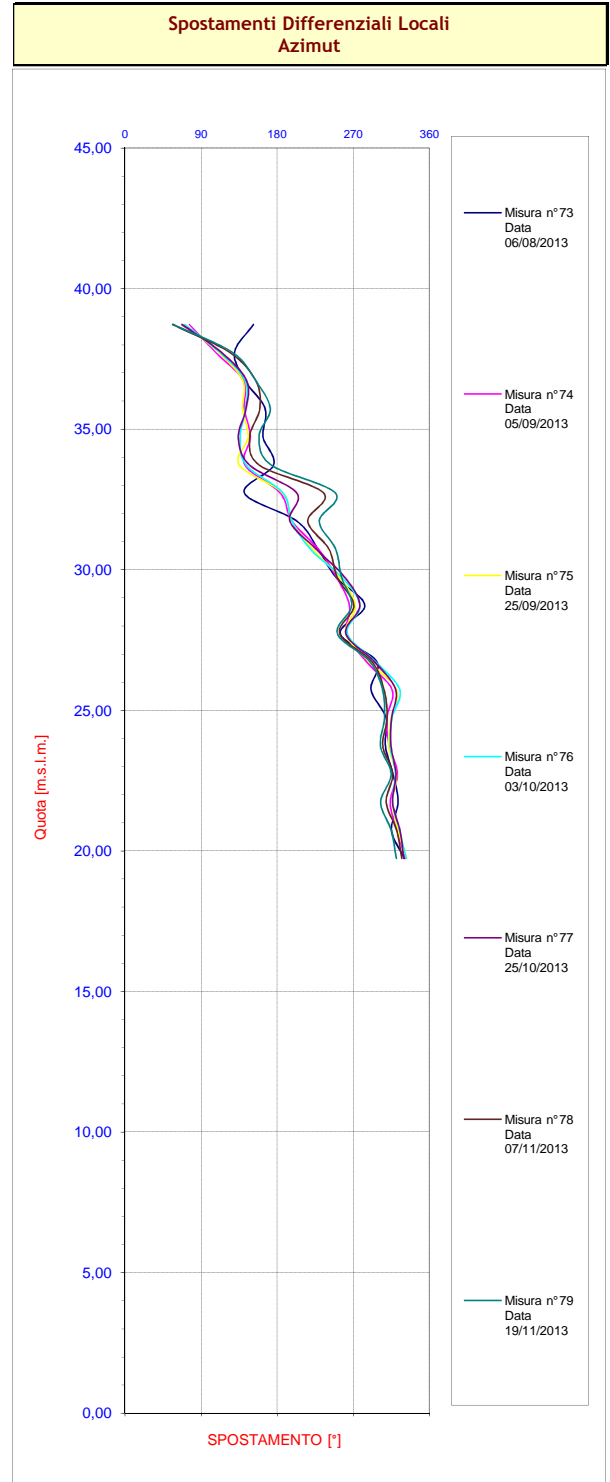
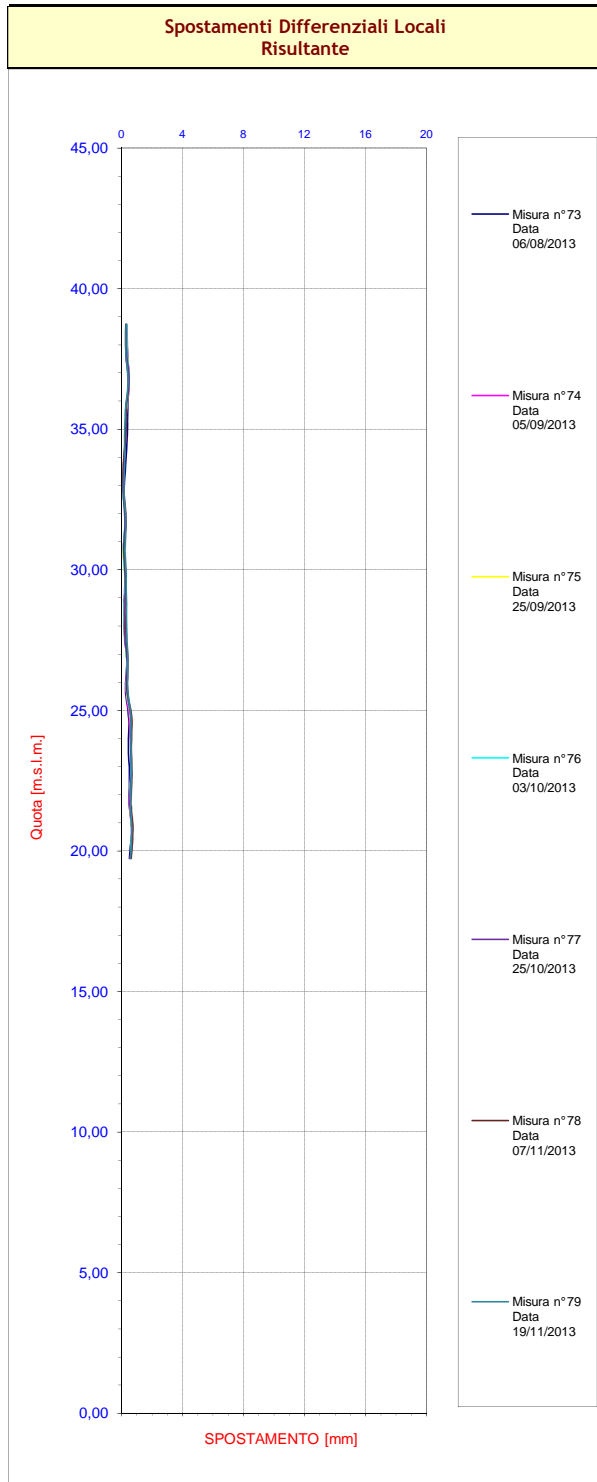


**Spostamenti Differenziali Locali  
SUD - (valori negativi) / NORD + (valori positivi)**



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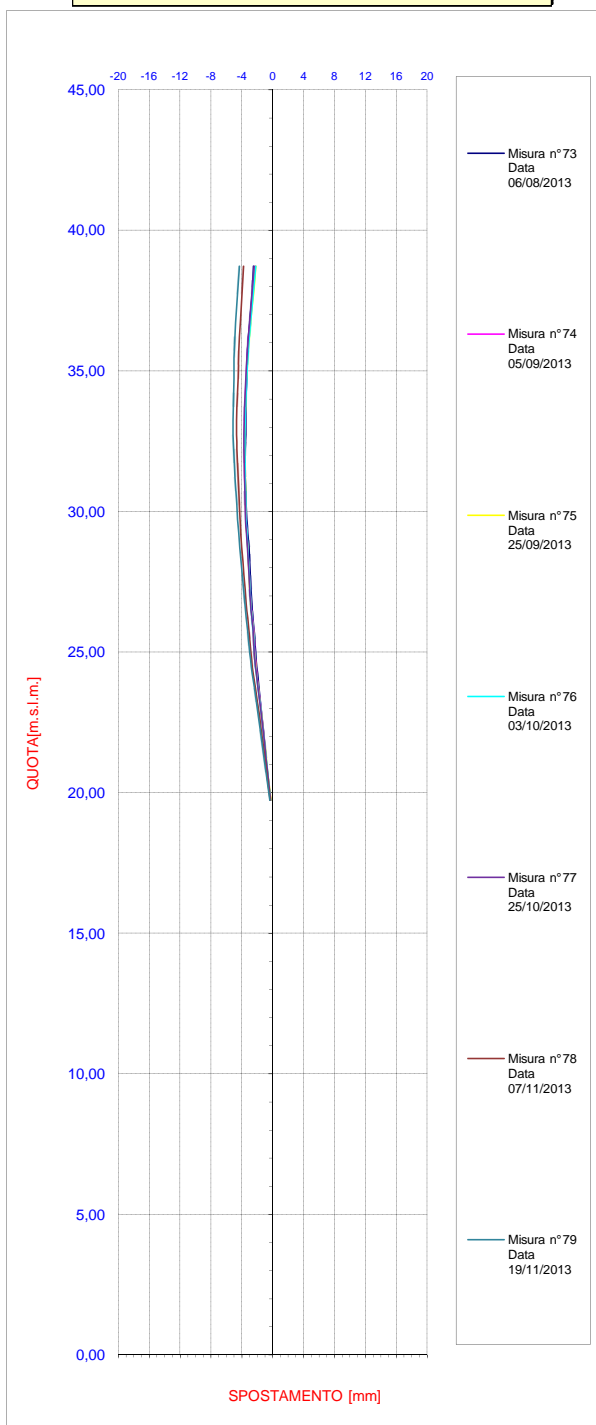




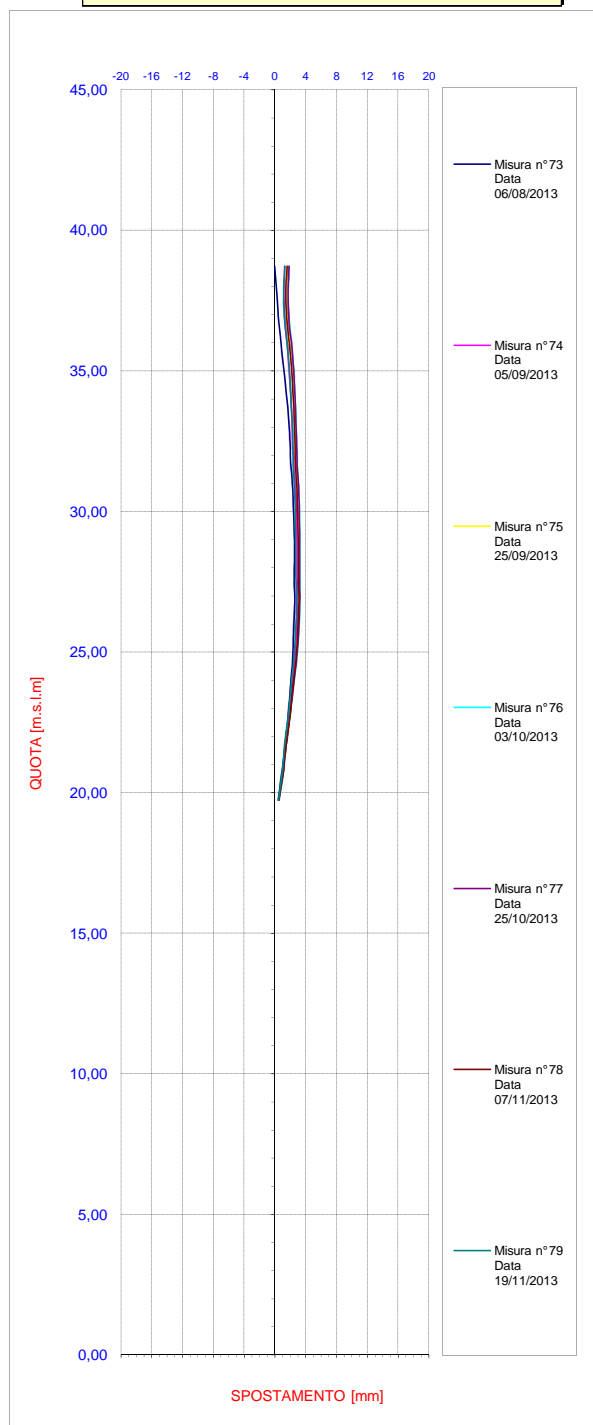
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Spostamenti Differenziali Integrali  
OVEST- (valori negativi) / EST + (valori positivi)



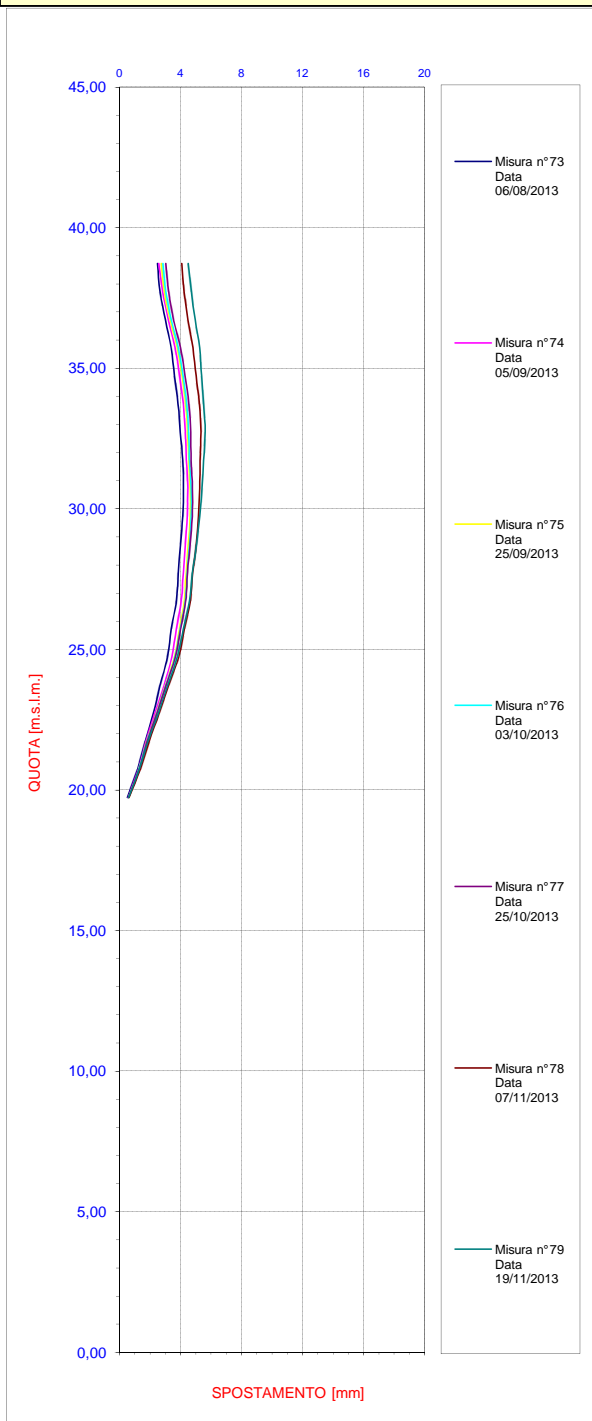
Spostamenti Differenziali Integrali  
SUD - (valori negativi) / NORD + (valori positivi)



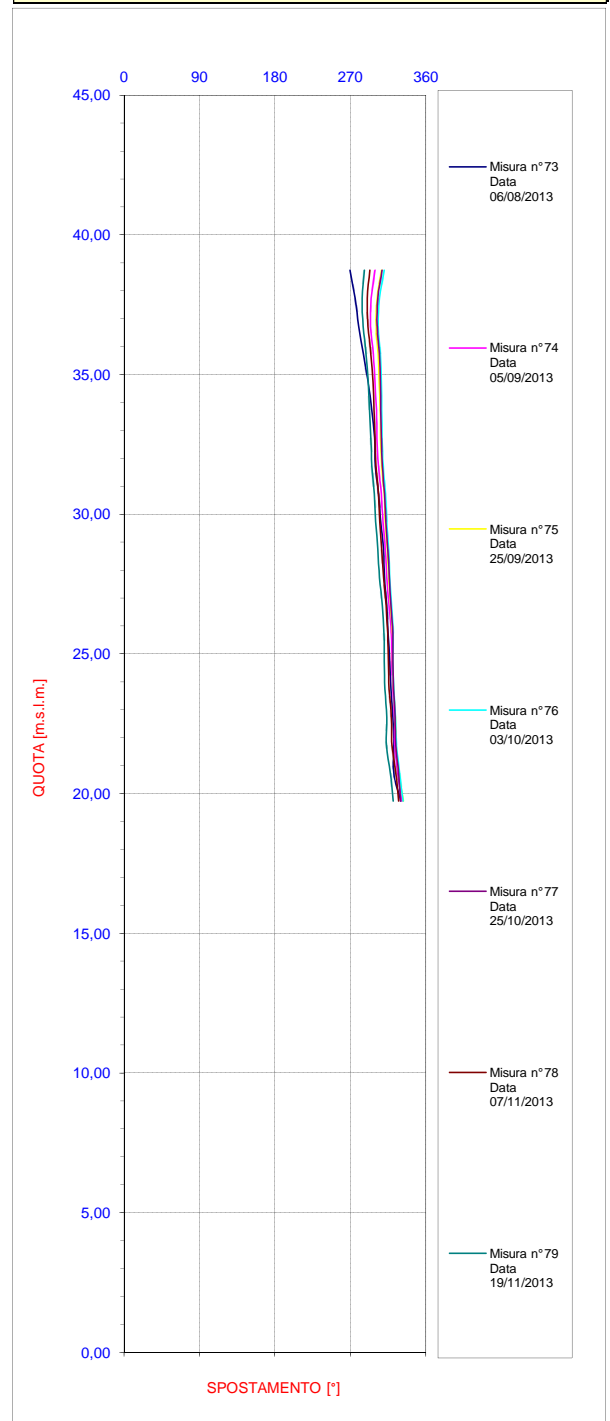
Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P13**  
 Azimut di riferimento **318**  
 Quota guida rif. (m.s.l.m.) **39,23**  
 Data lettura di zero **22/12/2010**  
 Data posa in opera **06/12/2010**

Ultima Misura **79** in data **19/11/2013 10.41**

Spostamenti Differenziali Integrali Risultante



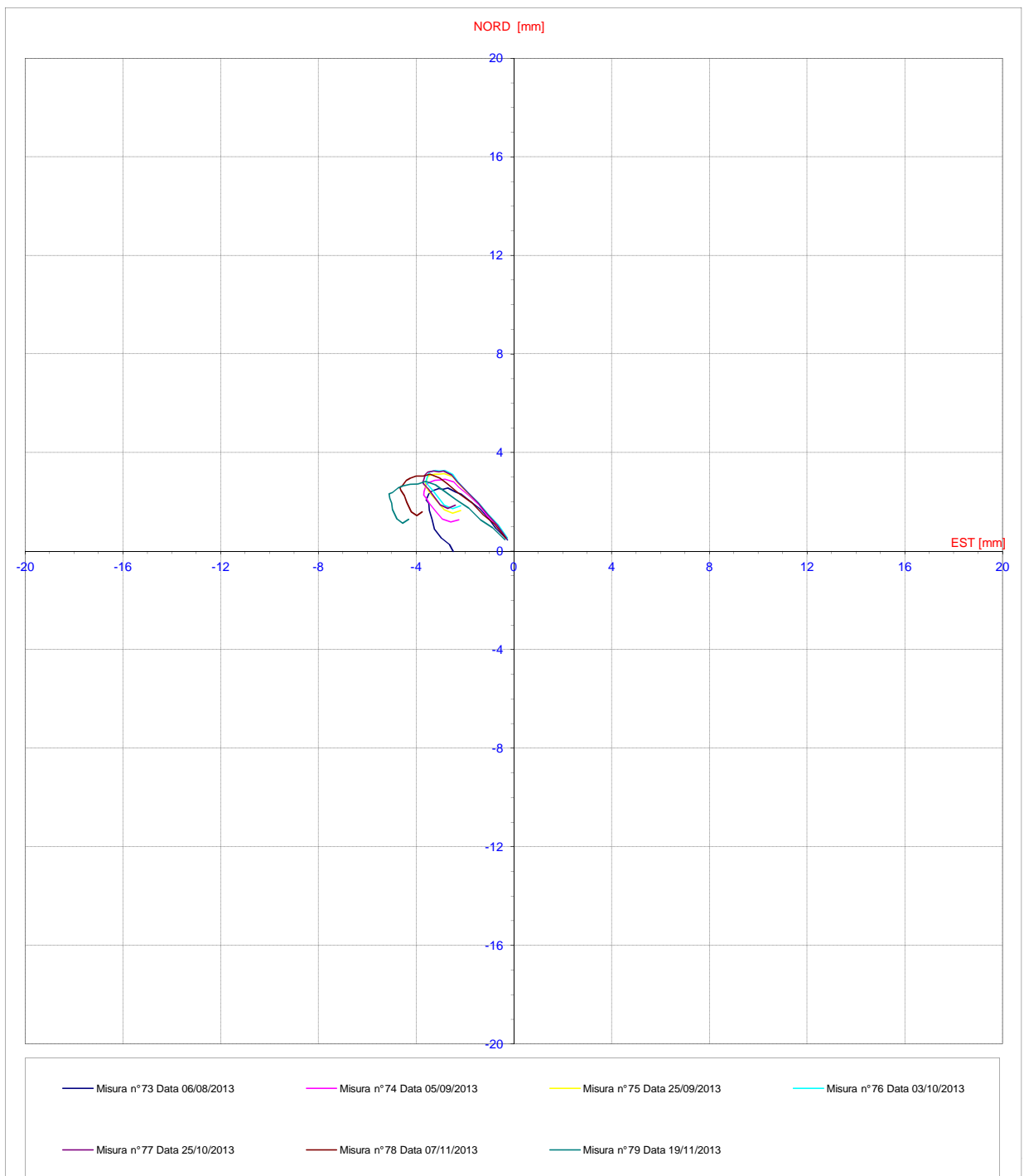
Spostamenti Differenziali Integrali Azimut



Ubicazione	STAZIONE CHIAIA
Tipo Strumento	Tubo inclinometrico
Nome tubo	CH_IN_P13
Azimut di riferimento	318
Quota guida rif. (m.s.l.m.)	39,23
Data lettura di zero	22/12/2010
Data posa in opera	06/12/2010

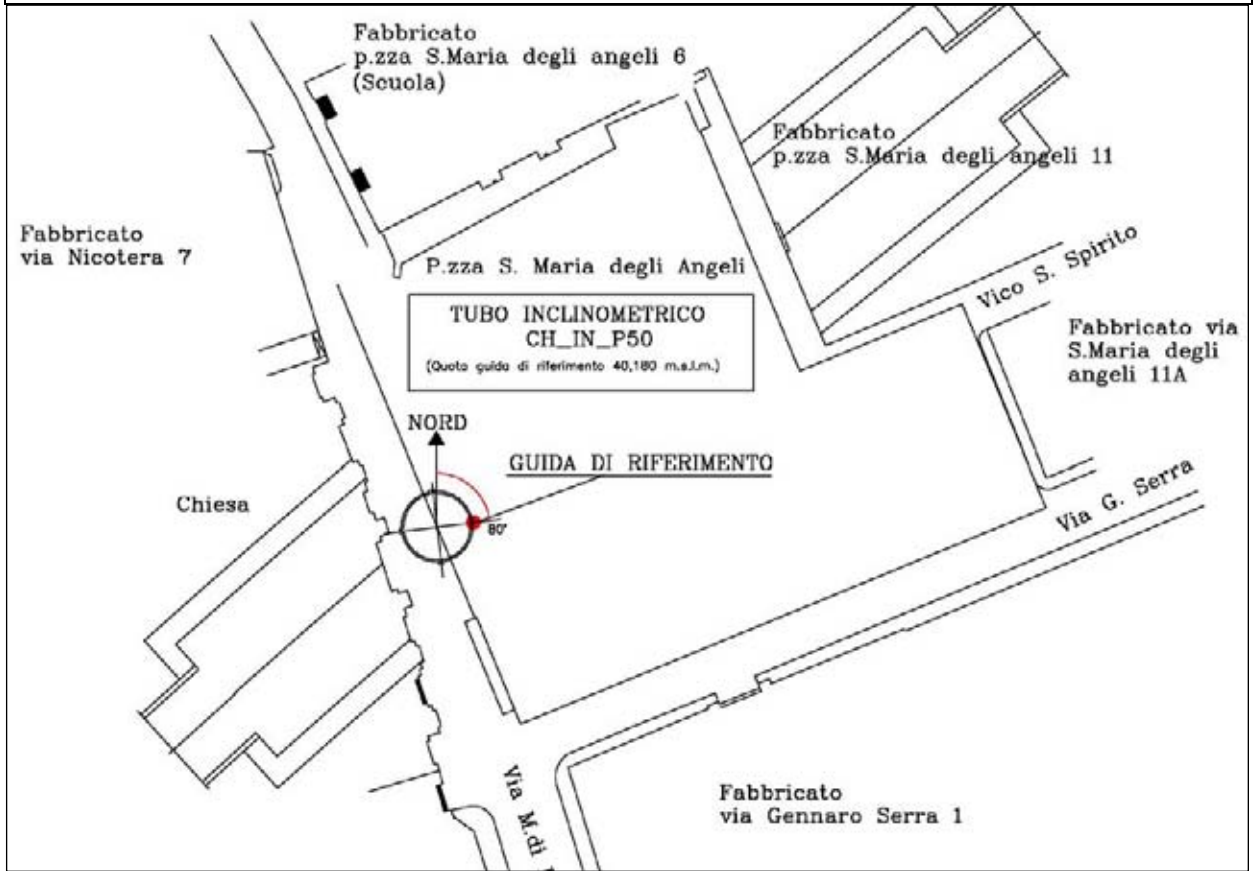
Ultima Misura	79	in data	19/11/2013 10.41
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Spostamenti Differenziali Integrali  
Diagramma polare



Inclinometro

CH\_IN\_P50



Affidabilità strumentale  
A.T.I. LM6 – TreEsse

buono  
da rivedere  
da scartare

X

Congruenza progettuale  
C.T. ATI LM6 – C.T. Monitoraggio

congruente  
non congruente, da valutare  
non congruente con implicazioni sulla  
sicurezza


**NOTE**


Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P50**  
 Azimut di riferimento **80**  
 Quota guida rif. (m.s.l.m.) **40,18**  
 Data lettura di zero **21/01/2011**  
 Data posa in opera **21/12/2010**

Misura **84** in data **19/11/2013 11.29**

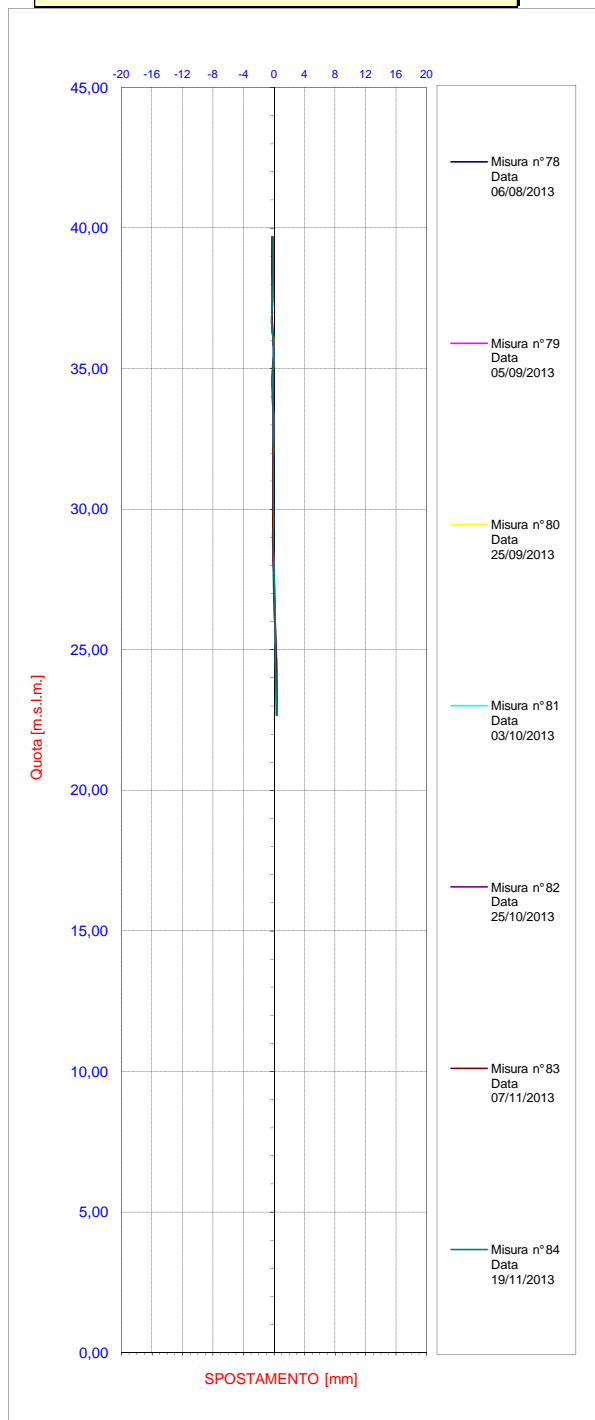
SPOSTAMENTI LOCALI (mm)				
PROFONDITA (m.s.l.m.)	EST	NORD	RISULTANTE	AZIMUT
39,7	-0,113	-0,059	0,128	242,389
38,7	-0,114	0,024	0,116	282,032
37,7	-0,141	0,114	0,181	309,005
36,7	-0,312	0,121	0,335	291,212
35,7	-0,032	0,032	0,046	315,357
34,7	-0,151	0,111	0,188	306,261
33,7	-0,111	0,105	0,152	313,457
32,7	-0,060	0,083	0,103	324,127
31,7	-0,064	0,083	0,104	322,201
30,7	-0,070	0,058	0,091	309,725
29,7	-0,041	0,004	0,041	275,734
28,7	-0,080	0,019	0,083	283,343
27,7	0,029	0,171	0,173	9,806
26,7	0,119	0,115	0,166	46,039
25,7	0,174	0,193	0,260	41,985
24,7	0,200	-0,029	0,202	98,287
23,7	0,257	0,209	0,331	50,883
22,7	0,397	0,170	0,432	66,783

SPOSTAMENTI INTEGRALI (mm)				
PROFONDITA (m.s.l.m.)	EST	NORD	RISULTANTE	AZIMUT
39,7	-0,112	1,524	1,528	355,782
38,7	0,001	1,583	1,583	0,037
37,7	0,115	1,559	1,563	4,207
36,7	0,255	1,445	1,468	10,016
35,7	0,568	1,324	1,441	23,205
34,7	0,600	1,292	1,424	24,901
33,7	0,751	1,181	1,399	32,455
32,7	0,861	1,076	1,378	38,680
31,7	0,922	0,993	1,355	42,880
30,7	0,986	0,910	1,342	47,284
29,7	1,056	0,852	1,357	51,086
28,7	1,096	0,848	1,386	52,273
27,7	1,177	0,829	1,439	54,835
26,7	1,147	0,658	1,323	60,150
25,7	1,028	0,543	1,162	62,145
24,7	0,854	0,350	0,922	67,725
23,7	0,653	0,379	0,755	59,889
22,7	0,397	0,170	0,432	66,783

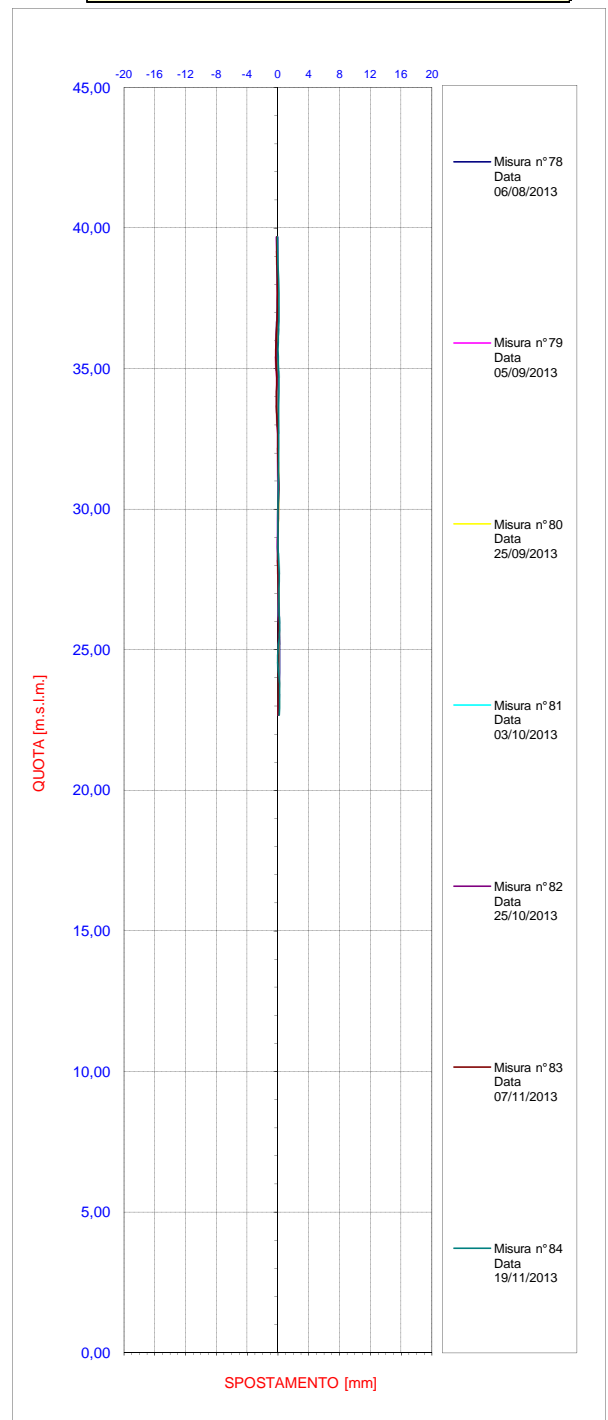
Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P50**  
 Azimut di riferimento **80**  
 Quota guida rif. (m.s.l.m.) **40,18**  
 Data lettura di zero **21/01/2011**  
 Data posa in opera **21/12/2010**

Ultima Misura **84** in data **19/11/2013 11.29**

**Spostamenti Differenziali Locali  
OVEST- (valori negativi) / EST + (valori positivi)**

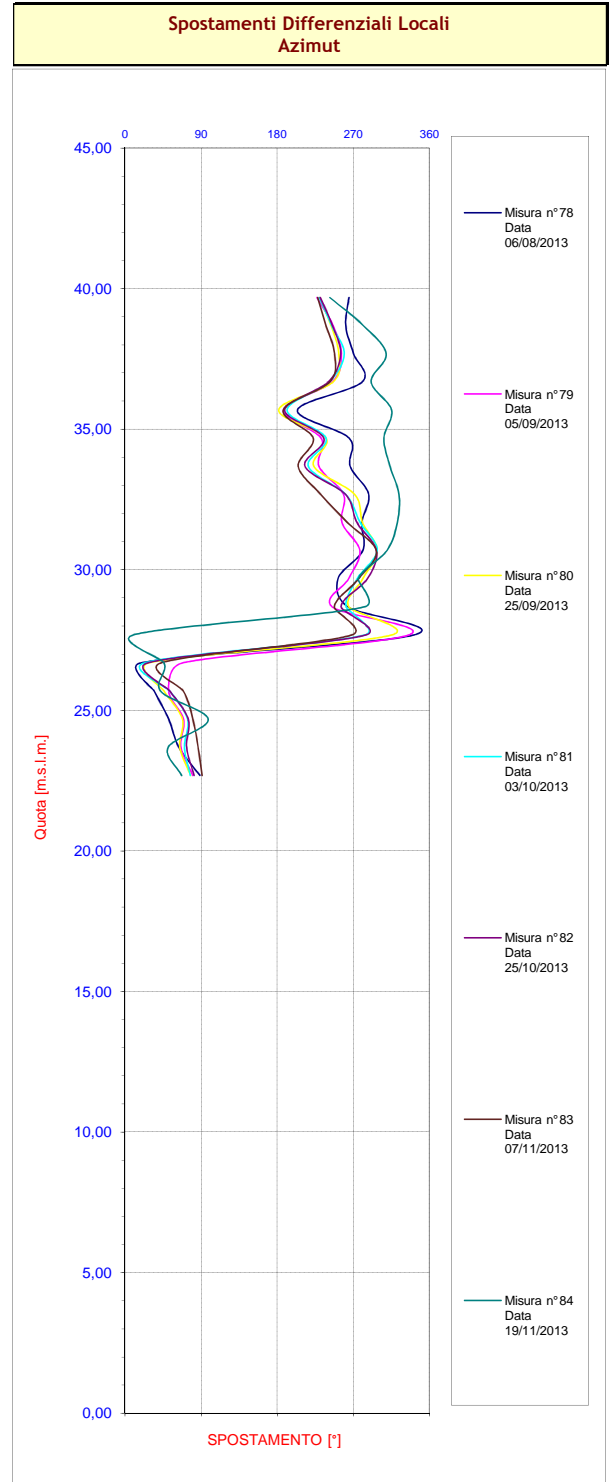
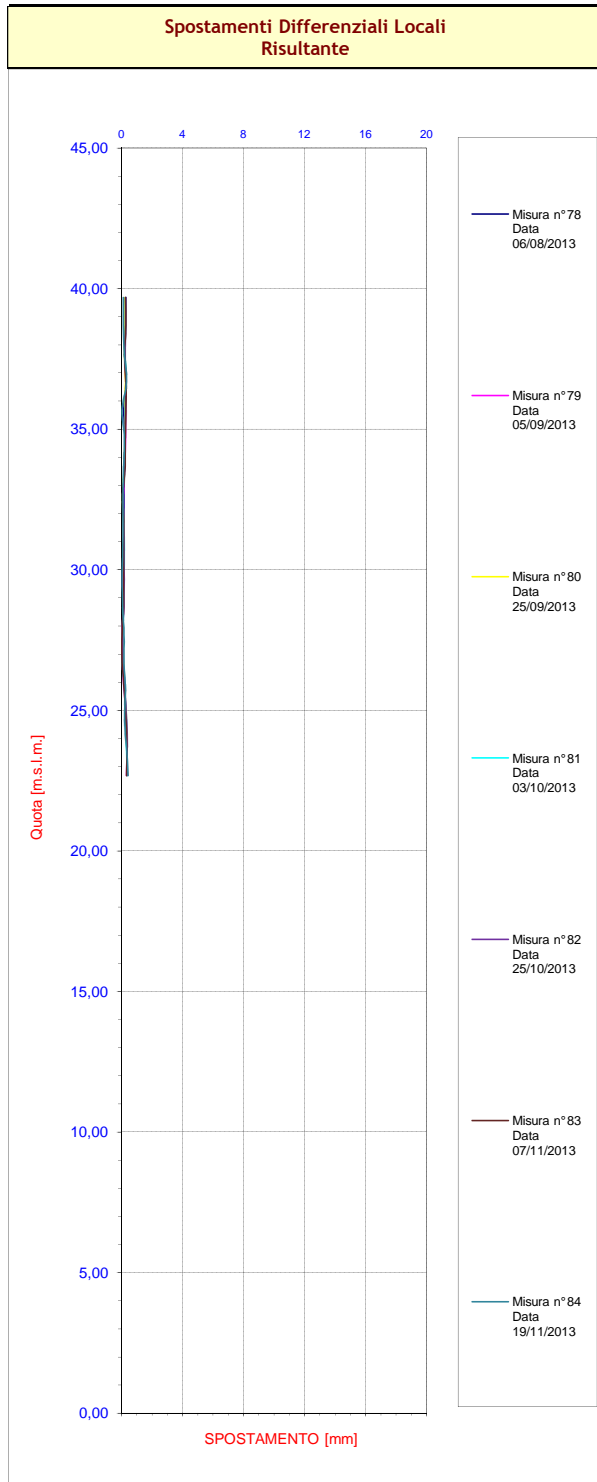


**Spostamenti Differenziali Locali  
SUD - (valori negativi) / NORD + (valori positivi)**



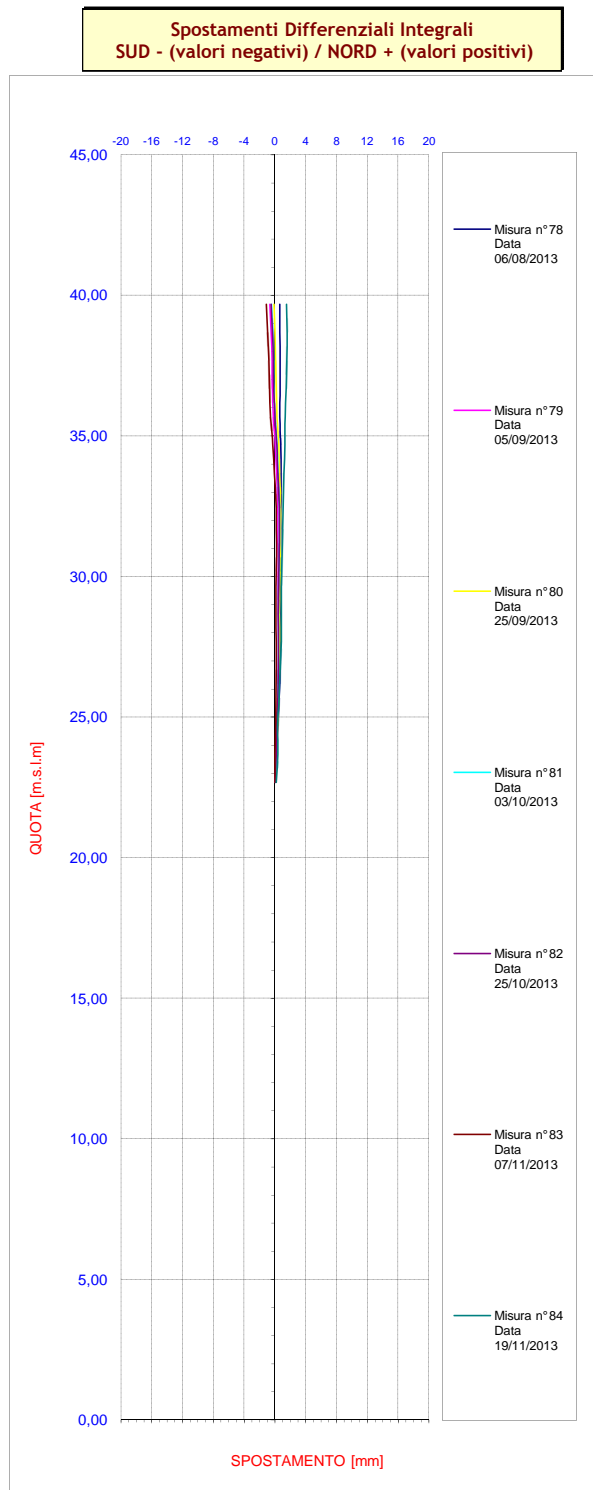
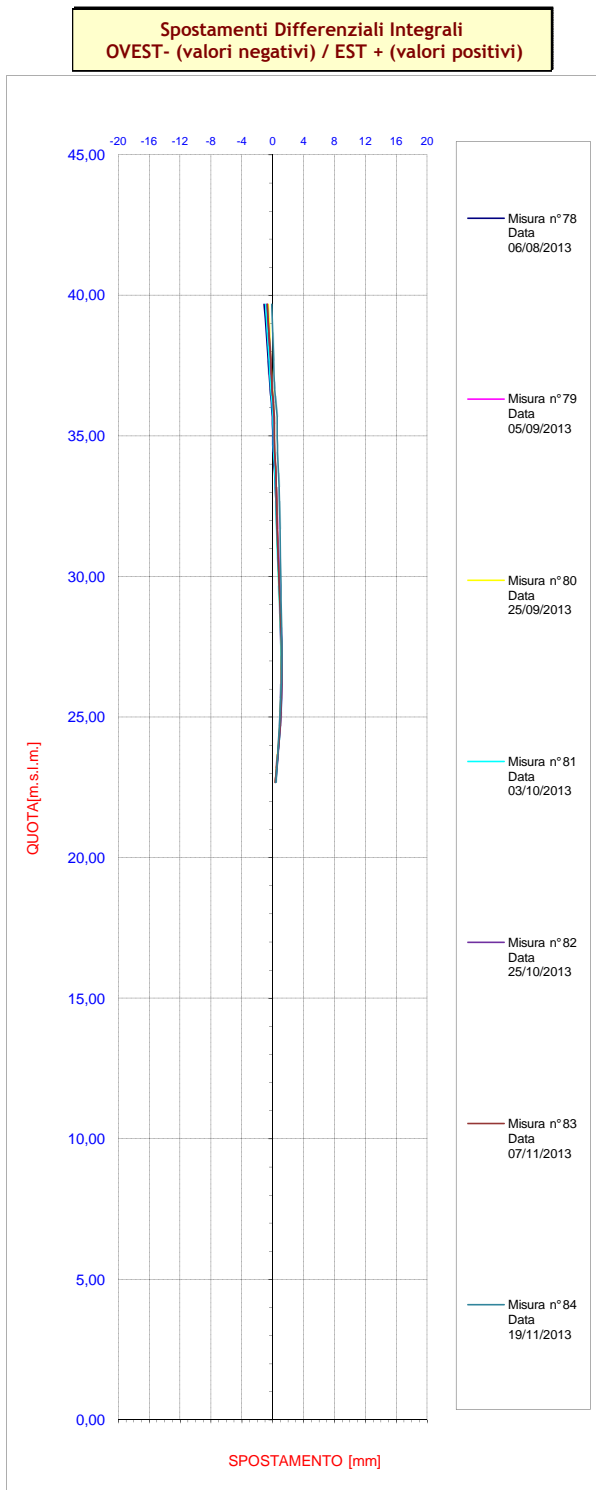
Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P50**  
 Azimut di riferimento **80**  
 Quota guida rif. (m.s.l.m.) **40,18**  
 Data lettura di zero **21/01/2011**  
 Data posa in opera **21/12/2010**

Ultima Misura **84** in data **19/11/2013 11.29**



Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P50**  
 Azimut di riferimento **80**  
 Quota guida rif. (m.s.l.m.) **40,18**  
 Data lettura di zero **21/01/2011**  
 Data posa in opera **21/12/2010**

Ultima Misura **84** in data **19/11/2013 11.29**

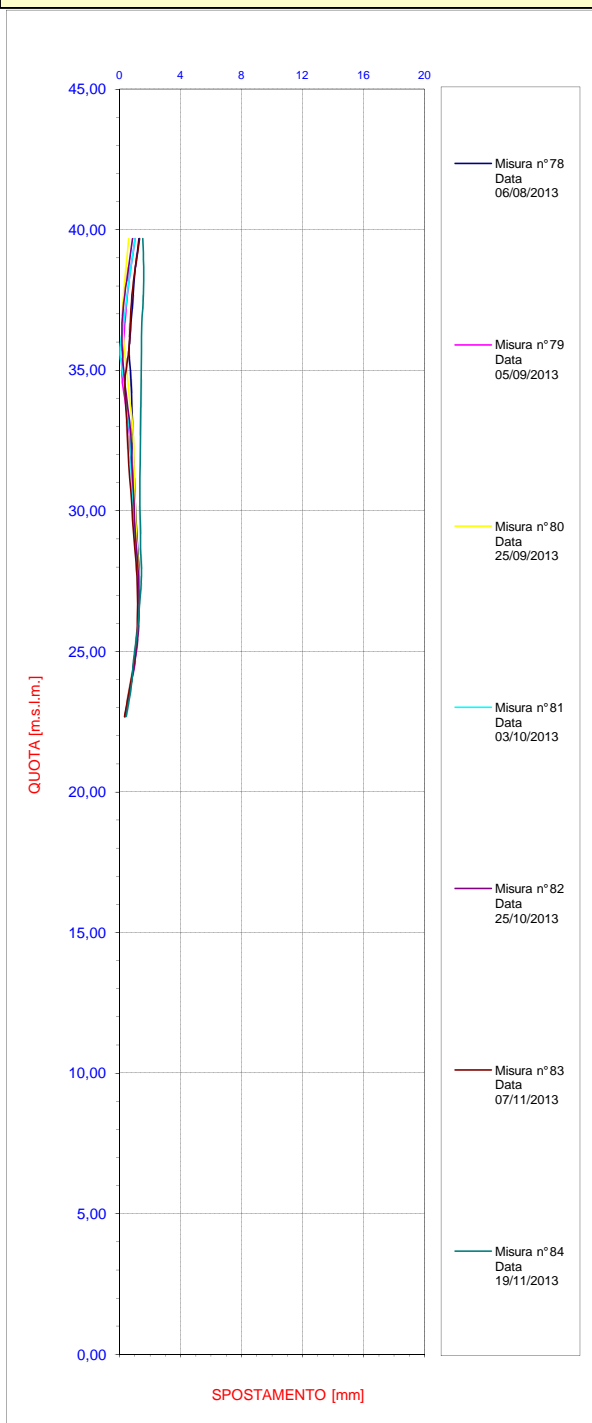




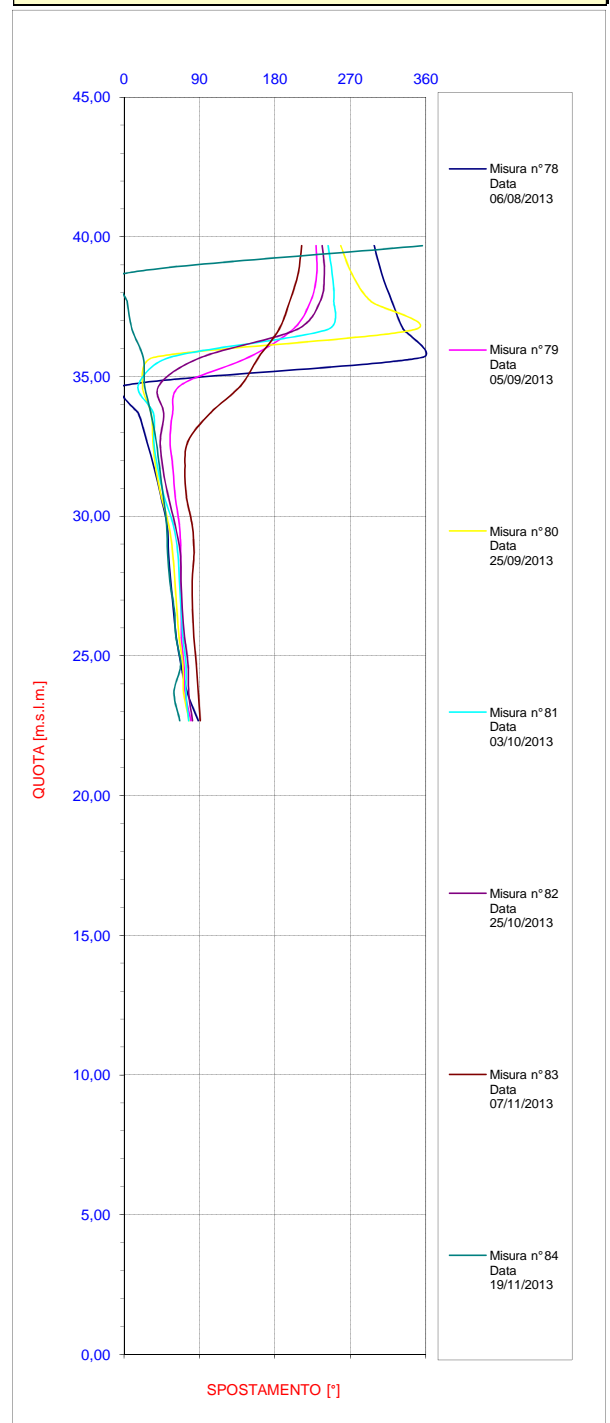
Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P50**  
 Azimut di riferimento **80**  
 Quota guida rif. (m.s.l.m.) **40,18**  
 Data lettura di zero **21/01/2011**  
 Data posa in opera **21/12/2010**

Ultima Misura **84** in data **19/11/2013 11.29**

Spostamenti Differenziali Integrali Risultante



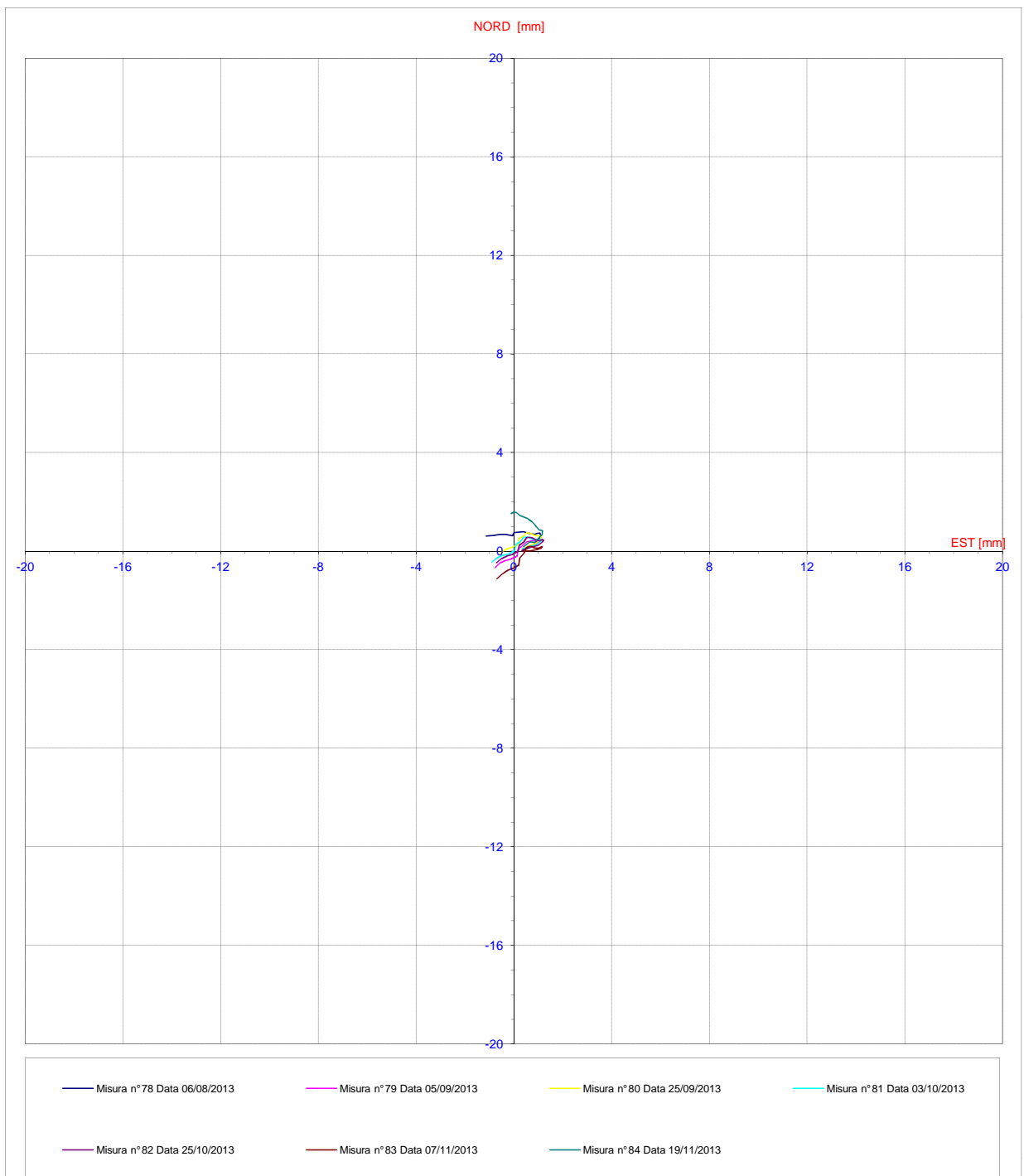
Spostamenti Differenziali Integrali Azimut



Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P50**  
 Azimut di riferimento **80**  
 Quota guida rif. (m.s.l.m.) **40,18**  
 Data lettura di zero **21/01/2011**  
 Data posa in opera **21/12/2010**

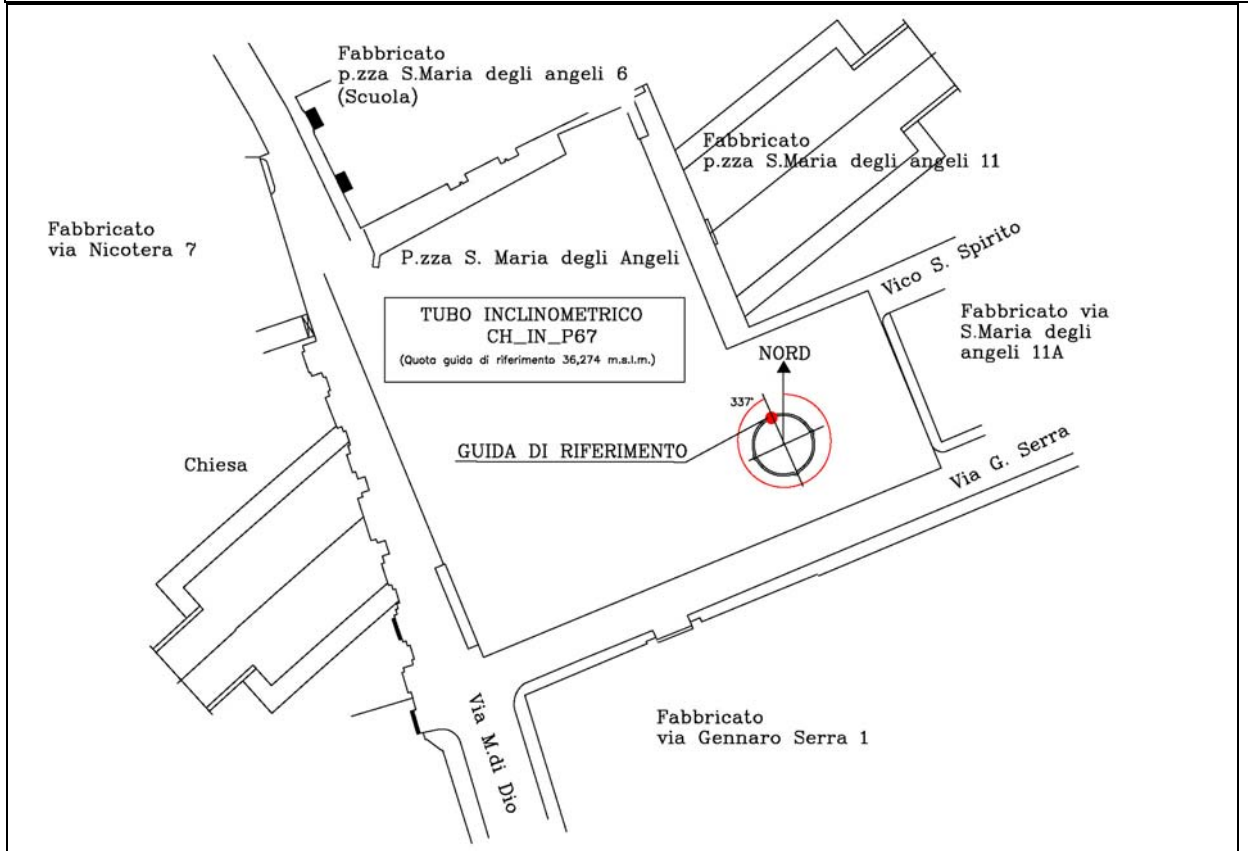
Ultima Misura **84** in data **19/11/2013 11.29**

Spostamenti Differenziali Integrali  
Diagramma polare



Inclinometro

CH\_IN\_P67



Affidabilità strumentale  
A.T.I. LM6 – TreEsse

buono  
da rivedere  
da scartare

X

Congruenza progettuale  
C.T. ATI LM6 – C.T. Monitoraggio

congruente  
non congruente, da valutare  
non congruente con implicazioni sulla  
sicurezza


NOTE


Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P67**  
 Azimut di riferimento **337**  
 Quota guida rif. (m.s.l.m.) **36,274**  
 Data lettura di zero **25/11/2009**  
 Data posa in opera **18/11/2009**

Misura **136** in data **19/11/2013 11.22**

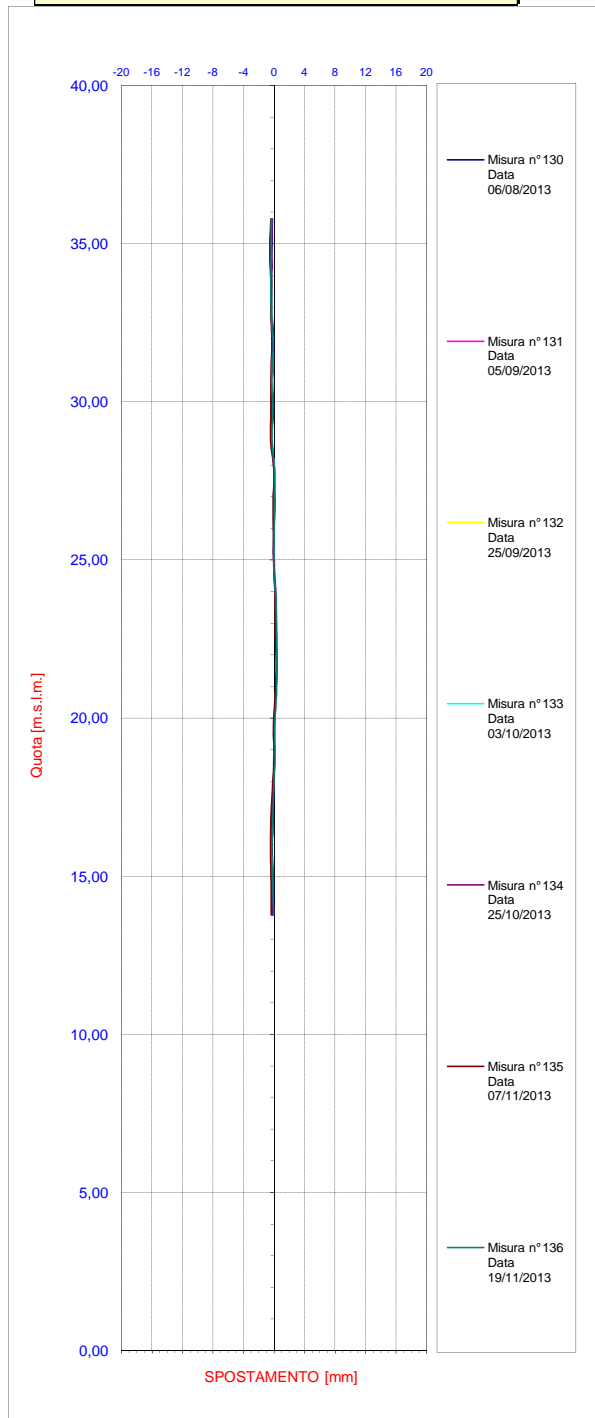
SPOSTAMENTI LOCALI (mm)				
PROFONDITA (m.s.l.m.)	EST	NORD	RISULTANTE	AZIMUT
35,8	-0,351	-0,061	0,356	260,103
34,8	-0,380	-0,027	0,381	265,980
33,8	-0,391	-0,041	0,393	263,976
32,8	-0,359	0,091	0,370	284,207
31,8	-0,112	0,169	0,203	326,404
30,8	-0,327	0,021	0,328	273,722
29,8	-0,133	0,287	0,317	335,209
28,8	-0,278	-0,029	0,279	264,137
27,8	0,095	0,175	0,200	28,554
26,8	0,042	0,120	0,127	19,305
25,8	0,037	0,670	0,671	3,185
24,8	-0,013	0,417	0,417	358,192
23,8	0,252	0,202	0,323	51,258
22,8	0,344	0,269	0,437	51,967
21,8	0,393	0,059	0,397	81,436
20,8	0,348	0,127	0,370	69,885
19,8	0,087	0,246	0,261	19,422
18,8	0,152	0,197	0,249	37,582
17,8	-0,017	0,046	0,049	339,658
16,8	-0,163	0,033	0,167	281,524
15,8	-0,282	0,002	0,282	270,458
14,8	-0,145	0,050	0,153	288,960
13,8	-0,037	0,123	0,128	343,301

SPOSTAMENTI INTEGRALI (mm)				
PROFONDITA (m.s.l.m.)	EST	NORD	RISULTANTE	AZIMUT
35,8	-1,237	3,149	3,383	338,557
34,8	-0,886	3,210	3,330	344,571
33,8	-0,506	3,237	3,276	351,118
32,8	-0,115	3,278	3,280	357,988
31,8	0,244	3,187	3,196	4,375
30,8	0,356	3,018	3,039	6,729
29,8	0,683	2,997	3,074	12,838
28,8	0,816	2,709	2,829	16,754
27,8	1,093	2,738	2,948	21,770
26,8	0,998	2,562	2,750	21,279
25,8	0,956	2,442	2,623	21,374
24,8	0,919	1,772	1,996	27,398
23,8	0,932	1,356	1,645	34,500
22,8	0,680	1,154	1,339	30,515
21,8	0,336	0,884	0,946	20,779
20,8	-0,057	0,825	0,827	356,036
19,8	-0,405	0,698	0,807	329,883
18,8	-0,492	0,451	0,667	312,558
17,8	-0,643	0,254	0,692	291,563
16,8	-0,626	0,208	0,660	288,384
15,8	-0,463	0,175	0,495	290,686
14,8	-0,181	0,173	0,250	313,578
13,8	-0,037	0,123	0,128	343,301

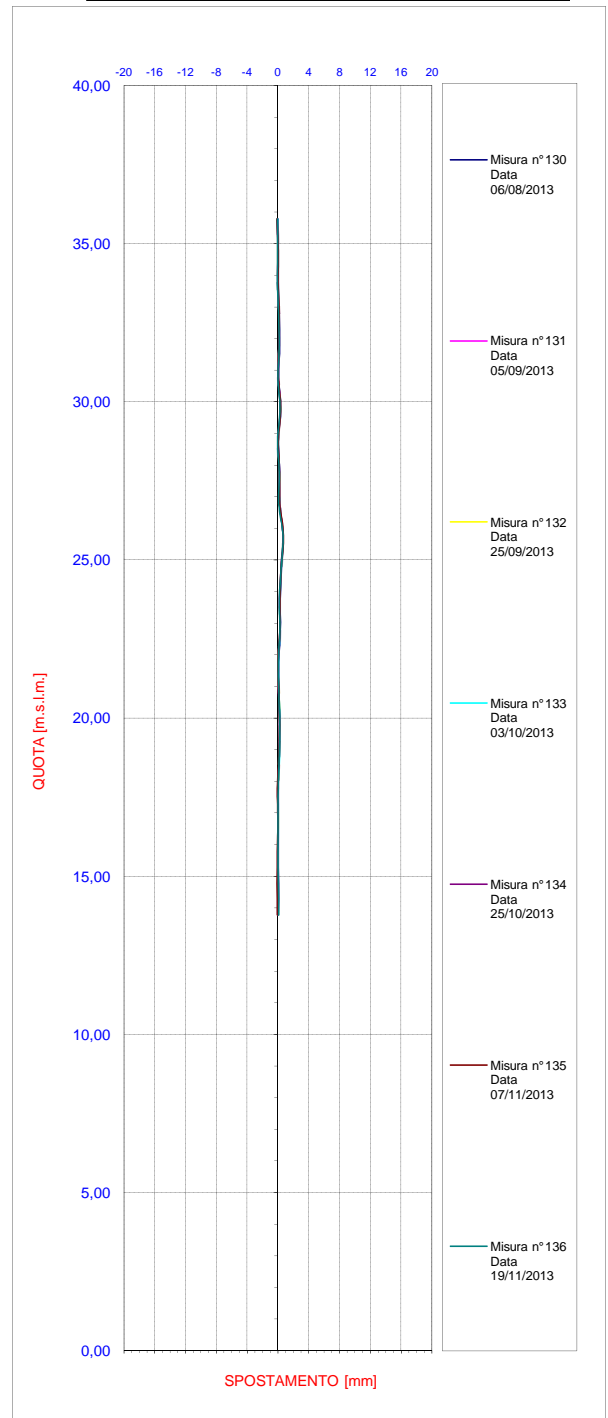
Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P67**  
 Azimut di riferimento **337**  
 Quota guida rif. (m.s.l.m.) **36,274**  
 Data lettura di zero **25/11/2009**  
 Data posa in opera **18/11/2009**

Ultima Misura **136** in data **19/11/2013 11.22**

**Spostamenti Differenziali Locali  
OVEST- (valori negativi) / EST + (valori positivi)**

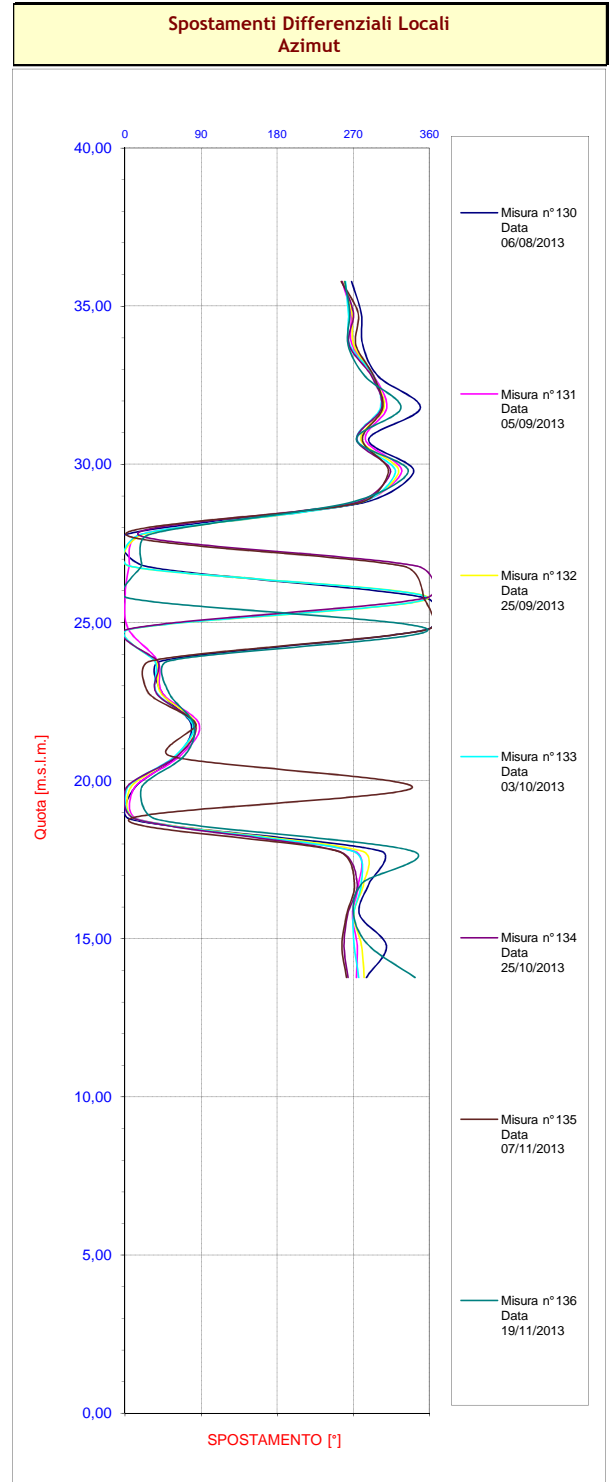
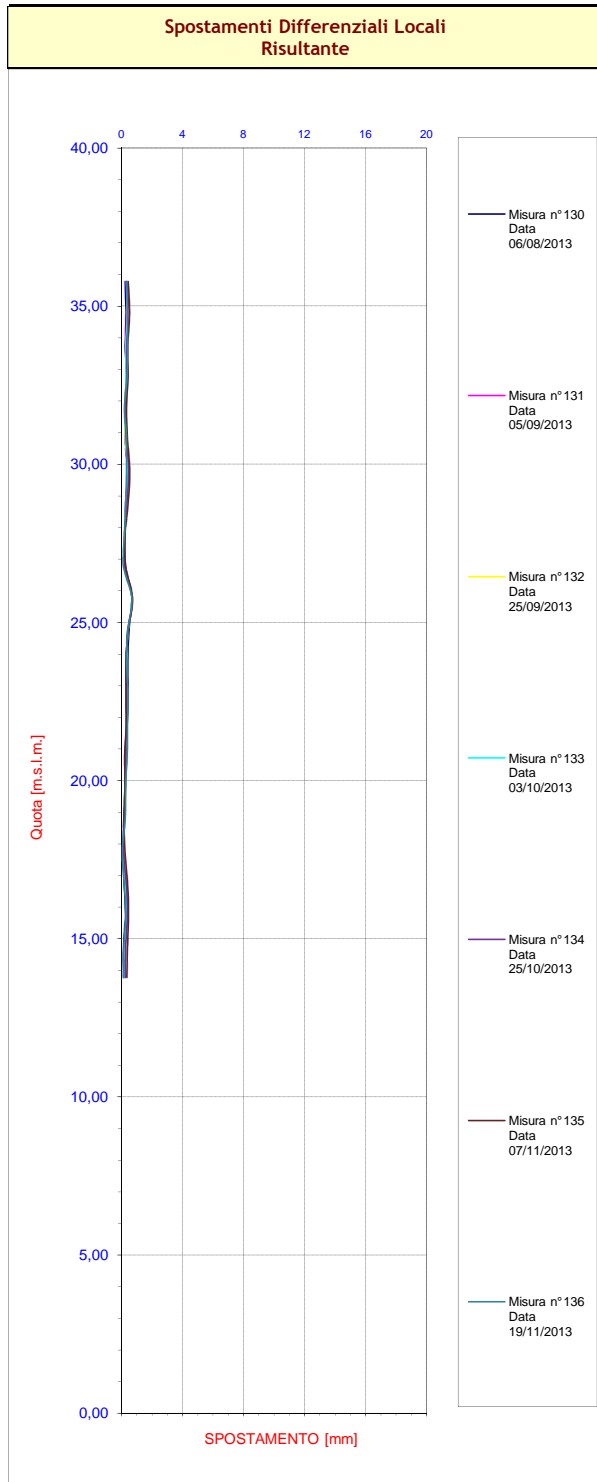


**Spostamenti Differenziali Locali  
SUD - (valori negativi) / NORD + (valori positivi)**



Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P67**  
 Azimut di riferimento **337**  
 Quota guida rif. (m.s.l.m.) **36,274**  
 Data lettura di zero **25/11/2009**  
 Data posa in opera **18/11/2009**

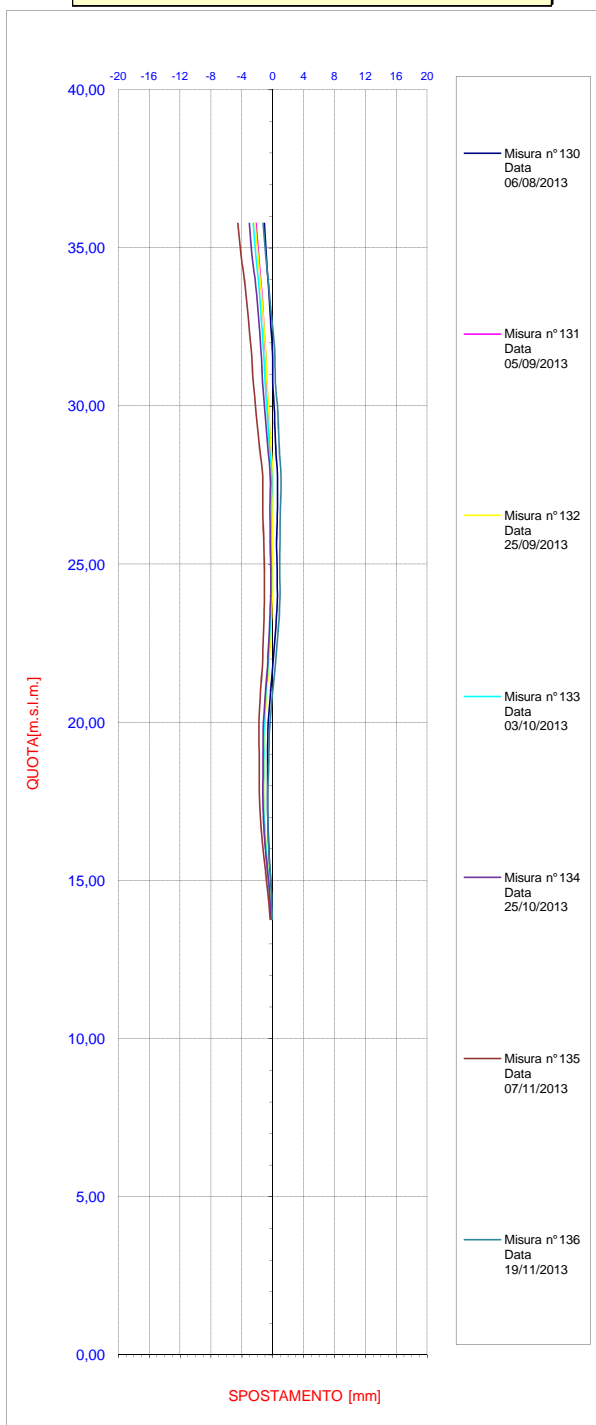
Ultima Misura **136** in data **19/11/2013 11.22**



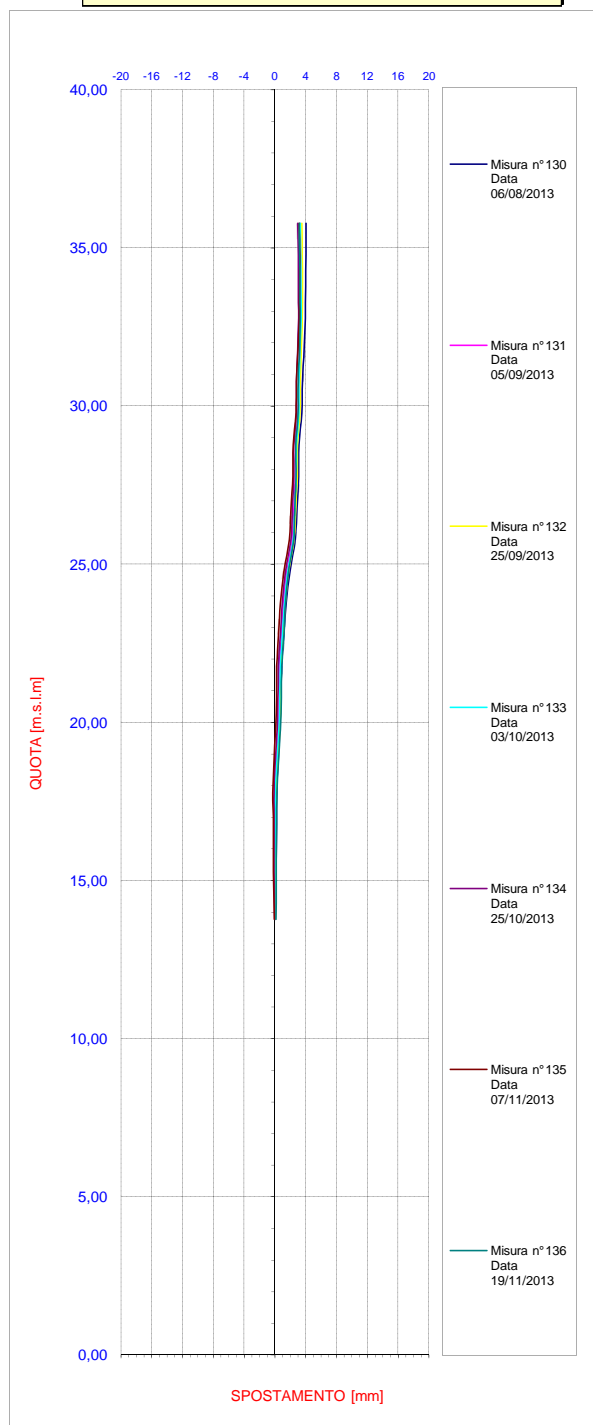
Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P67**  
 Azimut di riferimento **337**  
 Quota guida rif. (m.s.l.m.) **36,274**  
 Data lettura di zero **25/11/2009**  
 Data posa in opera **18/11/2009**

Ultima Misura **136** in data **19/11/2013 11.22**

Spostamenti Differenziali Integrali  
OVEST- (valori negativi) / EST + (valori positivi)



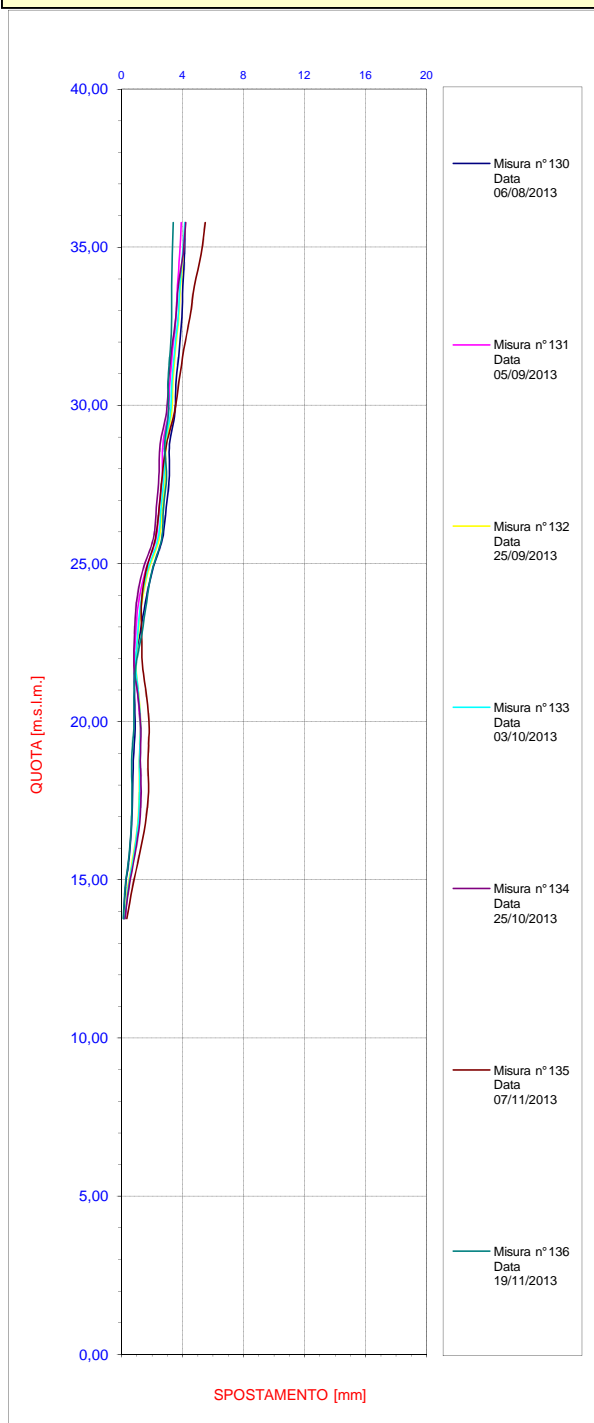
Spostamenti Differenziali Integrali  
SUD - (valori negativi) / NORD + (valori positivi)



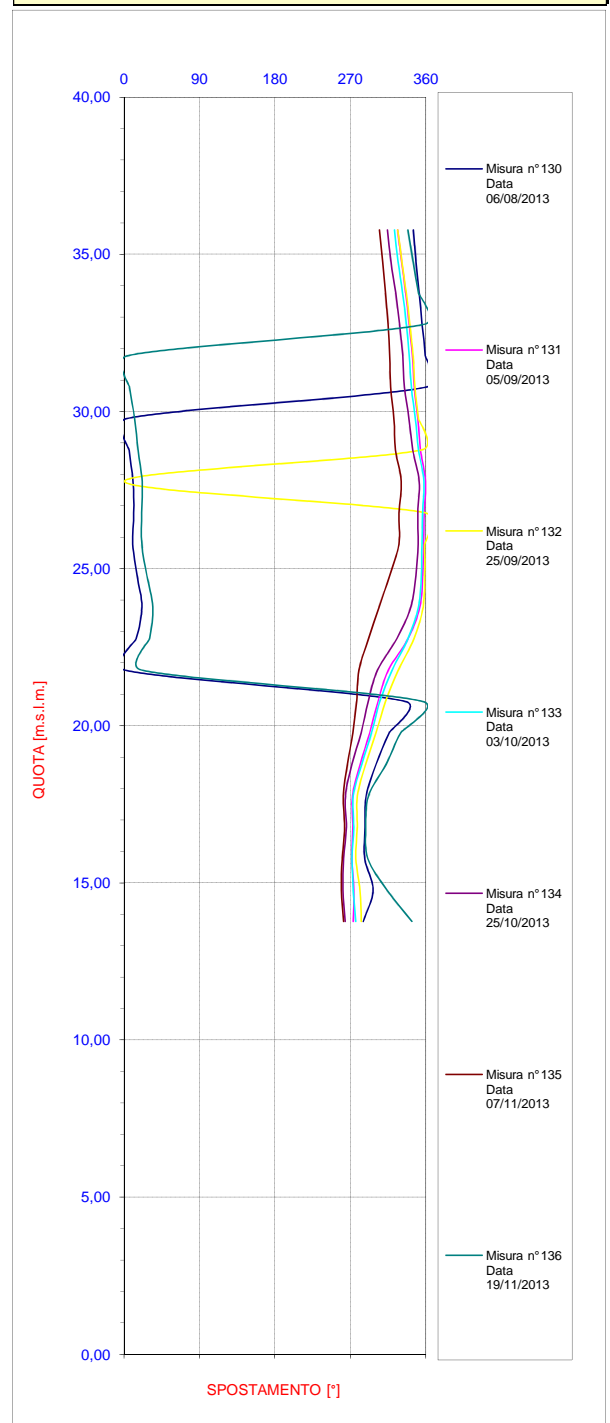
Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P67**  
 Azimut di riferimento **337**  
 Quota guida rif. (m.s.l.m.) **36,274**  
 Data lettura di zero **25/11/2009**  
 Data posa in opera **18/11/2009**

Ultima Misura **136** in data **19/11/2013 11.22**

Spostamenti Differenziali Integrali Risultante



Spostamenti Differenziali Integrali Azimut

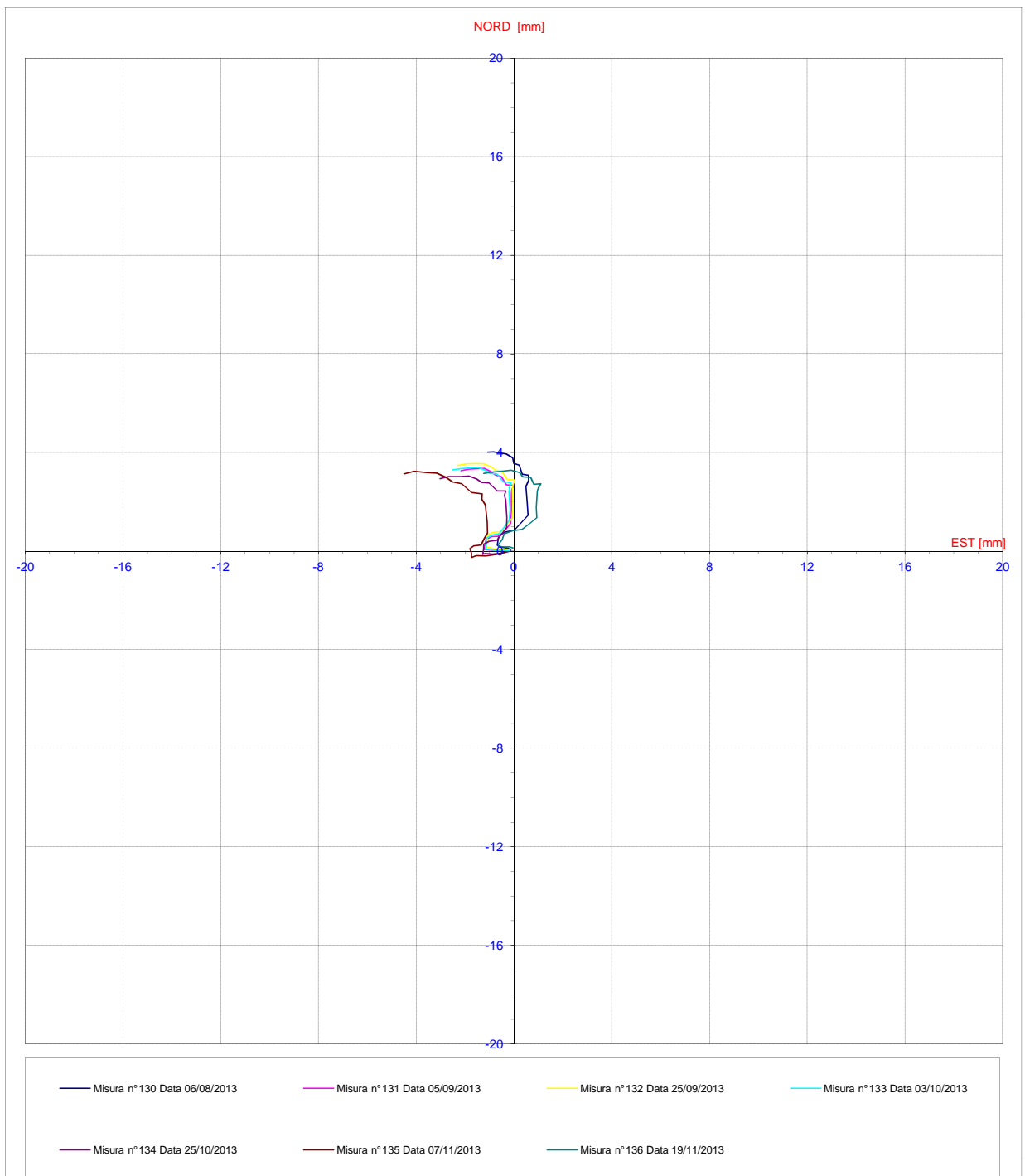


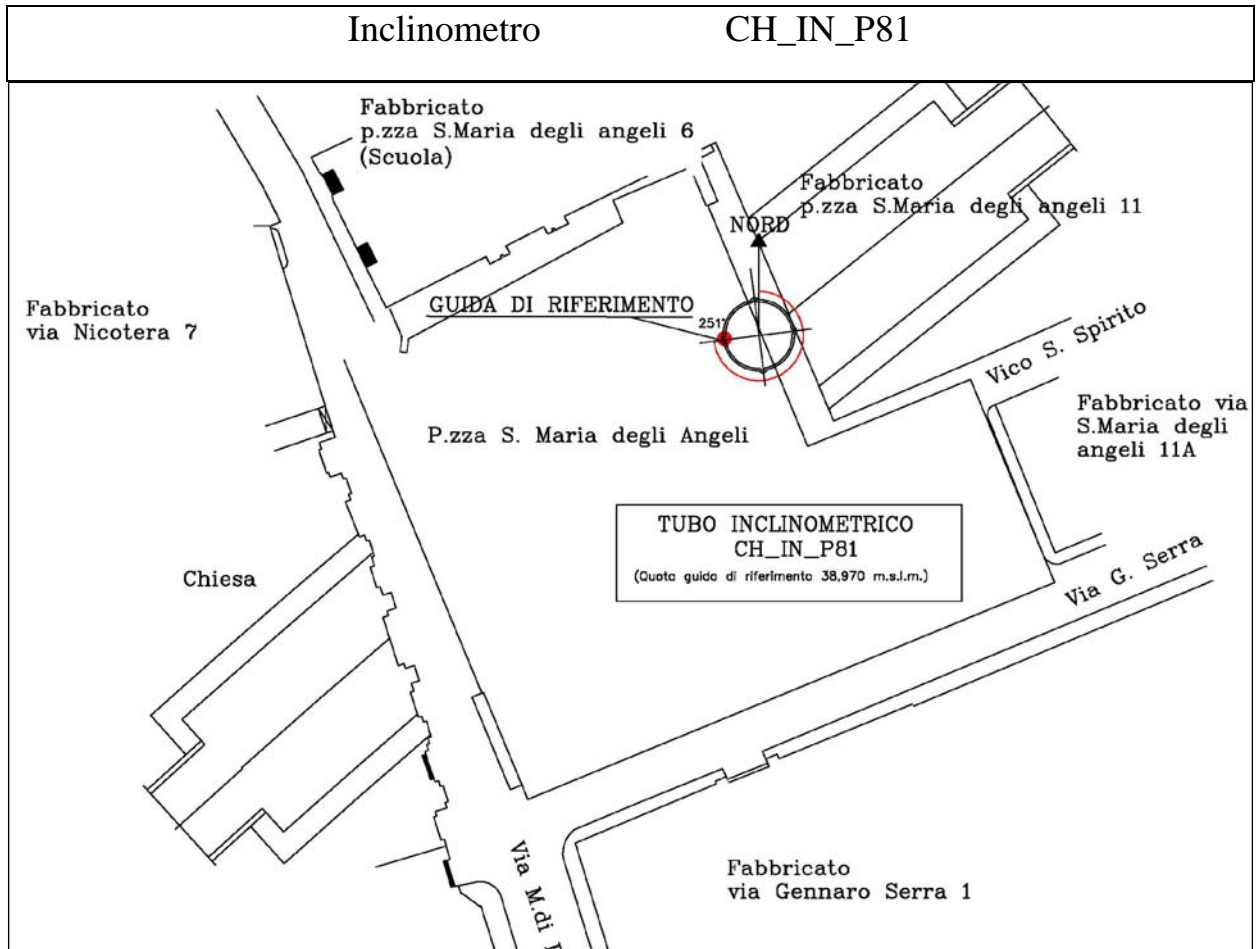


Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P67**  
 Azimut di riferimento **337**  
 Quota guida rif. (m.s.l.m.) **36,274**  
 Data lettura di zero **25/11/2009**  
 Data posa in opera **18/11/2009**

Ultima Misura **136** in data **19/11/2013 11.22**

Spostamenti Differenziali Integrali  
Diagramma polare





<b>Affidabilità strumentale</b> A.T.I. LM6 – TreEsse	<b>Congruenza progettuale</b> C.T. ATI LM6 – C.T. Monitoraggio
buono <input checked="" type="checkbox"/>	congruente <input type="checkbox"/>
da rivedere <input type="checkbox"/>	non congruente, da valutare <input type="checkbox"/>
da scartare <input type="checkbox"/>	non congruente con implicazioni sulla sicurezza <input type="checkbox"/>

<b>NOTE</b>

**Ubicazione** STAZIONE CHIAIA  
**Tipo Strumento** Tubo inclinometrico  
**Nome tubo** CH\_IN\_P81  
**Azimut di riferimento** 251  
**Quota guida rif. (m.s.l.m.)** 38,97  
**Data lettura di zero** 21/01/2011  
**Data posa in opera** 21/12/2010

**Misura** 83 **in data** 19/11/2013 11.15

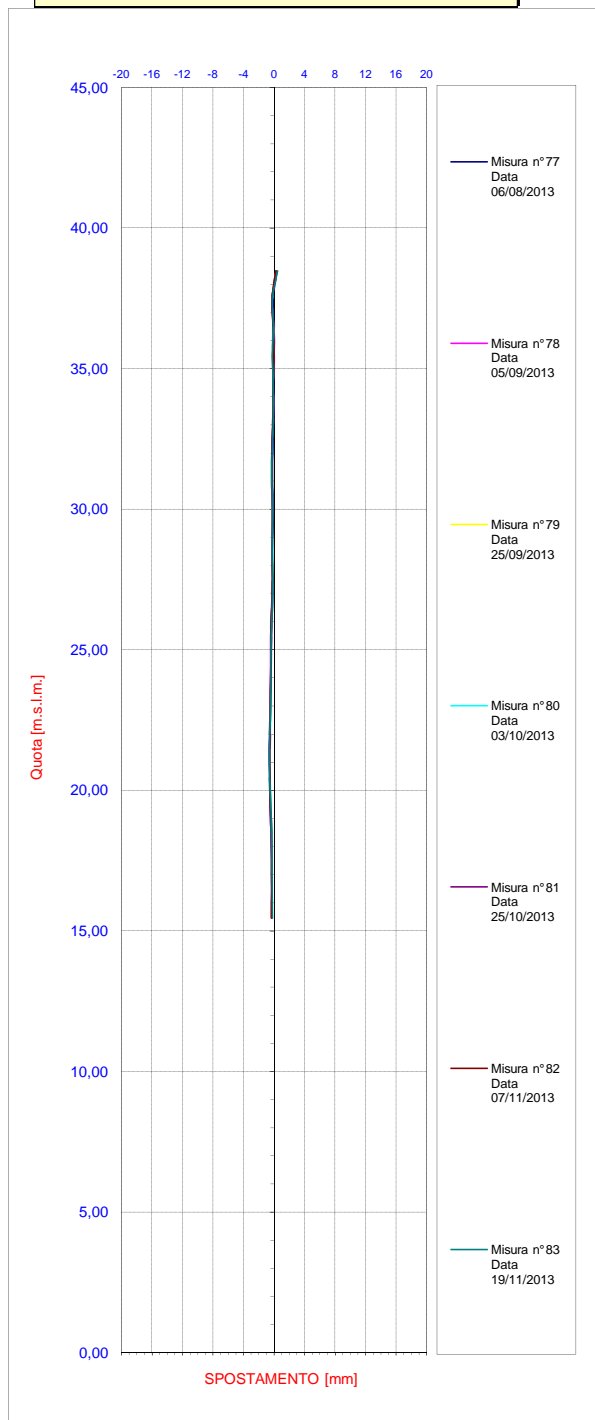
SPOSTAMENTI LOCALI (mm)				
PROFONDITA (m.s.l.m.)	EST	NORD	RISULTANTE	AZIMUT
38,5	0,451	-0,440	0,630	134,268
37,5	-0,232	-0,266	0,352	221,104
36,5	-0,086	0,213	0,230	337,974
35,5	-0,241	0,276	0,367	318,956
34,5	-0,105	0,158	0,190	326,372
33,5	-0,091	0,183	0,204	333,594
32,5	-0,197	0,200	0,281	315,496
31,5	-0,302	0,308	0,431	315,619
30,5	-0,226	0,061	0,234	285,127
29,5	-0,224	0,084	0,239	290,554
28,5	-0,264	0,011	0,265	272,298
27,5	-0,180	0,024	0,182	277,619
26,5	-0,267	-0,012	0,267	267,493
25,5	-0,361	-0,187	0,407	242,616
24,5	-0,434	-0,134	0,454	252,851
23,5	-0,415	-0,140	0,438	251,414
22,5	-0,510	-0,108	0,521	258,010
21,5	-0,609	-0,087	0,615	261,826
20,5	-0,582	-0,165	0,605	254,196
19,5	-0,423	-0,295	0,516	235,143
18,5	-0,330	-0,275	0,429	230,158
17,5	-0,276	-0,246	0,370	228,275
16,5	-0,234	-0,218	0,320	227,007
15,5	-0,199	-0,155	0,253	232,111

SPOSTAMENTI INTEGRALI (mm)				
PROFONDITA (m.s.l.m.)	EST	NORD	RISULTANTE	AZIMUT
38,5	-6,336	-1,208	6,451	259,203
37,5	-6,788	-0,768	6,831	263,541
36,5	-6,556	-0,503	6,575	265,614
35,5	-6,470	-0,716	6,509	263,688
34,5	-6,229	-0,992	6,308	260,950
33,5	-6,124	-1,151	6,231	259,360
32,5	-6,033	-1,334	6,179	257,535
31,5	-5,836	-1,534	6,034	255,274
30,5	-5,534	-1,842	5,833	251,588
29,5	-5,309	-1,903	5,640	250,277
28,5	-5,085	-1,987	5,459	248,652
27,5	-4,820	-1,998	5,218	247,486
26,5	-4,640	-2,022	5,062	246,454
25,5	-4,373	-2,010	4,813	245,313
24,5	-4,012	-1,823	4,407	245,561
23,5	-3,578	-1,689	3,957	244,727
22,5	-3,163	-1,550	3,522	243,897
21,5	-2,653	-1,441	3,019	241,483
20,5	-2,044	-1,354	2,452	236,483
19,5	-1,462	-1,189	1,885	230,880
18,5	-1,039	-0,894	1,371	229,276
17,5	-0,709	-0,619	0,942	228,874
16,5	-0,433	-0,373	0,572	229,260
15,5	-0,199	-0,155	0,253	232,111

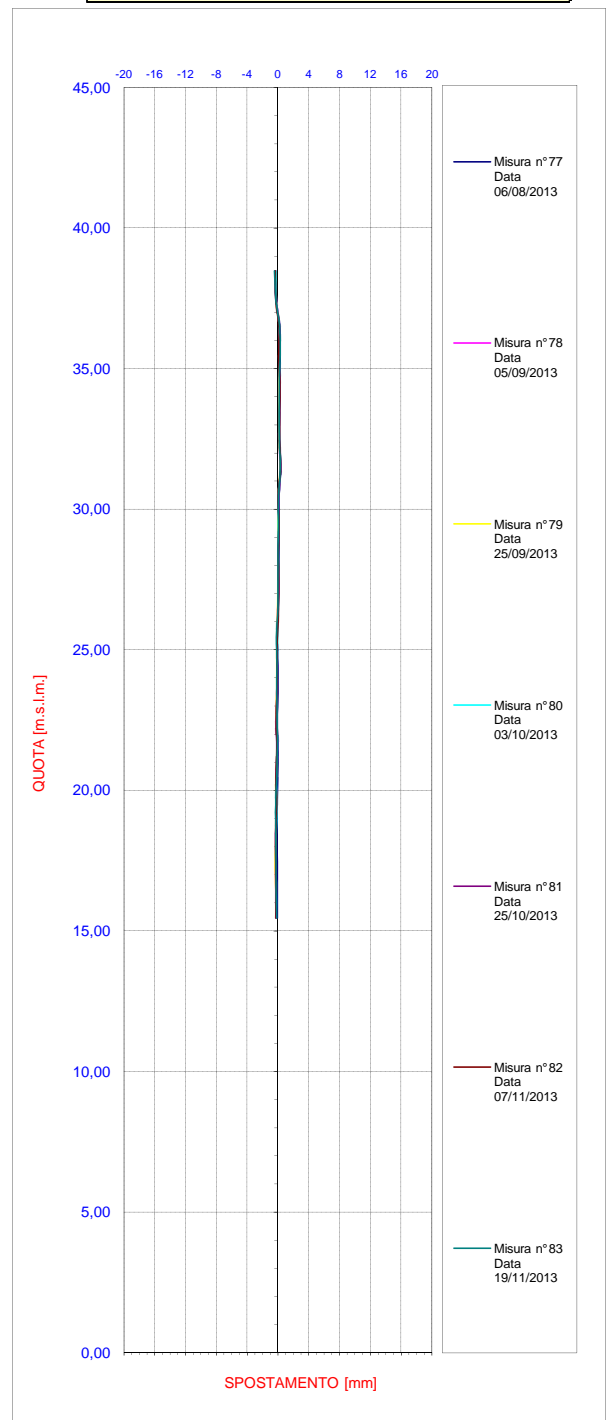
Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P81**  
 Azimut di riferimento **251**  
 Quota guida rif. (m.s.l.m.) **38,97**  
 Data lettura di zero **21/01/2011**  
 Data posa in opera **21/12/2010**

Ultima Misura **83** in data **19/11/2013 11.15**

**Spostamenti Differenziali Locali  
OVEST- (valori negativi) / EST + (valori positivi)**

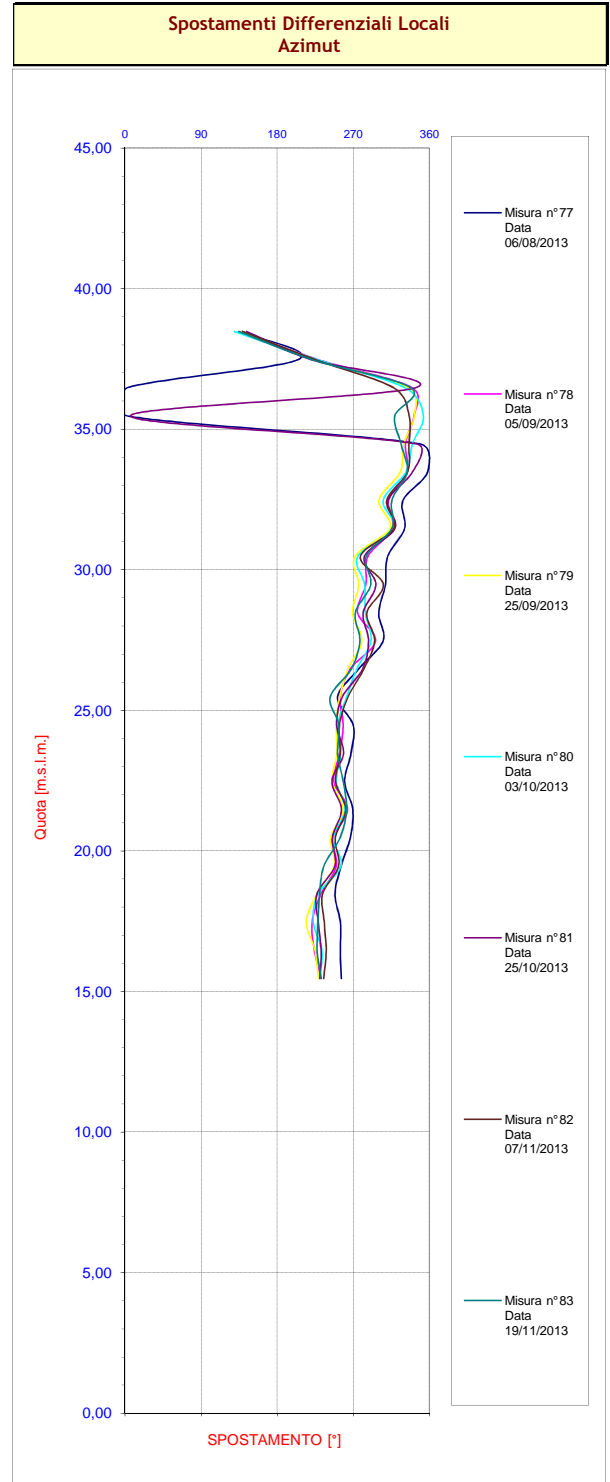
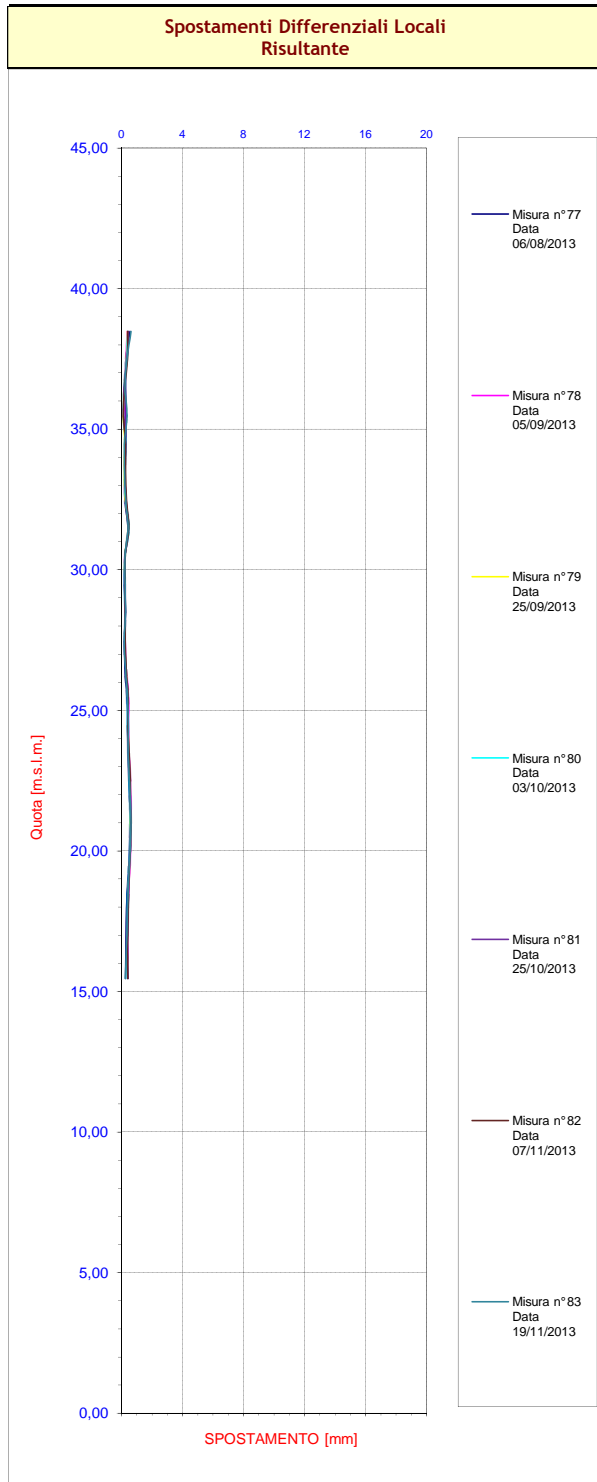


**Spostamenti Differenziali Locali  
SUD - (valori negativi) / NORD + (valori positivi)**



Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P81**  
 Azimut di riferimento **251**  
 Quota guida rif. (m.s.l.m.) **38,97**  
 Data lettura di zero **21/01/2011**  
 Data posa in opera **21/12/2010**

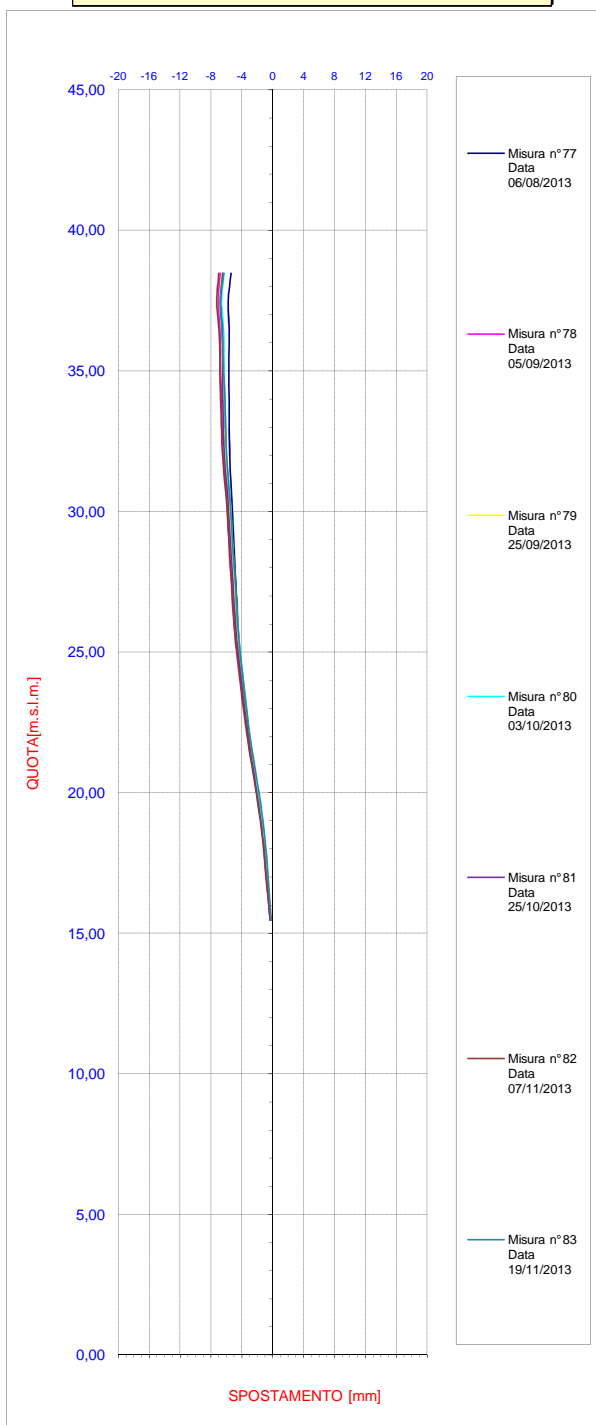
Ultima Misura **83** in data **19/11/2013 11.15**



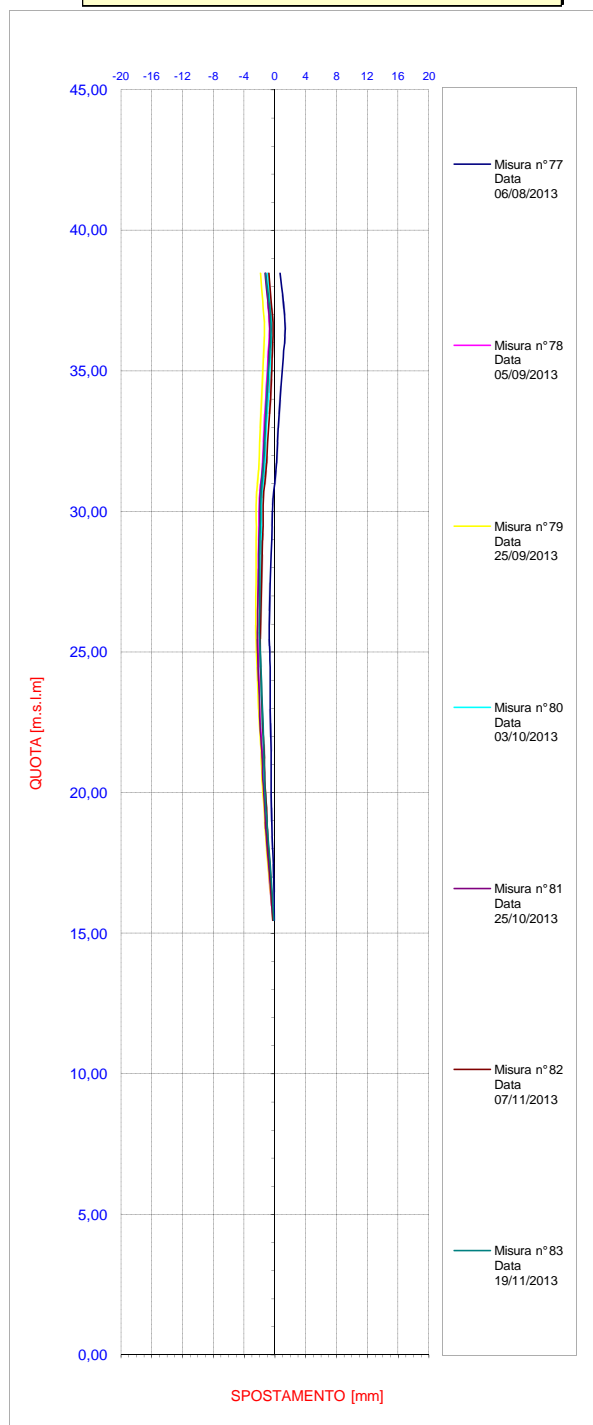
Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P81**  
 Azimut di riferimento **251**  
 Quota guida rif. (m.s.l.m.) **38,97**  
 Data lettura di zero **21/01/2011**  
 Data posa in opera **21/12/2010**

Ultima Misura **83** in data **19/11/2013 11.15**

Spostamenti Differenziali Integrali  
OVEST- (valori negativi) / EST + (valori positivi)



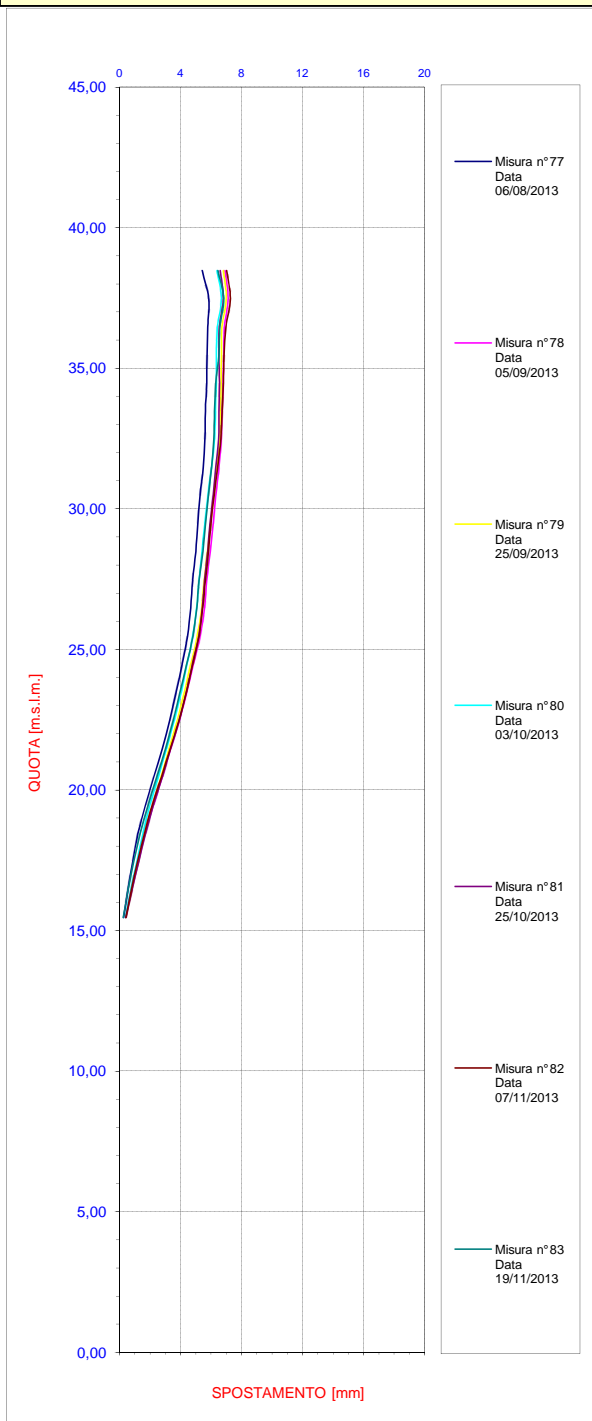
Spostamenti Differenziali Integrali  
SUD - (valori negativi) / NORD + (valori positivi)



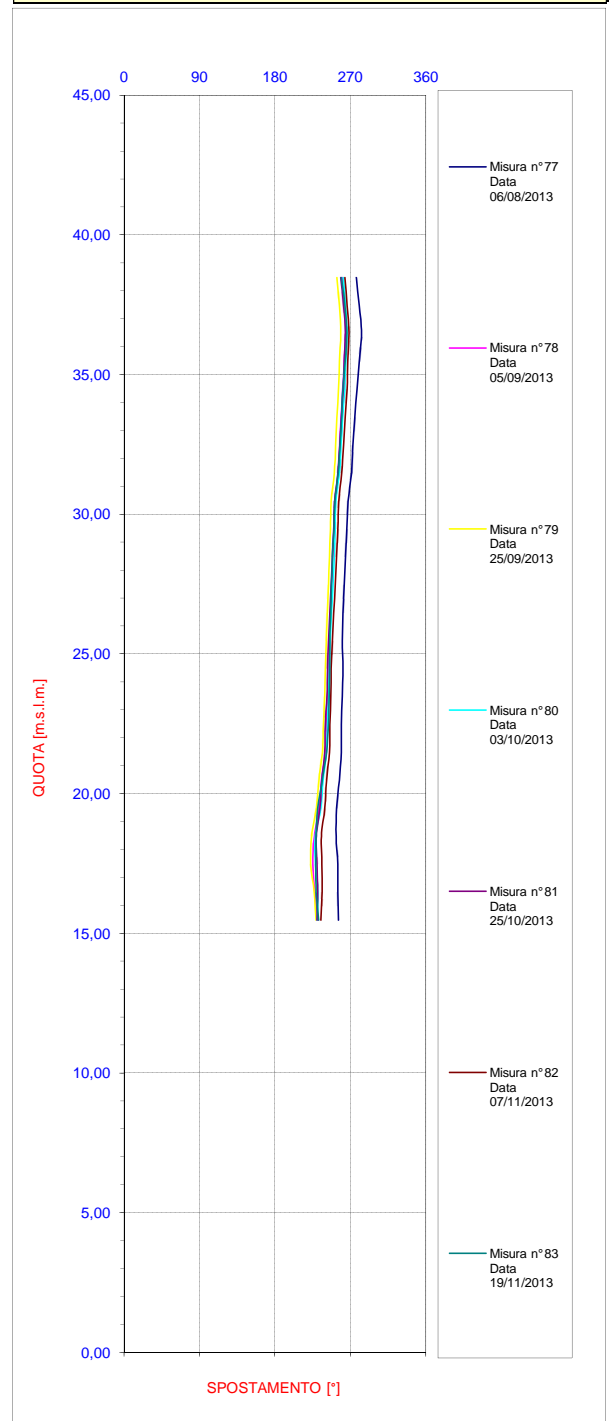
Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P81**  
 Azimut di riferimento **251**  
 Quota guida rif. (m.s.l.m.) **38,97**  
 Data lettura di zero **21/01/2011**  
 Data posa in opera **21/12/2010**

Ultima Misura **83** in data **19/11/2013 11.15**

Spostamenti Differenziali Integrali Risultante



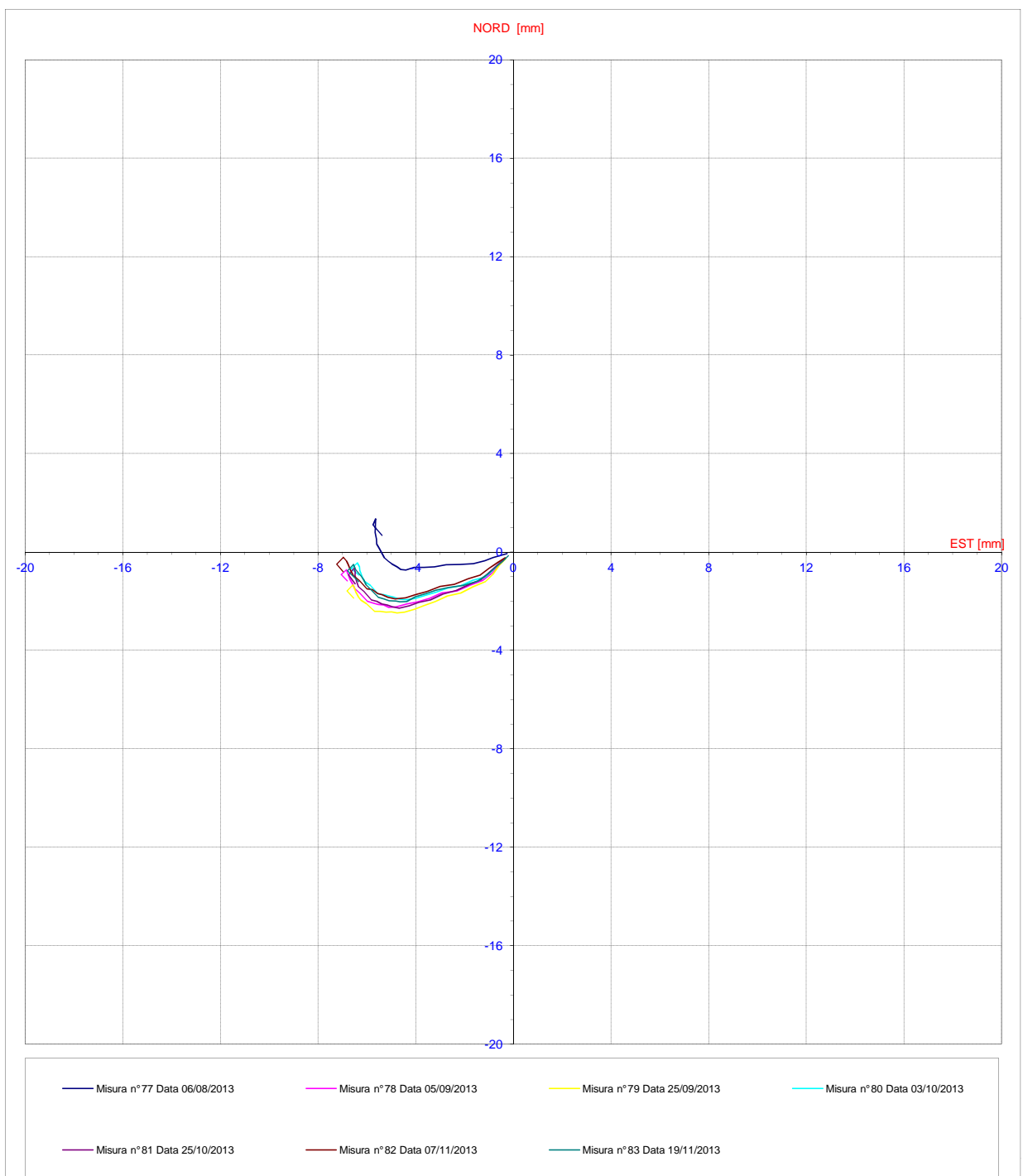
Spostamenti Differenziali Integrali Azimut




Ubicazione **STAZIONE CHIAIA**  
 Tipo Strumento **Tubo inclinometrico**  
 Nome tubo **CH\_IN\_P81**  
 Azimut di riferimento **251**  
 Quota guida rif. (m.s.l.m.) **38,97**  
 Data lettura di zero **21/01/2011**  
 Data posa in opera **21/12/2010**

Ultima Misura **83** in data **19/11/2013 11.15**

**Spostamenti Differenziali Integrali  
Diagramma polare**





 <p><b>Ansaldo STS</b> A Finmeccanica Company</p>	<p>LINEA 6 METROPOLITANA DI NAPOLI - PROGETTO ESECUTIVO</p> <p><i>OPERE CIVILI - MONITORAGGIO GEOTECNICO GEOREFERENZIATO</i></p> <p><i>REPORT DELLE MISURE - STAZIONE CHIAIA</i></p>	<p>LM6 7FX 2C I 27 Data: 29/11/13 Metropolitana di Napoli A.T.I. LM6 TreEsse Engineering S.r.l.</p>
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## **8. MISURE GEOTECNICHE – BARRETTE ESTENSIMETRICHE A CORDA VIBRANTE**

Gli estensimetri a corda vibrante sono costituiti da un filo d'acciaio, teso tra due supporti ancorati alla struttura da monitorare e messo in vibrazione da un elettromagnete.

Le deformazioni della struttura causano un movimento dei due supporti, facendo variare il tensionamento del filo. Questa variazione di tesatura provoca un mutamento della frequenza di vibrazione della corda, che risulta proporzionale alle deformazioni agenti.

Tutte le barrette estensimetriche installate sono del tipo a corda vibrante per metallo, rese solidali alla struttura mediante saldatura.


 <p><b>Ansaldo STS</b> A Finmeccanica Company</p>	<p>LINEA 6 METROPOLITANA DI NAPOLI - PROGETTO ESECUTIVO</p> <p>OPERE CIVILI - MONITORAGGIO GEOTECNICO GEOREFERENZIATO REPORT DELLE MISURE - STAZIONE CHIAIA</p>	<p>LM6 7FX 2C I 27 Data: 29/11/13 Metropolitana di Napoli A.T.I. LM6 TreEsse Engineering S.r.l.</p>
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Tabelle Riepilogative Per Le Barrette Estensimetriche Installate In Cantiere

Tabella Pannello N°13

NOME	TIPOLOGIA STRUMENTAZIONE	DATA INSTALL.	DISPONIBILITA' LETTURA			NOTE
			DATA LETT. DI ZERO	PERIODO INTERRUZIONE	DATA FINE ATTIVITA'	
CH_P13_S1	BARRETTE ESTENSIMETRICHE A C.V.	07/01/09	03/09/09			
CH_P13_S2	BARRETTE ESTENSIMETRICHE A C.V.	07/01/09				Non funzionante
CH_P13_S3	BARRETTE ESTENSIMETRICHE A C.V.	07/01/09	03/09/09			
CH_P13_S4	BARRETTE ESTENSIMETRICHE A C.V.	07/01/09	03/09/09			
CH_P13_S5	BARRETTE ESTENSIMETRICHE A C.V.	07/01/09	03/09/09			
CH_P13_S6	BARRETTE ESTENSIMETRICHE A C.V.	07/01/09	03/09/09			

Tabella Pannello N°50

NOME	TIPOLOGIA STRUMENTAZIONE	DATA INSTALL.	DISPONIBILITA' LETTURA			NOTE
			DATA LETT. DI ZERO	PERIODO INTERRUZIONE	DATA FINE ATTIVITA'	
CH_P50_S1	BARRETTE ESTENSIMETRICHE A C.V.	20/01/09	03/09/09			
CH_P50_S2	BARRETTE ESTENSIMETRICHE A C.V.	20/01/09	03/09/09			
CH_P50_S3	BARRETTE ESTENSIMETRICHE A C.V.	20/01/09	03/09/09			
CH_P50_S4	BARRETTE ESTENSIMETRICHE A C.V.	20/01/09	03/09/09			
CH_P50_S5	BARRETTE ESTENSIMETRICHE A C.V.	20/01/09	03/09/09			
CH_P50_S6	BARRETTE ESTENSIMETRICHE A C.V.	20/01/09	03/09/09			


 <p><b>Ansaldo STS</b> A Finmeccanica Company</p>	<p>LINEA 6 METROPOLITANA DI NAPOLI - PROGETTO ESECUTIVO</p> <p>OPERE CIVILI - MONITORAGGIO GEOTECNICO GEOREFERENZIATO REPORT DELLE MISURE - STAZIONE CHIAIA</p>	<p>LM6 7FX 2C I 27 Data: 29/11/13 Metropolitana di Napoli A.T.I. LM6 TreEsse Engineering S.r.l.</p>
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Tabella Pannello N°67

NOME	TIPOLOGIA STRUMENTAZIONE	DATA INSTALL.	DISPONIBILITA' LETTURA			NOTE
			DATA LETT. DI ZERO	PERIODO INTERRUZIONE	DATA FINE ATTIVITA'	
CH_P67_S1	BARRETTE ESTENSIMETRICHE A C.V.	04/03/09	03/09/09		28/09/11	Lo strumento restituisce valore discontinuo
CH_P67_S2	BARRETTE ESTENSIMETRICHE A C.V.	04/03/09	03/09/09			
CH_P67_S3	BARRETTE ESTENSIMETRICHE A C.V.	04/03/09	03/09/09			
CH_P67_S4	BARRETTE ESTENSIMETRICHE A C.V.	04/03/09	03/09/09			
CH_P67_S5	BARRETTE ESTENSIMETRICHE A C.V.	04/03/09	03/09/09			
CH_P67_S6	BARRETTE ESTENSIMETRICHE A C.V.	04/03/09	03/09/09			

Tabella Pannello N°81

NOME	TIPOLOGIA STRUMENTAZIONE	DATA INSTALL.	DISPONIBILITA' LETTURA			NOTE
			DATA LETT. DI ZERO	PERIODO INTERRUZIONE	DATA FINE ATTIVITA'	
CH_P81_S1	BARRETTE ESTENSIMETRICHE A C.V.	31/03/09	03/09/09		20/04/11	(*)
CH_P81_S2	BARRETTE ESTENSIMETRICHE A C.V.	31/03/09	03/09/09		20/04/11	(*)
CH_P81_S3	BARRETTE ESTENSIMETRICHE A C.V.	31/03/09	03/09/09		20/04/11	(*)
CH_P81_S4	BARRETTE ESTENSIMETRICHE A C.V.	31/03/09	03/09/09		25/03/10	(*)
CH_P81_S5	BARRETTE ESTENSIMETRICHE A C.V.	31/03/09	03/09/09		20/04/11	(*)
CH_P81_S6	BARRETTE ESTENSIMETRICHE A C.V.	31/03/09	03/09/09		20/04/11	(*)
CH_P81_S7	BARRETTE ESTENSIMETRICHE A C.V.	31/03/09				(*)
CH_P81_S8	BARRETTE ESTENSIMETRICHE A C.V.	31/03/09	03/09/09		20/04/11	(*)

(\*) Le barrette estensimetriche non restituiscono un segnale coerente pertanto non verranno più inserite nel programma di monitoraggio.


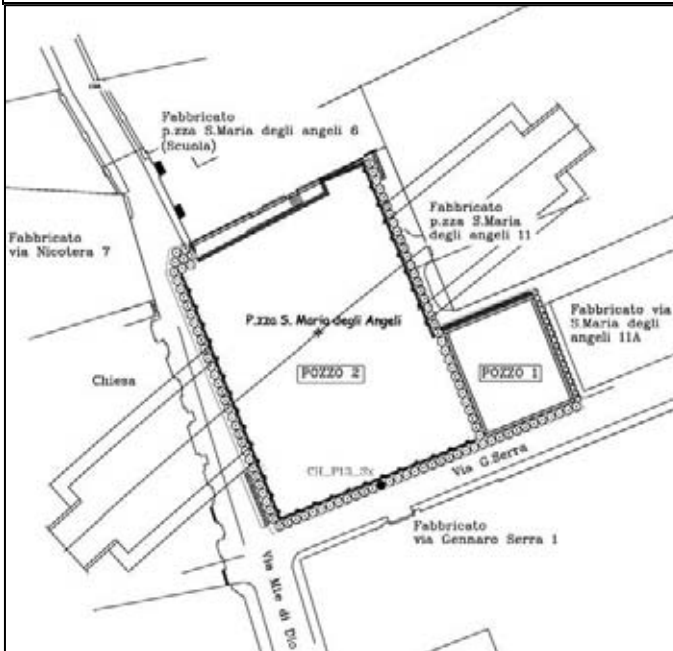
 <p><b>Ansaldo STS</b> A Finmeccanica Company</p>	<p>LINEA 6 METROPOLITANA DI NAPOLI - PROGETTO ESECUTIVO</p> <p>OPERE CIVILI - MONITORAGGIO GEOTECNICO GEOREFERENZIATO REPORT DELLE MISURE - STAZIONE CHIAIA</p>	<p>LM6 7FX 2C I 27 Data: 29/11/13 Metropolitana di Napoli A.T.I. LM6 TreEsse Engineering S.r.l.</p>
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Tabella Puntoni PU1 e PU2

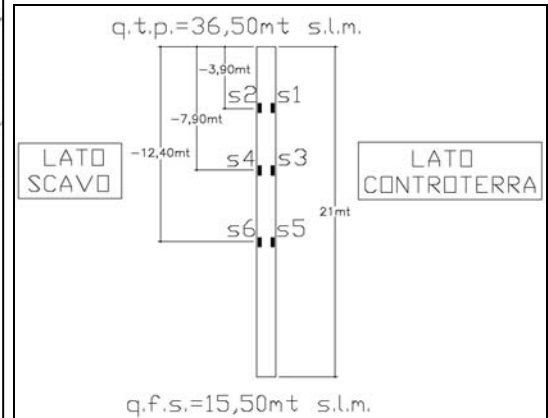
NOME	TIPOLOGIA STRUMENTAZIONE	DATA INSTALL.	DISPONIBILITA' LETTURA			NOTE
			DATA LETT. DI ZERO	PERIODO INTERRUZIONE	DATA FINE ATTIVITA'	
CH_PU1_S1	BARRETTE ESTENSIMETRICHE A C.V.	12/09/11	14/09/11			
CH_PU1_S2	BARRETTE ESTENSIMETRICHE A C.V.	12/09/11	14/09/11			
CH_PU1_S3	BARRETTE ESTENSIMETRICHE A C.V.	12/09/11	14/09/11			
CH_PU1_S4	BARRETTE ESTENSIMETRICHE A C.V.	12/09/11	14/09/11			
CH_PU2_S5	BARRETTE ESTENSIMETRICHE A C.V.	12/09/11	14/09/11			
CH_PU2_S6	BARRETTE ESTENSIMETRICHE A C.V.	12/09/11	14/09/11		15/10/12	Danneggiata. nessun valore
CH_PU2_S6_1	BARRETTE ESTENSIMETRICHE A C.V.	19/11/12	19/11/12			Sostituisce la CH_PU2_S6
CH_PU2_S7	BARRETTE ESTENSIMETRICHE A C.V.	12/09/11	14/09/11			
CH_PU2_S8	BARRETTE ESTENSIMETRICHE A C.V.	12/09/11	14/09/11			

Pannello strumentato

CH\_P13



SCHEMA INSTALLAZIONE  
STRUMENT. GEOTECNICA  
(BECV PER METALLO)  
PALO N°13



Le barrette con numero progressivi dispari (s1,s3,s5) sono installate lato contro terra, mentre quelle con numero pari (s2,s4,s6) sono poste lato scavo; la direzione di installazione è parallela all'asse di scavo.

Affidabilità strumentale

A.T.I. LM6 – TreEsse

buono  
da rivedere  
da scartare

X

Congruenza progettuale  
C.T. ATI LM6 – C.T.  
Monitoraggio

congruente  
non congruente, da valutare  
non congruente con implicazioni  
sulla sicurezza


**NOTE**

Le elaborazioni di seguito riportate includono lo storico delle misure.

La barretta estensimetrica a c.v. CH\_P13\_S2 non è funzionante.

**TABULATI**

Ubicazione STAZIONE CHIAIA

Opera \ \ P13

Strumento Barretta Est. per Metallo

Data posa in opera 03/09/2009

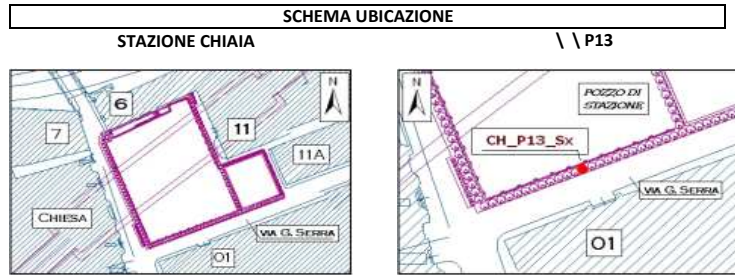
Data lettura di zero 03/09/2009

Ultima Misura 160 in data 19/11/2013

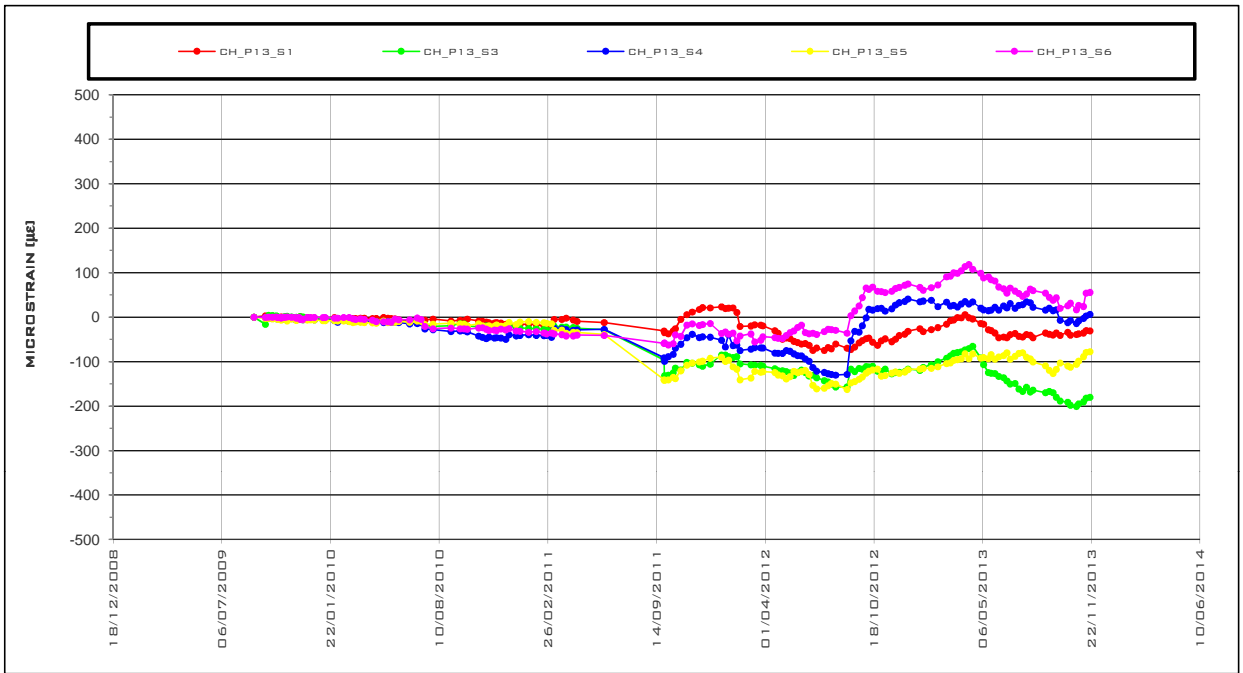
Letture n°	DATA	CH_P13_S1		CH_P13_S3		CH_P13_S4		CH_P13_S5		CH_P13_S6	
		Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]
109	20/9/12 10.00	-57,7	20,3	-115,0	18,0	-33,4	21,8	-139,4	17,3	25,6	22,9
110	26/9/12 11.00	-52,4	20,4	-116,6	18,2	-19,1	22,3	-134,1	17,4	44,3	24,1
111	3/10/12 11.00	-48,0	20,1	-111,0	18,0	-1,2	23,1	-125,6	17,1	65,8	25,2
112	8/10/12 10.00	-46,8	19,2	-111,8	17,6	17,9	24,0	-121,2	16,8	62,6	25,6
113	15/10/12 11.00	-56,1	19,1	-110,2	17,4	16,2	24,2	-118,3	16,7	67,9	25,7
114	24/10/12 11.00	-63,0	19,2	-121,1	17,5	19,5	24,8	-116,7	16,5	58,5	25,6
115	31/10/12 11.30	-52,9	18,7	-121,9	17,1	20,3	24,2	-132,5	16,2	57,7	25,2
116	7/11/12 11.00	-48,4	18,4	-116,7	17,2	13,8	24,0	-130,9	16,0	55,7	24,7
117	19/11/12 15.00	-54,9	18,2	-127,2	17,0	19,1	24,1	-125,6	16,1	58,5	24,6
118	26/11/12 11.00	-49,2	18,0	-124,0	16,6	27,6	23,8	-122,8	16,0	64,6	24,1
119	3/12/12 10.00	-41,1	18,0	-123,6	16,3	32,9	23,9	-126,1	15,4	67,4	24,0
120	13/12/12 10.30	-38,2	17,9	-122,0	16,1	35,7	23,8	-123,2	15,3	71,9	23,7
121	19/12/12 10.00	-31,7	18,1	-116,7	16,2	41,0	23,9	-117,9	15,4	74,7	23,6
122	10/1/13 10.00	-25,7	17,6	-119,5	16,3	34,9	22,4	-116,7	15,5	67,4	22,0
123	16/1/13 10.45	-32,2	17,4	-112,6	16,2	36,5	22,2	-115,1	15,3	60,9	21,8
124	31/1/13 9.30	-27,7	17,1	-106,9	16,0	38,1	22,0	-114,7	15,0	66,6	21,6
125	12/2/13 11.30	-23,2	16,8	-100,0	15,9	23,9	21,5	-111,4	14,6	72,7	21,1
126	28/2/13 11.00	-15,5	16,1	-92,3	15,2	34,1	21,0	-104,1	14,2	90,9	20,6
127	7/3/13 11.00	-7,8	15,4	-86,6	15,0	25,1	20,6	-102,5	14,0	92,6	20,4
128	13/3/13 11.30	-6,2	15,2	-80,9	14,8	26,7	20,4	-96,8	13,8	99,9	20,0
129	20/3/13 11.00	-0,5	15,0	-79,3	14,6	23,1	20,1	-95,2	13,6	99,1	19,6
130	27/3/13 12.00	-1,3	14,6	-77,7	14,4	30,0	20,0	-93,6	13,4	104,7	19,4
131	3/4/13 11.30	6,0	14,2	-73,2	14,1	35,3	19,1	-82,2	13,0	114,1	19,5
132	10/4/13 11.50	-0,9	14,3	-70,4	14,0	30,0	19,0	-93,2	13,1	118,5	19,2
133	17/4/13 11.00	-3,8	14,4	-65,1	14,1	34,4	18,7	-82,2	13,0	108,0	19,0
134	2/5/13 10.00	-13,9	14,9	-91,5	14,6	20,6	18,9	-92,0	13,2	99,1	19,6
135	7/5/13 11.30	-15,5	15,1	-106,5	14,7	16,6	18,9	-90,3	13,0	88,5	19,4
136	16/5/13 11.00	-28,1	15,4	-124,4	14,9	14,9	19,1	-93,2	13,1	90,9	19,6
137	21/5/13 11.30	-29,7	15,6	-126,0	15,1	16,2	19,2	-83,8	13,2	84,4	19,4
138	28/5/13 10.40	-35,4	15,8	-126,4	15,4	22,7	19,4	-94,4	13,0	81,6	19,5
139	4/6/13 11.00	-46,0	15,6	-132,9	15,2	16,2	19,2	-89,1	13,1	68,2	19,4
140	13/6/13 10.00	-44,4	15,4	-135,8	15,3	25,5	19,3	-86,3	13,0	64,1	19,4
141	19/6/13 11.00	-46,0	15,6	-143,1	15,7	21,0	19,6	-79,8	13,2	54,4	19,6
142	25/6/13 10.30	-39,1	15,5	-150,0	15,8	30,8	19,4	-94,4	13,0	65,7	19,2
143	4/7/13 12.00	-36,2	15,4	-148,8	15,9	20,2	19,2	-87,9	13,2	58,8	19,3
144	11/7/13 11.00	-42,7	15,2	-161,4	15,2	26,7	19,4	-81,4	13,4	53,6	19,2
145	18/7/13 10.00	-44,4	15,4	-166,7	15,1	28,4	19,2	-79,8	13,2	47,1	19,0
146	25/7/13 10.30	-38,7	15,2	-157,3	15,2	34,9	19,4	-89,5	13,4	52,3	19,1
147	1/8/13 12.30	-40,3	15,4	-167,9	15,0	32,8	17,9	-93,6	13,4	63,3	18,0
148	6/8/13 11.30	-46,0	15,6	-163,8	15,0	22,6	17,4	-100,5	13,5	60,0	17,4
149	29/8/13 11.00	-35,4	15,8	-169,5	15,2	16,1	17,2	-109,0	13,8	54,3	17,6
150	5/9/13 11.00	-38,3	15,9	-166,7	15,1	20,6	16,9	-119,2	14,3	45,0	17,5
151	12/9/13 10.00	-39,9	16,1	-169,5	15,2	14,9	17,1	-126,5	14,7	38,1	17,6
152	18/9/13 10.30	-35,4	15,8	-180,1	15,0	16,9	16,6	-117,1	14,8	43,8	17,4
153	25/9/13 10.30	-40,7	15,7	-188,2	15,0	-6,6	16,0	-102,9	14,3	20,2	16,8
154	9/10/13 10.00	-33,8	15,6	-191,0	15,1	-12,3	16,2	-109,4	14,1	25,9	16,6
155	14/10/13 10.00	-40,3	15,4	-197,9	15,2	-7,0	16,3	-112,3	14,2	31,6	16,4
156	25/10/13 11.00	-38,7	15,2	-200,4	15,0	-13,9	16,4	-105,8	14,4	17,0	16,2
157	29/10/13 11.30	-37,1	15,0	-194,7	14,8	-8,2	16,2	-98,5	14,0	26,7	16,0
158	7/11/13 11.00	-35,4	14,8	-190,2	14,5	-2,6	16,0	-88,7	13,8	24,3	15,8
159	12/11/13 10.00	-29,8	14,6	-181,7	14,2	3,1	15,8	-79,0	13,6	54,3	15,6
160	19/11/13 11.00	-30,6	14,2	-180,1	14,0	6,4	15,4	-77,3	13,4	55,9	15,4



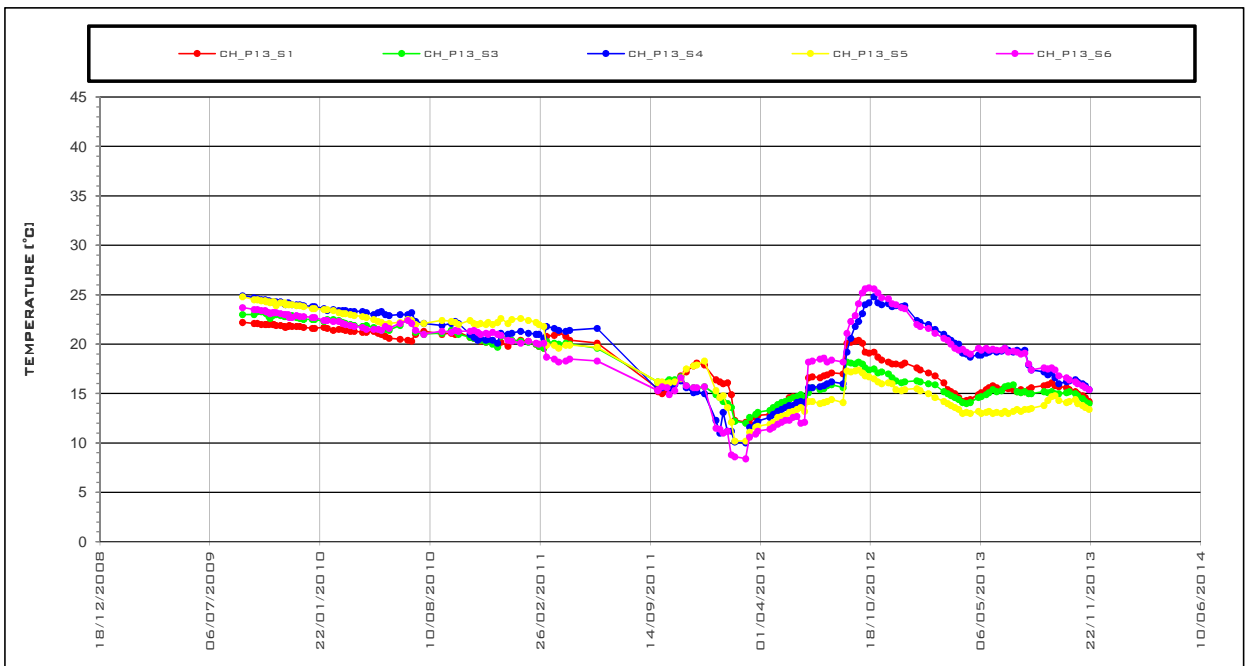
Ubicazione STAZIONE CHIAIA  
Opera \ \ P13  
Strumento Barretta Est. per Metallo  
Data posa in opera 03/09/2009  
Data lettura di zero 03/09/2009



**GRAFICO MICROSTRAIN**

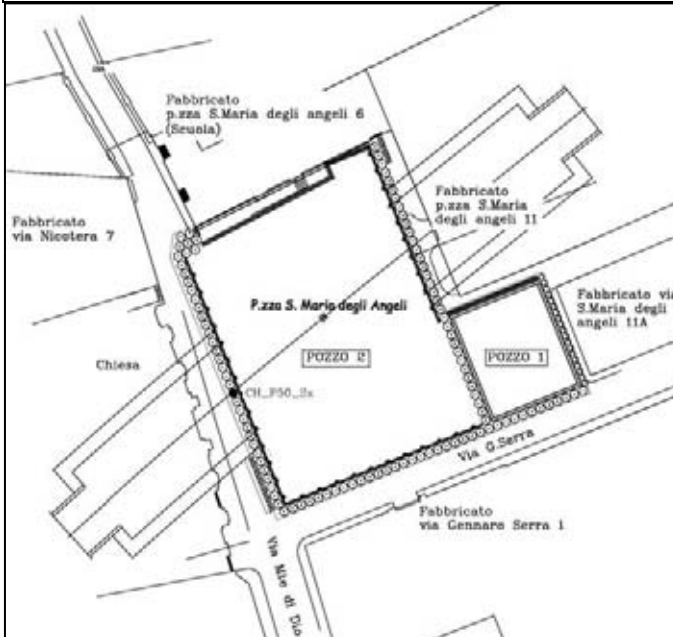


**GRAFICO TEMPERATURE**

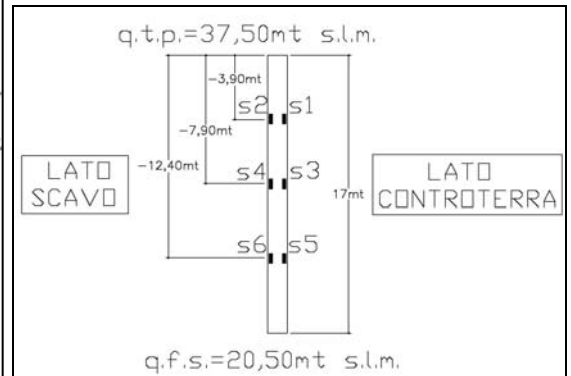


Pannello strumentato

CH\_P50



SCHEMA INSTALLAZIONE  
STRUMENT. GEOTECNICA (BECV  
PER METALLO)  
PALO N°50



Le barrette con numero progressivi dispari (s1,s3,s5) sono installate lato contro terra, mentre quelle con numero pari (s2,s4,s6) sono poste lato scavo; la direzione di installazione è parallela all'asse di scavo.

Affidabilità strumentale

A.T.I. LM6 – TreEsse

buono  
da rivedere  
da scartare

X

Congruenza progettuale  
C.T. ATI LM6 – C.T.  
Monitoraggio

congruente  
non congruente, da valutare  
non congruente con implicazioni  
sulla sicurezza


**NOTE**

Le elaborazioni di seguito riportate includono lo storico delle misure.




**TABULATI**

Ubicazione STAZIONE CHIAIA

Opera \ \ P50

Strumento Barretta Est. per Metallo

Data posa in opera 03/09/2009

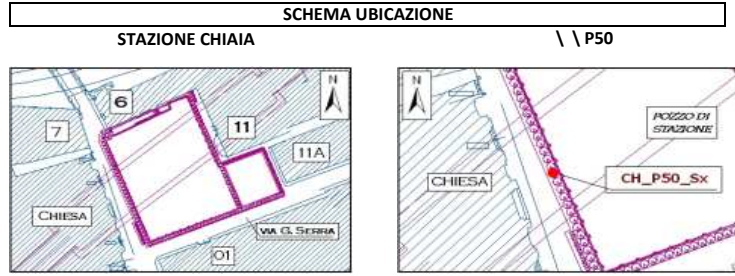
Data lettura di zero 03/09/2009

Ultima Misura 181 in data 19/11/2013

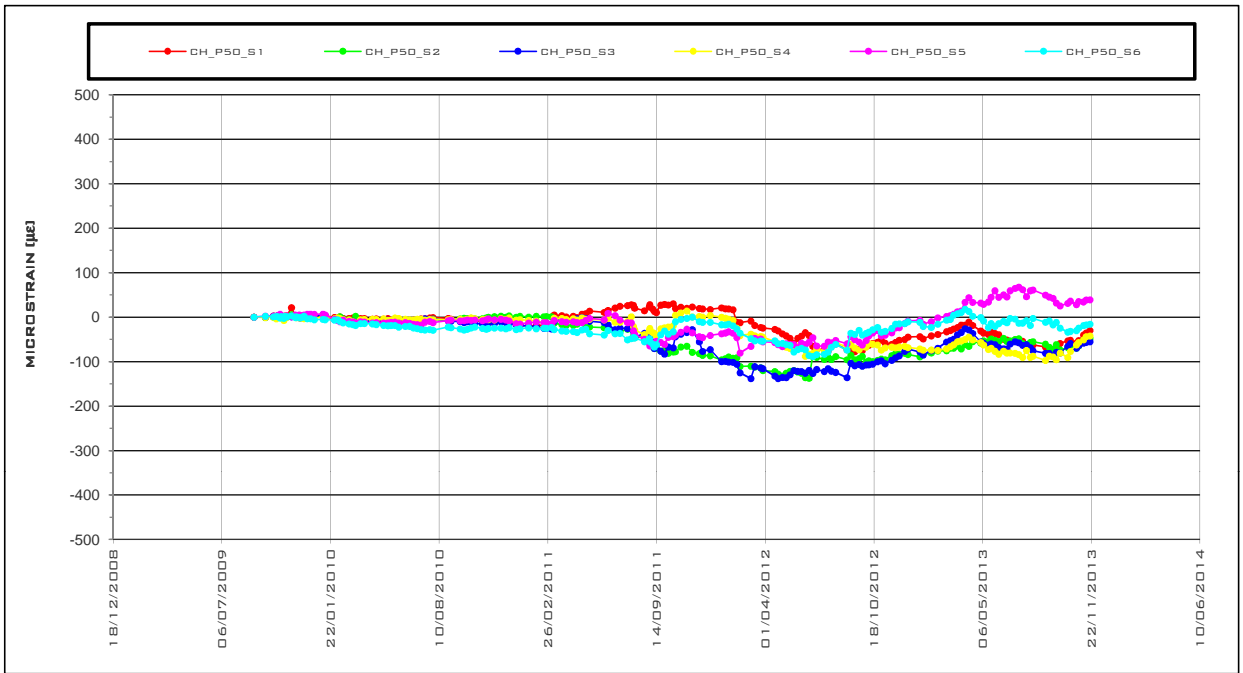
Letture n°	DATA	CH_P50_S1		CH_P50_S2		CH_P50_S3		CH_P50_S4		CH_P50_S5		CH_P50_S6	
		Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]
129	12/9/12 10.00	-77,6	19,4	-95,9	18,5	-109,0	16,3	-69,1	18,5	-50,4	18,5	-38,7	19,1
130	20/9/12 10.30	-71,9	19,2	-93,1	18,4	-106,1	16,2	-73,2	18,5	-55,7	18,4	-29,3	19,2
131	26/9/12 10.00	-74,8	19,3	-87,8	18,5	-110,2	16,2	-66,3	18,4	-62,2	18,2	-39,9	19,0
132	3/10/12 10.30	-65,0	19,1	-100,8	18,1	-107,3	16,1	-67,1	18,0	-52,5	18,0	-36,2	18,3
133	8/10/12 11.00	-63,0	18,6	-98,0	18,0	-106,9	15,8	-59,0	18,0	-41,9	18,2	-33,4	18,2
134	15/10/12 11.30	-59,0	18,6	-99,6	18,2	-105,3	15,6	-60,6	18,2	-35,4	18,4	-28,1	18,3
135	24/10/12 11.00	-56,1	18,5	-97,1	18,4	-100,0	15,7	-62,2	18,4	-30,1	18,5	-22,8	18,4
136	31/10/12 11.20	-51,7	18,2	-93,9	18,0	-98,0	15,2	-74,0	18,1	-41,9	18,2	-33,4	18,2
137	7/11/12 11.00	-58,2	18,0	-95,5	18,2	-104,5	15,0	-68,7	18,2	-40,3	18,0	-31,8	18,0
138	19/11/12 15.00	-61,0	18,1	-86,2	18,3	-96,8	15,3	-67,1	18,0	-35,0	18,1	-25,3	18,2
139	26/11/12 12.00	-56,5	17,8	-81,7	18,0	-91,1	15,1	-68,7	17,2	-24,0	18,0	-15,5	18,0
140	3/12/12 11.00	-51,7	17,2	-82,5	17,6	-86,6	14,8	-67,1	17,0	-23,6	17,7	-14,7	17,4
141	13/12/12 11.30	-50,0	17,0	-80,9	17,4	-76,9	14,6	-65,5	16,8	-13,9	17,5	-14,3	17,1
142	19/12/12 11.00	-44,8	17,1	-83,8	17,5	-71,6	14,7	-68,3	16,9	-8,6	17,6	-10,2	17,1
143	10/1/13 10.00	-43,5	17,2	-89,0	17,4	-78,1	14,5	-71,2	17,0	-7,0	17,4	-11,5	17,0
144	16/1/13 10.45	-48,8	17,1	-83,8	17,5	-85,0	14,6	-74,0	17,1	-15,9	17,0	-20,8	16,9
145	31/1/13 9.30	-41,9	17,0	-80,5	17,1	-75,3	14,4	-73,6	16,8	-10,2	16,8	-22,8	16,4
146	12/2/13 10.00	-38,7	16,6	-76,0	16,8	-69,6	14,2	-74,4	16,4	-1,3	16,2	-15,5	16,0
147	28/2/13 11.00	-32,6	16,1	-75,2	16,2	-55,8	14,0	-71,2	16,0	1,9	15,8	-6,6	15,4
148	7/3/13 11.00	-29,7	16,0	-69,6	16,0	-52,5	13,6	-66,3	15,4	3,5	15,6	-5,0	15,2
149	13/3/13 11.30	-26,5	15,6	-69,6	16,0	-49,3	13,2	-61,9	15,1	6,8	15,2	4,8	15,0
150	20/3/13 11.00	-23,3	15,2	-64,7	15,4	-39,6	13,0	-55,0	15,0	12,5	15,0	8,0	14,6
151	27/3/13 11.30	-17,6	15,0	-71,2	15,2	-34,3	13,1	-53,3	14,8	14,1	14,8	10,8	14,5
152	3/4/13 11.30	-17,6	14,0	-61,4	15,0	-25,7	12,8	-50,1	14,4	33,6	14,4	18,1	14,1
153	10/4/13 12.00	-10,7	13,9	-65,5	15,0	-28,6	12,9	-44,4	14,2	44,2	14,6	12,9	14,0
154	17/4/13 11.00	-18,4	13,6	-54,9	15,2	-36,3	12,6	-50,9	14,0	33,6	14,4	2,3	13,8
155	2/5/13 10.30	-31,0	13,9	-58,2	15,6	-55,4	12,7	-56,6	14,2	32,0	14,6	-0,5	13,9
156	7/5/13 11.00	-35,5	14,2	-52,9	15,7	-58,2	12,8	-62,3	14,4	29,1	14,7	-8,3	13,6
157	16/5/13 11.30	-38,7	14,6	-54,5	15,9	-62,7	13,1	-72,4	14,9	34,4	14,8	-23,3	13,7
158	21/5/13 11.00	-33,4	14,7	-48,8	15,7	-59,9	13,0	-69,6	14,8	45,0	15,0	-13,9	13,8
159	28/5/13 11.40	-36,3	14,8	-51,7	15,8	-61,5	13,2	-76,5	14,9	59,6	15,2	-20,9	13,9
160	4/6/13 11.00	-39,1	14,9	-54,5	15,9	-68,0	13,0	-83,0	14,7	45,0	15,0	-14,4	14,1
161	13/6/13 10.00	-49,7	14,7	-47,6	15,8	-70,8	13,1	-76,1	14,6	50,3	15,1	-9,1	14,2
162	19/6/13 11.00	-51,3	14,9	-54,5	15,9	-71,2	13,4	-80,6	14,9	45,8	15,4	-12,3	14,6
163	25/6/13 10.30	-56,6	14,8	-52,9	15,7	-60,3	13,3	-80,2	14,6	59,6	15,2	-2,6	14,4
164	4/7/13 12.30	-51,3	14,9	-50,1	15,6	-55,0	13,4	-81,0	14,2	64,9	15,3	-4,2	14,6
165	11/7/13 12.00	-57,0	15,1	-48,4	15,4	-57,4	13,2	-83,8	14,3	67,7	15,2	-13,5	14,5
166	18/7/13 10.00	-54,1	15,0	-59,0	15,2	-63,1	13,4	-90,3	14,1	62,0	15,4	-13,1	14,2
167	25/7/13 10.45	-61,4	15,4	-61,8	15,3	-61,5	13,2	-74,5	14,4	46,2	15,1	-7,4	14,0
168	1/8/13 12.45	-67,9	15,2	-56,6	15,4	-68,4	13,3	-90,3	14,1	59,6	15,2	-18,4	14,1
169	6/8/13 11.45	-62,7	15,3	-54,9	15,2	-75,3	13,4	-87,5	14,0	61,2	15,0	-2,6	14,4
170	29/8/13 11.00	-67,1	15,6	-60,6	15,4	-81,0	13,6	-97,2	14,2	49,9	15,4	-11,1	14,7
171	5/9/13 11.30	-68,7	15,8	-67,5	15,5	-81,4	13,9	-87,5	14,0	45,4	15,7	-8,3	14,6
172	12/9/13 10.00	-73,2	16,1	-72,0	15,8	-87,1	14,1	-89,1	14,2	42,5	15,8	-17,2	14,2
173	18/9/13 10.30	-68,7	15,8	-61,4	16,0	-78,9	14,1	-95,6	14,0	32,0	15,6	-11,5	14,0
174	25/9/13 11.30	-59,0	15,6	-73,6	16,0	-80,2	14,0	-80,6	13,9	25,5	15,4	-24,5	14,6
175	9/10/13 10.30	-53,3	15,4	-68,3	16,1	-65,5	14,2	-90,7	13,4	31,2	15,2	-33,4	14,2
176	14/10/13 10.00	-51,7	15,2	-63,1	16,2	-59,0	14,4	-76,9	13,2	36,4	15,3	-31,8	14,0
177	25/10/13 11.00	-58,2	15,0	-69,6	16,0	-69,6	14,2	-62,3	13,4	28,3	15,3	-30,2	13,8
178	29/10/13 11.30	-52,5	14,8	-64,7	15,4	-63,9	14,0	-56,6	13,2	35,2	15,2	-24,5	13,6
179	7/11/13 11.30	-39,9	14,5	-54,9	15,2	-58,2	13,8	-50,9	13,0	34,4	14,8	-18,8	13,4
180	12/11/13 11.00	-35,5	14,2	-49,3	15,0	-56,6	13,6	-43,6	12,6	38,9	14,5	-17,2	13,2
181	19/11/13 11.00	-29,8	14,0	-47,6	14,8	-55,0	13,4	-42,0	12,4	39,3	14,2	-15,6	13,0



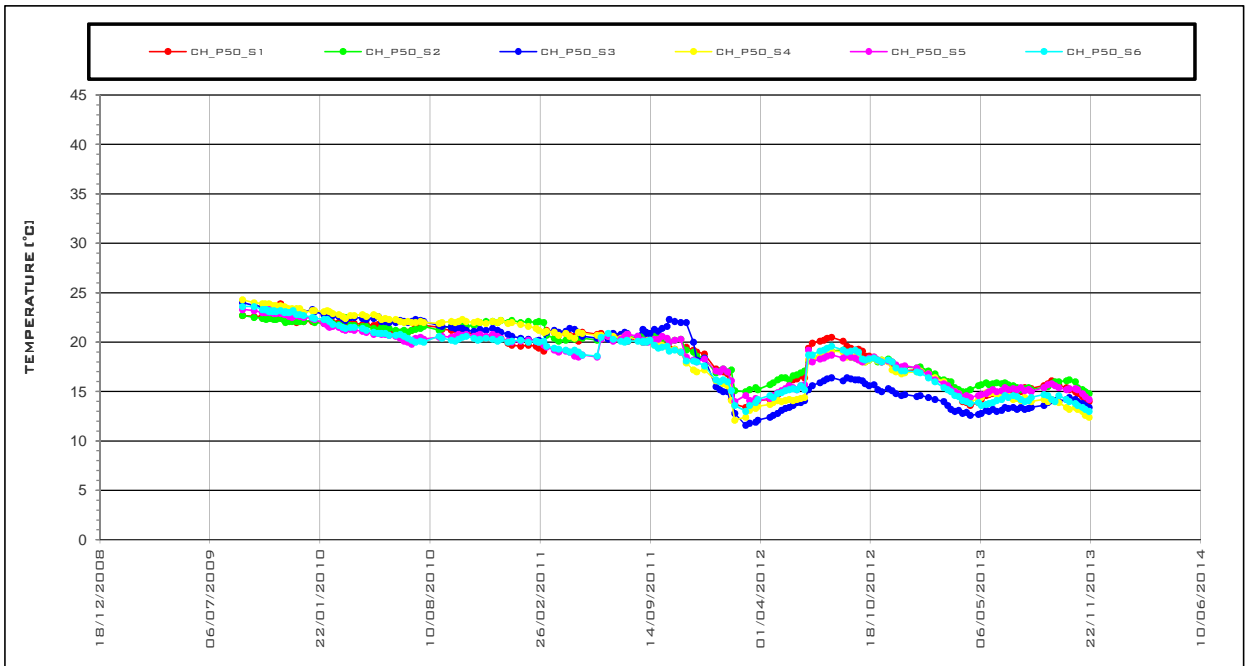
Ubicazione STAZIONE CHIAIA  
Opera \ \ P50  
Strumento Barretta Est. per Metallo  
Data posa in opera 03/09/2009  
Data lettura di zero 03/09/2009



**GRAFICO MICROSTRAIN**

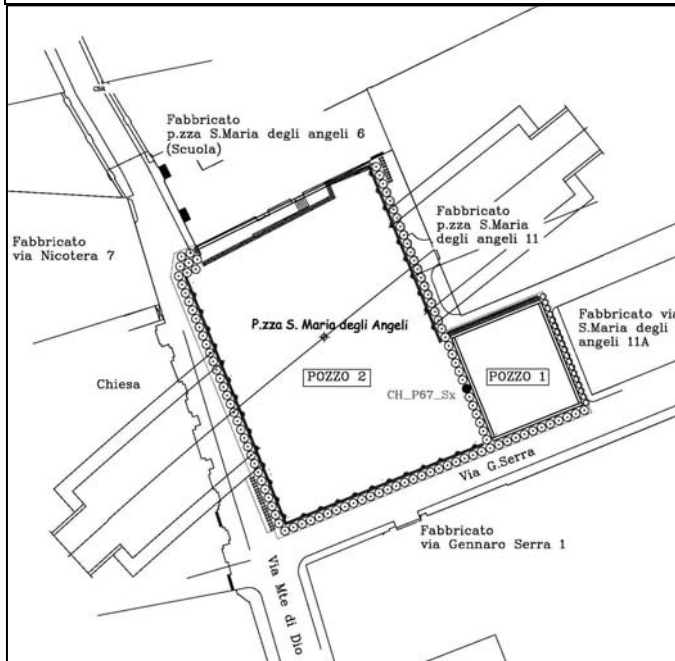


**GRAFICO TEMPERATURE**

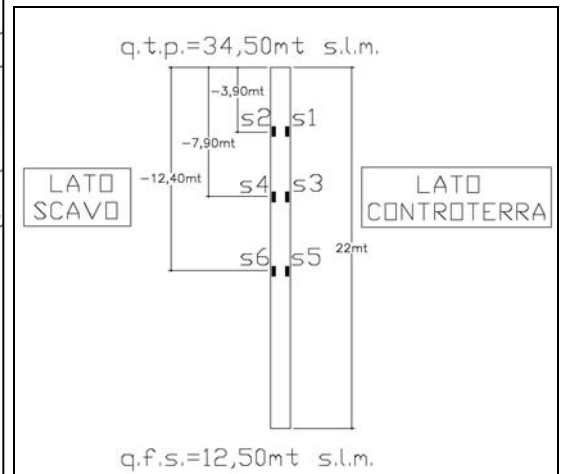


Pannello strumentato

CH\_P67



SCHEMA INSTALLAZIONE  
STRUMENT. GEOTECNICA (BECV  
PER METALLO)  
PALO N°67



Le barrette con numero progressivi dispari (s1,s3,s5) sono installate lato contro terra, mentre quelle con numero pari (s2,s4,s6) sono poste lato scavo; la direzione di installazione è parallela all'asse di scavo.

Affidabilità strumentale

A.T.I. LM6 – TreEsse

buono  
da rivedere  
da scartare

X

Congruenza progettuale  
C.T. ATI LM6 – C.T.  
Monitoraggio

congruente  
non congruente, da valutare  
non congruente con implicazioni  
sulla sicurezza


**NOTE**

Le elaborazioni di seguito riportate includono lo storico delle misure.

La barretta estensimetrica a c.v. CH\_P67\_S1 restituisce valori discontinui dal 28/09/2011.

**TABULATI**

Ubicazione STAZIONE CHIAIA

Opera \ \ P67

Strumento Barretta Est. per Metallo

Data posa in opera 03/09/2009

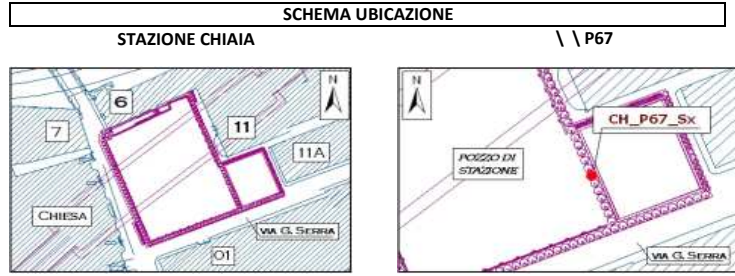
Data lettura di zero 03/09/2009

Ultima Misura 185 in data 19/11/2013

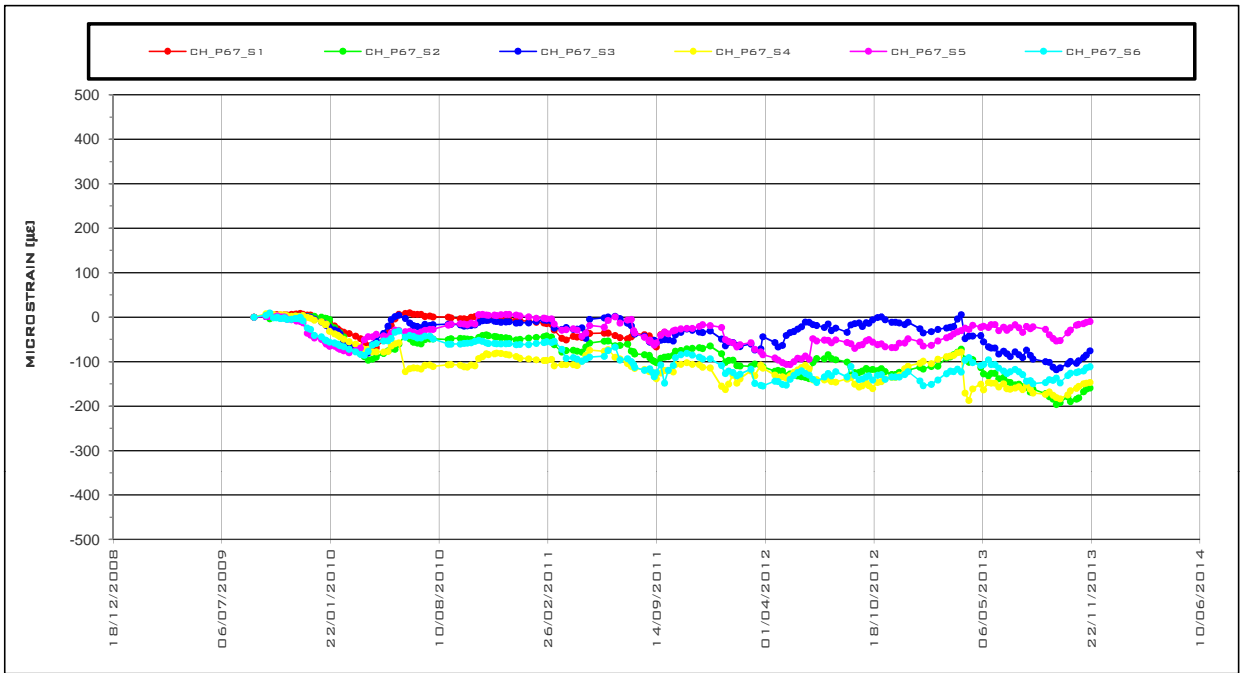
Letture n°	DATA	CH_P67_S1		CH_P67_S2		CH_P67_S3		CH_P67_S4		CH_P67_S5		CH_P67_S6	
		Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]
133	12/9/12 11.30			-124,4	19,0	-14,3	22,6	-150,4	18,4	-69,9	21,7	-130,8	21,7
134	20/9/12 11.00			-124,0	19,7	-12,6	22,4	-156,9	18,2	-63,0	21,6	-140,2	21,6
135	26/9/12 11.30			-121,1	19,6	-20,8	22,4	-154,1	18,1	-61,4	21,4	-138,6	21,4
136	3/10/12 11.00			-115,0	19,1	-12,2	22,1	-147,1	18,0	-52,9	21,1	-134,1	21,1
137	8/10/12 11.30			-119,1	18,1	-13,5	21,0	-153,6	17,8	-50,0	21,0	-131,3	21,0
138	15/10/12 11.00			-117,1	18,6	-5,8	21,3	-160,2	17,6	-55,7	21,2	-141,0	21,2
139	24/10/12 11.00			-119,9	18,7	-0,5	21,4	-146,7	17,7	-61,4	21,4	-130,4	21,4
140	31/10/12 10.30			-115,5	18,4	1,1	21,2	-144,7	17,2	-59,8	21,2	-128,8	21,2
141	7/11/12 10.00			-122,0	18,2	-5,4	21,0	-138,2	17,4	-66,3	21,0	-139,4	21,0
142	19/11/12 15.00			-128,5	18,0	-11,0	21,2	-135,4	17,3	-67,9	21,2	-134,1	21,1
143	26/11/12 12.00			-128,5	18,0	-11,0	21,2	-135,4	17,3	-67,9	21,2	-134,1	21,1
144	3/12/12 11.00			-123,6	17,4	-12,7	20,4	-130,5	16,7	-58,1	21,0	-134,5	21,4
145	13/12/12 11.30			-122,0	17,2	-16,3	20,1	-115,5	16,6	-57,7	20,7	-128,8	21,2
146	19/12/12 11.00			-119,1	17,1	-11,1	20,2	-110,2	16,7	-48,4	20,8	-122,3	21,4
147	10/1/13 10.00			-112,2	17,0	-25,7	18,0	-103,3	16,6	-55,3	19,9	-143,1	18,7
148	16/1/13 10.45			-116,3	17,0	-35,1	17,9	-98,8	16,3	-64,7	19,8	-153,6	18,5
149	31/1/13 9.30			-110,6	16,8	-32,2	17,8	-104,1	16,2	-63,0	19,6	-150,8	18,4
150	12/2/13 10.30			-109,8	16,2	-27,3	17,2	-94,4	16,0	-53,3	19,4	-141,1	18,2
151	28/2/13 10.00			-91,5	15,7	-24,1	16,8	-88,7	15,8	-46,0	19,0	-126,8	17,7
152	7/3/13 11.00			-88,7	15,6	-22,5	16,6	-87,1	15,6	-42,7	18,6	-121,2	17,5
153	13/3/13 11.30			-84,2	15,3	-20,9	16,4	-85,4	15,4	-37,1	18,4	-122,0	17,1
154	20/3/13 11.00			-78,5	15,1	-3,8	16,8	-79,8	15,2	-32,6	18,1	-116,7	17,2
155	27/3/13 11.30			-71,6	15,0	6,0	16,6	-78,1	15,0	-29,8	18,0	-123,2	17,0
156	3/4/13 11.00			-94,4	12,8	-47,7	13,2	-170,4	12,1	-24,5	15,1	-96,4	14,2
157	10/4/13 12.00			-100,9	12,6	-42,4	13,3	-187,0	12,4	-27,4	15,2	-90,7	14,0
158	17/4/13 11.00			-95,2	12,4	-42,0	13,0	-161,0	12,2	-18,0	15,3	-101,7	14,1
159	2/5/13 11.30			-113,1	12,6	-41,2	13,4	-150,5	12,4	-22,5	15,6	-108,6	14,2
160	7/5/13 11.00			-126,9	12,8	-55,0	13,6	-163,1	12,7	-20,0	15,8	-106,2	14,4
161	16/5/13 11.30			-131,4	13,1	-66,4	14,0	-146,4	12,4	-22,9	15,9	-95,6	14,6
162	21/5/13 11.00			-126,1	13,2	-69,2	14,1	-148,0	12,6	-16,4	16,1	-106,2	14,4
163	28/5/13 11.00			-126,1	13,2	-69,2	14,1	-148,0	12,6	-16,4	16,1	-106,2	14,4
164	4/6/13 11.30			-138,3	13,2	-82,6	14,0	-156,6	12,9	-29,8	16,0	-114,3	14,4
165	13/6/13 11.00			-135,4	13,1	-76,1	14,2	-149,7	12,8	-22,1	16,3	-120,8	14,2
166	19/6/13 10.30			-145,2	13,3	-81,8	14,4	-160,6	12,9	-29,0	16,4	-126,5	14,4
167	25/6/13 10.30			-146,4	13,2	-88,3	14,2	-161,8	12,8	-23,3	16,2	-122,4	14,4
168	4/7/13 12.30			-152,1	13,4	-77,8	14,4	-159,0	12,7	-16,8	16,4	-117,1	14,5
169	11/7/13 12.00			-150,5	13,2	-84,3	14,2	-156,2	12,6	-23,3	16,2	-122,4	14,4
170	18/7/13 10.00			-156,1	13,4	-90,8	14,0	-162,7	12,4	-33,8	16,0	-128,9	14,2
171	25/7/13 10.30			-157,8	13,6	-73,7	14,4	-152,1	12,6	-20,4	16,1	-143,5	14,0
172	1/8/13 12.30			-168,3	13,4	-85,5	14,1	-161,8	12,8	-25,7	16,0	-142,3	14,1
173	6/8/13 11.30			-161,8	13,6	-94,0	14,4	-170,4	13,1	-21,3	15,7	-149,2	14,2
174	29/8/13 11.00			-171,6	13,8	-99,7	14,6	-173,2	13,2	-26,9	15,9	-146,8	14,4
175	5/9/13 11.30			-178,5	13,9	-101,3	14,8	-167,9	13,3	-39,1	15,9	-140,3	14,6
176	12/9/13 10.00			-184,2	14,1	-112,3	14,9	-175,2	13,7	-47,7	16,2	-141,9	14,8
177	18/9/13 10.30			-196,0	13,8	-118,0	15,1	-180,5	13,6	-53,3	16,4	-136,6	14,9
178	25/9/13 11.00			-191,9	13,8	-113,5	14,8	-183,4	13,7	-52,1	16,5	-147,6	15,0
179	9/10/13 11.00			-178,9	13,2	-104,6	14,2	-174,4	13,1	-35,1	15,9	-130,9	14,7
180	14/10/13 10.00			-189,5	13,0	-99,3	14,3	-165,1	13,2	-28,6	16,1	-125,7	14,8
181	25/10/13 11.00			-184,2	13,1	-103,3	14,3	-159,8	13,3	-17,6	16,0	-124,0	14,6
182	29/10/13 11.30			-181,3	13,0	-97,7	14,1	-155,3	13,0	-16,0	15,8	-122,4	14,4
183	7/11/13 11.00			-167,5	12,8	-90,8	14,0	-149,7	12,8	-14,4	15,6	-120,8	14,2
184	12/11/13 11.30			-161,8	12,6	-85,1	13,8	-148,0	12,6	-11,1	15,2	-113,9	14,1
185	19/11/13 11.00			-159,0	12,5	-75,3	13,6	-146,4	12,4	-9,5	15,0	-111,1	14,0



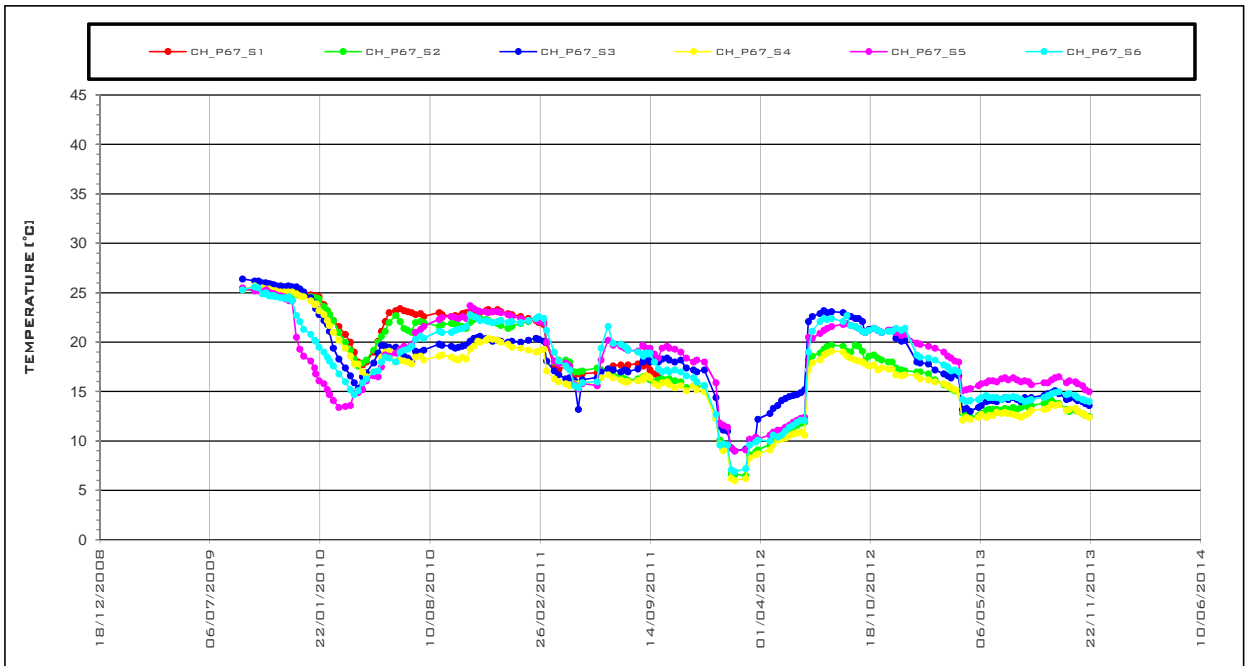
Ubicazione STAZIONE CHIAIA  
Opera \ \ P67  
Strumento Barretta Est. per Metallo  
Data posa in opera 03/09/2009  
Data lettura di zero 03/09/2009



**GRAFICO MICROSTRAIN**

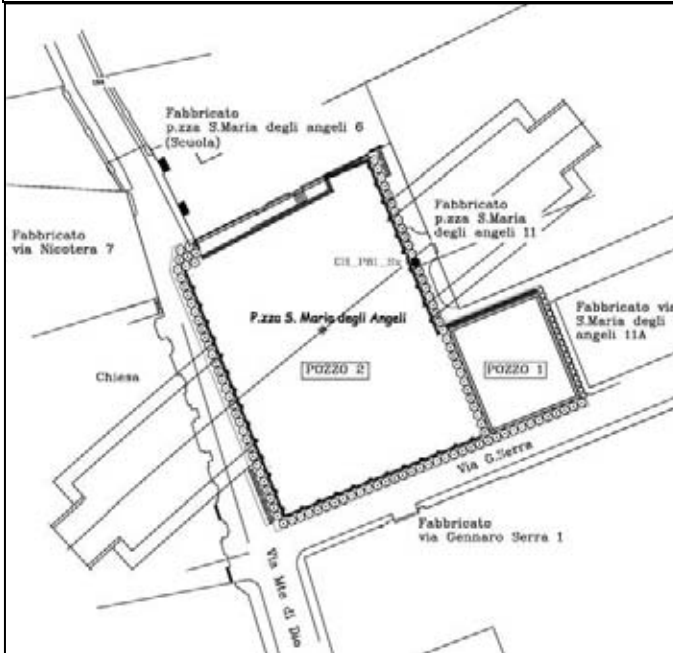


**GRAFICO TEMPERATURE**

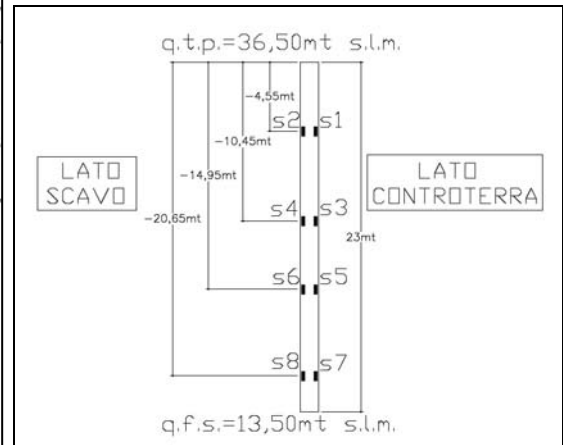


Pannello strumentato

CH\_P81



SCHEMA INSTALLAZIONE  
STRUMENT. GEOTECNICA (BECV  
PER METALLO)  
PALO N°81



Le barrette con numero progressivi dispari (s1,s3,s5,s7) sono installate lato contro terra, mentre quelle con numero pari (s2,s4,s6,s8) sono poste lato scavo; la direzione di installazione è parallela all'asse di scavo.

Affidabilità strumentale

A.T.I. LM6 – TreEsse

buono  
da rivedere

da scartare

X

Congruenza progettuale

C.T. ATI LM6 – C.T.

Monitoraggio

congruente  
non congruente, da valutare  
non congruente con implicazioni  
sulla sicurezza


**NOTE**

La barretta estensimetrica a c.v. CH\_P81\_S7 non è funzionante.

La barretta estensimetrica a c.v. CH\_P81\_S4 dalla data 25/03/10 non restituisce segnale

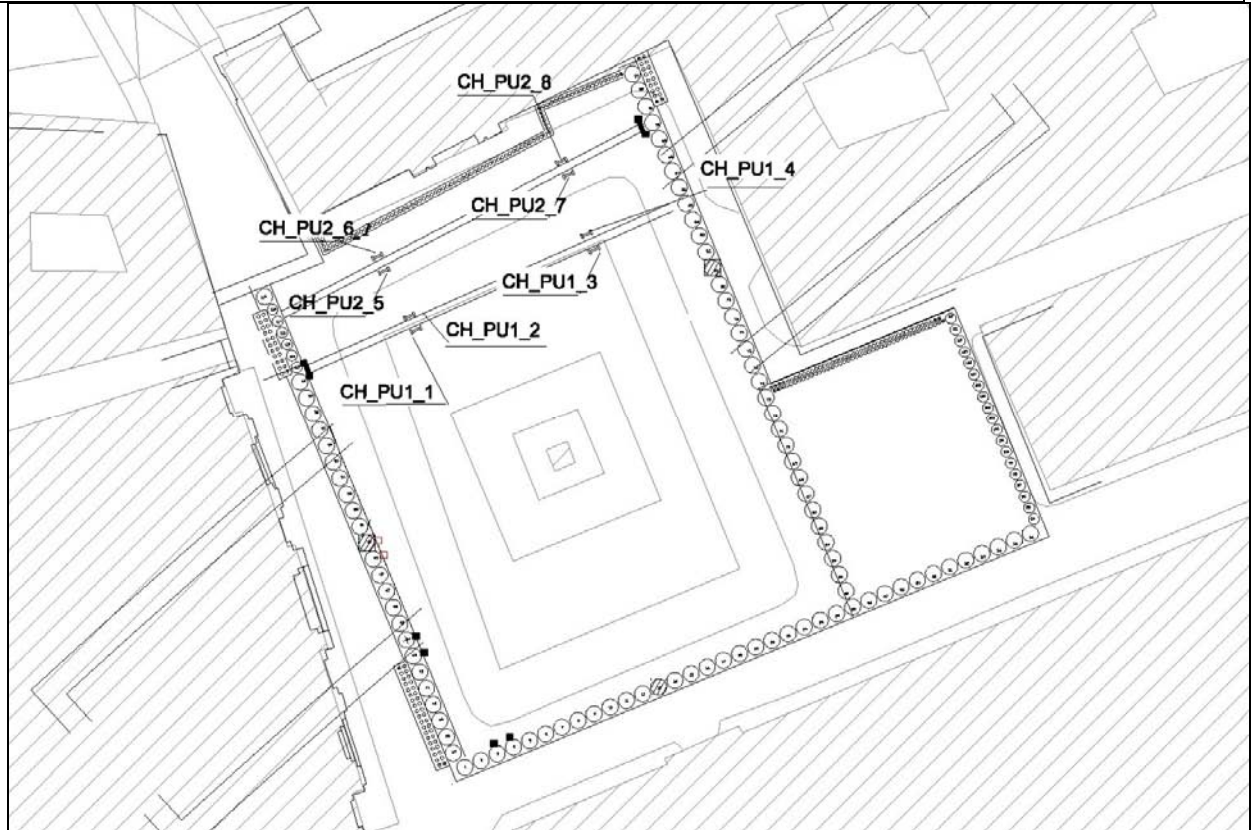
Le restanti barrette estensimetriche restituiscono valore discontinuo dal 20/04/2011

L'ultima misura disponibile è riportata nel report APR 2011 con codifica: LM6 7FX 2C I 00



Puntoni strumentati

CH\_PU1 CH\_PU2



Affidabilità strumentale

A.T.I. LM6 – TreEsse

buono  
da rivedere  
da scartare

X

Congruenza progettuale

C.T. ATI LM6 – C.T.  
Monitoraggio

congruente  
non congruente, da valutare  
non congruente con implicazioni  
sulla sicurezza


**NOTE**

La Barretta estensimetrica CH\_PU2\_6 risulta danneggiata e non restituisce valore.

La Barretta estensimetrica CH\_PU2\_6\_1 sostituisce la CH\_PU2\_6\_1

Ubicazione STAZIONE CHIAIA

Opera \ \ Puntone 1

Strumento Barretta Est. per Metallo

Data posa in opera 14/09/2011

Data lettura di zero 14/09/2011

Ultima Misura 95 in data 19/11/2013

Letture n°	DATA	CH_PU1_S1		CH_PU1_S2		CH_PU1_S3		CH_PU1_S4	
		Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]
43	20/9/12 10.40	176,1	32,6	102,1	28,0	96,8	27,1	105,4	27,6
44	26/9/12 10.00	177,7	32,4	102,5	27,7	99,7	27,0	98,8	27,4
45	3/10/12 11.00	179,3	32,2	108,6	27,2	102,9	26,6	111,4	27,1
46	8/10/12 11.30	174,0	31,1	114,3	27,0	114,3	26,2	120,0	26,8
47	15/10/12 11.00	168,8	31,0	119,6	27,1	117,1	26,1	117,5	26,6
48	24/10/12 11.00	167,1	31,2	112,7	27,2	122,4	26,2	122,8	26,7
49	31/10/12 12.00	177,7	31,4	119,2	27,4	43,9	22,1	28,5	22,3
50	7/11/12 11.00	179,3	31,2	106,2	27,0	36,2	21,8	12,2	20,3
51	19/11/12 15.00	176,9	31,0	87,1	26,1	35,8	21,1	-6,5	19,1
52	26/11/12 11.00	159,8	29,6	66,7	24,1	19,5	20,1	-16,2	18,3
53	3/12/12 10.00	159,0	29,2	70,8	24,1	17,9	19,3	-28,0	17,0
54	13/12/12 10.00	164,7	29,0	73,6	24,0	22,4	19,0	-27,6	16,7
55	19/12/12 11.00	170,0	29,1	75,2	23,8	20,3	18,5	-45,1	15,6
56	10/1/13 9.30	89,8	21,2	-6,5	18,1	-2,1	16,0	-45,9	15,2
57	16/1/13 10.30	69,9	18,9	5,3	17,4	10,5	15,7	-40,2	15,0
58	31/1/13 9.30	48,3	16,8	28,0	16,6	-21,6	15,4	-45,1	14,6
59	7/2/13 10.30	50,0	16,6	33,7	16,4	-14,3	15,0	-41,9	14,2
60	13/2/13 10.00	32,9	14,2	38,2	16,1	-11,0	14,6	-32,1	14,0
61	28/2/13 10.30	32,8	12,2	48,3	15,6	-3,7	14,2	-19,5	13,7
62	7/3/13 11.00	34,5	12,0	51,6	15,2	2,0	14,0	-15,1	13,4
63	13/3/13 11.30	40,1	11,8	61,3	15,0	1,2	13,6	-11,8	13,0
64	20/3/13 10.30	44,6	11,5	65,8	14,7	8,5	13,2	2,8	13,2
65	27/3/13 11.00	47,4	11,4	68,6	14,6	10,1	13,0	2,0	12,8
66	3/4/13 10.30	19,5	15,1	-12,6	16,6	-24,8	15,8	-41,1	14,6
67	10/4/13 11.00	3,2	17,1	-35,3	17,4	-32,5	18,5	-45,5	16,9
68	17/4/13 11.30	-19,1	17,6	-32,1	17,0	-29,6	18,4	-41,4	17,9
69	2/5/13 11.00	-11,4	17,9	-38,6	17,8	-30,0	18,7	-60,9	18,3
70	7/5/13 11.30	-14,6	18,3	-50,0	18,2	-42,6	19,0	-36,9	18,6
71	16/5/13 11.00	-23,1	18,6	-55,6	18,4	-66,2	18,4	-45,5	18,9
72	21/5/13 10.30	-26,0	18,7	-51,6	18,4	-62,1	19,4	-39,0	19,1
73	28/5/13 10.40	-31,7	18,9	-61,3	18,6	-67,8	19,6	-43,4	19,4
74	4/6/13 11.00	-37,3	19,1	-71,9	18,4	-70,6	19,7	-49,9	19,2
75	13/6/13 11.30	-32,1	19,2	-66,6	18,5	-67,8	19,6	-39,4	19,4
76	19/6/13 11.00	-41,8	19,4	-72,3	18,7	-72,3	19,9	-41,0	19,6
77	25/6/13 11.45	-47,9	20,9	-71,9	20,4	-70,6	20,7	-84,5	17,7
78	4/7/13 12.15	-41,0	20,8	-70,2	20,2	-63,7	20,6	-79,2	17,8
79	11/7/13 11.00	-47,5	20,6	-76,7	20,0	-70,2	20,4	-77,6	17,6
80	18/7/13 10.00	-49,1	20,8	-67,4	20,1	-76,7	20,2	-83,3	17,8
81	25/7/13 10.50	-15,3	24,9	-35,3	23,4	-66,1	22,4	-55,2	19,1
82	1/8/13 12.45	5,8	27,3	-8,8	26,9	54,6	28,3	24,9	26,0
83	6/8/13 11.45	16,0	28,8	-1,1	28,2	70,0	28,9	41,2	28,0
84	29/8/13 11.00	9,1	28,9	-6,8	28,4	45,2	28,2	47,7	28,2
85	5/9/13 11.00	16,0	30,8	-0,2	30,6	63,2	31,0	56,2	30,9
86	12/9/13 11.30	1,0	28,9	4,6	29,0	47,3	28,7	42,0	28,4
87	18/9/13 11.00	3,8	26,8	1,8	27,1	39,9	27,1	61,9	26,7
88	25/9/13 10.00	-30,4	24,0	-32,0	24,0	29,3	23,9	46,8	23,8
89	9/10/13 11.00	-37,3	23,1	-38,9	22,1	31,8	23,1	51,7	22,2
90	14/10/13 11.30	-30,4	23,0	-39,3	22,4	38,7	23,0	53,3	22,0
91	25/10/13 11.00	-19,0	22,6	-19,8	22,0	43,5	22,4	68,7	21,6
92	29/10/13 11.30	-33,2	22,1	-18,2	21,8	50,8	22,0	72,0	21,2
93	7/11/13 11.00	-46,2	21,7	-17,8	21,5	58,1	21,6	74,0	20,7
94	12/11/13 11.30	-43,0	21,3	-14,6	21,1	57,3	21,2	78,4	20,4
95	19/11/13 11.00	-42,6	21,0	-11,7	21,0	58,9	21,0	91,0	20,1



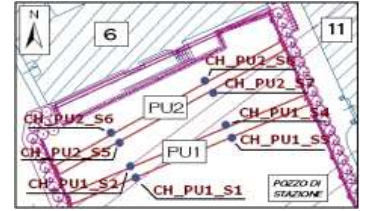
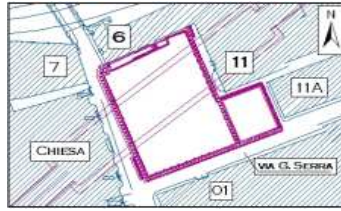


Ubicazione STAZIONE CHIAIA  
Opera \ \ Puntone 1  
Strumento Barretta Est. per Metallo  
Data posa in opera 14/09/2011  
Data lettura di zero 14/09/2011

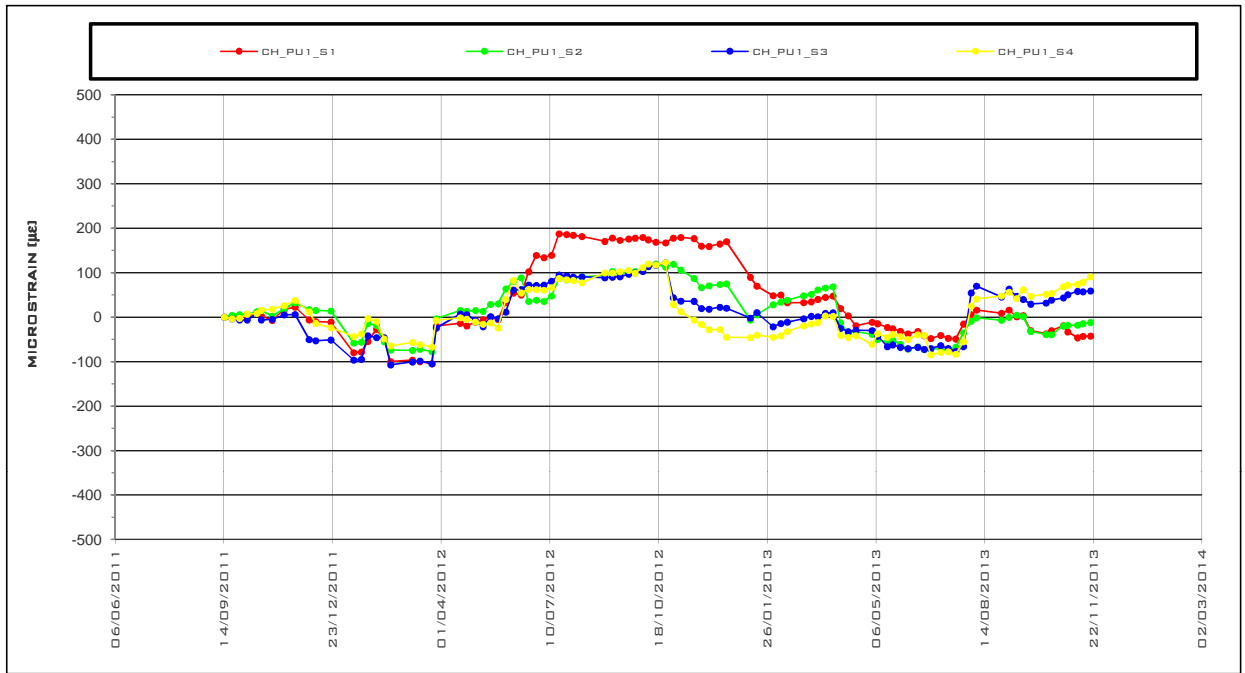
**SCHEMA UBICAZIONE**

**STAZIONE CHIAIA**

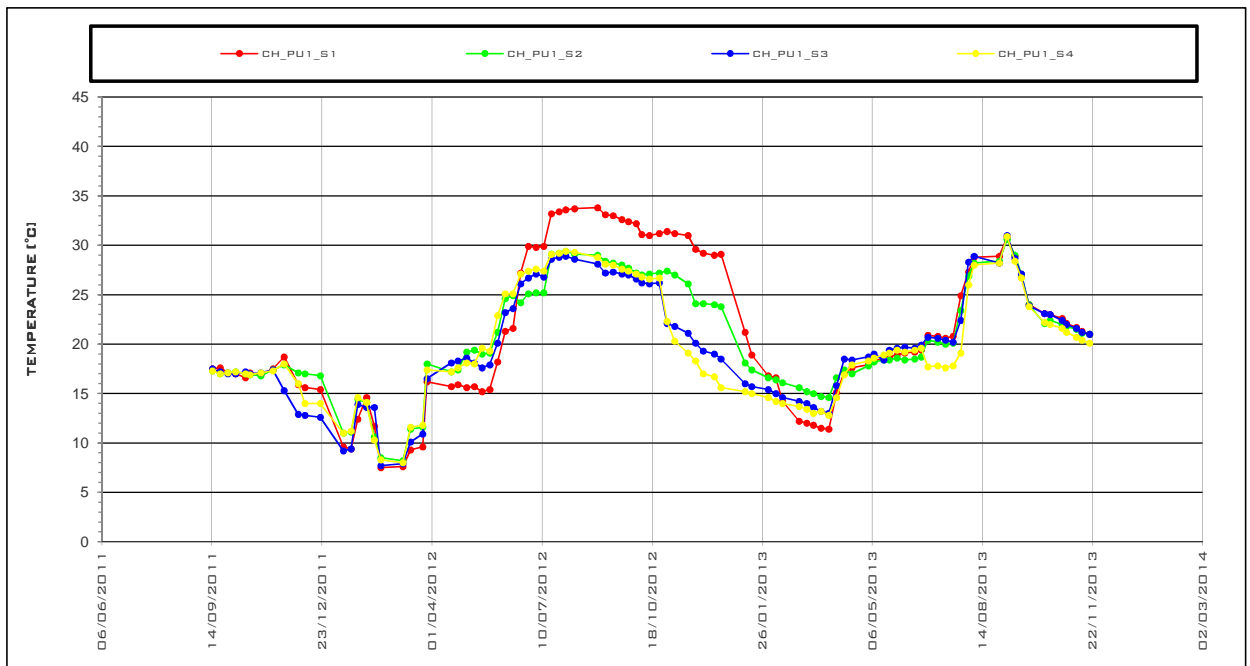
**\ \ Puntone 1**



**GRAFICO MICROSTRAIN**



**GRAFICO TEMPERATURE**





**TABULATI**

Ubicazione STAZIONE CHIAIA

Opera \ \ Puntone 2

Strumento Barretta Est. per Metallo

Data posa in opera 14/09/2011

Data lettura di zero 14/09/2011

Ultima Misura 96 in data 19/11/2013

Letture n°	DATA	CH_PU2_S5		CH_PU2_S6		CH_PU2_S6.1		CH_PU2_S7		CH_PU2_S8	
		Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]	Micro strain [µε]	Temp. [°C]
44	20/9/12 10.40	59,0	28,6	78,1	27,5			37,5	28,6	85,0	27,2
45	26/9/12 10.00	60,7	28,4	81,0	27,4			44,4	28,5	91,9	27,1
46	3/10/12 11.00	68,0	28,0	80,1	27,0			47,7	28,1	100,5	26,8
47	8/10/12 11.30	71,2	27,6	78,9	26,9			35,5	27,1	100,0	26,1
48	15/10/12 11.00	74,1	27,5	80,5	26,7			38,3	27,0	96,0	26,1
49	24/10/12 11.00	79,3	27,6					43,6	27,1	101,3	26,2
50	31/10/12 12.00	89,9	27,8					15,9	22,5	41,1	22,6
51	7/11/12 11.00	89,1	27,4					-4,0	21,2	11,8	21,2
52	19/11/12 15.00	82,6	27,2			0,0	18,6	-10,9	20,3	-9,7	20,1
53	26/11/12 11.00	71,6	25,3			6,1	18,1	-28,0	18,9	-4,4	19,2
54	3/12/12 10.00	62,7	24,9			-7,3	18,0	-32,5	18,2	4,5	18,6
55	13/12/12 10.00	67,1	24,6			-0,8	18,2	-26,8	18,0	10,2	18,4
56	19/12/12 11.00	68,7	24,4			0,8	18,0	-21,5	18,1	17,1	18,3
57	10/1/13 9.30	-11,4	19,5			-7,8	16,3	-26,0	17,4	19,9	17,2
58	16/1/13 10.30	-30,5	16,6			-7,8	15,3	-24,4	16,2	20,3	15,9
59	31/1/13 9.30	-40,7	15,1			-17,1	15,2	-31,3	16,3	26,8	16,1
60	7/2/13 10.30	-32,1	14,8			-15,5	15,0	-26,8	16,0	37,8	16,0
61	13/2/13 10.00	-22,4	14,6			-11,0	14,7	-28,5	15,2	32,1	15,2
62	28/2/13 10.30	-8,2	14,1			-4,1	14,6	-22,8	15,0	37,7	15,0
63	7/3/13 11.00	-5,3	14,0			-2,5	14,4	-29,7	15,1	41,0	14,6
64	13/3/13 11.30	-3,7	13,8			-3,3	14,0	-27,7	14,6	44,2	14,2
65	20/3/13 10.30	0,7	13,5			2,4	13,8	-24,8	14,5	52,3	14,2
66	27/3/13 11.00	-0,1	13,1			4,0	13,6	-19,5	14,6	58,0	14,0
67	3/4/13 10.30	-26,0	16,3			-13,8	16,8	-104,4	16,3	11,8	16,2
68	10/4/13 11.00	-94,6	18,0			-15,5	17,0	-101,1	17,9	-31,7	17,3
69	17/4/13 11.30	-70,3	19,0			-24,4	16,6	-82,9	18,4	-39,4	17,0
70	2/5/13 11.00	-103,2	19,3			-52,0	17,0	-92,6	18,6	-53,2	17,2
71	7/5/13 11.30	-128,3	19,9			-56,5	17,3	-88,9	18,9	-58,9	17,4
72	16/5/13 11.00	-134,0	20,1			-75,6	17,4	-93,4	19,2	-64,6	17,6
73	21/5/13 10.30	-131,2	20,0			-69,1	17,6	-89,4	19,2	-67,4	17,7
74	28/5/13 10.40	-134,0	20,1			-78,4	17,5	-97,9	19,5	-69,1	17,9
75	4/6/13 11.00	-131,2	20,0			-85,3	17,6	-84,5	19,6	-66,6	18,1
76	13/6/13 11.30	-124,7	20,2			-83,7	17,4	-79,2	19,7	-61,3	18,2
77	19/6/13 11.00	-134,0	20,1			-82,9	17,8	-78,8	19,4	-67,8	18,0
78	25/6/13 11.45	-134,8	20,7			-75,5	20,4	-88,9	19,9	-59,7	20,0
79	4/7/13 12.15	-134,4	20,4			-56,8	20,6	-86,1	19,8	-54,4	20,1
80	11/7/13 11.00	-145,0	20,2			-55,2	20,4	-96,7	19,6	-59,7	20,0
81	18/7/13 10.00	-146,6	20,4			-61,7	20,2	-101,9	19,5	-54,4	20,1
82	25/7/13 10.50	-120,6	23,2			-2,4	24,4	-107,2	20,4	-4,4	23,2
83	1/8/13 12.45	-65,3	27,4			18,8	26,8	-46,6	25,7	57,0	27,9
84	6/8/13 11.45	-55,1	28,9			56,6	28,9	-19,4	28,6	55,8	28,8
85	29/8/13 11.00	-67,3	28,9			26,6	29,1	-17,7	28,4	45,2	28,6
86	5/9/13 11.00	-54,2	31,3			36,7	31,6	-15,2	31,6	72,1	31,8
87	12/9/13 11.30	-74,2	29,0			13,5	28,7	-36,4	28,2	41,2	28,6
88	18/9/13 11.00	-89,2	27,1			11,5	26,2	-42,9	26,0	39,5	26,8
89	25/9/13 10.00	-109,2	23,8			9,8	23,4	-72,6	22,9	38,3	23,7
90	9/10/13 11.00	-88,9	22,8			13,9	22,4	-66,6	21,4	41,1	22,6
91	14/10/13 11.30	-89,7	22,4			15,5	22,2	-56,0	21,6	54,5	22,7
92	25/10/13 11.00	-86,5	22,0			25,2	22,0	-52,8	21,2	69,5	22,6
93	29/10/13 11.30	-80,8	21,8			30,9	21,8	-47,1	21,0	75,2	22,4
94	7/11/13 11.00	-76,3	21,5			35,4	21,5	-42,6	20,7	82,5	22,0
95	12/11/13 11.30	-66,2	21,0			42,7	21,1	-35,3	20,3	89,8	21,6
96	19/11/13 11.00	-76,7	20,8			45,5	21,0	-34,9	20,0	91,4	21,4



Ubicazione STAZIONE CHIAIA  
Opera \ \ Puntone 2  
Strumento Barretta Est. per Metallo  
Data posa in opera 14/09/2011  
Data lettura di zero 14/09/2011

SCHEMA UBICAZIONE

STAZIONE CHIAIA

\ \ Puntone 2

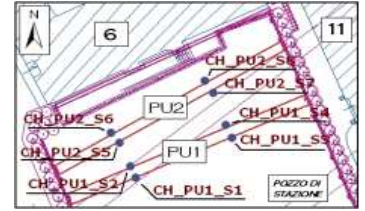
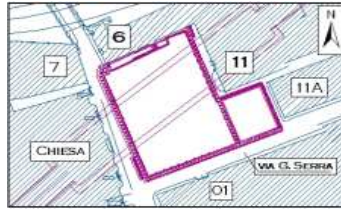


GRAFICO MICROSTRAIN

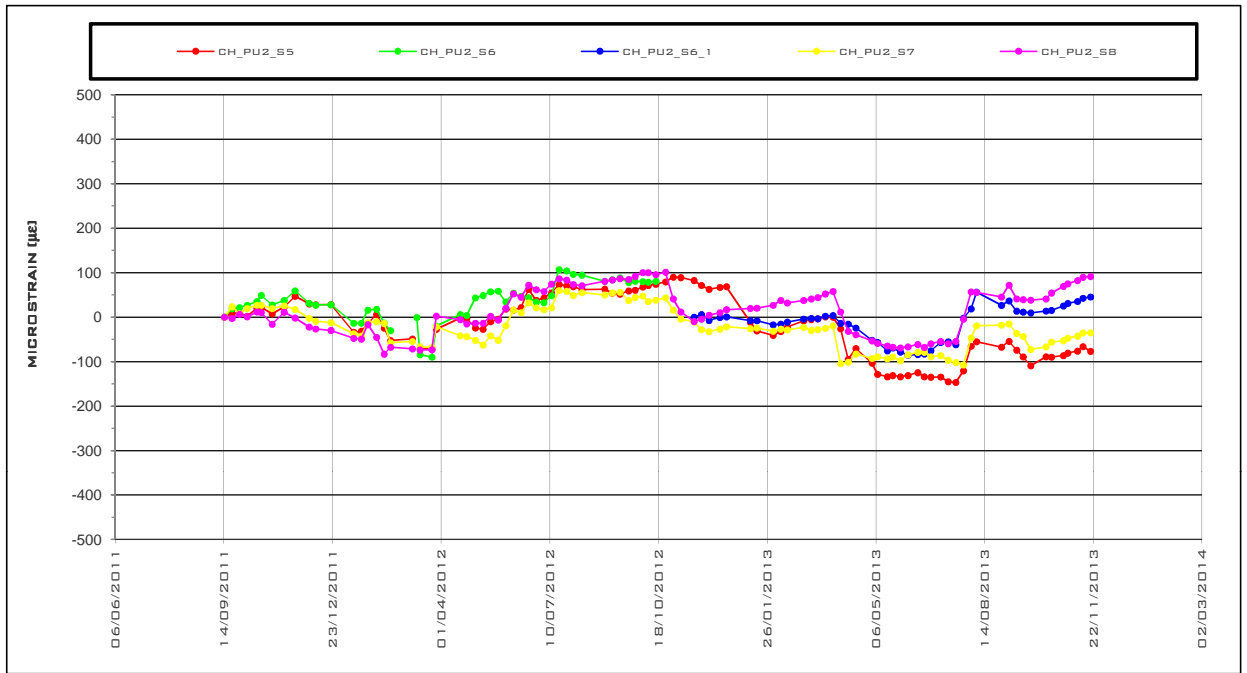
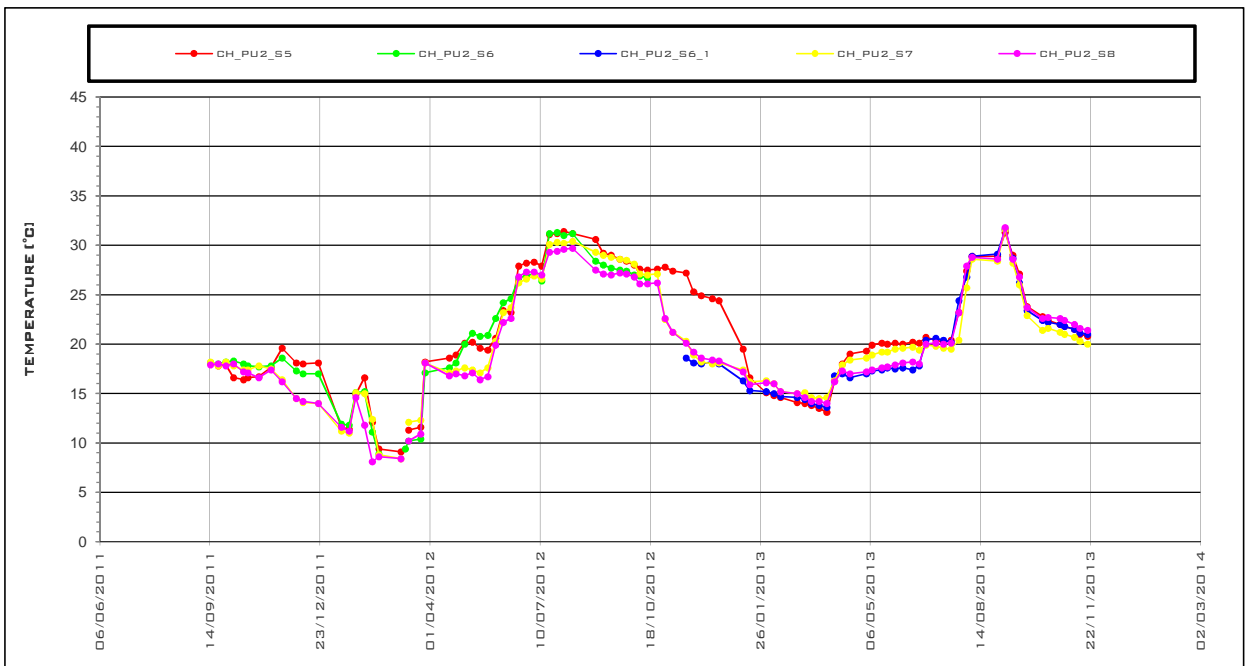



GRAFICO TEMPERATURE



 <p><b>Ansaldo STS</b> A Finmeccanica Company</p>	<p>LINEA 6 METROPOLITANA DI NAPOLI - PROGETTO ESECUTIVO</p> <p><i>OPERE CIVILI - MONITORAGGIO GEOTECNICO GEOREFERENZIATO</i></p> <p><i>REPORT DELLE MISURE - STAZIONE CHIAIA</i></p>	<p>LM6 7FX 2C I 27 Data: 29/11/13 Metropolitana di Napoli A.T.I. LM6 TreEsse Engineering S.r.l.</p>
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## **9. MISURE GEOTECNICHE – CELLE DI CARICO TOROIDALI**

Le celle di carico toroidali a compressione, costituite da un anello di acciaio di diverso diametro in funzione alla tipologia di utilizzo, trovano applicazione nel controllo della tesatura di tiranti o di bulloni per chiodature in roccia o nel terreno; servono inoltre per tenere sotto controllo gli stessi durante il servizio evidenziando eventuali rilasci o sovraccarichi tensionali.

Le celle, sottoposte ad un carico, subiscono una deformazione che viene rilevata dagli estensimetri, i quali variando il loro valore di resistenza, generano in uscita un segnale elettrico proporzionale al carico applicato.


 <b>Ansaldo STS</b> <small>A Finmeccanica Company</small>	<b>LINEA 6 METROPOLITANA DI NAPOLI - PROGETTO ESECUTIVO</b>  <i>OPERE CIVILI - MONITORAGGIO GEOTECNICO GEOREFERENZIATO</i> <i>REPORT DELLE MISURE - STAZIONE CHIAIA</i>	LM6 7FX 2C I 27 Data: 29/11/13 Metropolitana di Napoli A.T.I. LM6 TreEsse Engineering S.r.l.
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Tabelle riepilogative per le Celle di Carico toroidali installate in cantiere.

Tabella Celle di Carico Primo Ordine di Tiranti

NOME	TIPOLOGIA STRUMENTO	DATA INSTALLAZIONE	DISPONIBILITA' LETTURA			NOTE
			DATA LETTURA DI ZERO	PERIODO INTERRUZIONE	DATA FINE ATTIVITA'	
CH_CC1	CC.TOROIDALI	16/05/11	16/05/11			
CH_CC2	CC.TOROIDALI	16/05/11	16/05/11			
CH_CC3	CC.TOROIDALI	16/05/11	16/05/11			
CH_CC4	CC.TOROIDALI	16/05/11	16/05/11			

Tabella Celle di Carico Secondo Ordine di Tiranti

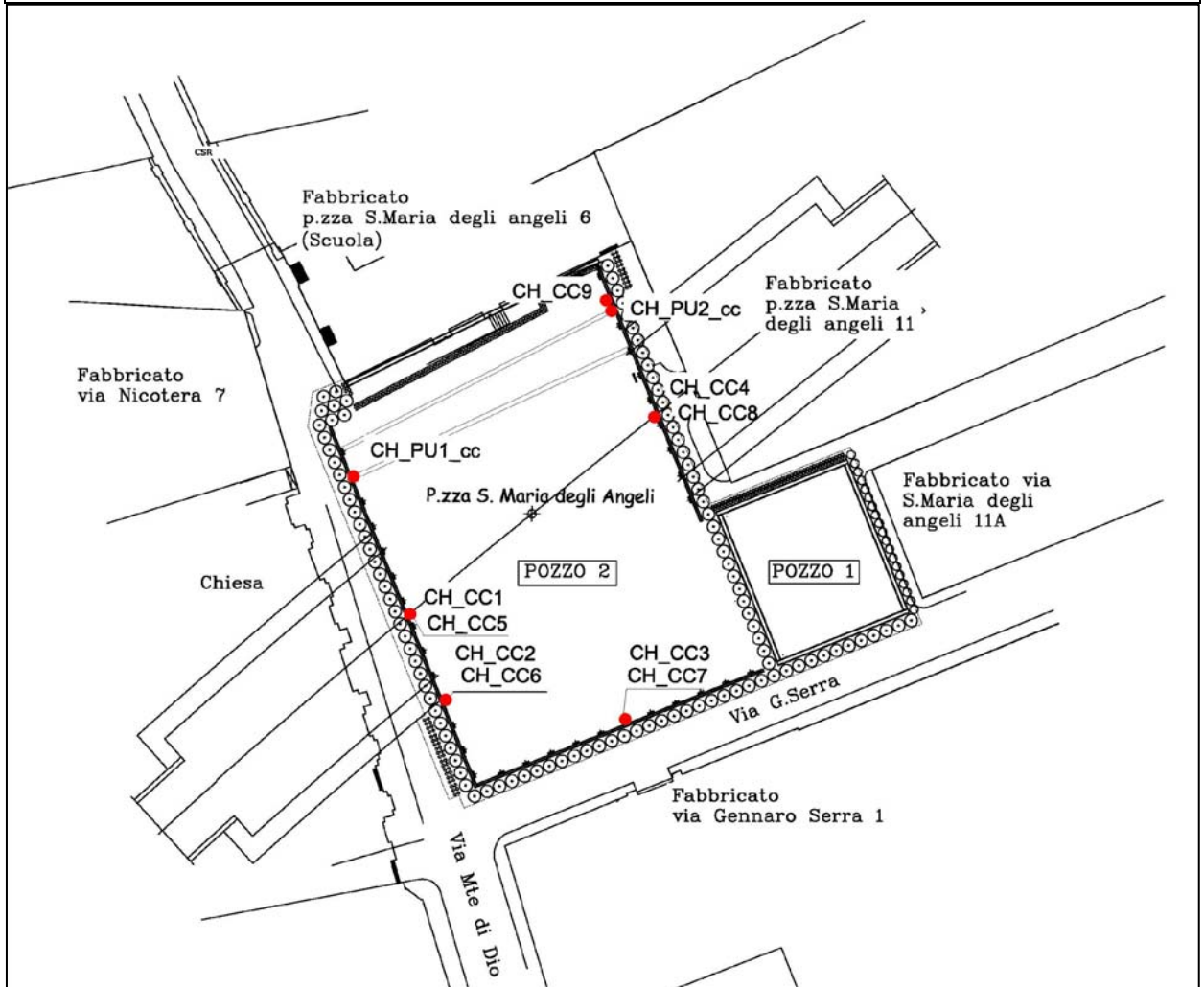
NOME	TIPOLOGIA STRUMENTO	DATA INSTALLAZIONE	DISPONIBILITA' LETTURA			NOTE
			DATA LETTURA DI ZERO	PERIODO INTERRUZIONE	DATA FINE ATTIVITA'	
<b>SECONDO ORDINE DI TIRANTI</b>						
CH_CC5	CC. TOROIDALI	02/08/11	02/08/11			
CH_CC6	CC. TOROIDALI	02/08/11	02/08/11			
CH_CC7	CC. TOROIDALI	16/05/11	19/07/11			
CH_CC8	CC. TOROIDALI	16/05/11	19/07/11			
CH_CC9	CC. TOROIDALI	02/04/12	02/04/12			

Tabella Celle di Carico Puntoni

NOME	TIPOLOGIA STRUMENTO	DATA INSTALLAZIONE	DISPONIBILITA' LETTURA			NOTE
			DATA LETTURA DI ZERO	PERIODO INTERRUZIONE	DATA FINE ATTIVITA'	
<b>PUNTONI</b>						
CH_PU1_CC	CC. TOROIDALI	14/09/11	14/09/11			
CH_PU2_CC	CC. TOROIDALI	14/09/11	14/09/11			

Celle di Carico

CH\_CC1-9 / CH\_PU1-2\_CC



Affidabilità strumentale  
A.T.I. LM6 – TreEsse

buono  
da rivedere  
da scartare

X

Congruenza progettuale  
C.T. ATI LM6 – C.T. Monitoraggio

congruente  
non congruente, da valutare  
non congruente con implicazioni sulla  
sicurezza


**NOTE**


**TABULATI**
**Ubicazione** STAZIONE CHIAIA

**Tipo Strumento** Cella di Carico

**Posizione** \ \ 1° Ordine Di Tiranti

**Data posa in opera** 16/05/2011

**Data lettura di zero** 16/06/2011

**Ultima  
misura**

124

**in data**

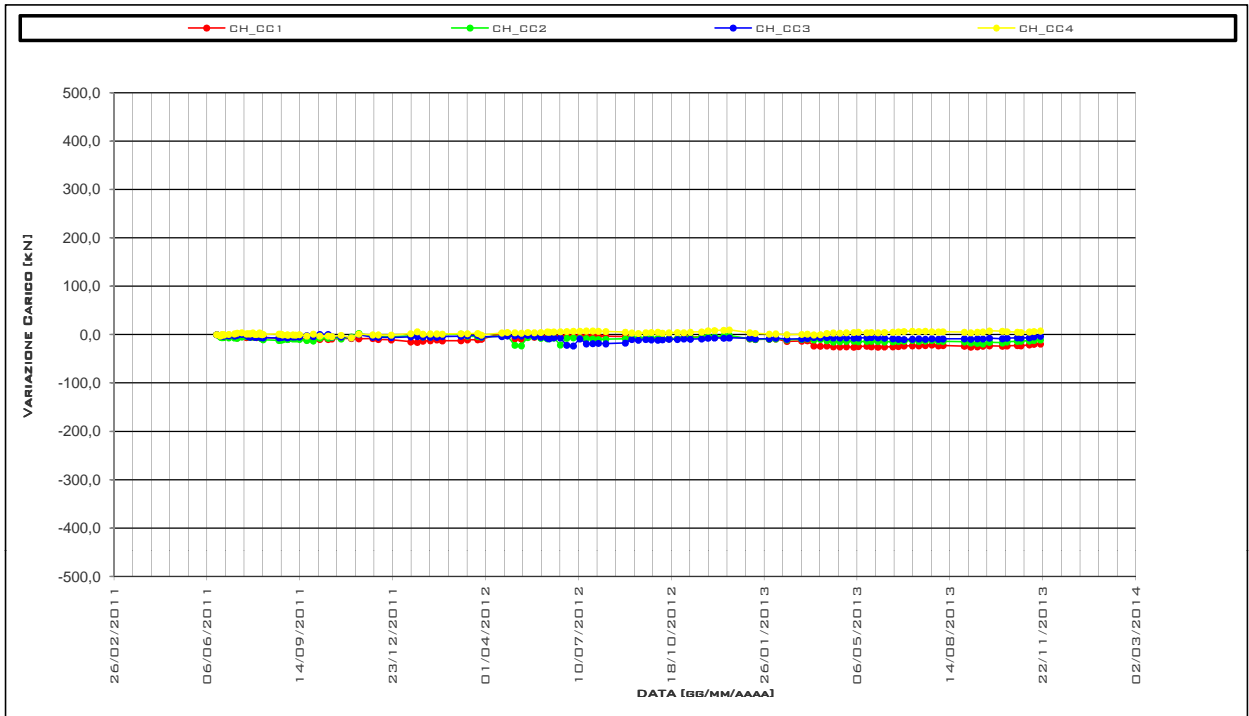
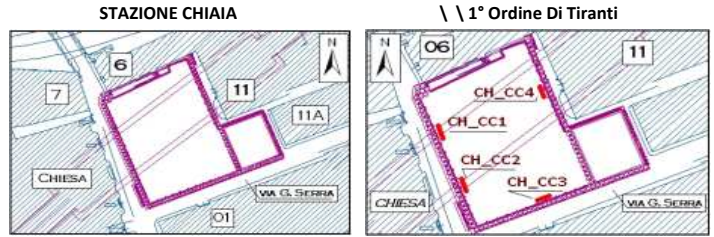
19/11/2013

Letture n°	DATA	CH_CC1		CH_CC2		CH_CC3		CH_CC4	
		Δ Carico [kN]	Carico [kN]	Δ Carico [kN]	Carico [kN]	Δ Carico [kN]	Carico [kN]	Δ Carico [kN]	Carico [kN]
71	12/09/2012 10.00	-8,00	292,97	-7,50	292,58	-11,50	318,03	2,50	288,38
72	20/09/2012 11.00	-7,50	293,47	-7,00	293,08	-10,00	319,53	4,00	289,88
73	26/09/2012 11.30	-8,50	292,47	-7,50	292,58	-11,00	318,53	4,50	290,38
74	03/10/2012 11.00	-8,00	292,97	-8,00	292,08	-11,50	318,03	5,00	290,88
75	08/10/2012 10.00	-9,00	291,97	-9,00	291,08	-10,50	319,03	3,00	288,88
76	15/10/2012 11.00	-8,50	292,47	-8,50	291,58	-9,50	320,03	4,00	289,88
77	24/10/2012 11.00	-8,00	292,97	-8,00	292,08	-10,00	319,53	4,50	290,38
78	31/10/2012 10.00	-6,00	294,97	-7,50	292,58	-9,00	320,53	4,00	289,88
79	07/11/2012 11.00	-5,50	295,47	-6,50	293,58	-9,50	320,03	5,00	290,88
80	19/11/2012 15.00	-4,50	296,47	-5,00	295,08	-9,00	320,53	5,50	291,38
81	26/11/2012 12.00	-4,00	296,97	-4,00	296,08	-7,50	322,03	8,00	293,88
82	03/12/2012 11.00	-5,00	295,97	-4,00	296,08	-7,00	322,53	8,50	294,38
83	13/12/2012 10.00	-4,50	296,47	-3,00	297,08	-7,50	322,03	9,00	294,88
84	19/12/2012 10.00	-4,00	296,97	-2,00	298,08	-7,00	322,53	9,50	295,38
85	10/01/2013 10.30	-8,50	292,47	-8,50	291,58	-7,50	322,03	4,00	289,88
86	16/01/2013 10.00	-10,00	290,97	-10,01	290,08	-9,00	320,53	2,50	288,38
87	31/01/2013 10.00	-9,50	291,47	-9,51	290,58	-8,50	321,03	1,00	286,88
88	07/02/2013 11.00	-9,00	291,97	-9,00	291,08	-7,50	322,03	1,50	287,38
89	19/02/2013 10.00	-14,00	286,97	-11,01	289,08	-9,50	320,03	0,00	285,88
90	07/03/2013 11.00	-13,50	287,47	-10,01	290,08	-9,00	320,53	0,50	286,38
91	13/03/2013 11.30	-12,50	288,47	-9,00	291,08	-8,00	321,53	1,00	286,88
92	20/03/2013 10.00	-23,50	277,47	-11,01	289,08	-6,00	323,53	-0,50	285,38
93	27/03/2013 10.30	-24,00	276,97	-10,01	290,08	-6,50	323,03	0,00	285,88
94	03/04/2013 10.00	-23,50	277,47	-12,51	287,58	-6,00	323,53	2,50	288,38
95	10/04/2013 10.15	-25,00	275,97	-15,01	285,07	-7,00	322,53	3,50	289,38
96	17/04/2013 10.00	-25,50	275,47	-14,51	285,57	-7,00	322,53	3,00	288,88
97	24/04/2013 11.30	-25,00	275,97	-14,01	286,07	-6,50	323,03	4,00	289,88
98	02/05/2013 10.30	-26,00	274,97	-13,51	286,58	-7,50	322,03	4,50	290,38
99	07/05/2013 10.30	-24,50	276,47	-14,51	285,57	-7,00	322,53	5,00	290,88
100	16/05/2013 11.30	-24,00	276,97	-14,01	286,07	-6,50	323,03	4,00	289,88
101	21/05/2013 10.30	-25,00	275,97	-13,51	286,58	-6,00	323,53	4,50	290,38
102	28/05/2013 11.30	-26,00	274,97	-14,01	286,07	-6,50	323,03	4,00	289,88
103	04/06/2013 11.00	-25,50	275,47	-15,01	285,07	-7,50	322,03	4,50	290,38
104	13/06/2013 11.30	-25,00	275,97	-14,51	285,57	-8,50	321,03	5,00	290,88
105	19/06/2013 11.00	-24,50	276,47	-14,01	286,07	-9,50	320,03	5,50	291,38
106	25/06/2013 11.30	-23,50	277,47	-13,51	286,58	-10,00	319,53	6,50	292,38
107	04/07/2013 12.00	-23,00	277,97	-12,01	288,08	-9,50	320,03	7,00	292,88
108	11/07/2013 11.00	-23,00	277,97	-14,01	286,07	-9,00	320,53	6,50	292,38
109	18/07/2013 10.30	-22,50	278,47	-13,01	287,08	-9,50	320,03	7,00	292,88
110	25/07/2013 11.30	-21,50	279,47	-12,01	288,08	-8,50	321,03	6,00	291,88
111	01/08/2013 12.30	-23,00	277,97	-13,51	286,58	-9,50	320,03	5,50	291,38
112	06/08/2013 12.30	-22,50	278,47	-14,01	286,07	-9,00	320,53	6,00	291,88
113	29/08/2013 12.30	-24,00	276,97	-15,01	285,07	-8,50	321,03	5,00	290,88
114	05/09/2013 10.30	-26,00	274,97	-17,01	283,07	-9,50	320,03	4,00	289,88
115	12/09/2013 11.00	-25,00	275,97	-18,01	282,07	-8,50	321,03	5,00	290,88
116	18/09/2013 11.30	-24,00	276,97	-19,01	281,07	-9,00	320,53	5,50	291,38
117	25/09/2013 11.30	-23,00	277,97	-16,01	284,07	-7,50	322,03	7,50	293,38
118	09/10/2013 10.30	-24,00	276,97	-17,01	283,07	-8,50	321,03	7,00	292,88
119	14/10/2013 10.30	-23,50	277,47	-15,01	285,07	-7,50	322,03	6,00	291,88
120	25/10/2013 11.30	-22,50	278,47	-14,01	286,07	-6,50	323,03	5,00	290,88
121	29/10/2013 11.00	-23,00	277,97	-13,51	286,58	-7,00	322,53	4,50	290,38
122	07/11/2013 11.00	-21,00	279,97	-13,01	287,08	-6,50	323,03	5,50	291,38
123	12/11/2013 10.30	-20,00	280,97	-12,01	288,08	-4,50	325,03	6,50	292,38
124	19/11/2013 11.00	-19,50	281,47	-11,01	289,08	-3,50	326,03	7,50	293,38



**SCHEMA UBICAZIONE**

**Ubicazione** STAZIONE CHIAIA  
**Tipo Strumento** Cella di Carico  
**Posizione** \ \ 1° Ordine Di Tiranti  
**Data posa in opera** 16/05/2011  
**Data lettura di zero** 16/06/2011






**TABULATI**
**Ubicazione** STAZIONE CHIAIA

**Tipo Strumento** Cella di Carico

**Posizione** \ \ 2° Ordine Di Tiranti

**Data posa in opera** 02/08/2011

**Data lettura di zero** 02/08/2011

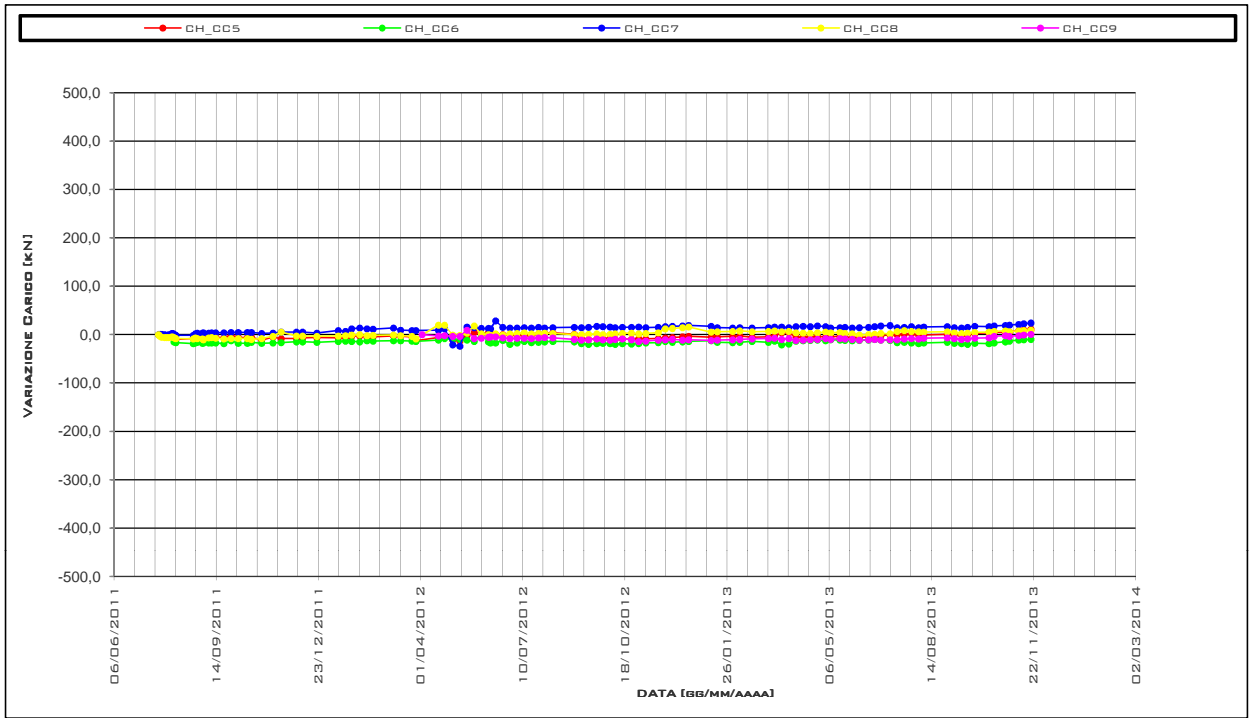
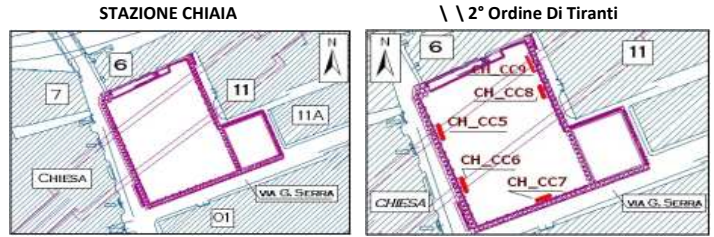
**Ultima misura** 116 **in data** 19/11/2013

Letture n°	DATA	CH_CC5		CH_CC6		CH_CC7		CH_CC8		CH_CC9	
		Δ Carico [kN]	Carico [kN]	Δ Carico [kN]	Carico [kN]	Δ Carico [kN]	Carico [kN]	Δ Carico [kN]	Carico [kN]	Δ Carico [kN]	Carico [kN]
63	12/09/2012 10.00	-9,75	529,31	-20,25	502,71	15,00	496,43	0,75	362,09	-10,50	390,75
64	20/09/2012 10.00	-9,00	530,06	-18,75	504,21	17,25	498,68	1,50	362,84	-9,00	392,25
65	26/09/2012 10.00	-8,25	530,81	-18,00	504,96	16,50	497,93	0,00	361,34	-10,50	390,75
66	03/10/2012 10.00	-7,50	531,56	-18,75	504,21	15,75	497,18	0,75	362,09	-11,25	390,00
67	08/10/2012 11.00	-9,75	529,31	-20,25	502,71	14,25	495,68	1,50	362,84	-9,75	391,50
68	15/10/2012 11.00	-9,00	530,06	-18,75	504,21	15,00	496,43	2,25	363,59	-9,00	392,25
69	24/10/2012 11.00	-9,75	529,31	-19,50	503,46	15,00	496,43	3,00	364,34	-10,50	390,75
70	31/10/2012 10.00	-8,25	530,81	-18,75	504,21	15,75	497,18	1,50	362,84	-14,25	387,00
71	07/11/2012 11.00	-9,00	530,06	-17,25	505,71	14,25	495,68	2,25	363,59	-13,50	387,75
72	19/11/2012 15.00	-8,25	530,81	-16,50	506,46	15,00	496,43	3,75	365,09	-11,25	390,00
73	26/11/2012 12.00	-6,75	532,31	-14,25	508,71	16,50	497,93	12,00	373,34	-10,50	390,75
74	03/12/2012 11.00	-6,00	533,06	-15,75	507,21	17,25	498,68	12,75	374,08	-9,75	391,50
75	13/12/2012 10.00	-4,50	534,56	-15,00	507,96	18,00	499,43	14,25	375,58	-11,25	390,00
76	19/12/2012 10.00	-3,75	535,31	-14,25	508,71	18,75	500,18	15,75	377,08	-10,50	390,75
77	10/01/2013 10.30	-5,25	533,81	-12,75	510,21	17,25	498,68	5,25	366,59	-12,00	389,25
78	16/01/2013 10.00	-4,50	534,56	-15,75	507,21	14,25	495,68	6,00	367,34	-11,25	390,00
79	31/01/2013 10.00	-3,75	535,31	-16,50	506,46	13,50	494,93	6,75	368,09	-10,50	390,75
80	07/02/2013 10.30	-3,00	536,06	-15,75	507,21	14,25	495,68	7,50	368,84	-9,75	391,50
81	19/02/2013 10.00	-5,25	533,81	-14,25	508,71	13,50	494,93	6,00	367,34	-9,00	392,25
82	07/03/2013 11.00	-4,50	534,56	-15,75	507,21	14,25	495,68	6,75	368,09	-8,25	393,00
83	13/03/2013 11.30	-3,00	536,06	-13,50	509,46	15,75	497,18	7,50	368,84	-7,50	393,75
84	20/03/2013 10.00	3,75	542,81	-21,00	501,96	15,75	497,18	6,00	367,34	-9,75	391,50
85	27/03/2013 10.30	4,50	543,56	-19,50	503,46	14,25	495,68	6,75	368,09	-8,25	393,00
86	03/04/2013 10.00	-5,25	533,81	-13,50	509,46	16,50	497,93	3,75	365,09	-12,00	389,25
87	10/04/2013 10.15	-5,25	533,81	-12,75	510,21	17,25	498,68	3,00	364,34	-11,25	390,00
88	17/04/2013 10.00	-4,50	534,56	-12,00	510,96	16,50	497,93	2,25	363,59	-10,50	390,75
89	24/04/2013 11.00	-3,75	535,31	-11,25	511,71	18,00	499,43	3,75	365,09	-9,75	391,50
90	02/05/2013 10.30	-5,25	533,81	-12,75	510,21	16,50	497,93	5,25	366,59	-8,25	393,00
91	07/05/2013 10.30	-4,50	534,56	-10,50	512,46	13,50	494,93	3,75	365,09	-9,75	391,50
92	16/05/2013 11.30	-3,75	535,31	-11,25	511,71	14,25	495,68	4,50	365,84	-8,25	393,00
93	21/05/2013 10.30	-5,25	533,81	-12,00	510,96	15,00	496,43	2,25	363,59	-9,00	392,25
94	28/05/2013 11.30	-6,75	532,31	-12,75	510,21	13,50	494,93	1,50	362,84	-9,75	391,50
95	04/06/2013 11.00	-6,00	533,06	-12,00	510,96	14,25	495,68	-0,75	360,59	-11,25	390,00
96	13/06/2013 11.30	-4,50	534,56	-11,25	511,71	15,00	496,43	0,00	361,34	-10,50	390,75
97	19/06/2013 11.00	-3,75	535,31	-9,75	513,21	16,50	497,93	0,75	362,09	-9,75	391,50
98	25/06/2013 11.30	-2,25	536,81	-11,25	511,71	18,00	499,43	2,25	363,59	-11,25	390,00
99	04/07/2013 12.30	-0,75	538,31	-12,00	510,96	18,75	500,18	1,50	362,84	-10,50	390,75
100	11/07/2013 11.00	0,00	539,06	-16,50	506,46	14,25	495,68	6,75	368,09	-10,50	390,75
101	18/07/2013 10.00	0,75	539,81	-15,75	507,21	15,00	496,43	8,25	369,59	-9,00	392,25
102	25/07/2013 11.00	1,50	540,56	-17,25	505,71	16,50	497,93	6,75	368,09	-8,25	393,00
103	01/08/2013 12.30	-0,75	538,31	-18,75	504,21	14,25	495,68	6,00	367,34	-9,00	392,25
104	06/08/2013 12.30	-0,75	538,31	-17,25	505,71	15,75	497,18	5,25	366,59	-7,50	393,75
105	29/08/2013 12.30	0,75	539,81	-15,75	507,21	16,50	497,93	6,00	367,34	-6,75	394,50
106	05/09/2013 10.30	0,00	539,06	-18,00	504,96	14,25	495,68	3,75	365,09	-8,25	393,00
107	12/09/2013 11.00	-0,75	538,31	-18,75	504,21	13,50	494,93	2,25	363,59	-9,75	391,50
108	18/09/2013 10.30	0,00	539,06	-20,25	502,71	15,00	496,43	3,00	364,34	-9,00	392,25
109	25/09/2013 10.30	2,25	541,31	-18,00	504,96	17,25	498,68	4,50	365,84	-7,50	393,75
110	09/10/2013 10.30	3,75	542,81	-18,75	504,21	16,50	497,93	5,25	366,59	-6,75	394,50
111	14/10/2013 10.00	5,25	544,31	-17,25	505,71	18,00	499,43	6,75	368,09	-3,75	397,50
112	25/10/2013 10.00	4,50	543,56	-15,00	507,96	18,75	500,18	7,50	368,84	-2,25	399,00
113	29/10/2013 10.30	5,25	544,31	-13,50	509,46	19,50	500,93	6,00	367,34	-3,75	397,50
114	07/11/2013 10.30	8,25	547,31	-11,25	511,71	21,00	502,43	7,50	368,84	-2,25	399,00
115	12/11/2013 10.30	9,75	548,81	-10,50	512,46	22,50	503,93	8,25	369,59	-0,75	400,50
116	19/11/2013 11.00	11,25	550,31	-9,75	513,21	24,00	505,43	9,00	370,34	0,75	402,00



**SCHEMA UBICAZIONE**

**Ubicazione** STAZIONE CHIAIA  
**Tipo Strumento** Cella di Carico  
**Posizione** \ \ 2° Ordine Di Tiranti  
**Data posa in opera** 02/08/2011  
**Data lettura di zero** 02/08/2011




**TABULATI**
**Ubicazione** STAZIONE CHIAIA

**Tipo Strumento** Cella di Carico

**Posizione** \ \ Puntoni

**Data posa in opera** 14/09/2011

**Data lettura di zero** 14/09/2011

**Ultima  
misura**

97

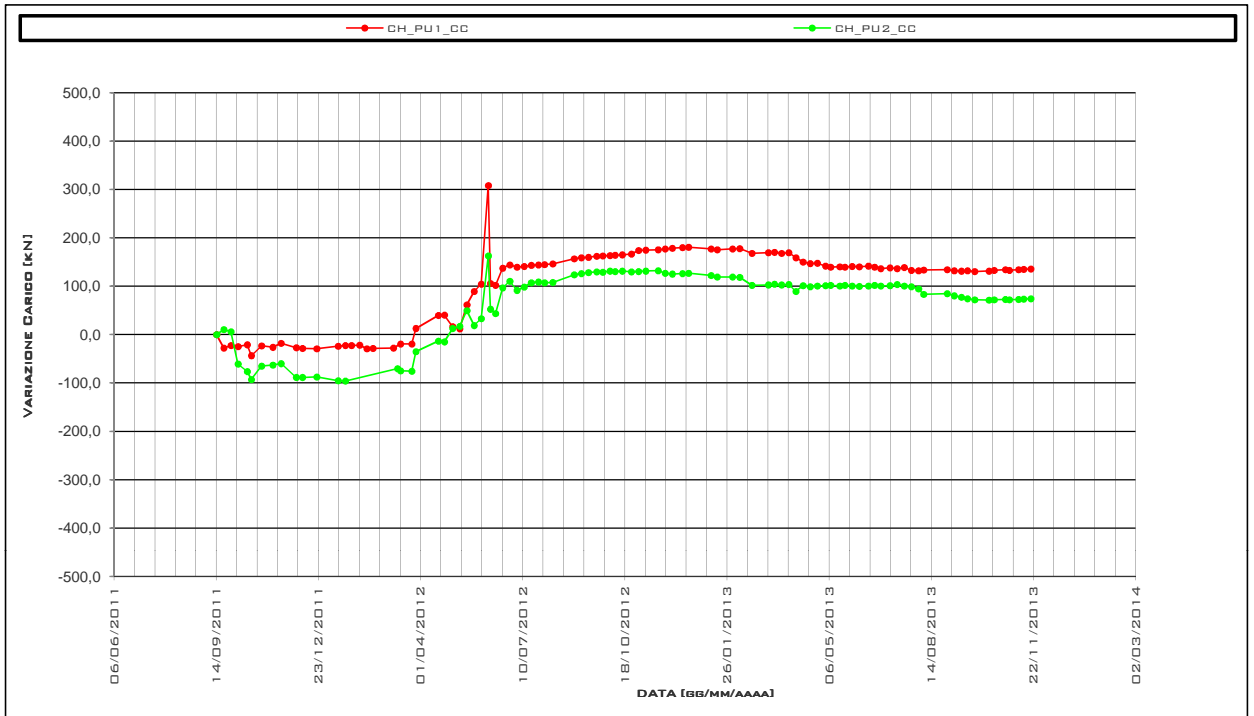
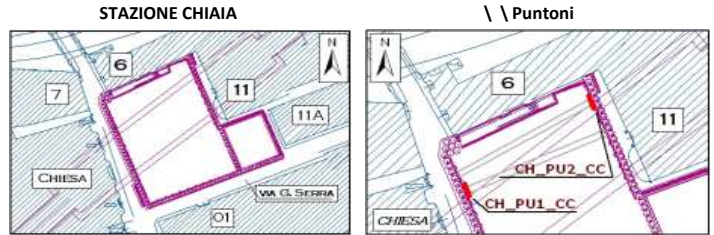
**in data**
**19/11/2013**


Letture n°	DATA	CH_PU1_CC		CH_PU2_CC	
		Δ Carico [kN]	Carico [kN]	Δ Carico [kN]	Carico [kN]
44	12/09/2012 10.00	159,72	462,93	128,25	704,29
45	20/09/2012 10.00	161,97	465,18	129,75	705,79
46	26/09/2012 10.00	162,72	465,93	129,00	705,04
47	03/10/2012 10.00	163,47	466,68	131,25	707,29
48	08/10/2012 11.00	164,22	467,43	130,50	706,54
49	15/10/2012 11.00	164,97	468,18	131,25	707,29
50	24/10/2012 11.00	166,47	469,68	129,75	705,79
51	31/10/2012 10.00	173,97	477,18	130,50	706,54
52	07/11/2012 11.00	174,72	477,93	131,25	707,29
53	19/11/2012 15.00	175,47	478,68	132,00	708,04
54	26/11/2012 11.00	176,97	480,18	126,75	702,79
55	03/12/2012 11.00	178,47	481,68	125,25	701,29
56	13/12/2012 10.30	179,97	483,18	126,00	702,04
57	19/12/2012 10.00	180,72	483,93	126,75	702,79
58	10/01/2013 10.30	176,97	480,18	122,25	698,29
59	16/01/2013 10.00	175,47	478,68	119,25	695,29
60	31/01/2013 10.00	176,97	480,18	119,25	695,29
61	07/02/2013 10.30	177,72	480,93	118,50	694,54
62	19/02/2013 10.00	167,97	471,18	102,00	678,04
63	07/03/2013 11.00	169,47	472,68	102,75	678,79
64	13/03/2013 11.00	170,22	473,43	104,25	680,29
65	20/03/2013 10.00	167,97	471,18	102,75	678,79
66	27/03/2013 11.00	169,47	472,68	103,50	679,54
67	03/04/2013 11.00	158,97	462,18	89,25	665,29
68	10/04/2013 10.30	149,97	453,19	101,25	677,29
69	17/04/2013 10.00	146,97	450,19	99,00	675,04
70	24/04/2013 11.00	147,72	450,94	100,50	676,54
71	02/05/2013 10.30	141,72	444,94	101,25	677,29
72	07/05/2013 10.30	139,47	442,69	102,00	678,04
73	16/05/2013 10.30	140,22	443,44	100,50	676,54
74	21/05/2013 10.30	139,47	442,69	102,00	678,04
75	28/05/2013 11.30	140,97	444,19	100,50	676,54
76	04/06/2013 12.00	140,22	443,44	99,75	675,79
77	13/06/2013 11.00	141,72	444,94	100,50	676,54
78	19/06/2013 11.00	139,47	442,69	102,00	678,04
79	25/06/2013 11.30	136,47	439,69	100,50	676,54
80	04/07/2013 12.30	137,97	441,19	101,25	677,29
81	11/07/2013 12.30	136,47	439,69	103,50	679,54
82	18/07/2013 11.30	138,72	441,94	100,50	676,54
83	25/07/2013 11.00	132,73	435,94	99,00	675,04
84	01/08/2013 12.30	131,98	435,19	94,50	670,54
85	06/08/2013 12.30	133,48	436,69	83,25	659,29
86	29/08/2013 12.30	134,22	437,44	84,75	660,79
87	05/09/2013 10.30	131,98	435,19	80,25	656,29
88	12/09/2013 11.00	131,23	434,44	77,25	653,29
89	18/09/2013 10.30	131,98	435,19	74,25	650,29
90	25/09/2013 10.30	130,48	433,69	72,00	648,04
91	09/10/2013 11.30	131,23	434,44	71,25	647,29
92	14/10/2013 11.30	132,73	435,94	72,00	648,04
93	25/10/2013 11.30	134,22	437,44	72,75	648,79
94	29/10/2013 11.00	132,73	435,94	72,00	648,04
95	07/11/2013 10.00	134,22	437,44	72,75	648,79
96	12/11/2013 10.00	134,97	438,19	73,50	649,54
97	19/11/2013 11.00	135,72	438,94	74,25	650,29



SCHEMA UBICAZIONE

Ubicazione STAZIONE CHIAIA  
Tipo Strumento Cella di Carico  
Posizione \ \ Puntoni  
Data posa in opera 14/09/2011  
Data lettura di zero 14/09/2011



 <p><b>Ansaldo STS</b> A Finmeccanica Company</p>	<p>LINEA 6 METROPOLITANA DI NAPOLI - PROGETTO ESECUTIVO</p> <p><i>OPERE CIVILI - MONITORAGGIO GEOTECNICO GEOREFERENZIATO</i></p> <p><i>REPORT DELLE MISURE - STAZIONE CHIAIA</i></p>	<p>LM6 7FX 2C I 27 Data: 29/11/13 Metropolitana di Napoli A.T.I. LM6 TreEsse Engineering S.r.l.</p>
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## **10. MISURE TOPOGRAFICHE – MIRE OTTICHE**

Le Mire Ottiche, installate in prossimità delle travi di distribuzione dei carichi, che collegano i tiranti in testa, permettono di controllare in tali aree l'influenza delle lavorazioni, registrando eventuali variazioni di quota e spostamenti sul piano orizzontale. La misurazione verrà effettuata tramite Teodolite dall'ATI.


 <p><b>Ansaldo STS</b> A Finmeccanica Company</p>	<p>LINEA 6 METROPOLITANA DI NAPOLI - PROGETTO ESECUTIVO</p> <p>OPERE CIVILI - MONITORAGGIO GEOTECNICO GEOREFERENZIATO REPORT DELLE MISURE - STAZIONE CHIAIA</p>	<p>LM6 7FX 2C I 27 Data: 29/11/13 Metropolitana di Napoli A.T.I. LM6 TreEsse Engineering S.r.l.</p>
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Tabelle riepilogative per le Mire Ottiche installate in cantiere. Tabella Mire Ottiche Primo Ordine di Tiranti

NOME	TIPOLOGIA STRUMENTO	DATA INSTALLAZIONE	DISPONIBILITA' LETTURA			NOTE
			DATA LETTURA DI ZERO	PERIODO INTERRUZIONE	DATA FINE ATTIVITA'	
CH_MO1	M. OTTICHE		13/09/11			
CH_MO2	M. OTTICHE		13/09/11			
CH_MO3	M. OTTICHE		15/07/11			
CH_MO4	M. OTTICHE		15/07/11			
CH_MO5	M. OTTICHE		15/07/11			
CH_MO6	M. OTTICHE		15/07/11			
CH_MO7	M. OTTICHE		15/07/11			
CH_MO8	M. OTTICHE		15/07/11			
CH_MO9	M. OTTICHE		15/07/11			
CH_MO10	M. OTTICHE		15/07/11			
CH_MO11	M. OTTICHE		15/07/11			
CH_MO12	M. OTTICHE		15/07/11			
CH_MO13	M. OTTICHE		15/07/11			
CH_MO14	M. OTTICHE		19/07/11			
CH_MO15	M. OTTICHE		06/09/11			
CH_MO16	M. OTTICHE		06/09/11			

Tabella Mire Ottiche Secondo Ordine di Tiranti

NOME	TIPOLOGIA STRUMENTO	DATA INSTALLAZIONE	DISPONIBILITA' LETTURA			NOTE
			DATA LETTURA DI ZERO	PERIODO INTERRUZIONE	DATA FINE ATTIVITA'	
CH_MO17	M. OTTICHE		17/04/12			
CH_MO18	M. OTTICHE		17/04/12			
CH_MO19	M. OTTICHE		15/11/11			
CH_MO20	M. OTTICHE		15/11/11			
CH_MO21	M. OTTICHE		02/08/11			
CH_MO22	M. OTTICHE		02/08/11			
CH_MO23	M. OTTICHE		02/08/11			
CH_MO24	M. OTTICHE		02/08/11			
CH_MO25	M. OTTICHE		25/07/11			
CH_MO26	M. OTTICHE		25/07/11			
CH_MO27	M. OTTICHE		24/08/11			
CH_MO28	M. OTTICHE		24/08/11			
CH_MO29	M. OTTICHE		24/08/11			
CH_MO30	M. OTTICHE		24/08/11			
CH_MO31	M. OTTICHE		29/11/11			
CH_MO32	M. OTTICHE		29/11/11			


 <p><b>Ansaldo STS</b> A Finmeccanica Company</p>	<p>LINEA 6 METROPOLITANA DI NAPOLI - PROGETTO ESECUTIVO</p> <p>OPERE CIVILI - MONITORAGGIO GEOTECNICO GEOREFERENZIATO REPORT DELLE MISURE - STAZIONE CHIAIA</p>	<p>LM6 7FX 2C I 27 Data: 29/11/13 Metropolitana di Napoli A.T.I. LM6 TreEsse Engineering S.r.l.</p>
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Tabella Mire Ottiche Terzo e Quarto Ordine - Tufo

NOME	TIPOLOGIA STRUMENTO	DATA INSTALLAZIONE	DISPONIBILITA' LETTURA			NOTE
			DATA LETTURA DI ZERO	PERIODO INTERRUZIONE	DATA FINE ATTIVITA'	
CH_MO33	M. OTTICHE		12/07/12			
CH_MO34	M. OTTICHE		18/07/12			
CH_MO35	M. OTTICHE		13/09/12			
CH_MO36	M. OTTICHE		13/09/12		27/02/13	
CH_MO36A	M. OTTICHE		28/03/13			Sostituisce CH_MO36
CH_MO37	M. OTTICHE		18/09/12		13/06/13	
CH_MO37A	M. OTTICHE		01/07/13			Sostituisce CH_MO37
CH_MO38	M. OTTICHE		07/02/13			
CH_MO39	M. OTTICHE		07/02/13			
CH_MO40	M. OTTICHE		14/02/13			
CH_MO41	M. OTTICHE		05/03/13			
CH_MO42	M. OTTICHE		05/03/13			
CH_MO43	M. OTTICHE		05/03/13		31/10/13	DIVELTA
CH_MO44	M. OTTICHE		05/03/13		28/08/13	DIVELTA
CH_MO45	M. OTTICHE		28/03/13			
CH_MO46	M. OTTICHE		28/03/13			
CH_MO47	M. OTTICHE		28/03/13			
CH_MO48	M. OTTICHE		28/03/13			
CH_MO49	M. OTTICHE		28/03/13			
CH_MO50	M. OTTICHE		28/03/13			
CH_MO51	M. OTTICHE		03/04/13			
CH_MO52	M. OTTICHE		28/03/13			
CH_MO53	M. OTTICHE		28/03/13			
CH_MO54	M. OTTICHE		28/03/13			
CH_MO55	M. OTTICHE		28/03/13			
CH_MO56	M. OTTICHE		28/03/13			
CH_MO57	M. OTTICHE		28/03/13			
CH_MO58	M. OTTICHE		28/03/13			
CH_MO59	M. OTTICHE		28/03/13			
CH_MO60	M. OTTICHE		28/03/13			
CH_MO61	M. OTTICHE		28/03/13			
CH_MO62	M. OTTICHE		28/03/13			
CH_MO63	M. OTTICHE		28/03/13			
CH_MO64	M. OTTICHE		28/03/13			

Mire Ottiche

CH\_MO01-64

Affidabilità strumentale  
A.T.I. LM6 – TreEsse

Congruenza progettuale  
C.T. ATI LM6 – C.T. Monitoraggio

buono

da rivedere

da scartare

congruente

non congruente, da valutare

non congruente con implicazioni sulla sicurezza

**NOTE**

In data 28/03/13 la mira ottica CH\_MO36 viene sostituita da CH\_MO36A

In data 01/07/13 la mira ottica CH\_MO37 viene sostituita da CH\_MO37A

La mira ottica CH\_MO43 dalla data 31/10/13 risulta fuori uso

La mira ottica CH\_MO44 dalla data 28/08/13 risulta fuori uso





Ubicazione STAZIONE CHIAIA

Opera \ \ Ordine di Tiranti \ 01-04

Tipo Strumento Mire Ottiche

Data posa in opera 13/09/2011

Data lettura di zero 13/09/2011

Ultima Misura 100 in data 30/11/2013

Lett. n°	DATA	CH_M01					CH_M02					CH_M03					CH_M04				
		Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]
10	20/09/2011 08.00	18.0	34.7	-1.0	0.0	0.0	18.0	34.7	0.0	-1.0	-1.0	18.0	33.0	2.0	-1.0	-1.0	18.0	32.9	2.0	-1.0	-1.0
11	27/09/2011 08.00	20.0	34.7	-3.0	1.0	1.0	20.0	34.7	0.0	-1.0	0.0	20.0	33.0	1.0	-1.0	0.0	20.0	32.9	1.0	-1.0	1.0
12	04/10/2011 08.00	18.0	34.7	-1.0	1.0	1.0	18.0	34.7	0.0	0.0	-1.0	18.0	33.0	2.0	-1.0	-2.0	18.0	32.9	1.0	-1.0	0.0
13	11/10/2011 08.00	15.0	34.7	-2.0	1.0	1.0	15.0	34.7	0.0	0.0	0.0	15.0	33.0	2.0	0.0	-1.0	15.0	32.9	1.0	-1.0	0.0
14	18/10/2011 08.00	12.0	34.7	0.0	0.0	-1.0	12.0	34.7	0.0	0.0	-1.0	12.0	33.0	2.0	0.0	-2.0	12.0	32.9	2.0	0.0	0.0
15	25/10/2011 08.00	13.0	34.7	0.0	1.0	0.0	13.0	34.7	1.0	0.0	0.0	13.0	33.0	3.0	-1.0	-3.0	13.0	32.9	2.0	-2.0	-1.0
16	02/11/2011 10.00	18.0	34.7	0.0	0.0	1.0	18.0	34.7	0.0	0.0	0.0	18.0	33.0	2.0	-1.0	-1.0	18.0	32.9	2.0	-1.0	0.0
17	08/11/2011 08.00	13.0	34.7	-1.0	1.0	0.0	13.0	34.7	0.0	0.0	-1.0	13.0	33.0	2.0	-1.0	-2.0	13.0	32.9	2.0	-1.0	0.0
18	15/11/2011 08.00	9.0	34.7	0.0	0.0	-2.0	9.0	34.7	0.0	-1.0	-1.0	9.0	33.0	1.0	-1.0	-2.0	9.0	32.9	2.0	-1.0	-1.0
19	22/11/2011 08.00	14.0	34.7	0.0	0.0	-2.0	14.0	34.7	0.0	-1.0	-1.0	14.0	33.0	2.0	-2.0	-2.0	14.0	32.9	1.0	-2.0	0.0
20	29/11/2011 08.00	10.0	34.7	0.0	1.0	-1.0	10.0	34.7	1.0	-1.0	-2.0	10.0	33.0	2.0	-1.0	-3.0	10.0	32.9	2.0	-1.0	0.0
21	06/12/2011 08.00	14.0	34.7	-1.0	1.0	2.0	14.0	34.7	0.0	-3.0	0.0	14.0	33.0	1.0	-3.0	-2.0	14.0	32.9	1.0	-3.0	0.0
22	13/12/2011 08.00	13.0	34.7	0.0	2.0	1.0	13.0	34.7	0.0	-2.0	-2.0	13.0	33.0	2.0	-1.0	-3.0	13.0	32.9	1.0	-1.0	-1.0
23	20/12/2011 08.00	4.0	34.7	0.0	1.0	0.0	4.0	34.7	0.0	-2.0	-2.0	4.0	33.0	2.0	-2.0	-2.0	4.0	32.9	1.0	-2.0	0.0
24	10/01/2012 08.00	4.0	34.7	0.0	1.0	-2.0	4.0	34.7	1.0	-1.0	-2.0	4.0	33.0	2.0	-1.0	-2.0	4.0	32.9	1.0	-1.0	0.0
25	24/01/2012 08.00	10.0	34.7	1.0	1.0	0.0	10.0	34.7	1.0	-2.0	-1.0	10.0	33.0	2.0	-2.0	-2.0	10.0	32.9	2.0	-2.0	0.0
26	08/02/2012 08.00	5.0	34.7	1.0	1.0	-1.0	5.0	34.7	1.0	-2.0	-2.0	5.0	33.0	2.0	-2.0	-3.0	5.0	32.9	2.0	-3.0	-1.0
27	13/03/2012 08.00	11.0	34.7	1.0	-1.0	-3.0	11.0	34.7	2.0	-2.0	-3.0	11.0	33.0	2.0	-2.0	-3.0	11.0	32.9	2.0	-3.0	-1.0
28	26/03/2012 08.00	13.0	34.7	0.0	-2.0	-2.0	13.0	34.7	0.0	-2.0	-3.0	13.0	33.0	2.0	-1.0	-2.0	13.0	32.9	1.0	-3.0	-1.0
29	05/04/2012 08.00	16.0	34.7	1.0	-1.0	-1.0	16.0	34.7	1.0	-2.0	-2.0	16.0	33.0	2.0	-1.0	-3.0	16.0	32.9	3.0	-2.0	-1.0
30	17/04/2012 08.00	11.0	34.7	0.0	-3.0	-3.0	11.0	34.7	1.0	-4.0	-2.0	11.0	33.0	2.0	-2.0	-2.0	11.0	32.9	2.0	-3.0	-1.0
31	02/05/2012 10.30	18.0	34.7	0.0	-1.0	0.0	18.0	34.7	2.0	-2.0	0.0	18.0	33.0	3.0	-2.0	-2.0	18.0	32.9	3.0	-3.0	0.0
32	15/05/2012 08.30	13.0	34.7	0.0	-1.0	0.0	13.0	34.7	1.0	-3.0	0.0	13.0	33.0	3.0	-3.0	-2.0	13.0	32.9	3.0	-3.0	0.0
33	23/05/2012 17.30	20.0	34.7	1.0	-1.0	-2.0	20.0	34.7	2.0	-2.0	-2.0	20.0	33.0	3.0	-1.0	-3.0	20.0	32.9	3.0	-1.0	-2.0
34	30/05/2012 08.30	18.0	34.7	1.0	0.0	1.0	18.0	34.7	1.0	0.0	0.0	18.0	33.0	4.0	-1.0	-2.0	18.0	32.9	3.0	-2.0	-1.0
35	06/06/2012 16.30	25.0	34.7	1.0	0.0	0.0	25.0	34.7	1.0	2.0	1.0	25.0	33.0	3.0	-3.0	-2.0	25.0	32.9	3.0	-3.0	1.0
36	13/06/2012 08.30	20.0	34.7	1.0	1.0	0.0	20.0	34.7	1.0	0.0	-1.0	20.0	33.0	3.0	-1.0	-2.0	20.0	32.9	3.0	-2.0	-1.0
37	20/06/2012 16.30	31.0	34.7	2.0	1.0	0.0	31.0	34.7	2.0	0.0	0.0	31.0	33.0	3.0	-1.0	-3.0	31.0	32.9	3.0	-3.0	-1.0
38	28/06/2012 08.30	28.0	34.7	2.0	0.0	0.0	28.0	34.7	1.0	-1.0	-1.0	28.0	33.0	3.0	-2.0	-2.0	28.0	32.9	2.0	-2.0	-1.0
39	04/07/2012 19.30	29.0	34.7	2.0	0.0	0.0	29.0	34.7	2.0	0.0	0.0	29.0	33.0	3.0	-2.0	-2.0	29.0	32.9	3.0	-2.0	-1.0
40	12/07/2012 08.30	25.0	34.7	1.0	2.0	1.0	25.0	34.7	2.0	1.0	1.0	25.0	33.0	3.0	-1.0	-2.0	25.0	32.9	2.0	-1.0	-1.0
41	18/07/2012 16.30	34.0	34.7	2.0	0.0	0.0	34.0	34.7	2.0	-1.0	-1.0	34.0	33.0	4.0	-2.0	-3.0	34.0	32.9	3.0	-2.0	-1.0
42	24/07/2012 09.00	23.0	34.7	0.0	0.0	1.0	23.0	34.7	0.0	-1.0	0.0	23.0	33.0	2.0	-2.0	-3.0	23.0	32.9	2.0	-1.0	-1.0
43	01/08/2012 09.00	26.0	34.7	0.0	1.0	1.0	26.0	34.7	1.0	-1.0	0.0	26.0	33.0	2.0	-1.0	-2.0	26.0	32.9	1.0	0.0	0.0
44	09/08/2012 08.30	26.0	34.7	1.0	0.0	-1.0	26.0	34.7	2.0	0.0	0.0	26.0	33.0	3.0	-2.0	-3.0	26.0	32.9	3.0	-3.0	-1.0
45	29/08/2012 16.00	30.0	34.7	1.0	1.0	1.0	30.0	34.7	2.0	0.0	0.0	30.0	33.0	3.0	-1.0	-2.0	30.0	32.9	2.0	-2.0	-1.0
46	13/09/2012 15.00	22.0	34.7	1.0	0.0	0.0	22.0	34.7	2.0	-1.0	-1.0	22.0	33.0	3.0	-2.0	-2.0	22.0	32.9	3.0	-2.0	-1.0
47	18/09/2012 08.00	19.0	34.7	1.0	0.0	0.0	19.0	34.7	2.0	0.0	0.0	19.0	33.0	3.0	-2.0	-2.0	19.0	32.9	3.0	-1.0	0.0
48	26/09/2012 15.00	30.0	34.7	2.0	-1.0	-1.0	30.0	34.7	2.0	-1.0	0.0	30.0	33.0	4.0	-2.0	-3.0	30.0	32.9	4.0	-4.0	-2.0
49	04/10/2012 09.00	18.0	34.7	2.0	0.0	0.0	18.0	34.7	2.0	-1.0	-1.0	18.0	33.0	3.0	-3.0	-2.0	18.0	32.9	3.0	-3.0	-1.0
50	17/10/2012 08.30	14.0	34.7	2.0	-1.0	-1.0	14.0	34.7	2.0	-3.0	0.0	14.0	33.0	4.0	-4.0	-2.0	14.0	32.9	3.0	-3.0	0.0
51	07/11/2012 08.30	14.0	34.7	0.0	-2.0	0.0	14.0	34.7	1.0	-2.0	-2.0	14.0	33.0	2.0	-2.0	-3.0	14.0	32.9	2.0	-3.0	-1.0
52	27/11/2012 08.30	11.0	34.7	2.0	-2.0	-1.0	11.0	34.7	2.0	-3.0	-2.0	11.0	33.0	3.0	-3.0	-4.0	11.0	32.9	3.0	-4.0	-2.0
53	17/12/2012 08.30	13.0	34.7	0.0	0.0	0.0	13.0	34.7	0.0	-3.0	-2.0	13.0	33.0	2.0	-3.0	-3.0	13.0	32.9	2.0	-3.0	-1.0
54	09/01/2013 08.30	10.0	34.7	0.0	-1.0	-1.0	10.0	34.7	1.0	-3.0	-1.0	10.0	33.0	2.0	-3.0	-2.0	10.0	32.9	2.0	-5.0	-1.0
55	29/01/2013 08.30	8.0	34.7	1.0	-1.0	-2.0	8.0	34.7	1.0	-2.0	-1.0	8.0	33.0	2.0	-2.0	-3.0	8.0	32.9	2.0	-3.0	-1.0
56	07/02/2013 15.00	8.0	34.7	1.0	0.0	-1.0	8.0	34.7	3.0	-2.0	-1.0	8.0	33.0	4.0	-2.0	-3.0	8.0	32.9	3.0	-3.0	0.0
57	14/02/2013 15.00	6.0	34.7	0.0	-1.0	-1.0	6.0	34.7	1.0	-3.0	-2.0	6.0	33.0	2.0	-4.0	-3.0	6.0	32.9	2.0	-4.0	-2.0
58	19/02/2013 15.00	12.0	34.7	1.0	-3.0	-2.0	12.0	34.7	1.0	-4.0	-3.0	12.0	33.0	2.0	-4.0	-4.0	12.0	32.9	2.0	-3.0	-2.0
59	27/02/2013 08.30	6.0	34.7	1.0	-1.0	-2.0	6.0	34.7	2.0	-3.0	-3.0	6.0	33.0	3.0	-4.0	-4.0	6.0	32.9	2.0	-3.0	-1.0
60	05/03/2013 10.30	12.0	34.7	0.0	0.0	-1.0	12.0	34.7	1.0	-2.0	-2.0	12.0	33.0	2.0	-2.0	-3.0	12.0	32.9	2.0	-3.0	-1.0
61	12/03/2013 08.30	10.0	34.7	2.0	-1.0	-1.0	10.0	34.7	2.0	-2.0	-1.0	10.0	33.0	3.0	-2.0	-2.0	10.0	32.9	3.0	-2.0	-1.0
62	19/03/2013 16.00	16.0	34.7	1.0	-1.0	-3.0	16.0	34.7	3.0	-2.0	-2.0	16.0	33.0	3.0	-3.0	-3.0	16.0	32.9	2.0	-2.0	-1.0
63	26/03/2013 08.30	13.0	34.7	1.0	0.0	-2.0	13.0	34.7	1.0	-1.0	-3.0	13.0	33.0	3.0	-2.0	-3.0	13.0	32.9	2.0	-3.0	-1.0
64	28/03/2013 11.00	15.0	34.7	2.0	-2.0	-2.0	15.0	34.7	2.0	-1.0	-2.0	15.0	33.0	3.0	-3.0	-3.0	15.0	32.9	3.0	-4.0	-1.0
65	03/04/2013 17.30	16.0	34.7	0.0	-1.0	-2.0	16.0	34.7	1.0	-1.0	-2.0	16.0	33.0	2.0	-5.0	-4.0	16.0	32.9	2.0	-4.0	-1.0
66	10/04/2013 10.30	16.0	34.7	2.0	-1.0	-1.0	16.0	34.7	2.0	0.0	-1.0	16.0	33.0	3							



UBICAZIONE

STAZIONE CHIAIA

\\ \1 Ordine di Tiranti \ 01-04

Ubicazione STAZIONE CHIAIA  
Opera \\ \1 Ordine di Tiranti \ 01-  
Tipo Strumento Mire Ottiche  
Data posa in opera 13/09/2011  
Data lettura di zero 13/09/2011

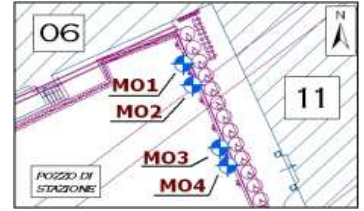
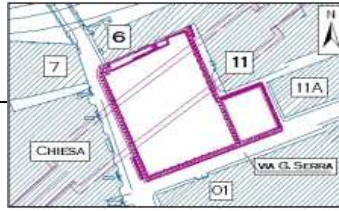


GRAFICO QUOTA

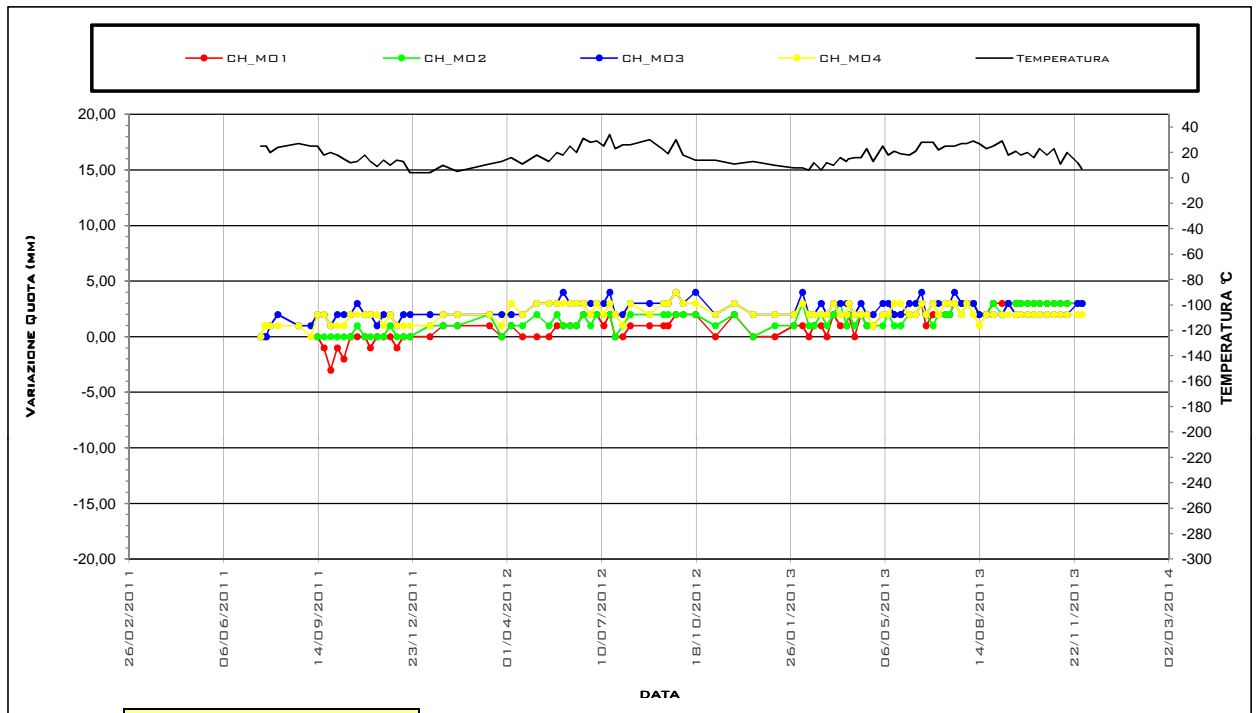
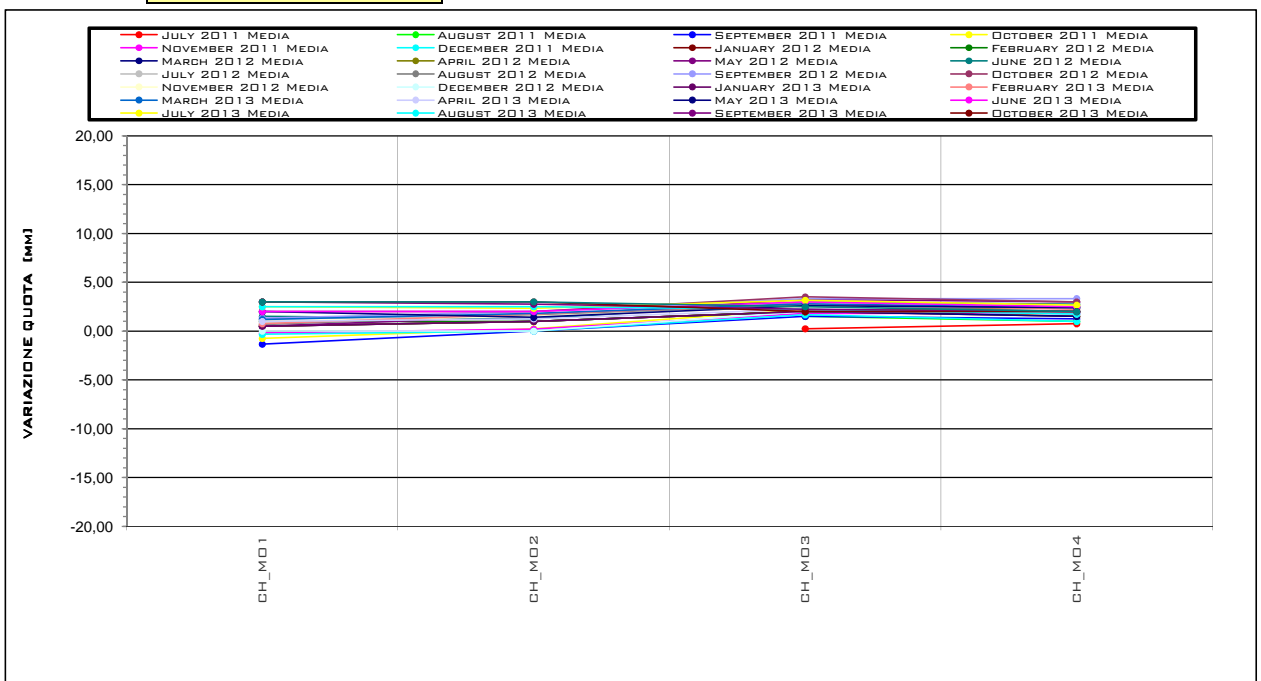
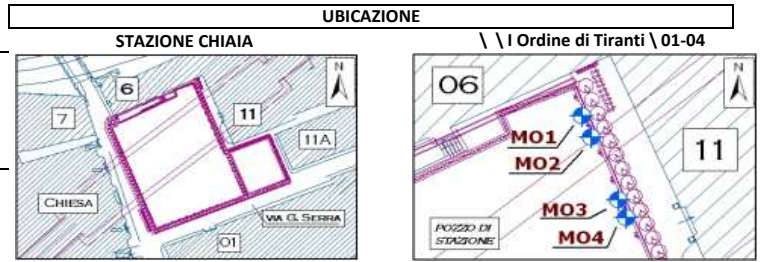


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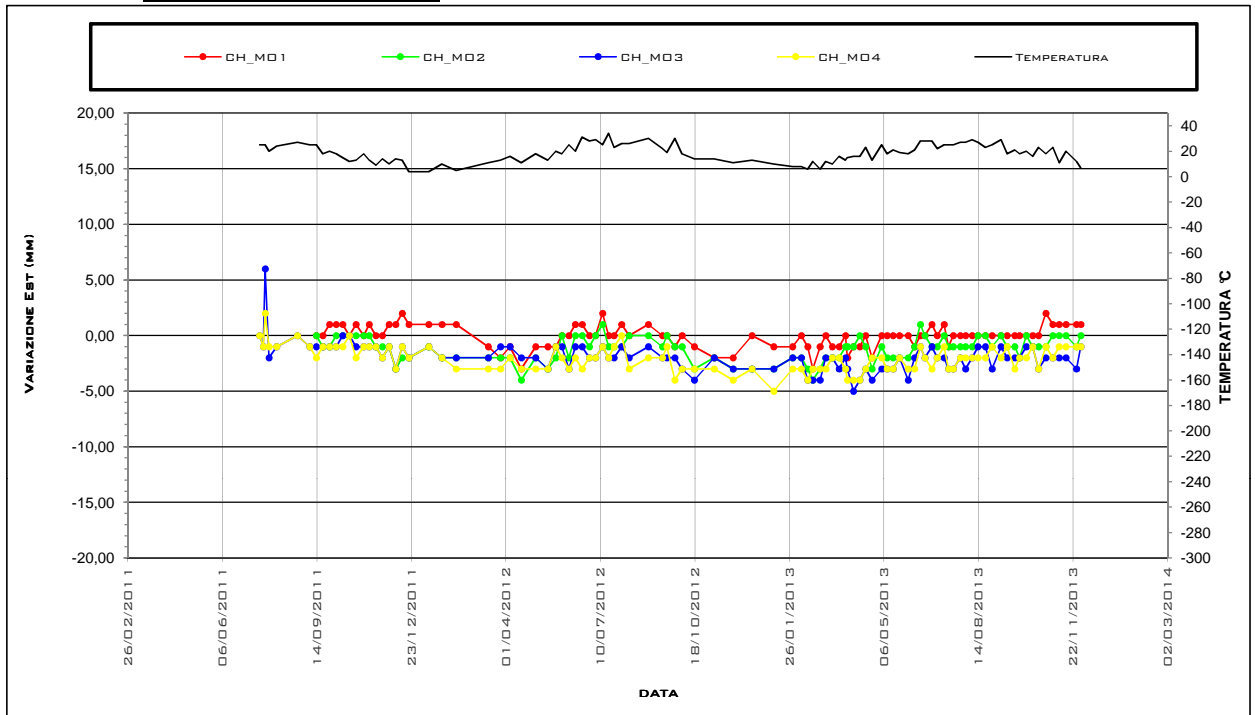




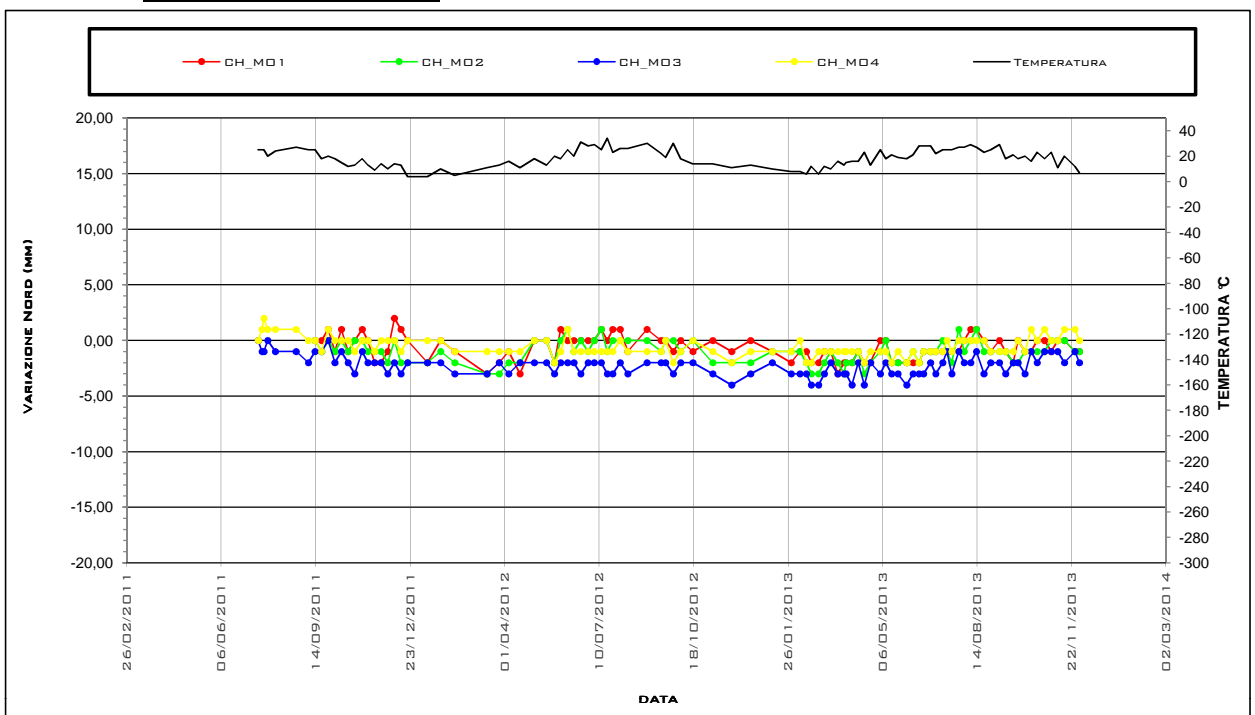
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ 1 Ordine di Tiranti \ 01-  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 13/09/2011  
**Data lettura di zero** 13/09/2011



**GRAFICO EST**



**GRAFICO NORD**





Ubicazione STAZIONE CHIAIA

Opera \ \ Ordine di Tiranti \ 05-08

Tipo Strumento Mire Ottiche

Data posa in opera 15/07/2011

Data lettura di zero 15/07/2011

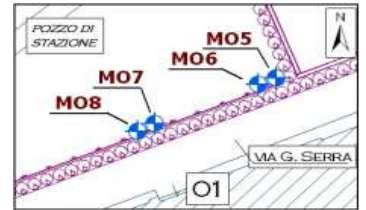
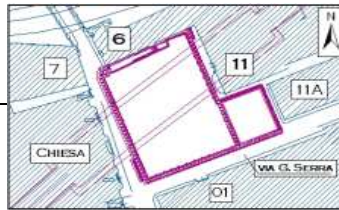
Ultima Misura 99 in data 30/11/2013

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		Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est. Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est. Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est. Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est. Spost. [mm]	Nord Spost. [mm]
9	20/09/2011 08.00	18,0	33,2	1,0	-5,0	1,0	18,0	33,2	1,0	-4,0	1,0	18,0	33,1	0,0	-4,0	-1,0	18,0	33,1	0,0	-4,0	-1,0
10	27/09/2011 08.00	20,0	33,2	1,0	-3,0	1,0	20,0	33,2	3,0	-4,0	2,0	20,0	33,1	1,0	-4,0	1,0	20,0	33,1	2,0	-4,0	1,0
11	04/10/2011 08.00	18,0	33,2	1,0	-2,0	1,0	18,0	33,2	1,0	-1,0	0,0	18,0	33,1	1,0	-1,0	2,0	18,0	33,1	1,0	-2,0	1,0
12	11/10/2011 08.00	15,0	33,2	2,0	-3,0	2,0	15,0	33,2	2,0	-2,0	3,0	15,0	33,1	1,0	-3,0	0,0	15,0	33,1	1,0	-3,0	-1,0
13	18/10/2011 08.00	12,0	33,2	3,0	-3,0	0,0	12,0	33,2	2,0	-2,0	0,0	12,0	33,1	0,0	-3,0	0,0	12,0	33,1	1,0	-3,0	1,0
14	25/10/2011 08.00	13,0	33,2	2,0	-4,0	1,0	13,0	33,2	3,0	-3,0	1,0	13,0	33,1	1,0	-3,0	-1,0	13,0	33,1	2,0	-3,0	0,0
15	02/11/2011 10.00	18,0	33,2	3,0	-4,0	1,0	18,0	33,2	3,0	-4,0	1,0	18,0	33,1	1,0	-3,0	0,0	18,0	33,1	1,0	-3,0	0,0
16	08/11/2011 08.00	13,0	33,2	2,0	-4,0	1,0	13,0	33,2	2,0	-4,0	1,0	13,0	33,1	1,0	-3,0	0,0	13,0	33,1	1,0	-2,0	2,0
17	15/11/2011 08.00	9,0	33,2	2,0	-4,0	1,0	9,0	33,2	3,0	-3,0	1,0	9,0	33,1	0,0	-3,0	0,0	9,0	33,1	1,0	-4,0	0,0
18	22/11/2011 08.00	14,0	33,2	3,0	-6,0	2,0	14,0	33,2	3,0	-4,0	3,0	14,0	33,1	0,0	-4,0	1,0	14,0	33,1	0,0	-5,0	1,0
19	29/11/2011 08.00	10,0	33,2	3,0	-2,0	2,0	10,0	33,2	3,0	-1,0	1,0	10,0	33,1	0,0	-4,0	0,0	10,0	33,1	0,0	-4,0	0,0
20	06/12/2011 08.00	14,0	33,2	1,0	-5,0	0,0	14,0	33,2	1,0	-6,0	2,0	14,0	33,1	0,0	-3,0	2,0	14,0	33,1	0,0	-4,0	2,0
21	13/12/2011 08.00	13,0	33,2	2,0	-3,0	0,0	13,0	33,2	2,0	-3,0	1,0	13,0	33,1	0,0	-3,0	1,0	13,0	33,1	0,0	-3,0	1,0
22	20/12/2011 08.00	4,0	33,2	2,0	-5,0	1,0	4,0	33,2	3,0	-4,0	1,0	4,0	33,1	0,0	-4,0	1,0	4,0	33,1	0,0	-4,0	1,0
23	10/01/2012 08.00	4,0	33,2	3,0	-2,0	3,0	4,0	33,2	3,0	-2,0	2,0	4,0	33,1	0,0	-2,0	2,0	4,0	33,1	1,0	-2,0	3,0
24	24/01/2012 08.00	10,0	33,2	3,0	-4,0	3,0	10,0	33,2	3,0	-4,0	3,0	10,0	33,1	0,0	-3,0	3,0	10,0	33,1	0,0	-3,0	1,0
25	08/02/2012 08.00	5,0	33,2	2,0	-5,0	1,0	5,0	33,2	3,0	-5,0	2,0	5,0	33,1	-1,0	-4,0	0,0	5,0	33,1	0,0	-4,0	1,0
26	13/03/2012 08.00	11,0	33,2	3,0	-5,0	0,0	11,0	33,2	3,0	-5,0	1,0	11,0	33,1	0,0	-4,0	1,0	11,0	33,1	0,0	-4,0	0,0
27	26/03/2012 08.00	13,0	33,2	2,0	-1,0	1,0	13,0	33,2	2,0	-2,0	1,0	13,0	33,1	0,0	-2,0	2,0	13,0	33,1	0,0	-3,0	1,0
28	05/04/2012 08.00	16,0	33,2	2,0	-2,0	1,0	16,0	33,2	3,0	-2,0	2,0	16,0	33,1	-1,0	-2,0	1,0	16,0	33,1	0,0	-3,0	2,0
29	17/04/2012 08.00	11,0	33,2	1,0	-3,0	1,0	11,0	33,2	3,0	-3,0	1,0	11,0	33,1	0,0	-4,0	1,0	11,0	33,1	2,0	-4,0	1,0
30	02/05/2012 10.30	18,0	33,2	3,0	-6,0	2,0	18,0	33,2	3,0	-3,0	1,0	18,0	33,1	2,0	-3,0	1,0	18,0	33,1	1,0	-4,0	1,0
31	15/05/2012 08.30	13,0	33,2	3,0	-6,0	2,0	13,0	33,2	3,0	-4,0	1,0	13,0	33,1	1,0	-3,0	1,0	13,0	33,1	1,0	-4,0	0,0
32	23/05/2012 17.30	20,0	33,2	3,0	0,0	2,0	20,0	33,2	3,0	0,0	3,0	20,0	33,1	0,0	-3,0	2,0	20,0	33,1	1,0	-3,0	3,0
33	30/05/2012 08.30	18,0	33,2	2,0	-5,0	1,0	18,0	33,2	3,0	-3,0	1,0	18,0	33,1	0,0	-3,0	1,0	18,0	33,1	1,0	-3,0	3,0
34	06/06/2012 16.30	25,0	33,2	2,0	-5,0	2,0	25,0	33,2	3,0	-4,0	2,0	25,0	33,1	0,0	-4,0	2,0	25,0	33,1	0,0	-5,0	2,0
35	13/06/2012 08.30	20,0	33,2	1,0	0,0	2,0	20,0	33,2	1,0	0,0	3,0	20,0	33,1	0,0	-4,0	2,0	20,0	33,1	1,0	-4,0	3,0
36	20/06/2012 16.30	31,0	33,2	1,0	-2,0	2,0	31,0	33,2	1,0	-2,0	2,0	31,0	33,1	0,0	-5,0	1,0	31,0	33,1	1,0	-5,0	1,0
37	28/06/2012 08.30	28,0	33,2	1,0	-1,0	4,0	28,0	33,2	1,0	-1,0	4,0	28,0	33,1	0,0	-4,0	3,0	28,0	33,1	1,0	-5,0	3,0
38	04/07/2012 19.30	29,0	33,2	1,0	-4,0	2,0	29,0	33,2	1,0	-4,0	2,0	29,0	33,1	0,0	-5,0	1,0	29,0	33,1	0,0	-6,0	2,0
39	12/07/2012 08.30	25,0	33,2	2,0	-3,0	3,0	25,0	33,2	3,0	-3,0	4,0	25,0	33,1	1,0	-4,0	4,0	25,0	33,1	1,0	-5,0	4,0
40	18/07/2012 16.30	34,0	33,2	1,0	0,0	3,0	34,0	33,2	3,0	2,0	4,0	34,0	33,1	-2,0	-4,0	4,0	34,0	33,1	-1,0	-5,0	5,0
41	24/07/2012 09.00	23,0	33,2	1,0	-1,0	0,0	23,0	33,2	3,0	1,0	3,0	23,0	33,1	-2,0	-1,0	2,0	23,0	33,1	-1,0	-2,0	0,0
42	01/08/2012 09.00	26,0	33,2	0,0	0,0	0,0	26,0	33,2	3,0	1,0	3,0	26,0	33,1	-1,0	-1,0	3,0	26,0	33,1	-1,0	-2,0	1,0
43	09/08/2012 08.30	26,0	33,2	1,0	-3,0	1,0	26,0	33,2	1,0	-3,0	3,0	26,0	33,1	-2,0	-4,0	5,0	26,0	33,1	-2,0	-5,0	4,0
44	29/08/2012 16.00	30,0	33,2	1,0	-2,0	2,0	30,0	33,2	1,0	-2,0	3,0	30,0	33,1	-1,0	-5,0	3,0	30,0	33,1	-2,0	-6,0	2,0
45	13/09/2012 15.00	22,0	33,2	1,0	-1,0	4,0	22,0	33,2	1,0	-2,0	5,0	22,0	33,1	-1,0	-5,0	4,0	22,0	33,1	-1,0	-6,0	5,0
46	18/09/2012 09.00	19,0	33,2	1,0	-1,0	4,0	19,0	33,2	1,0	0,0	6,0	19,0	33,1	-2,0	-5,0	4,0	19,0	33,1	-1,0	-5,0	6,0
47	26/09/2012 15.00	30,0	33,2	2,0	-2,0	4,0	30,0	33,2	1,0	-1,0	4,0	30,0	33,1	-1,0	-4,0	4,0	30,0	33,1	-1,0	-5,0	4,0
48	04/10/2012 09.00	18,0	33,2	2,0	-4,0	2,0	18,0	33,2	1,0	-3,0	3,0	18,0	33,1	-2,0	-5,0	5,0	18,0	33,1	-1,0	-7,0	4,0
49	17/10/2012 08.30	14,0	33,2	3,0	-2,0	4,0	14,0	33,2	3,0	-1,0	5,0	14,0	33,1	-4,0	-5,0	4,0	14,0	33,1	-3,0	-5,0	5,0
50	07/11/2012 08.30	14,0	33,2	1,0	-1,0	3,0	14,0	33,2	2,0	-1,0	4,0	14,0	33,1	-3,0	-4,0	5,0	14,0	33,1	-2,0	-4,0	6,0
51	27/11/2012 08.30	11,0	33,2	2,0	-6,0	2,0	11,0	33,2	2,0	-5,0	3,0	11,0	33,1	-3,0	-5,0	6,0	11,0	33,1	-2,0	-6,0	5,0
52	17/12/2012 08.30	13,0	33,2	1,0	-3,0	4,0	13,0	33,2	2,0	-2,0	5,0	13,0	33,1	-5,0	-6,0	5,0	13,0	33,1	-4,0	-6,0	4,0
53	09/01/2013 08.30	10,0	33,2	1,0	-6,0	3,0	10,0	33,2	2,0	-6,0	3,0	10,0	33,1	-4,0	-5,0	5,0	10,0	33,1	-3,0	-5,0	5,0
54	29/01/2013 08.30	8,0	33,2	1,0	-3,0	4,0	8,0	33,2	2,0	-3,0	4,0	8,0	33,1	-4,0	-5,0	5,0	8,0	33,1	-3,0	-5,0	5,0
55	07/02/2013 15.00	8,0	33,2	2,0	-3,0	3,0	8,0	33,2	2,0	-4,0	5,0	8,0	33,1	-3,0	-5,0	2,0	8,0	33,1	-2,0	-6,0	3,0
56	14/02/2013 08.30	6,0	33,2	1,0	-4,0	3,0	6,0	33,2	2,0	-4,0	5,0	6,0	33,1	-2,0	-5,0	5,0	6,0	33,1	-2,0	-6,0	5,0
57	19/02/2013 15.30	12,0	33,2	2,0	-1,0	5,0	12,0	33,2	2,0	-1,0	5,0	12,0	33,1	-4,0	-5,0	4,0	12,0	33,1	-3,0	-5,0	4,0
58	27/02/2013 08.30	6,0	33,2	2,0	-3,0	3,0	6,0	33,2	1,0	-4,0	4,0	6,0	33,1	-2,0	-7,0	1,0	6,0	33,1	-2,0	-8,0	1,0
59	05/03/2013 10.30	12,0	33,2	1,0	-1,0	4,0	12,0	33,2	1,0	-2,0	6,0	12,0	33,1	-3,0	-4,0	3,0	12,0	33,1	-2,0	-5,0	5,0
60	12/03/2013 08.30	10,0	33,2	1,0	-2,0	4,0	10,0	33,2	3,0	-2,0	5,0	10,0	33,1	-3,0	-6,0	3,0	10,0	33,1	-2,0	-6,0	4,0
61	19/03/2013 16.00	16,0	33,2	2,0	0,0	5,0	16,0	33,2	2,0	0,0	6,0	16,0	33,1	-2,0	-6,0	3,0	16,0	33,1	-1,0	-7,0	3,0
62	26/03/2013 08.30	13,0	33,2	1,0	-3,0	3,0	13,0	33,2	2,0	-3,0	4,0	13,0	33,1	-3,0	-5,0	0,0	13,0	33,1	-2,0	-6,0	2,0
63	28/03/2013 11.00	15,0	33,2	1,0	-2,0	4,0	15,0	33,2	2,0	-2,0	6,0	15,0	33,1	-3,0	-5,0	2,0	15,0	33,1	-3,0	-7,0	-1,0
64	03/04/2013 16.00	16,0	33,2	1,0	-1,0	5,0	16,0	33,2	1,0	-2,0	6,0	16,0	33,1	-2,0	-5,0	2,0	16,0	33,1	-1,0	-5,0	2,0
65	10/04/2013 10.00	16,0	33,2	2,0	-3,0	5,0	16,0	33,2	2,0	-2,0	6,0	16,0	33,1								

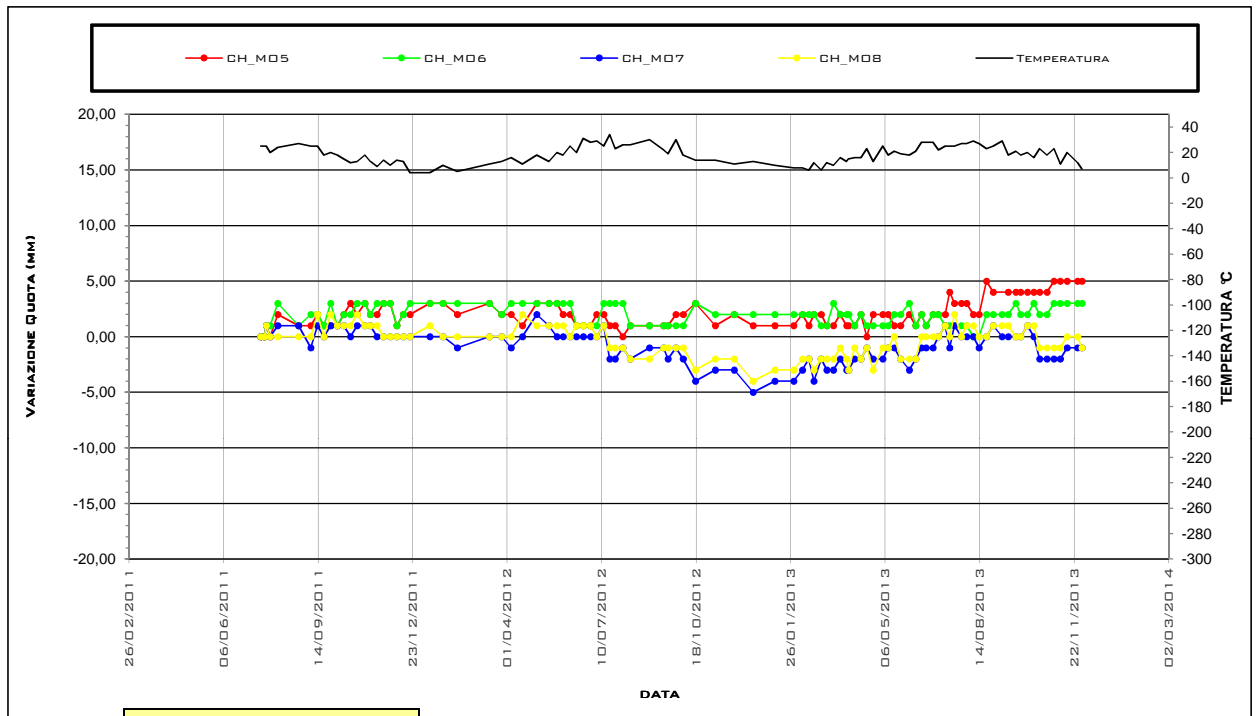


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ 1 Ordine di Tiranti \ 05-  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 15/07/2011  
**Data lettura di zero** 15/07/2011

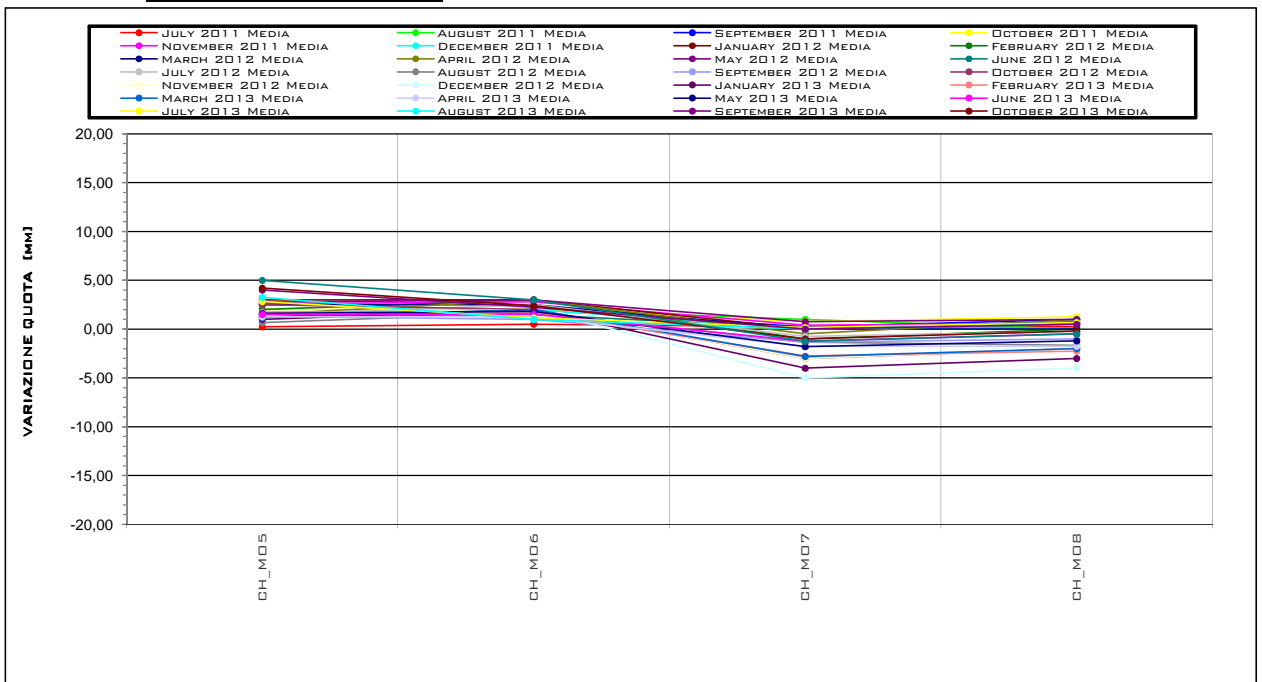
**UBICAZIONE**  
STAZIONE CHIAIA \ \ 1 Ordine di Tiranti \ 05-08



**GRAFICO QUOTA**

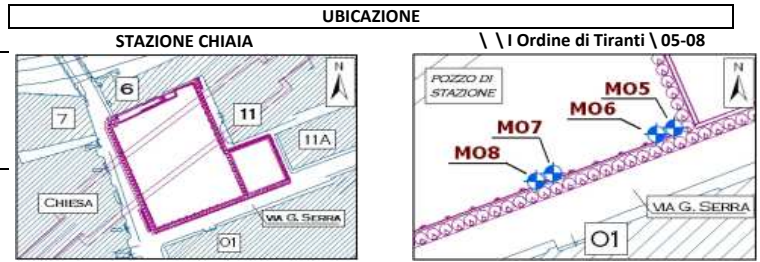


**GRAFICO ISOCRONE**

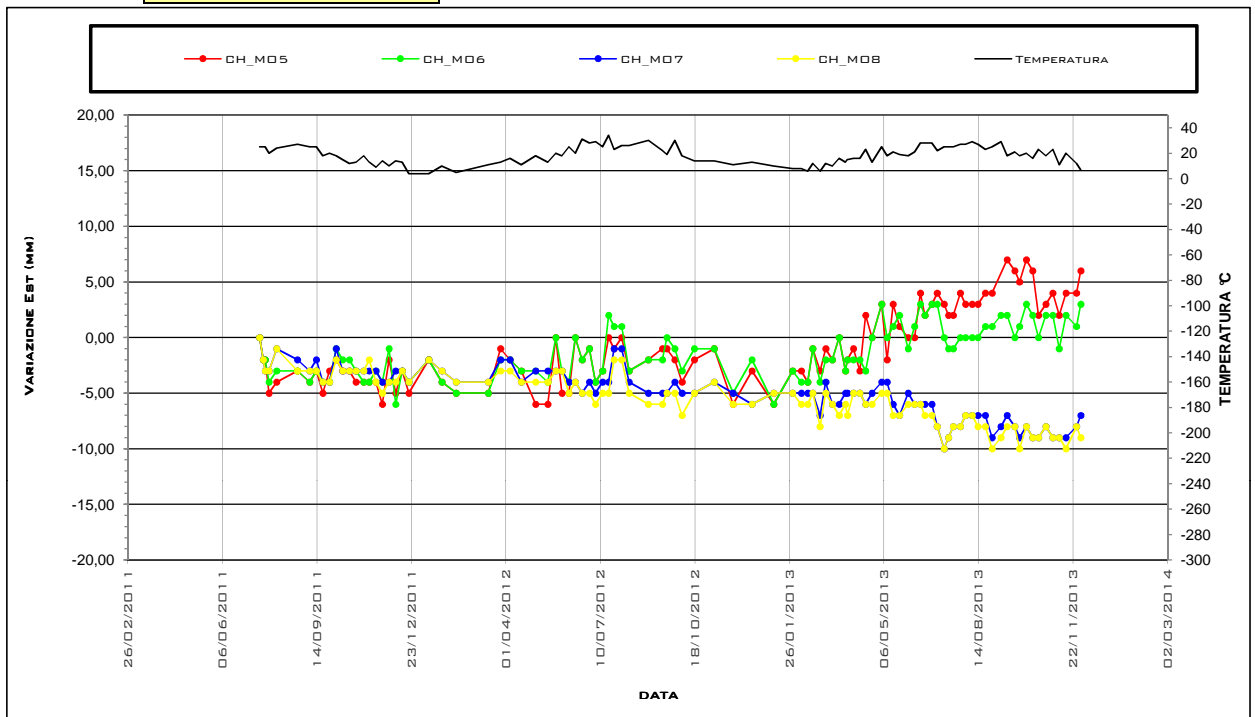




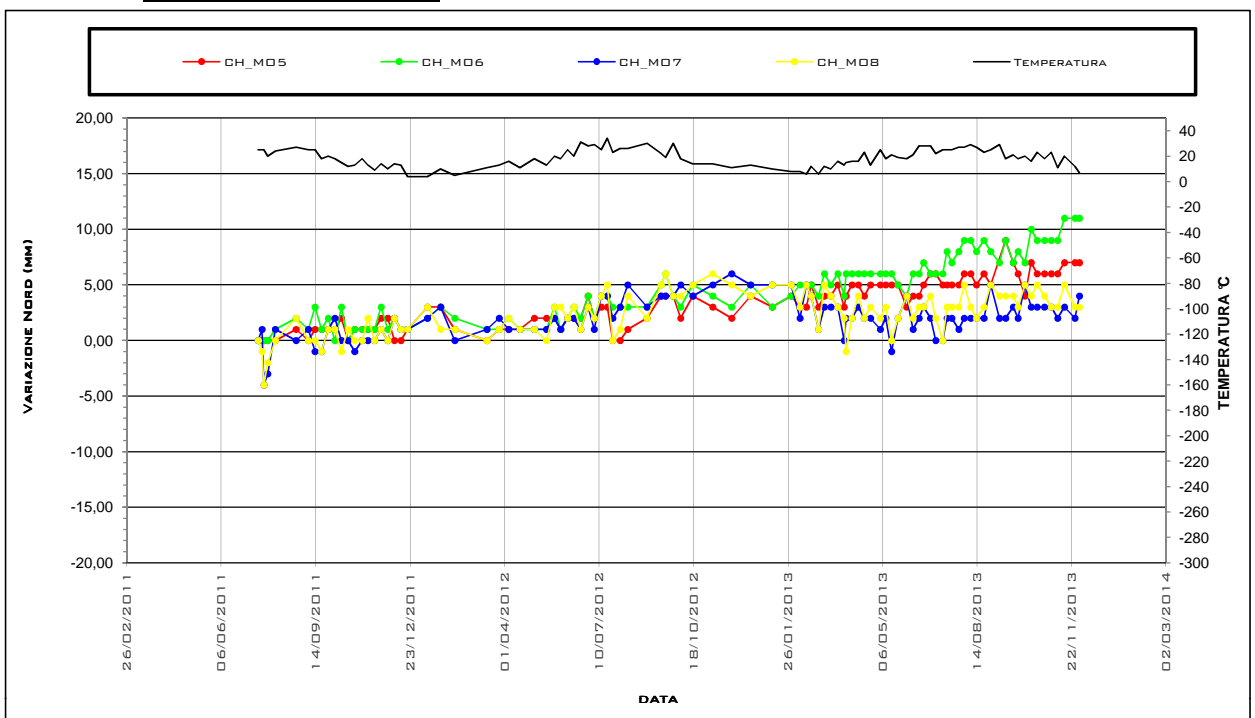
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ 1 Ordine di Tiranti \ 05-  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 15/07/2011  
**Data lettura di zero** 15/07/2011



**GRAFICO EST**



**GRAFICO NORD**







Ubicazione STAZIONE CHIAIA

Opera \ \ Ordine di Tiranti \ 09-12

Tipo Strumento Mire Ottiche

Data posa in opera 15/07/2011

Data lettura di zero 15/07/2011

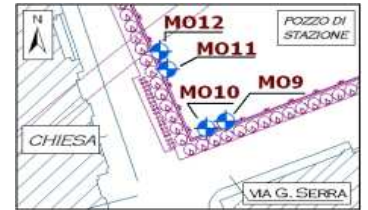
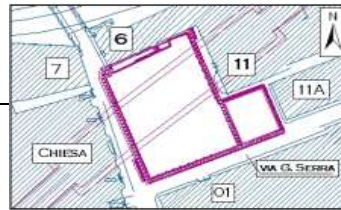
Ultima Misura 99 in data 30/11/2013

Letto. n°	DATA	CH_M010					CH_M011					CH_M012					CH_M09				
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9	20/09/2011 08.00	18.0	34.1	0.0	-3.0	-2.0	18.0	34.0	-1.0	-2.0	1.0	18.0	34.0	0.0	-2.0	0.0	18.0	34.1	0.0	-1.0	0.0
10	27/09/2011 08.00	20.0	34.1	0.0	-3.0	0.0	20.0	34.0	-1.0	-2.0	2.0	20.0	34.0	0.0	-3.0	2.0	20.0	34.1	1.0	-2.0	1.0
11	04/10/2011 08.00	18.0	34.1	0.0	0.0	-1.0	18.0	34.0	0.0	0.0	1.0	18.0	34.0	0.0	-1.0	2.0	18.0	34.1	1.0	0.0	1.0
12	11/10/2011 08.00	15.0	34.1	0.0	-2.0	0.0	15.0	34.0	0.0	0.0	1.0	15.0	34.0	1.0	-1.0	1.0	15.0	34.1	1.0	0.0	0.0
13	18/10/2011 08.00	12.0	34.1	0.0	-3.0	1.0	12.0	34.0	-1.0	-1.0	2.0	12.0	34.0	0.0	-3.0	2.0	12.0	34.1	1.0	-1.0	1.0
14	25/10/2011 08.00	13.0	34.1	0.0	-2.0	0.0	13.0	34.0	0.0	-1.0	2.0	13.0	34.0	1.0	-3.0	1.0	13.0	34.1	2.0	0.0	0.0
15	02/11/2011 10.00	18.0	34.1	1.0	-2.0	1.0	18.0	34.0	0.0	-1.0	2.0	18.0	34.0	2.0	-2.0	1.0	18.0	34.1	2.0	0.0	1.0
16	08/11/2011 08.00	13.0	34.1	0.0	-2.0	1.0	13.0	34.0	0.0	-1.0	2.0	13.0	34.0	0.0	-2.0	2.0	13.0	34.1	2.0	0.0	1.0
17	15/11/2011 08.00	9.0	34.1	0.0	-3.0	-1.0	9.0	34.0	0.0	-2.0	1.0	9.0	34.0	0.0	-3.0	1.0	9.0	34.1	1.0	0.0	0.0
18	22/11/2011 08.00	14.0	34.1	0.0	-3.0	1.0	14.0	34.0	-2.0	-2.0	3.0	14.0	34.0	0.0	-4.0	2.0	14.0	34.1	0.0	-2.0	1.0
19	29/11/2011 08.00	10.0	34.1	-1.0	-3.0	0.0	10.0	34.0	-2.0	-2.0	2.0	10.0	34.0	0.0	-3.0	2.0	10.0	34.1	-1.0	0.0	1.0
20	06/12/2011 08.00	14.0	34.1	0.0	-2.0	0.0	14.0	34.0	-1.0	-2.0	2.0	14.0	34.0	0.0	-3.0	2.0	14.0	34.1	0.0	-1.0	1.0
21	13/12/2011 08.00	13.0	34.1	0.0	-2.0	0.0	13.0	34.0	-1.0	0.0	2.0	13.0	34.0	0.0	-2.0	2.0	13.0	34.1	0.0	-2.0	1.0
22	20/12/2011 08.00	4.0	34.1	-1.0	-3.0	1.0	4.0	34.0	-1.0	-2.0	2.0	4.0	34.0	0.0	-3.0	2.0	4.0	34.1	1.0	-1.0	1.0
23	10/01/2012 08.00	4.0	34.1	0.0	0.0	2.0	4.0	34.0	0.0	0.0	3.0	4.0	34.0	0.0	-2.0	3.0	4.0	34.1	1.0	1.0	3.0
24	24/01/2012 08.00	10.0	34.1	0.0	-2.0	1.0	10.0	34.0	-1.0	-2.0	2.0	10.0	34.0	0.0	-2.0	3.0	10.0	34.1	0.0	0.0	1.0
25	08/02/2012 08.00	5.0	34.1	-1.0	-3.0	0.0	5.0	34.0	-2.0	-1.0	3.0	5.0	34.0	0.0	-3.0	2.0	5.0	34.1	0.0	-1.0	2.0
26	13/03/2012 08.00	11.0	34.1	0.0	-2.0	0.0	11.0	34.0	-1.0	0.0	1.0	11.0	34.0	0.0	-2.0	1.0	11.0	34.1	0.0	0.0	0.0
27	26/03/2012 08.00	13.0	34.1	0.0	-2.0	1.0	13.0	34.0	-2.0	-1.0	3.0	13.0	34.0	0.0	-1.0	3.0	13.0	34.1	1.0	0.0	0.0
28	05/04/2012 08.00	16.0	34.1	-1.0	-3.0	0.0	16.0	34.0	-2.0	-1.0	2.0	16.0	34.0	0.0	-3.0	2.0	16.0	34.1	1.0	-1.0	1.0
29	17/04/2012 08.00	11.0	34.1	0.0	-3.0	1.0	11.0	34.0	-1.0	-1.0	2.0	11.0	34.0	1.0	-3.0	2.0	11.0	34.1	1.0	-2.0	2.0
30	02/05/2012 08.00	18.0	34.1	1.0	-2.0	0.0	18.0	34.0	0.0	-1.0	2.0	18.0	34.0	2.0	-3.0	2.0	18.0	34.1	2.0	-1.0	1.0
31	15/05/2012 08.30	13.0	34.1	0.0	-4.0	-1.0	13.0	34.0	0.0	-1.0	1.0	13.0	34.0	1.0	-3.0	1.0	13.0	34.1	2.0	0.0	0.0
32	23/05/2012 17.30	20.0	34.1	1.0	-2.0	1.0	20.0	34.0	0.0	-1.0	2.0	20.0	34.0	0.0	-2.0	2.0	20.0	34.1	1.0	-1.0	2.0
33	30/05/2012 08.30	18.0	34.1	0.0	-2.0	0.0	18.0	34.0	0.0	-1.0	2.0	18.0	34.0	0.0	-2.0	2.0	18.0	34.1	2.0	-2.0	1.0
34	06/06/2012 08.30	25.0	34.1	0.0	-4.0	1.0	25.0	34.0	-1.0	-1.0	3.0	25.0	34.0	0.0	-2.0	1.0	25.0	34.1	1.0	-2.0	2.0
35	13/06/2012 08.30	20.0	34.1	0.0	-3.0	1.0	20.0	34.0	0.0	-1.0	2.0	20.0	34.0	0.0	-2.0	2.0	20.0	34.1	1.0	0.0	1.0
36	20/06/2012 16.30	31.0	34.1	0.0	-4.0	-1.0	31.0	34.0	0.0	-1.0	-1.0	31.0	34.0	1.0	-1.0	0.0	31.0	34.1	1.0	-1.0	0.0
37	28/06/2012 08.30	28.0	34.1	0.0	-4.0	1.0	28.0	34.0	1.0	-1.0	1.0	28.0	34.0	1.0	-2.0	3.0	28.0	34.1	1.0	-3.0	3.0
38	04/07/2012 08.30	29.0	34.1	0.0	-6.0	0.0	29.0	34.0	0.0	-2.0	0.0	29.0	34.0	0.0	-3.0	1.0	29.0	34.1	0.0	-3.0	1.0
39	12/07/2012 08.30	25.0	34.1	0.0	-4.0	0.0	25.0	34.0	0.0	-1.0	1.0	25.0	34.0	0.0	-1.0	2.0	25.0	34.1	0.0	-2.0	1.0
40	18/07/2012 16.30	34.0	34.1	-2.0	-4.0	1.0	34.0	34.0	-1.0	-1.0	0.0	34.0	34.0	0.0	-1.0	2.0	34.0	34.1	-1.0	-3.0	2.0
41	24/07/2012 09.00	23.0	34.1	-2.0	-2.0	-3.0	23.0	34.0	-1.0	1.0	2.0	23.0	34.0	-1.0	0.0	1.0	23.0	34.1	-1.0	-1.0	-2.0
42	01/08/2012 09.00	26.0	34.1	-2.0	-3.0	-2.0	26.0	34.0	-1.0	2.0	2.0	26.0	34.0	-1.0	0.0	0.0	26.0	34.1	-1.0	-1.0	-1.0
43	09/08/2012 08.30	26.0	34.1	-2.0	-4.0	1.0	26.0	34.0	-1.0	-1.0	1.0	26.0	34.0	-1.0	-1.0	3.0	26.0	34.1	-2.0	-1.0	2.0
44	29/08/2012 16.00	30.0	34.1	-1.0	-5.0	1.0	30.0	34.0	-1.0	-1.0	0.0	30.0	34.0	0.0	-2.0	1.0	30.0	34.1	0.0	-4.0	1.0
45	13/09/2012 15.00	22.0	34.1	-1.0	-4.0	2.0	22.0	34.0	-1.0	-2.0	1.0	22.0	34.0	0.0	-2.0	2.0	22.0	34.1	0.0	-3.0	3.0
46	18/09/2012 15.00	19.0	34.1	-2.0	-4.0	3.0	19.0	34.0	-1.0	-1.0	2.0	19.0	34.0	0.0	-1.0	3.0	19.0	34.1	0.0	-3.0	3.0
47	26/09/2012 15.00	30.0	34.1	-1.0	-4.0	2.0	30.0	34.0	0.0	-1.0	1.0	30.0	34.0	0.0	-1.0	1.0	30.0	34.1	0.0	-3.0	2.0
48	04/10/2012 08.00	18.0	34.1	-2.0	-4.0	2.0	18.0	34.0	-1.0	-2.0	2.0	18.0	34.0	0.0	-2.0	3.0	18.0	34.1	0.0	-4.0	2.0
49	17/10/2012 08.30	14.0	34.1	-3.0	-3.0	2.0	14.0	34.0	-2.0	0.0	2.0	14.0	34.0	-2.0	-1.0	3.0	14.0	34.1	-2.0	-2.0	3.0
50	07/11/2012 08.30	14.0	34.1	-2.0	-3.0	3.0	14.0	34.0	-2.0	0.0	2.0	14.0	34.0	0.0	0.0	3.0	14.0	34.1	-1.0	-2.0	3.0
51	27/11/2012 08.30	11.0	34.1	-2.0	-3.0	3.0	11.0	34.0	-2.0	0.0	3.0	11.0	34.0	-1.0	-1.0	3.0	11.0	34.1	0.0	-2.0	4.0
52	17/12/2012 08.30	13.0	34.1	-3.0	-5.0	3.0	13.0	34.0	-3.0	-1.0	2.0	13.0	34.0	-3.0	-2.0	3.0	13.0	34.1	-3.0	-3.0	5.0
53	09/01/2013 08.30	10.0	34.1	-3.0	-3.0	2.0	10.0	34.0	-2.0	-1.0	2.0	10.0	34.0	-2.0	-2.0	2.0	10.0	34.1	-2.0	-4.0	3.0
54	29/01/2013 08.30	8.0	34.1	-3.0	-3.0	4.0	8.0	34.0	-2.0	-1.0	3.0	8.0	34.0	-2.0	-2.0	3.0	8.0	34.1	-2.0	-3.0	5.0
55	07/02/2013 15.00	8.0	34.1	-1.0	-4.0	2.0	8.0	34.0	-1.0	0.0	2.0	8.0	34.0	-1.0	-1.0	2.0	8.0	34.1	0.0	-3.0	2.0
56	14/02/2013 08.30	6.0	34.1	-1.0	-3.0	4.0	6.0	34.0	-1.0	0.0	3.0	6.0	34.0	-1.0	0.0	5.0	6.0	34.1	0.0	-2.0	4.0
57	19/02/2013 15.30	12.0	34.1	-2.0	-3.0	3.0	12.0	34.0	-2.0	0.0	3.0	12.0	34.0	-2.0	0.0	4.0	12.0	34.1	-1.0	-1.0	4.0
58	27/02/2013 08.30	6.0	34.1	-1.0	-6.0	1.0	6.0	34.0	0.0	-1.0	1.0	6.0	34.0	0.0	-2.0	2.0	6.0	34.1	0.0	-4.0	1.0
59	05/03/2013 10.30	12.0	34.1	-2.0	-3.0	2.0										12.0	34.1	-1.0	-2.0	3.0	
60	12/03/2013 08.30	10.0	34.1	-2.0	-5.0	2.0										10.0	34.1	-1.0	-4.0	3.0	
61	19/03/2013 16.00	16.0	34.1	-1.0	-4.0	2.0										16.0	34.1	1.0	-4.0	3.0	
62	26/03/2013 08.30	13.0	34.1	-2.0	-3.0	-1.0										13.0	34.1	-1.0	-2.0	1.0	
63	28/03/2013 11.00	15.0	34.1	-2.0	-4.0	0.0										15.0	34.1	-1.0	-3.0	2.0	
64	03/04/2013 17.30	16.0	34.1	-2.0	-4.0	1.0	16.0	34.0	-1.0	1.0	1.0	16.0	34.0	-2.0	0.0	3.0	16.0	34.1	0.0	-3.0	2.0
65	10/04/2013 10.30	16.0	34.1	-1.0	-3.0	2.0	16.0	34.0	-1.0	1.0	1.0	16.0	34.0	-2.0	1.0	2.0	16.0	34.1	0.0	-3.0	2.0
66	16/04/2013 15.00	23.0	34.1	0.0	-4.0	0.0	23.0	34.0	0.0	0.0	0.0	23.0	34.0	0.0	0.0	2.0	23.0	34.1			

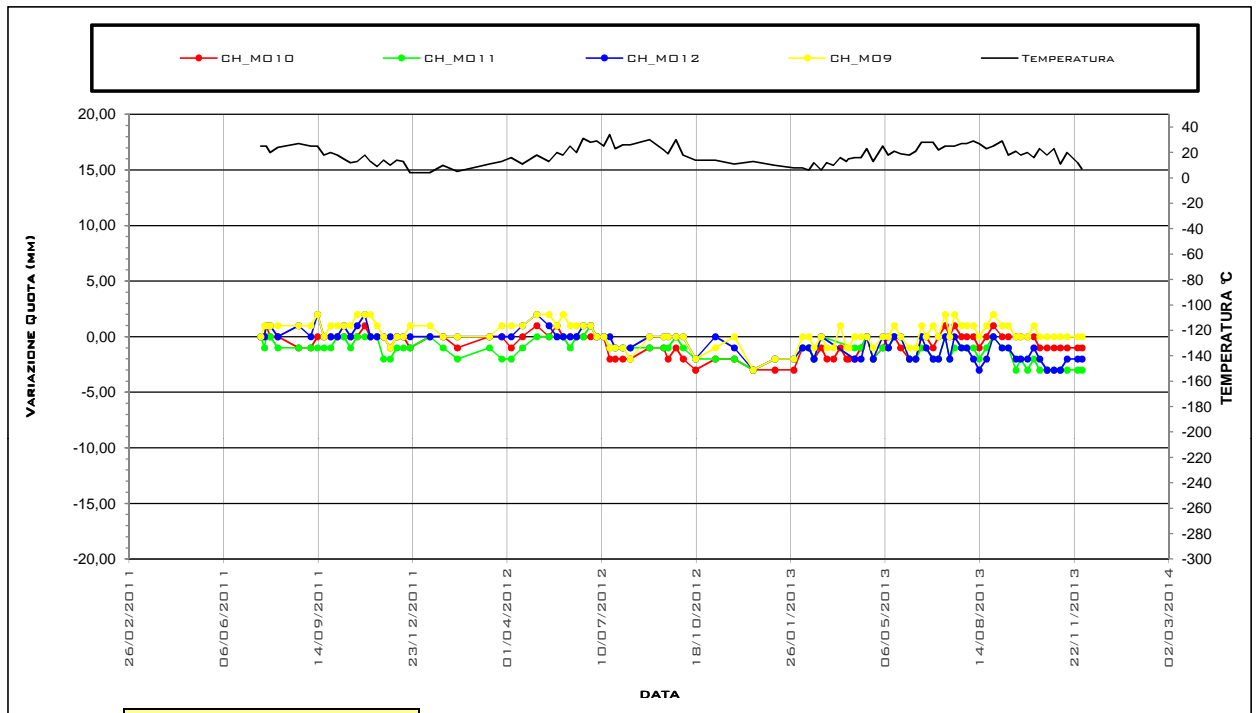


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ I Ordine di Tiranti \ 09-  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 15/07/2011  
**Data lettura di zero** 15/07/2011

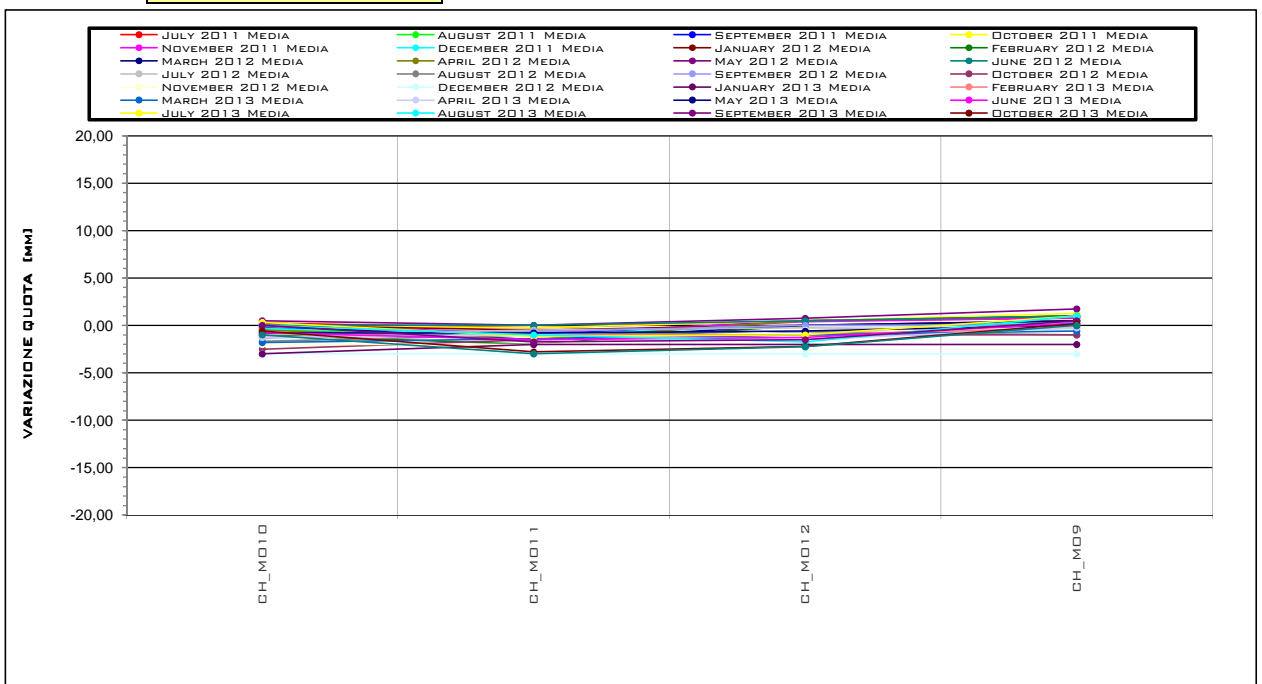
**UBICAZIONE**  
STAZIONE CHIAIA \ \ I Ordine di Tiranti \ 09-12



**GRAFICO QUOTA**



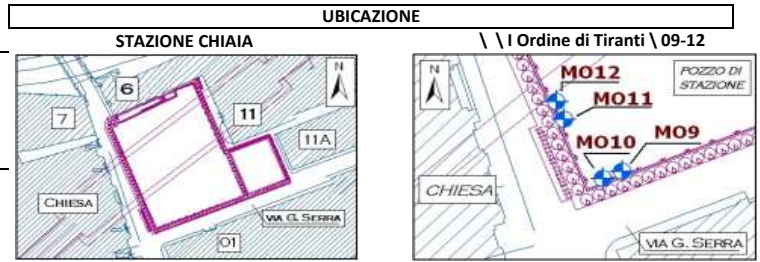
**GRAFICO ISOCRONE**



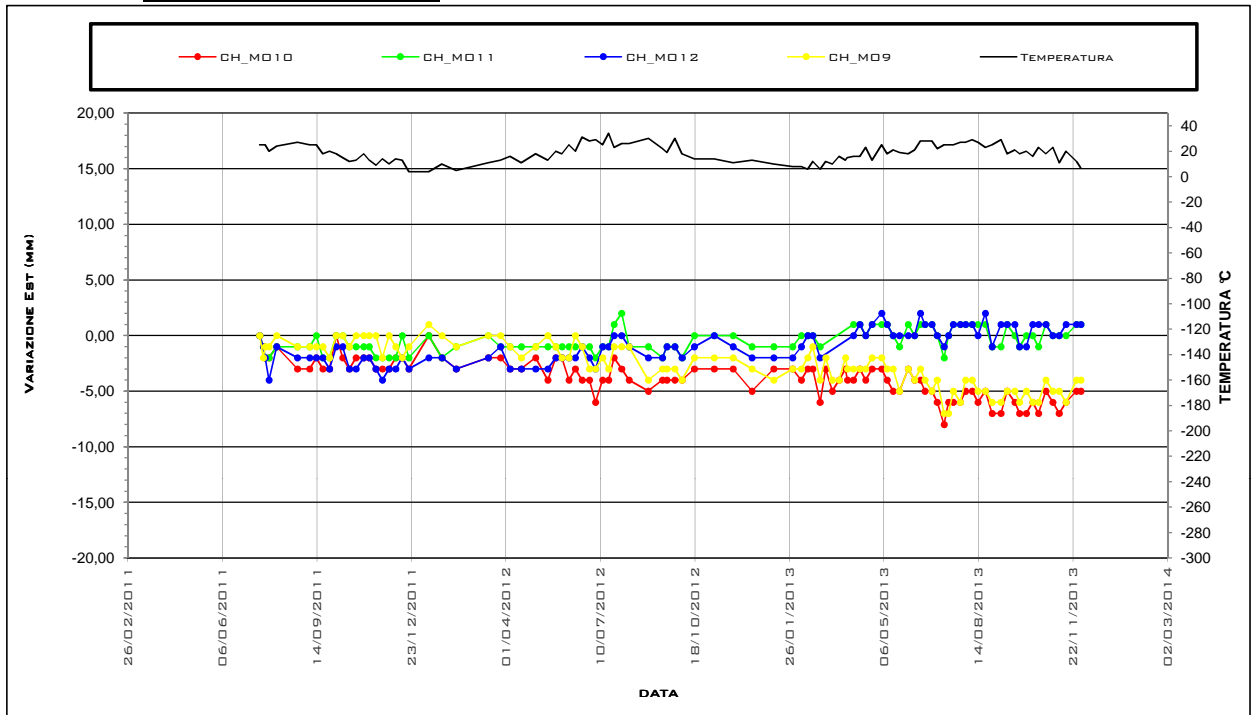




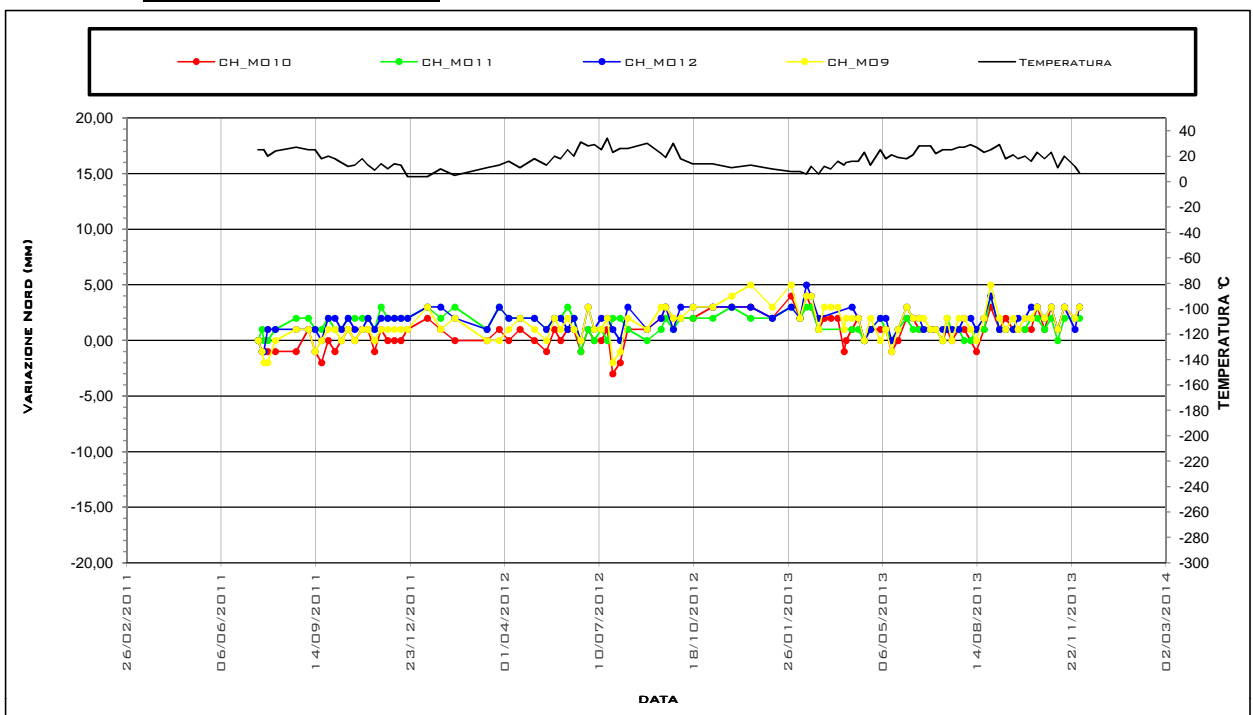
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ I Ordine di Tiranti \ 09-  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 15/07/2011  
**Data lettura di zero** 15/07/2011



**GRAFICO EST**



**GRAFICO NORD**





Ubicazione STAZIONE CHIAIA

Opera \ \ Ordine di Tiranti \ 13-16

Tipo Strumento Mire Ottiche

Data posa in opera 15/07/2011

Data lettura di zero 15/07/2011

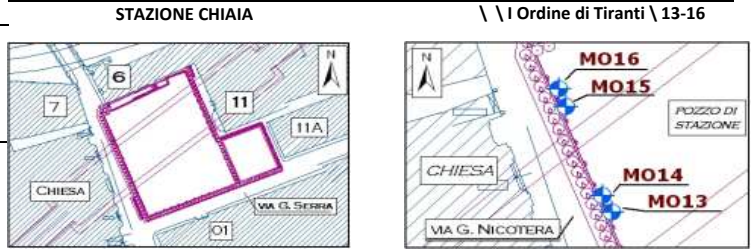
Ultima Misura 101 in data 30/11/2013

Lett. n°	DATA	CH_M013					CH_M014					CH_M015					CH_M016				
		Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]
11	20/09/2011 08.00	18.0	34.0	-1.0	-1.0	-1.0	18.0	34.0	0.0	-1.0	-1.0	18.0	34.6	0.0	1.0	0.0	18.0	34.6	0.0	2.0	1.0
12	27/09/2011 08.00	20.0	34.0	0.0	0.0	0.0	20.0	34.0	2.0	-1.0	0.0	20.0	34.6	0.0	-1.0	1.0	20.0	34.6	1.0	2.0	2.0
13	04/10/2011 08.00	18.0	34.0	0.0	0.0	0.0	18.0	34.0	1.0	0.0	-1.0	18.0	34.6	1.0	0.0	0.0	18.0	34.6	0.0	1.0	1.0
14	11/10/2011 08.00	15.0	34.0	0.0	0.0	0.0	15.0	34.0	2.0	1.0	0.0	15.0	34.6	0.0	0.0	0.0	15.0	34.6	1.0	3.0	1.0
15	18/10/2011 08.00	12.0	34.0	0.0	0.0	1.0	12.0	34.0	1.0	-1.0	1.0	12.0	34.6	1.0	1.0	1.0	12.0	34.6	0.0	2.0	2.0
16	25/10/2011 08.00	13.0	34.0	0.0	-1.0	-1.0	13.0	34.0	2.0	0.0	1.0	13.0	34.6	0.0	0.0	2.0	13.0	34.6	0.0	1.0	2.0
17	02/11/2011 10.00	18.0	34.0	0.0	-1.0	1.0	18.0	34.0	1.0	0.0	1.0	18.0	34.6	1.0	1.0	1.0	18.0	34.6	1.0	3.0	1.0
18	08/11/2011 08.00	13.0	34.0	-1.0	-1.0	0.0	13.0	34.0	1.0	-1.0	-1.0	13.0	34.6	0.0	0.0	1.0	13.0	34.6	1.0	3.0	2.0
19	15/11/2011 08.00	9.0	34.0	0.0	-1.0	-1.0	9.0	34.0	1.0	-1.0	0.0	9.0	34.6	0.0	1.0	1.0	9.0	34.6	1.0	2.0	1.0
20	22/11/2011 08.00	14.0	34.0	-1.0	-1.0	1.0	14.0	34.0	0.0	-2.0	1.0	14.0	34.6	-1.0	0.0	2.0	14.0	34.6	-1.0	2.0	2.0
21	29/11/2011 08.00	10.0	34.0	-1.0	-2.0	0.0	10.0	34.0	1.0	-1.0	1.0	10.0	34.6	0.0	1.0	2.0	10.0	34.6	0.0	2.0	1.0
22	06/12/2011 08.00	14.0	34.0	-1.0	0.0	0.0	14.0	34.0	1.0	0.0	1.0	14.0	34.6	1.0	2.0	1.0	14.0	34.6	1.0	2.0	1.0
23	13/12/2011 08.00	13.0	34.0	0.0	0.0	-1.0	13.0	34.0	1.0	0.0	0.0	13.0	34.6	0.0	0.0	0.0	13.0	34.6	1.0	2.0	1.0
24	20/12/2011 08.00	4.0	34.0	-1.0	-1.0	0.0	4.0	34.0	0.0	-1.0	1.0	4.0	34.6	0.0	0.0	2.0	4.0	34.6	0.0	3.0	3.0
25	10/01/2012 08.00	4.0	34.0	0.0	1.0	1.0	4.0	34.0	1.0	1.0	2.0	4.0	34.6	1.0	1.0	2.0	4.0	34.6	1.0	3.0	1.0
26	24/01/2012 08.00	10.0	34.0	-2.0	0.0	0.0	10.0	34.0	0.0	0.0	1.0	10.0	34.6	-1.0	1.0	1.0	10.0	34.6	-1.0	3.0	2.0
27	08/02/2012 08.00	5.0	34.0	-1.0	-1.0	0.0	5.0	34.0	0.0	-1.0	1.0	5.0	34.6	-1.0	1.0	2.0	5.0	34.6	-1.0	4.0	3.0
28	13/03/2012 08.00	11.0	34.0	0.0	1.0	-1.0	11.0	34.0	1.0	1.0	-1.0	11.0	34.6	0.0	2.0	1.0	11.0	34.6	1.0	3.0	1.0
29	26/03/2012 08.00	13.0	34.0	-1.0	1.0	1.0	13.0	34.0	0.0	1.0	0.0	13.0	34.6	0.0	0.0	1.0	13.0	34.6	0.0	3.0	1.0
30	05/04/2012 08.00	16.0	34.0	-1.0	0.0	0.0	16.0	34.0	0.0	1.0	1.0	16.0	34.6	0.0	0.0	0.0	16.0	34.6	0.0	2.0	0.0
31	17/04/2012 08.00	11.0	34.0	-1.0	0.0	0.0	11.0	34.0	1.0	0.0	2.0	11.0	34.6	0.0	1.0	2.0	11.0	34.6	1.0	2.0	2.0
32	02/05/2012 10.30	18.0	34.0	0.0	-1.0	-2.0	18.0	34.0	2.0	0.0	0.0	18.0	34.6	2.0	1.0	0.0	18.0	34.6	1.0	1.0	0.0
33	15/05/2012 08.30	13.0	34.0	0.0	-1.0	-1.0	13.0	34.0	1.0	-1.0	-1.0	13.0	34.6	1.0	1.0	1.0	13.0	34.6	0.0	1.0	0.0
34	23/05/2012 17.30	20.0	34.0	-1.0	0.0	-1.0	20.0	34.0	1.0	1.0	1.0	20.0	34.6	1.0	0.0	2.0	20.0	34.6	1.0	1.0	1.0
35	30/05/2012 08.30	18.0	34.0	0.0	0.0	0.0	18.0	34.0	0.0	0.0	0.0	18.0	34.6	1.0	0.0	1.0	18.0	34.6	2.0	2.0	1.0
36	06/06/2012 16.30	25.0	34.0	0.0	-1.0	0.0	25.0	34.0	1.0	0.0	0.0	25.0	34.6	2.0	0.0	1.0	25.0	34.6	2.0	2.0	1.0
37	13/06/2012 08.30	20.0	34.0	0.0	0.0	0.0	20.0	34.0	1.0	0.0	-1.0	20.0	34.6	2.0	1.0	2.0	20.0	34.6	2.0	2.0	1.0
38	20/06/2012 16.30	31.0	34.0	1.0	1.0	-2.0	31.0	34.0	2.0	1.0	-1.0	31.0	34.6	3.0	0.0	0.0	31.0	34.6	2.0	0.0	-1.0
39	28/06/2012 08.30	28.0	34.0	1.0	1.0	1.0	28.0	34.0	2.0	2.0	2.0	28.0	34.6	3.0	1.0	1.0	28.0	34.6	2.0	2.0	1.0
40	04/07/2012 08.30	29.0	34.0	0.0	1.0	0.0	29.0	34.0	0.0	0.0	0.0	29.0	34.6	2.0	0.0	1.0	29.0	34.6	2.0	0.0	0.0
41	12/07/2012 08.30	25.0	34.0	0.0	1.0	1.0	25.0	34.0	2.0	1.0	1.0	25.0	34.6	3.0	0.0	0.0	25.0	34.6	2.0	2.0	1.0
42	18/07/2012 16.30	34.0	34.0	0.0	1.0	-1.0	34.0	34.0	0.0	2.0	0.0	34.0	34.6	2.0	0.0	0.0	34.0	34.6	1.0	1.0	0.0
43	24/07/2012 09.00	23.0	34.0	-1.0	2.0	1.0	23.0	34.0	1.0	3.0	2.0	23.0	34.6	2.0	0.0	1.0	23.0	34.6	1.0	2.0	2.0
44	01/08/2012 08.30	26.0	34.0	-1.0	2.0	0.0	26.0	34.0	0.0	2.0	1.0	26.0	34.6	1.0	0.0	1.0	26.0	34.6	1.0	1.0	1.0
45	09/08/2012 08.30	26.0	34.0	-1.0	1.0	-1.0	26.0	34.0	0.0	1.0	1.0	26.0	34.6	2.0	-1.0	0.0	26.0	34.6	1.0	1.0	0.0
46	29/08/2012 16.00	30.0	34.0	-1.0	2.0	-1.0	30.0	34.0	0.0	1.0	1.0	30.0	34.6	1.0	0.0	0.0	30.0	34.6	1.0	2.0	0.0
47	13/09/2012 15.00	22.0	34.0	0.0	1.0	1.0	22.0	34.0	1.0	2.0	2.0	22.0	34.6	2.0	-1.0	0.0	22.0	34.6	1.0	1.0	1.0
48	18/09/2012 08.00	19.0	34.0	-1.0	0.0	1.0	19.0	34.0	0.0	1.0	1.0	19.0	34.6	2.0	-1.0	0.0	19.0	34.6	1.0	1.0	0.0
49	26/09/2012 15.00	30.0	34.0	0.0	2.0	0.0	30.0	34.0	1.0	1.0	1.0	30.0	34.6	2.0	0.0	0.0	30.0	34.6	2.0	2.0	0.0
50	04/10/2012 09.00	18.0	34.0	-1.0	1.0	1.0	18.0	34.0	0.0	0.0	1.0	18.0	34.6	2.0	-1.0	1.0	18.0	34.6	2.0	1.0	0.0
51	17/10/2012 08.30	14.0	34.0	-2.0	2.0	2.0	14.0	34.0	-1.0	1.0	1.0	14.0	34.6	0.0	0.0	2.0	14.0	34.6	0.0	2.0	1.0
52	07/11/2012 08.30	14.0	34.0	-1.0	2.0	2.0	14.0	34.0	0.0	2.0	2.0	14.0	34.6	1.0	1.0	2.0	14.0	34.6	1.0	3.0	1.0
53	27/11/2012 08.30	11.0	34.0	-1.0	1.0	1.0	11.0	34.0	0.0	1.0	1.0	11.0	34.6	0.0	0.0	2.0	11.0	34.6	0.0	1.0	2.0
54	17/12/2012 08.30	13.0	34.0	-3.0	1.0	2.0	13.0	34.0	-3.0	1.0	2.0	13.0	34.6	0.0	1.0	2.0	13.0	34.6	-1.0	2.0	1.0
55	09/01/2013 08.30	10.0	34.0	-2.0	1.0	1.0	10.0	34.0	-1.0	1.0	2.0	10.0	34.6	1.0	1.0	2.0	10.0	34.6	-1.0	2.0	1.0
56	29/01/2013 08.30	8.0	34.0	-3.0	1.0	1.0	8.0	34.0	-2.0	1.0	3.0	8.0	34.6	0.0	-1.0	2.0	8.0	34.6	0.0	2.0	2.0
57	07/02/2013 15.00	8.0	34.0	-2.0	2.0	0.0	8.0	34.0	-1.0	2.0	0.0	8.0	34.6	1.0	2.0	-1.0	8.0	34.6	0.0	2.0	-1.0
58	14/02/2013 08.30	6.0	34.0	-2.0	3.0	2.0	6.0	34.0	-1.0	3.0	2.0	6.0	34.6	0.0	0.0	2.0	6.0	34.6	0.0	4.0	2.0
59	19/02/2013 15.30	12.0	34.0	-3.0	1.0	1.0	12.0	34.0	-1.0	3.0	2.0	12.0	34.6	-1.0	1.0	2.0	12.0	34.6	-1.0	3.0	1.0
60	27/02/2013 08.30	6.0	34.0	-2.0	1.0	1.0	6.0	34.0	0.0	2.0	1.0	6.0	34.6	1.0	2.0	1.0	6.0	34.6	1.0	2.0	-2.0
61	05/03/2013 10.30	12.0	34.0	-2.0	3.0	0.0	12.0	34.0	-1.0	3.0	1.0	12.0	34.6	0.0	0.0	-1.0	12.0	34.6	0.0	2.0	0.0
62	12/03/2013 08.30	10.0	34.0	-2.0	2.0	1.0	10.0	34.0	-1.0	2.0	2.0	10.0	34.6	0.0	0.0	1.0	10.0	34.6	0.0	2.0	1.0
63	19/03/2013 16.00	16.0	34.0	-2.0	2.0	1.0	16.0	34.0	0.0	3.0	2.0	16.0	34.6	0.0	0.0	0.0	16.0	34.6	0.0	2.0	0.0
64	26/03/2013 08.30	13.0	34.0	-3.0	4.0	-1.0	13.0	34.0	-2.0	4.0	0.0	13.0	34.6	0.0	1.0	-2.0	13.0	34.6	0.0	3.0	-2.0
65	28/03/2013 11.00	15.0	34.0	-3.0	4.0	-1.0	15.0	34.0	-2.0	4.0	0.0	15.0	34.6	-1.0	2.0	-2.0	15.0	34.6	0.0	3.0	-1.0
66	03/04/2013 17.30	16.0	34.0	-3.0	3.0	0.0	16.0	34.0	-1.0	4.0	2.0	16.0	34.6	0.0	0.0	-2.0	16.0	34.6	1.0	2.0	-1.0
67	10/04/2013 10.30	16.0	34.0	-2.0	4.0	1.0	16.0	34.0	-1.0	3.0	1.0	16.0	34.6								

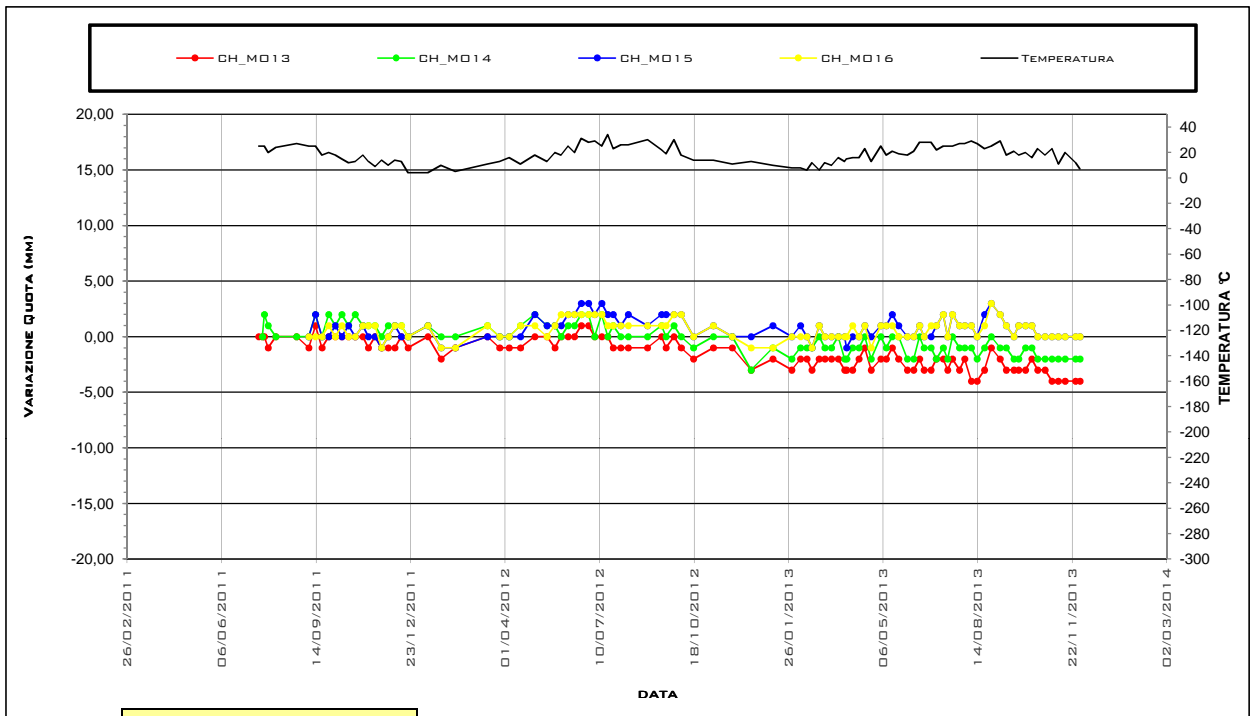


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ | Ordine di Tiranti \ 13-  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 15/07/2011  
**Data lettura di zero** 15/07/2011

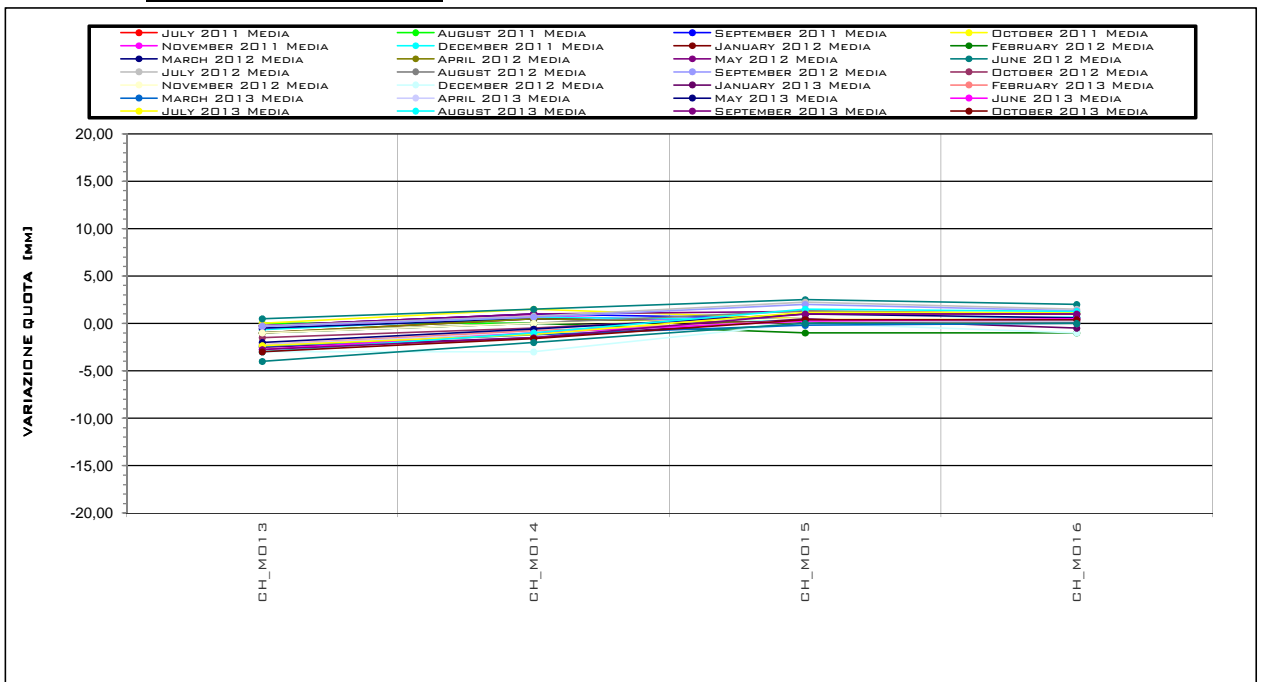
**UBICAZIONE**



**GRAFICO QUOTA**

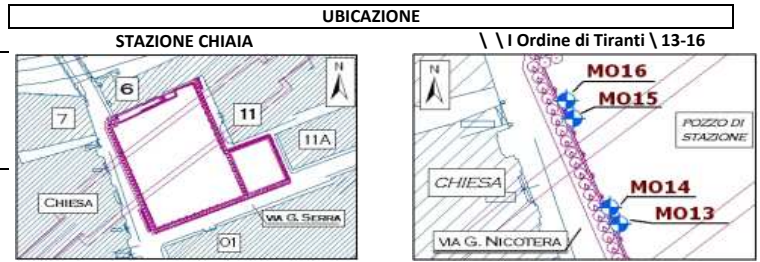


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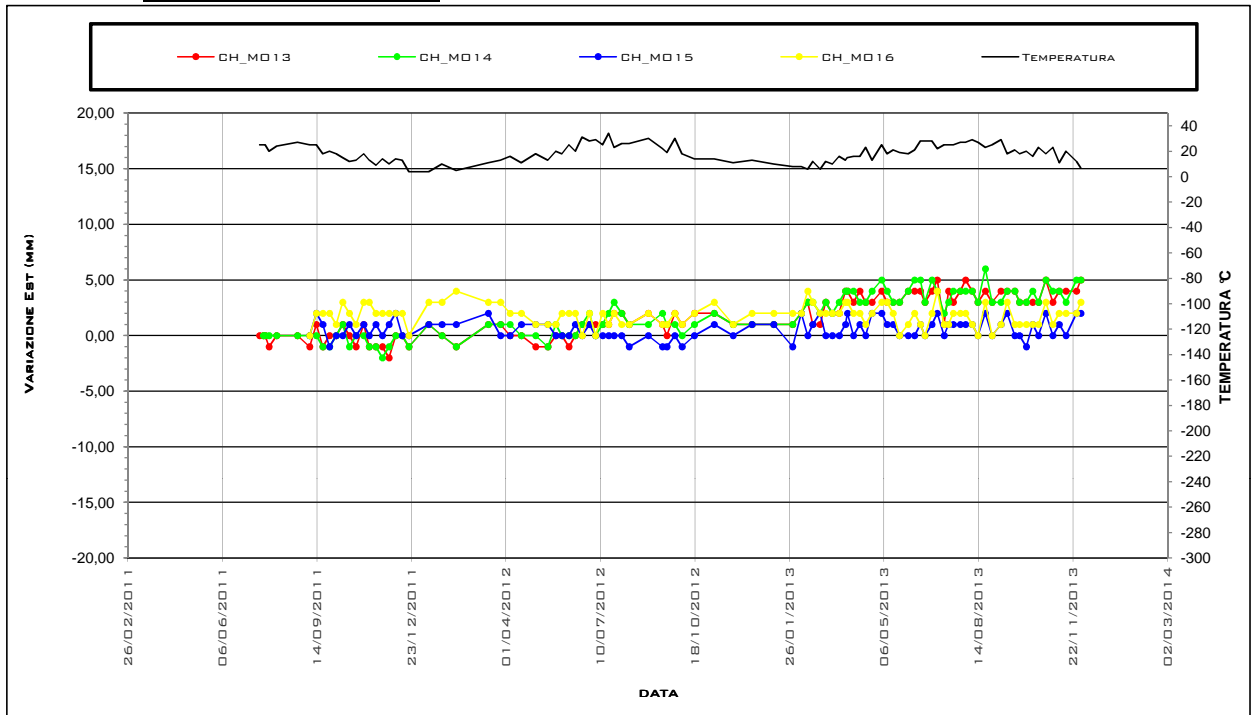




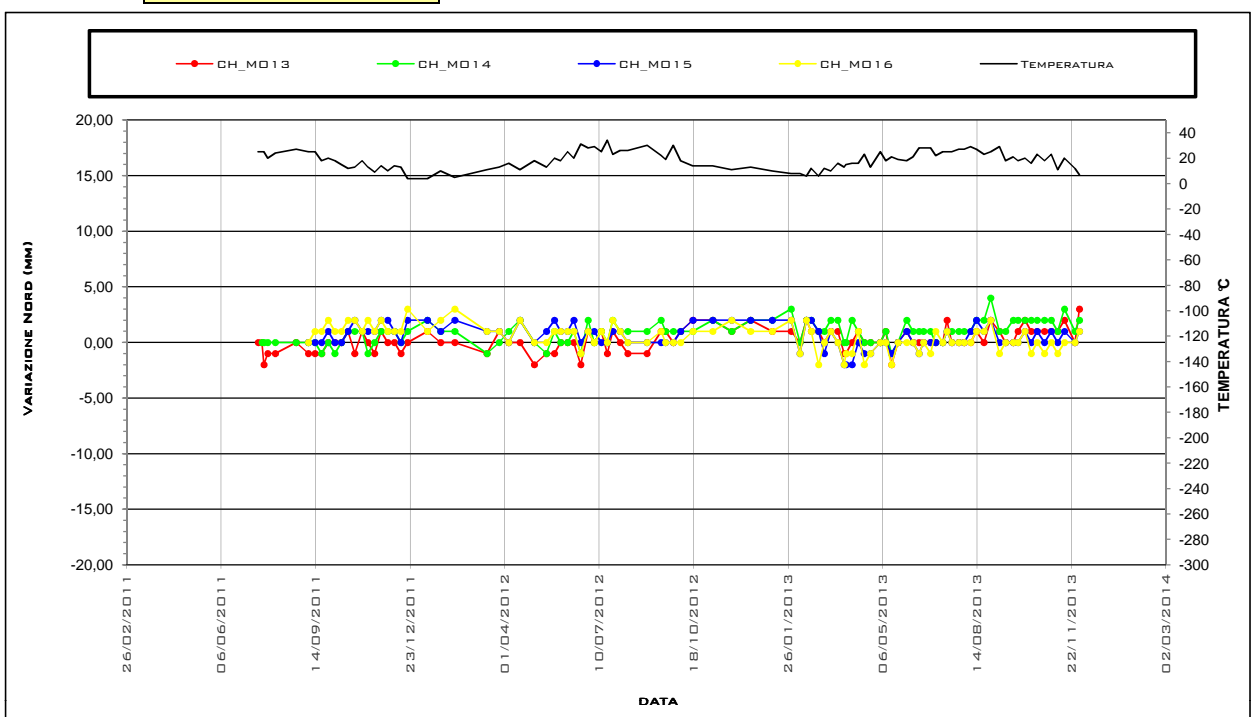
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ I Ordine di Tiranti \ 13-  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 15/07/2011  
**Data lettura di zero** 15/07/2011



**GRAFICO EST**



**GRAFICO NORD**



Ubicazione STAZIONE CHIAIA

Opera \ \ Il Ordine di Tiranti \ 17-20

Tipo Strumento Mire Ottiche

Data posa in opera 17/04/2012

Data lettura di zero 17/04/2012

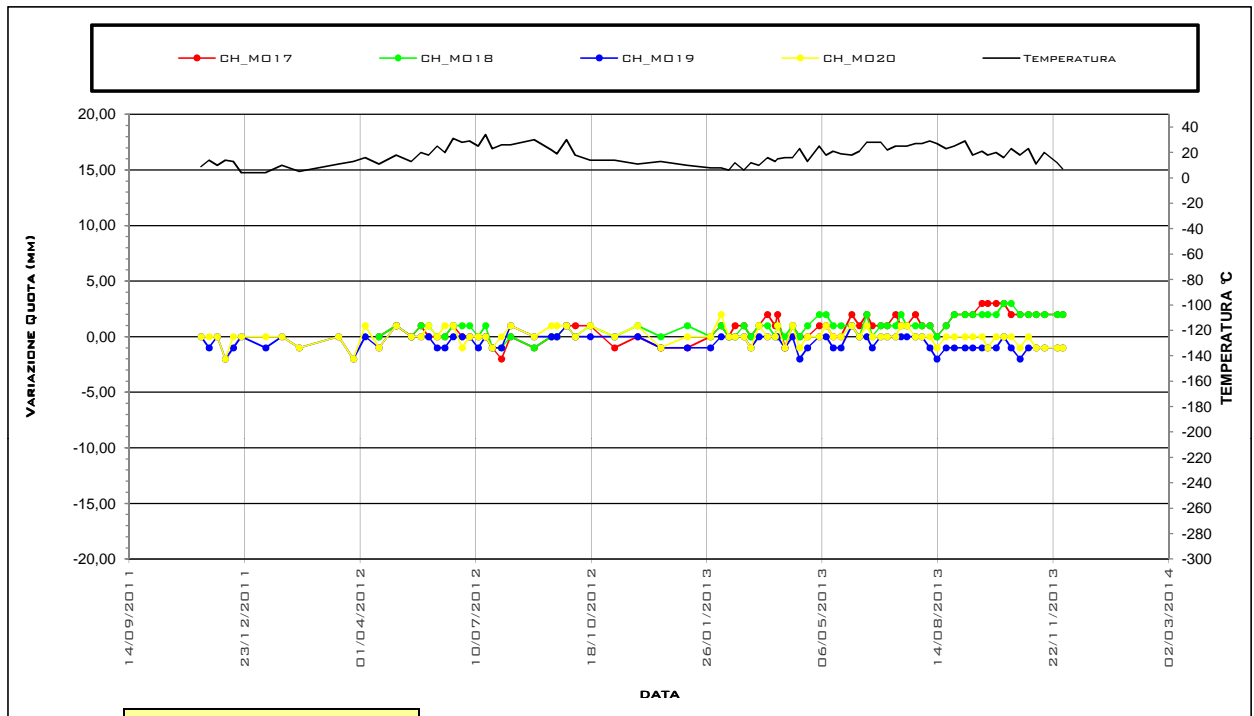
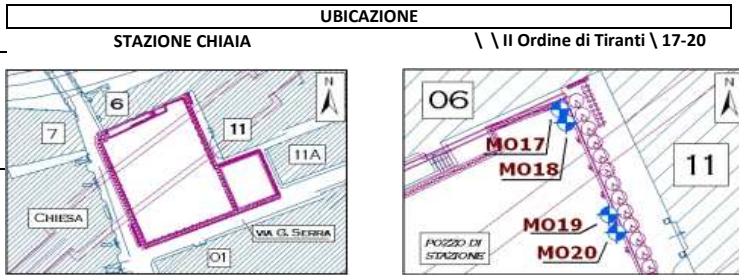
Ultima Misura 84 in data 30/11/2013

Lett. n°	DATA	CH_M017					CH_M018					CH_M019					CH_M020					
		Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	
1	15/11/2011 08.01																					
2	22/11/2011 08.00																					
3	29/11/2011 08.00																					
4	06/12/2011 08.00																					
5	13/12/2011 08.00																					
6	20/12/2011 08.00																					
7	10/01/2012 08.00																					
8	24/01/2012 08.00																					
9	08/02/2012 08.00																					
10	13/03/2012 08.00																					
11	26/03/2012 08.00																					
12	05/04/2012 08.00																					
13	17/04/2012 08.00																					
14	17/04/2012 08.01	11,0	26,5	0,0	0,0	0,0	11,0	26,4	0,0	0,0	0,0	11,0	28,7	-1,0	0,0	1,0	11,0	28,7	-1,0	-1,0	-1,0	
15	02/05/2012 10.30	18,0	26,5	1,0	0,0	1,0	18,0	26,4	1,0	1,0	1,0	18,0	28,7	1,0	0,0	2,0	18,0	28,7	1,0	-1,0	0,0	
16	15/05/2012 08.30	13,0	26,5	0,0	0,0	0,0	13,0	26,4	0,0	3,0	3,0	13,0	28,7	0,0	0,0	3,0	13,0	28,7	0,0	-1,0	0,0	
17	23/05/2012 17.30	20,0	26,5	1,0	2,0	0,0	20,0	26,4	1,0	2,0	1,0	20,0	28,7	0,0	1,0	1,0	20,0	28,7	0,0	0,0	-1,0	
18	30/05/2012 08.30	18,0	26,5	0,0	2,0	2,0	18,0	26,4	1,0	3,0	3,0	18,0	28,7	0,0	0,0	2,0	18,0	28,7	1,0	0,0	0,0	
19	06/06/2012 16.30	25,0	26,5	0,0	0,0	2,0	25,0	26,4	0,0	2,0	2,0	25,0	28,7	-1,0	-1,0	2,0	25,0	28,7	0,0	-3,0	0,0	
20	13/06/2012 08.30	20,0	26,5	0,0	2,0	2,0	20,0	26,4	0,0	3,0	1,0	20,0	28,7	-1,0	2,0	2,0	20,0	28,7	1,0	-1,0	0,0	
21	20/06/2012 16.30	31,0	26,5	1,0	2,0	2,0	31,0	26,4	1,0	3,0	2,0	31,0	28,7	0,0	1,0	1,0	31,0	28,7	1,0	0,0	-1,0	
22	28/06/2012 08.30	28,0	26,5	0,0	2,0	2,0	28,0	26,4	1,0	3,0	1,0	28,0	28,7	0,0	0,0	1,0	28,0	28,7	-1,0	0,0	0,0	
23	04/07/2012 19.30	29,0	26,5	0,0	3,0	2,0	29,0	26,4	1,0	3,0	3,0	29,0	28,7	0,0	0,0	2,0	29,0	28,7	0,0	0,0	0,0	
24	12/07/2012 08.30	25,0	26,5	0,0	2,0	2,0	25,0	26,4	0,0	4,0	2,0	25,0	28,7	-1,0	1,0	2,0	25,0	28,7	0,0	0,0	0,0	
25	18/07/2012 16.30	34,0	26,5	0,0	1,0	1,0	34,0	26,4	1,0	2,0	1,0	34,0	28,7	0,0	1,0	0,0	34,0	28,7	0,0	0,0	-1,0	
26	24/07/2012 09.00	23,0	26,5	-1,0	1,0	2,0	23,0	26,4	-1,0	2,0	2,0	23,0	28,7	-1,0	1,0	1,0	23,0	28,7	-1,0	0,0	-1,0	
27	01/08/2012 09.00	26,0	26,5	-2,0	2,0	3,0	26,0	26,4	-1,0	2,0	2,0	26,0	28,7	-1,0	2,0	2,0	26,0	28,7	0,0	0,0	0,0	
28	09/08/2012 08.30	26,0	26,5	0,0	1,0	1,0	26,0	26,4	0,0	2,0	2,0	26,0	28,7	1,0	0,0	1,0	26,0	28,7	1,0	-1,0	-1,0	
29	29/08/2012 16.00	30,0	26,5	-1,0	2,0	1,0	30,0	26,4	-1,0	3,0	2,0	30,0	28,7	0,0	1,0	2,0	30,0	28,7	0,0	0,0	-1,0	
30	13/09/2012 15.00	22,0	26,5	0,0	3,0	3,0	22,0	26,4	0,0	3,0	2,0	22,0	28,7	0,0	1,0	2,0	22,0	28,7	1,0	-1,0	0,0	
31	18/09/2012 08.00	19,0	26,5	0,0	1,0	1,0	19,0	26,4	0,0	2,0	2,0	19,0	28,7	0,0	0,0	1,0	19,0	28,7	1,0	0,0	0,0	
32	26/09/2012 15.00	30,0	26,5	1,0	0,0	1,0	30,0	26,4	1,0	1,0	1,0	30,0	28,7	1,0	-1,0	1,0	30,0	28,7	1,0	-1,0	0,0	
33	04/10/2012 09.00	18,0	26,5	1,0	2,0	2,0	18,0	26,4	0,0	2,0	2,0	18,0	28,7	0,0	0,0	1,0	18,0	28,7	0,0	0,0	0,0	
34	17/10/2012 09.00	14,0	26,5	1,0	1,0	1,0	14,0	26,4	1,0	2,0	2,0	14,0	28,7	0,0	-1,0	2,0	14,0	28,7	1,0	-2,0	0,0	
35	07/11/2012 08.30	14,0	26,5	-1,0	1,0	1,0	14,0	26,4	0,0	1,0	2,0	14,0	28,7	0,0	1,0	1,0	14,0	28,7	0,0	-1,0	-1,0	
36	27/11/2012 08.30	11,0	26,5	0,0	1,0	0,0	11,0	26,4	1,0	2,0	0,0	11,0	28,7	0,0	0,0	0,0	11,0	28,7	1,0	-3,0	-2,0	
37	17/12/2012 08.30	13,0	26,5	-1,0	1,0	1,0	13,0	26,4	0,0	1,0	1,0	13,0	28,7	-1,0	0,0	1,0	13,0	28,7	-1,0	-1,0	0,0	
38	09/01/2013 08.30	10,0	26,5	-1,0	1,0	1,0	10,0	26,4	1,0	1,0	1,0	10,0	28,7	-1,0	-1,0	1,0	10,0	28,7	0,0	-2,0	0,0	
39	29/01/2013 08.30	8,0	26,5	0,0	0,0	0,0	8,0	26,4	0,0	1,0	1,0	8,0	28,7	-1,0	-1,0	1,0	8,0	28,7	0,0	-2,0	-1,0	
40	07/02/2013 15.00	8,0	26,5	1,0	2,0	1,0	8,0	26,4	1,0	3,0	2,0	8,0	28,7	0,0	0,0	1,0	8,0	28,7	2,0	-2,0	-1,0	
41	14/02/2013 08.30	6,0	26,5	0,0	1,0	0,0	6,0	26,4	0,0	2,0	0,0	6,0	28,7	0,0	-1,0	0,0	6,0	28,7	0,0	-2,0	-2,0	
42	19/02/2013 15.30	12,0	26,5	1,0	-1,0	-1,0	12,0	26,4	0,0	0,0	0,0	12,0	28,7	0,0	-1,0	0,0	12,0	28,7	0,0	-3,0	-2,0	
43	27/02/2013 08.30	6,0	26,5	1,0	1,0	1,0	6,0	26,4	1,0	1,0	0,0	6,0	28,7	0,0	0,0	0,0	6,0	28,7	0,0	-3,0	-2,0	
44	05/03/2013 08.30	12,0	26,5	0,0	0,0	0,0	12,0	26,4	0,0	1,0	1,0	12,0	28,7	-1,0	0,0	1,0	12,0	28,7	-1,0	-1,0	-1,0	
45	12/03/2013 08.30	10,0	26,5	1,0	1,0	2,0	10,0	26,4	1,0	1,0	1,0	10,0	28,7	0,0	-1,0	1,0	10,0	28,7	1,0	-2,0	-1,0	
46	19/03/2013 16.00	16,0	26,5	2,0	1,0	-1,0	16,0	26,4	1,0	3,0	1,0	16,0	28,7	0,0	0,0	1,0	16,0	28,7	0,0	-1,0	0,0	
47	26/03/2013 08.30	13,0	26,5	1,0	2,0	0,0	13,0	26,4	0,0	3,0	1,0	13,0	28,7	0,0	0,0	0,0	13,0	28,7	0,0	-1,0	-2,0	
48	28/03/2013 11.00	15,0	26,5	2,0	1,0	0,0	15,0	26,4	1,0	2,0	1,0	15,0	28,7	0,0	-1,0	1,0	15,0	28,7	1,0	-1,0	-1,0	
49	03/04/2013 17.30	16,0	26,5	-1,0	1,0	-1,0	16,0	26,4	0,0	0,0	0,0	16,0	28,7	-1,0	-1,0	1,0	16,0	28,7	-1,0	-2,0	-1,0	
50	10/04/2013 10.30	16,0	26,5	1,0	1,0	1,0	16,0	26,4	1,0	2,0	1,0	16,0	28,7	0,0	0,0	2,0	16,0	28,7	1,0	-2,0	-1,0	
51	16/04/2013 15.00	23,0	26,5	0,0	1,0	0,0	23,0	26,4	0,0	1,0	-1,0	23,0	28,7	-2,0	1,0	0,0	23,0	28,7	-1,0	-2,0	-2,0	
52	23/04/2013 08.30	13,0	26,5	0,0	0,0	0,0	13,0	26,4	1,0	1,0	1,0	13,0	28,7	-1,0	0,0	1,0	13,0	28,7	0,0	-2,0	-1,0	
53	03/05/2013 14.30	25,0	26,5	1,0	1,0	0,0	25,0	26,4	2,0	2,0	1,0	25,0	28,7	0,0	0,0	1,0	25,0	28,7	0,0	0,0	0,0	
54	09/05/2013 08.30	18,0	26,5	1,0	2,0	1,0	18,0	26,4	2,0	1,0	1,0	18,0	28,7	0,0	-1,0	2,0	18,0	28,7	1,0	-3,0	-1,0	
55	15/05/2013 14.30	21,0	26,5	0,0	0,0	-1,0	21,0	26,4	1,0	2,0	0,0	21,0	28,7	-1,0	2,0	1,0	21,0	28,7	0,0	0,0	-1,0	
56	22/05/2013 08.30	19,0	26,5	0,0	2,0	-1,0	19,0	26,4	1,0	2,0	1,0	19,0	28,7	-1,0	1,0	0,0	19,0	28,7	0,0	-1,0	-2,0	
57	31/05/2013 15.30	18,0	26,5	2,0	1,0	-1,0	18,0	26,4	1,0	2,0	-1,0	18,0	28,7	1,0	-1,0	0,0	18,0	28,7	1,0	-1,0	-2,0	
58	07/06/2013 08.30	21,0	26,5	1,0	1,0	0,0	21,0	26,4	0,0	2,0	1,0	21,0	28,7	0,0	0,0	1,0	21,0	28,7	0,0	-2,0	-1,0	
59	13/06/2013 14.30	28,0	26,5	2,0	2,0	0,0	28,0	26,4	2,0	3,0	0,0	28,0	28,7	0,0	1,0	1,0	28,0	28,7	1,0	1,0	-2,0	
60	18/06/2013 09.00	28,0	26,5	1,0	1,0	1,0	28,0	26,4	0,0	2,0	1,0	28,0	28,7	-1,0	0,0	2,0	28,0	28,7	0,0	-1,0	-1,0	
61	25/06/2013 18.00	28,0	26,5	1,0	1,0	0,0	28,0	26,4	1,0	3,0	1,0	28,0	28,7	0,0	1,0	1,0	28,0	28,7	0,0	0,0	-2,0	
62	01/07/2013 07.30	22,0	26,5	1,0	1,0	0,0	22,0	26,4	1,0	2,0	1,0	22,0	28,7	0,0	1,0	0,0	22,0	28,7	0,0	-1,0	-1,0	
63	08																					

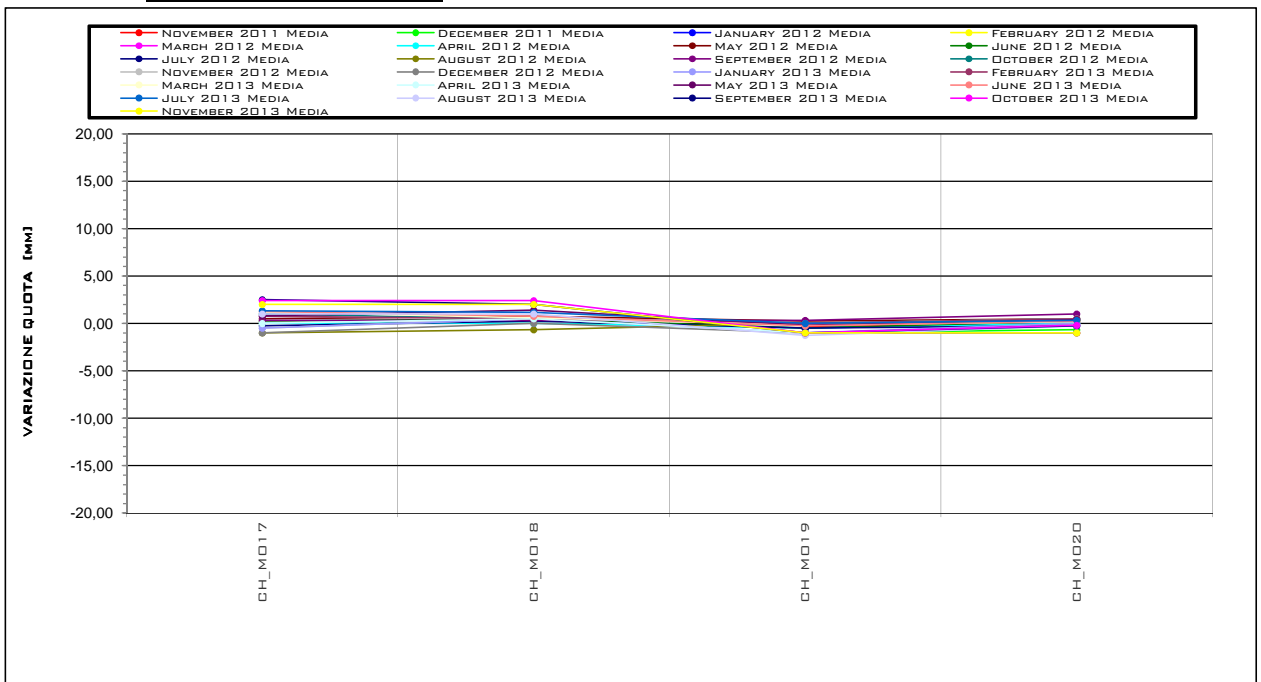


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Il Ordine di Tiranti \ 17-  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 17/04/2012  
**Data lettura di zero** 17/04/2012

**GRAFICO QUOTA**



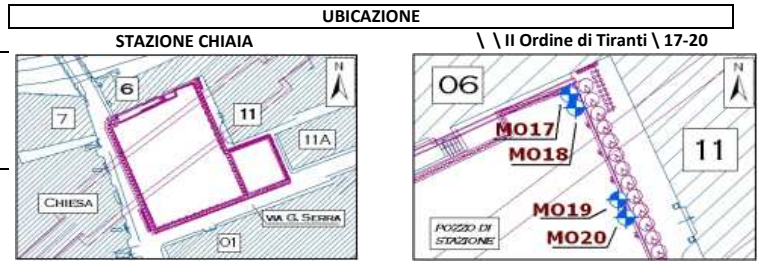
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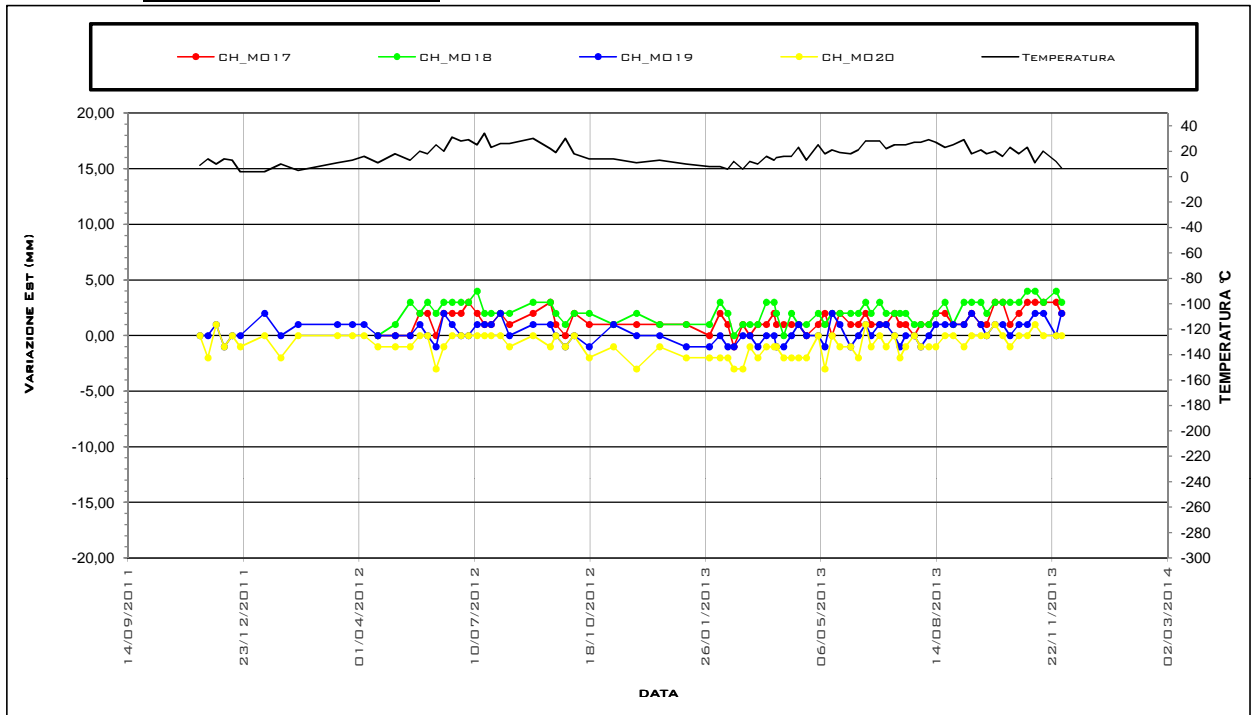




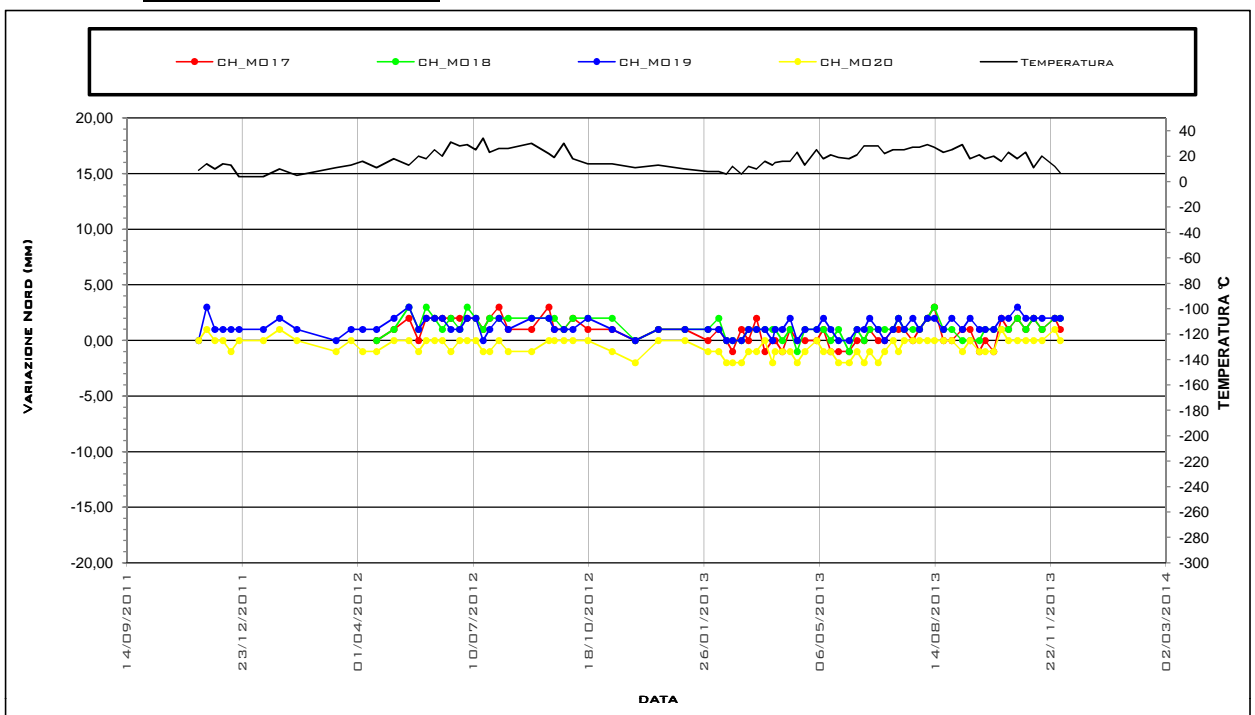
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Il Ordine di Tiranti \ 17-  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 17/04/2012  
**Data lettura di zero** 17/04/2012



**GRAFICO EST**



**GRAFICO NORD**





Ubicazione STAZIONE CHIAIA

Opera \ \ II Ordine di Tiranti \ 21-24

Tipo Strumento Mire Ottiche

Data posa in opera 02/08/2011

Data lettura di zero 02/08/2011

Ultima Misura 95 in data 30/11/2013

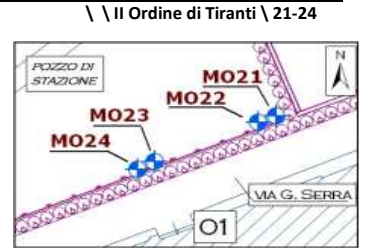
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		Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]
5	20/09/2011 08.00	18,0	28,9	1,0	0,0	0,0	18,0	28,9	-1,0	-1,0	0,0	18,0	28,8	-1,0	-2,0	1,0	18,0	28,8	-1,0	-3,0	0,0
6	27/09/2011 08.00	20,0	28,9	0,0	1,0	1,0	20,0	28,9	-2,0	0,0	1,0	18,0	28,8	0,0	-1,0	3,0	18,0	28,8	0,0	-1,0	3,0
7	04/10/2011 08.00	18,0	28,9	0,0	2,0	0,0	18,0	28,9	-2,0	2,0	0,0	18,0	28,8	0,0	-1,0	3,0	18,0	28,8	0,0	-1,0	3,0
8	11/10/2011 08.00	15,0	28,9	0,0	2,0	1,0	15,0	28,9	-1,0	1,0	1,0	15,0	28,8	0,0	-2,0	2,0	15,0	28,8	0,0	-2,0	1,0
9	18/10/2011 08.00	12,0	28,9	1,0	1,0	0,0	12,0	28,9	0,0	0,0	-1,0	12,0	28,8	0,0	-2,0	2,0	12,0	28,8	-1,0	-3,0	2,0
10	25/10/2011 08.00	13,0	28,9	1,0	1,0	0,0	13,0	28,9	0,0	-1,0	0,0	13,0	28,8	0,0	-3,0	1,0	13,0	28,8	0,0	-3,0	1,0
11	02/11/2011 10.00	18,0	28,9	1,0	0,0	0,0	18,0	28,9	-1,0	0,0	0,0	18,0	28,8	0,0	-3,0	2,0	18,0	28,8	0,0	-1,0	1,0
12	08/11/2011 08.00	13,0	28,9	0,0	-1,0	0,0	13,0	28,9	0,0	-1,0	0,0	13,0	28,8	0,0	-2,0	2,0	13,0	28,8	-1,0	-2,0	2,0
13	15/11/2011 08.00	9,0	28,9	-1,0	1,0	0,0	9,0	28,9	0,0	0,0	0,0	9,0	28,8	0,0	-3,0	1,0	9,0	28,8	0,0	-3,0	1,0
14	22/11/2011 08.00	14,0	28,9	2,0	0,0	2,0	14,0	28,9	1,0	-1,0	2,0	14,0	28,8	-1,0	-5,0	1,0	14,0	28,8	-1,0	-4,0	2,0
15	29/11/2011 08.00	10,0	28,9	1,0	3,0	1,0	10,0	28,9	0,0	2,0	0,0	10,0	28,8	0,0	-3,0	2,0	10,0	28,8	0,0	-2,0	2,0
16	06/12/2011 08.00	14,0	28,9	0,0	-1,0	0,0	14,0	28,9	-1,0	-2,0	1,0	14,0	28,8	0,0	-3,0	3,0	14,0	28,8	0,0	-2,0	3,0
17	13/12/2011 08.00	13,0	28,9	0,0	1,0	0,0	13,0	28,9	-1,0	-1,0	0,0	13,0	28,8	1,0	-2,0	3,0	13,0	28,8	0,0	-2,0	3,0
18	20/12/2011 08.00	4,0	28,9	1,0	0,0	0,0	4,0	28,9	1,0	-3,0	1,0	4,0	28,8	0,0	-3,0	4,0	4,0	28,8	-1,0	-3,0	2,0
19	10/01/2012 08.00	4,0	28,9	1,0	2,0	1,0	4,0	28,9	1,0	1,0	1,0	4,0	28,8	1,0	-2,0	5,0	4,0	28,8	0,0	-1,0	4,0
20	24/01/2012 08.00	10,0	28,9	1,0	0,0	2,0	10,0	28,9	0,0	-1,0	2,0	10,0	28,8	-1,0	-2,0	4,0	10,0	28,8	-1,0	-2,0	3,0
21	08/02/2012 08.00	5,0	28,9	1,0	0,0	0,0	5,0	28,9	0,0	-1,0	0,0	5,0	28,8	-1,0	-3,0	3,0	5,0	28,8	-1,0	-3,0	2,0
22	13/03/2012 08.00	11,0	28,9	2,0	-1,0	-1,0	11,0	28,9	1,0	-3,0	-1,0	11,0	28,8	1,0	-2,0	2,0	11,0	28,8	0,0	-2,0	2,0
23	26/03/2012 08.00	13,0	28,9	0,0	2,0	1,0	13,0	28,9	-1,0	2,0	1,0	13,0	28,8	-1,0	-3,0	3,0	13,0	28,8	0,0	-2,0	3,0
24	05/04/2012 08.00	16,0	28,9	1,0	1,0	1,0	16,0	28,9	0,0	0,0	1,0	16,0	28,8	-1,0	-2,0	2,0	16,0	28,8	-1,0	-2,0	3,0
25	17/04/2012 08.00	11,0	28,9	0,0	1,0	0,0	11,0	28,9	0,0	0,0	0,0	11,0	28,8	0,0	-4,0	3,0	11,0	28,8	0,0	-3,0	3,0
26	02/05/2012 10.30	18,0	28,9	1,0	1,0	2,0	18,0	28,9	1,0	-1,0	2,0	18,0	28,8	1,0	-3,0	3,0	18,0	28,8	1,0	-2,0	2,0
27	15/05/2012 08.30	13,0	28,9	2,0	-1,0	2,0	13,0	28,9	1,0	-2,0	1,0	13,0	28,8	1,0	-4,0	2,0	13,0	28,8	0,0	-3,0	2,0
28	23/05/2012 17.30	20,0	28,9	1,0	5,0	2,0	20,0	28,9	-1,0	3,0	2,0	20,0	28,8	0,0	-3,0	4,0	20,0	28,8	-1,0	-3,0	4,0
29	30/05/2012 08.30	18,0	28,9	0,0	1,0	2,0	18,0	28,9	-2,0	0,0	2,0	18,0	28,8	0,0	-4,0	4,0	18,0	28,8	0,0	-3,0	3,0
30	06/06/2012 16.30	25,0	28,9	0,0	-1,0	2,0	25,0	28,9	-2,0	-2,0	2,0	25,0	28,8	-1,0	-4,0	5,0	25,0	28,8	-1,0	-4,0	4,0
31	13/06/2012 08.30	20,0	28,9	0,0	4,0	4,0	20,0	28,9	-2,0	3,0	5,0	20,0	28,8	-1,0	-4,0	5,0	20,0	28,8	0,0	-4,0	4,0
32	20/06/2012 16.30	31,0	28,9	-1,0	3,0	2,0	31,0	28,9	-2,0	1,0	2,0	31,0	28,8	-1,0	-4,0	3,0	31,0	28,8	0,0	-4,0	2,0
33	28/06/2012 08.30	28,0	28,9	-2,0	3,0	3,0	28,0	28,9	-2,0	2,0	4,0	28,0	28,8	0,0	-5,0	6,0	28,0	28,8	-1,0	-4,0	5,0
34	04/07/2012 08.30	29,0	28,9	-1,0	1,0	3,0	29,0	28,9	-2,0	-1,0	3,0	29,0	28,8	-1,0	-6,0	4,0	29,0	28,8	-2,0	-5,0	3,0
35	12/07/2012 08.30	25,0	28,9	-1,0	2,0	3,0	25,0	28,9	-2,0	0,0	4,0	25,0	28,8	-1,0	-4,0	6,0	25,0	28,8	-1,0	-3,0	6,0
36	18/07/2012 16.30	34,0	28,9	0,0	4,0	4,0	34,0	28,9	-2,0	3,0	4,0	34,0	28,8	-2,0	-4,0	5,0	34,0	28,8	-3,0	-4,0	5,0
37	24/07/2012 09.00	23,0	28,9	-1,0	3,0	1,0	23,0	28,9	-3,0	3,0	2,0	23,0	28,8	-3,0	-1,0	4,0	23,0	28,8	-4,0	-1,0	4,0
38	01/08/2012 09.00	26,0	28,9	-1,0	4,0	2,0	26,0	28,9	-2,0	4,0	3,0	26,0	28,8	-3,0	-1,0	4,0	26,0	28,8	-4,0	-1,0	3,0
39	09/08/2012 08.30	26,0	28,9	-2,0	2,0	2,0	26,0	28,9	-2,0	-1,0	3,0	26,0	28,8	-3,0	-5,0	7,0	26,0	28,8	-4,0	-4,0	6,0
40	29/08/2012 16.00	30,0	28,9	-2,0	3,0	2,0	30,0	28,9	-2,0	0,0	4,0	30,0	28,8	-2,0	-5,0	6,0	30,0	28,8	-3,0	-4,0	5,0
41	13/09/2012 15.00	22,0	28,9	0,0	3,0	4,0	22,0	28,9	-2,0	1,0	6,0	22,0	28,8	-3,0	-6,0	6,0	22,0	28,8	-3,0	-5,0	6,0
42	18/09/2012 05.00	19,0	28,9	0,0	5,0	5,0	19,0	28,9	-2,0	-1,0	6,0	19,0	28,8	-2,0	-5,0	7,0	19,0	28,8	-3,0	-5,0	7,0
43	26/09/2012 15.00	30,0	28,9	0,0	2,0	5,0	30,0	28,9	-1,0	0,0	6,0	30,0	28,8	-1,0	-4,0	7,0	30,0	28,8	-2,0	-3,0	6,0
44	04/10/2012 09.00	18,0	28,9	0,0	2,0	4,0	18,0	28,9	0,0	-1,0	5,0	18,0	28,8	-2,0	-6,0	8,0	18,0	28,8	-3,0	-6,0	5,0
45	17/10/2012 08.30	14,0	28,9	0,0	2,0	5,0	14,0	28,9	-1,0	0,0	6,0	14,0	28,8	-4,0	-5,0	7,0	14,0	28,8	-4,0	-5,0	7,0
46	07/11/2012 08.30	14,0	28,9	-1,0	3,0	4,0	14,0	28,9	-2,0	1,0	5,0	14,0	28,8	-3,0	-4,0	8,0	14,0	28,8	-4,0	-3,0	7,0
47	27/11/2012 08.30	11,0	28,9	0,0	-2,0	2,0	11,0	28,9	-1,0	-3,0	3,0	11,0	28,8	-3,0	-5,0	8,0	11,0	28,8	-4,0	-5,0	8,0
48	17/12/2012 08.30	13,0	28,9	-1,0	1,0	5,0	13,0	28,9	-2,0	-1,0	5,0	13,0	28,8	-6,0	-6,0	8,0	13,0	28,8	-6,0	-5,0	7,0
49	09/01/2013 08.30	10,0	28,9	-1,0	-1,0	3,0	10,0	28,9	-2,0	-4,0	5,0	10,0	28,8	-4,0	-6,0	6,0	10,0	28,8	-4,0	-5,0	7,0
50	29/01/2013 08.30	8,0	28,9	0,0	1,0	4,0	8,0	28,9	-1,0	0,0	6,0	8,0	28,8	-4,0	-5,0	9,0	8,0	28,8	-5,0	-4,0	8,0
51	07/02/2013 15.00	8,0	28,9	1,0	0,0	5,0	8,0	28,9	0,0	-1,0	6,0	8,0	28,8	-3,0	-5,0	7,0	8,0	28,8	-3,0	-5,0	6,0
52	14/02/2013 08.30	6,0	28,9	0,0	0,0	3,0	6,0	28,9	-2,0	-2,0	4,0	6,0	28,8	-2,0	-5,0	9,0	6,0	28,8	-3,0	-4,0	9,0
53	19/02/2013 15.30	12,0	28,9	0,0	2,0	5,0	12,0	28,9	-1,0	1,0	6,0	12,0	28,8	-3,0	-5,0	8,0	12,0	28,8	-4,0	-5,0	7,0
54	27/02/2013 08.30	6,0	28,9	1,0	0,0	4,0	6,0	28,9	-1,0	-2,0	5,0	6,0	28,8	-2,0	-6,0	5,0	6,0	28,8	-4,0	-5,0	4,0
55	05/03/2013 10.30	12,0	28,9	0,0	2,0	6,0	12,0	28,9	-2,0	1,0	6,0	12,0	28,8	-3,0	-4,0	8,0	12,0	28,8	-3,0	-4,0	7,0
56	12/03/2013 08.30	10,0	28,9	1,0	3,0	5,0	10,0	28,9	-1,0	2,0	6,0	10,0	28,8	-3,0	-6,0	7,0	10,0	28,8	-3,0	-5,0	7,0
57	19/03/2013 16.00	16,0	28,9	1,0	4,0	7,0	16,0	28,9	-1,0	2,0	8,0	16,0	28,8	-2,0	-7,0	8,0	16,0	28,8	-3,0	-7,0	7,0
58	26/03/2013 08.30	13,0	28,9	0,0	1,0	4,0	13,0	28,9	-1,0	-1,0	5,0	13,0	28,8	-2,0	-3,0	5,0	13,0	28,8	-3,0	-4,0	5,0
59	28/03/2013 11.00	15,0	28,9	0,0	3,0	5,0	15,0	28,9	-1,0	1,0	7,0	15,0	28,8	-2,0	-5,0	6,0	15,0	28,8	-3,0	-5,0	5,0
60	03/04/2013 17.30	16,0	28,9	-1,0	2,0	6,0	16,0	28,9	-2,0	0,0	7,0	16,0	28,8	-1,0	-4,0	6,0	16,0	28,8	-2,0	-4,0	6,0
61	10/04/2013 10.30	16,0	28,9	0,0	2,0	6,0	16,0	28,9	0,0	0,0	7,0	16,0	28,8	-2,							



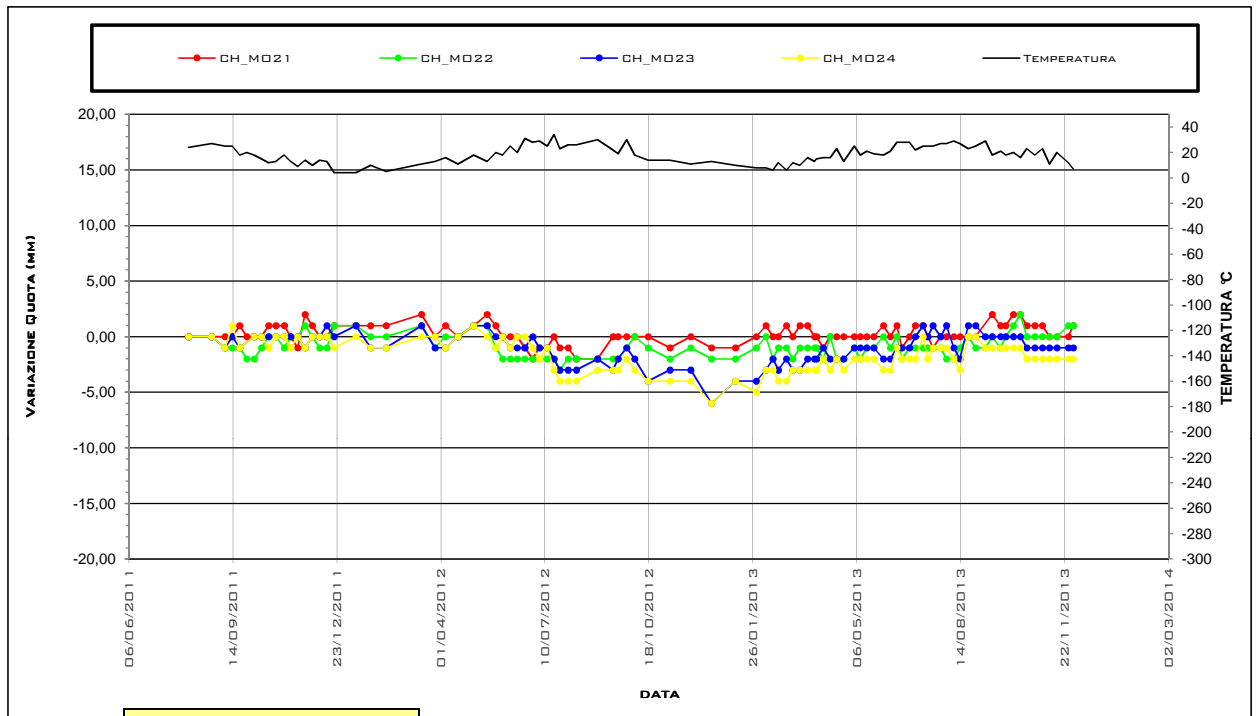


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Il Ordine di Tiranti \ 21-  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 02/08/2011  
**Data lettura di zero** 02/08/2011

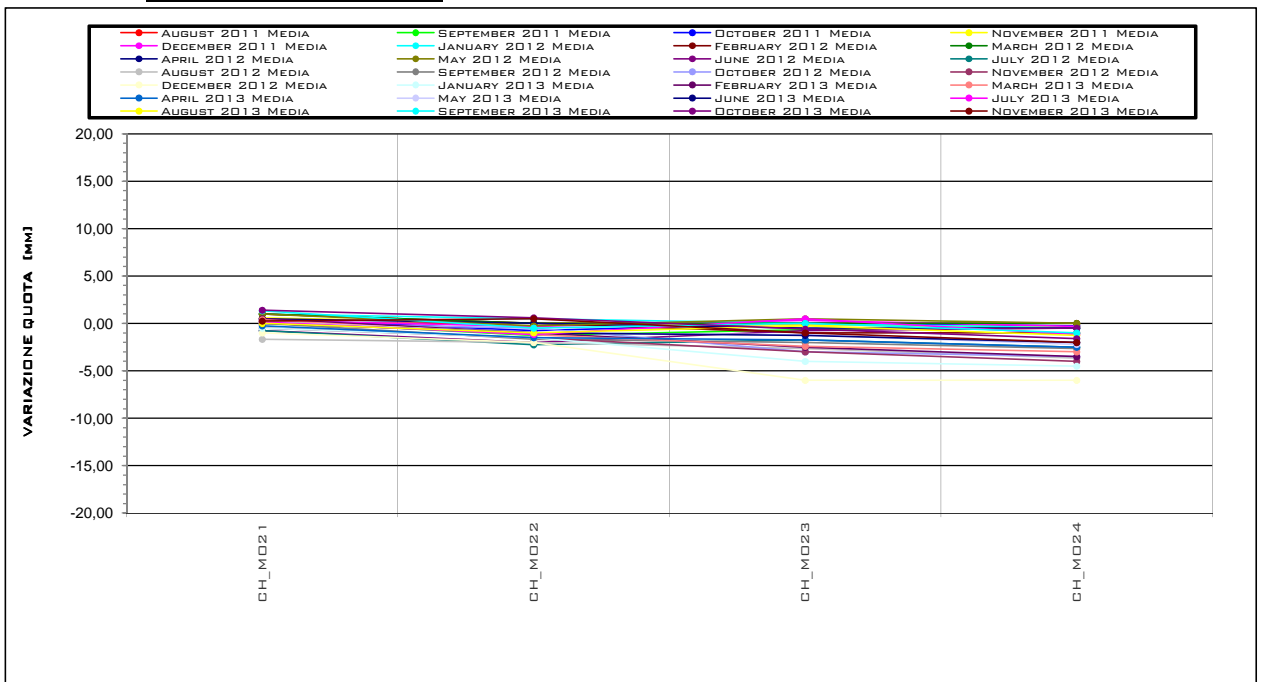
**UBICAZIONE**



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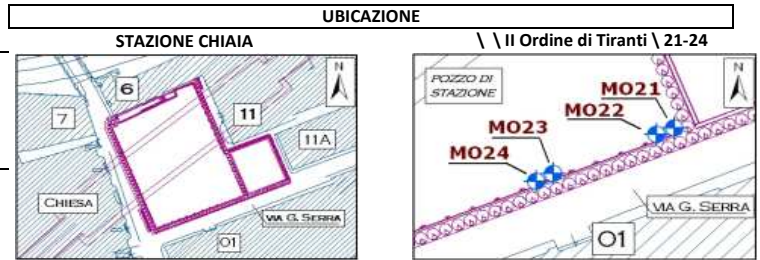


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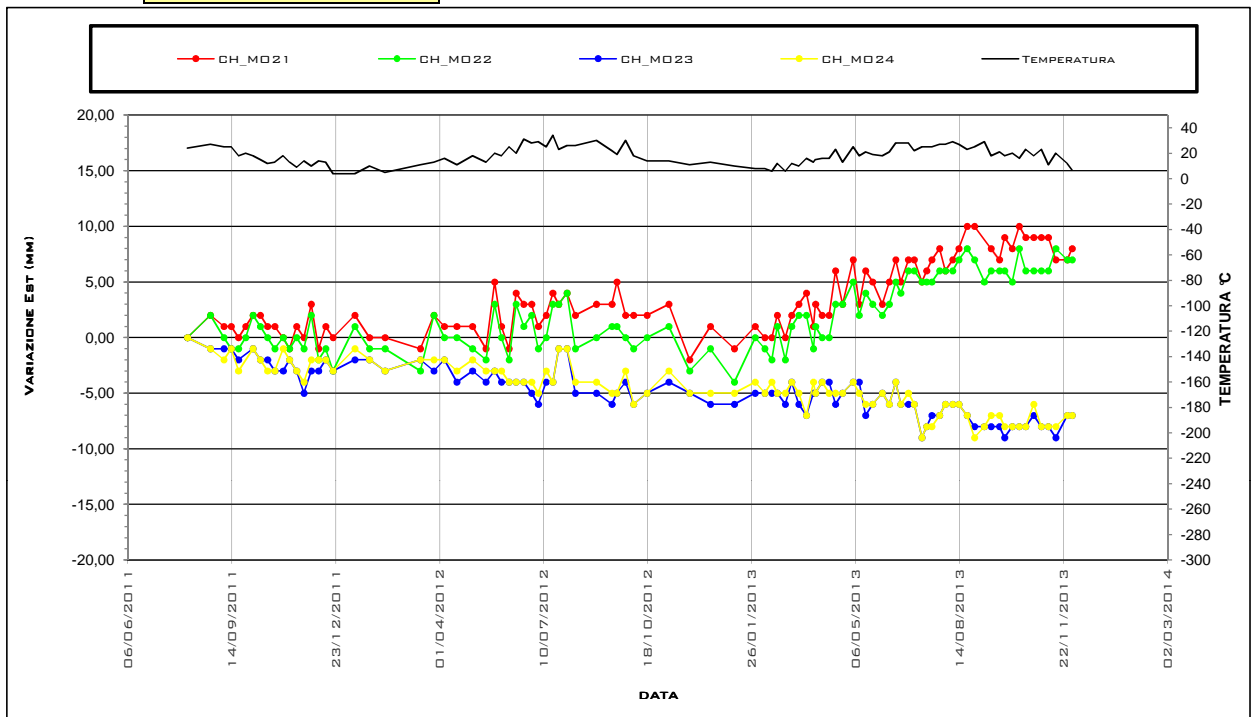




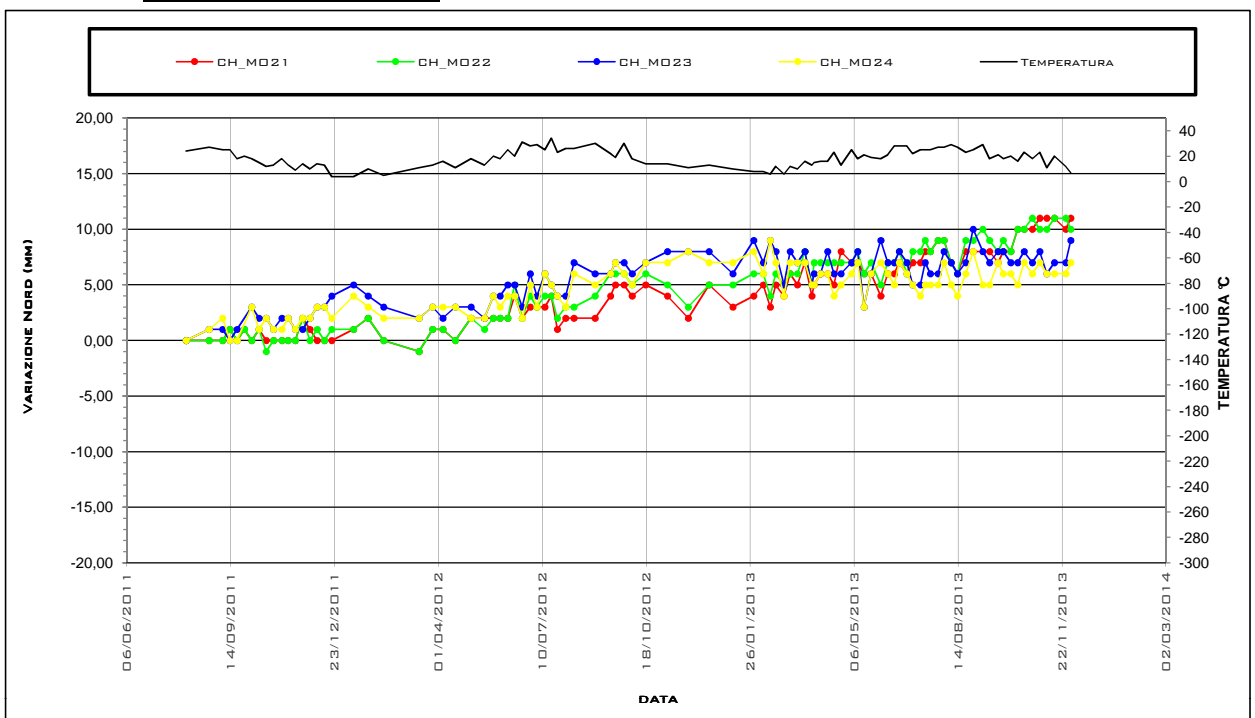
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Il Ordine di Tiranti \ 21-  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 02/08/2011  
**Data lettura di zero** 02/08/2011



**GRAFICO EST**



**GRAFICO NORD**





Ubicazione STAZIONE CHIAIA

Opera \ \ Il Ordine di Tiranti \ 25-28

Tipo Strumento Mire Ottiche

Data posa in opera 25/07/2011

Data lettura di zero 25/07/2011

Ultima Misura 97 in data 30/11/2013

Letto. n°	DATA	CH_M025					CH_M026					CH_M027					CH_M028				
		Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]
7	20/09/2011 08.00	18,0	29,9	-1,0	0,0	2,0	18,0	30,0	-1,0	0,0	1,0	18,0	29,8	-2,0	0,0	-1,0	18,0	29,8	-1,0	-1,0	-1,0
8	27/09/2011 08.00	20,0	29,9	0,0	0,0	4,0	20,0	30,0	0,0	-1,0	2,0	20,0	29,8	0,0	-2,0	1,0	20,0	29,8	-2,0	-2,0	2,0
9	04/10/2011 08.00	18,0	29,9	0,0	3,0	3,0	18,0	30,0	0,0	1,0	2,0	18,0	29,8	-1,0	1,0	-1,0	18,0	29,8	-1,0	0,0	0,0
10	11/10/2011 08.00	15,0	29,9	-1,0	1,0	3,0	15,0	30,0	1,0	1,0	2,0	15,0	29,8	-1,0	0,0	0,0	15,0	29,8	-1,0	-1,0	-1,0
11	18/10/2011 08.00	12,0	29,9	0,0	1,0	3,0	12,0	30,0	-1,0	0,0	2,0	12,0	29,8	-1,0	-2,0	0,0	12,0	29,8	-1,0	-2,0	-1,0
12	25/10/2011 08.00	13,0	29,9	0,0	1,0	2,0	13,0	30,0	1,0	0,0	2,0	13,0	29,8	-1,0	-2,0	-1,0	13,0	29,8	0,0	-2,0	-1,0
13	02/11/2011 10.00	18,0	29,9	0,0	2,0	3,0	18,0	30,0	1,0	1,0	2,0	18,0	29,8	0,0	0,0	0,0	18,0	29,8	0,0	0,0	0,0
14	08/11/2011 08.00	13,0	29,9	0,0	1,0	3,0	13,0	30,0	0,0	1,0	3,0	13,0	29,8	0,0	-1,0	-1,0	13,0	29,8	-1,0	-1,0	-1,0
15	15/11/2011 08.00	9,0	29,9	0,0	1,0	3,0	9,0	30,0	0,0	0,0	0,0	9,0	29,8	0,0	-2,0	-1,0	9,0	29,8	0,0	-1,0	0,0
16	22/11/2011 08.00	14,0	29,9	0,0	-1,0	3,0	14,0	30,0	-1,0	0,0	2,0	14,0	29,8	-2,0	-2,0	0,0	14,0	29,8	-1,0	-2,0	2,0
17	29/11/2011 08.00	10,0	29,9	0,0	1,0	3,0	10,0	30,0	-1,0	0,0	2,0	10,0	29,8	-1,0	-1,0	0,0	10,0	29,8	-1,0	-2,0	0,0
18	06/12/2011 08.00	14,0	29,9	-1,0	1,0	3,0	14,0	30,0	0,0	0,0	2,0	14,0	29,8	-1,0	-2,0	0,0	14,0	29,8	-1,0	-1,0	0,0
19	13/12/2011 08.00	13,0	29,9	0,0	1,0	3,0	13,0	30,0	0,0	1,0	2,0	13,0	29,8	-1,0	0,0	1,0	13,0	29,8	0,0	0,0	-1,0
20	20/12/2011 08.00	4,0	29,9	-1,0	1,0	3,0	4,0	30,0	-1,0	0,0	3,0	4,0	29,8	-1,0	-1,0	0,0	4,0	29,8	-1,0	-3,0	0,0
21	10/01/2012 08.00	4,0	29,9	1,0	2,0	4,0	4,0	30,0	1,0	2,0	4,0	4,0	29,8	1,0	0,0	3,0	4,0	29,8	1,0	0,0	2,0
22	24/01/2012 08.00	10,0	29,9	-1,0	1,0	3,0	10,0	30,0	-1,0	1,0	3,0	10,0	29,8	-1,0	-2,0	1,0	10,0	29,8	-2,0	0,0	0,0
23	08/02/2012 08.00	5,0	29,9	-1,0	1,0	3,0	5,0	30,0	-1,0	-1,0	4,0	5,0	29,8	-1,0	-2,0	1,0	5,0	29,8	-1,0	-1,0	0,0
24	13/03/2012 08.00	11,0	29,9	0,0	2,0	2,0	11,0	30,0	0,0	1,0	2,0	11,0	29,8	-1,0	0,0	-1,0	11,0	29,8	0,0	-1,0	-1,0
25	26/03/2012 08.00	13,0	29,9	-1,0	1,0	3,0	13,0	30,0	-1,0	1,0	3,0	13,0	29,8	-1,0	0,0	2,0	13,0	29,8	-1,0	0,0	0,0
26	05/04/2012 08.00	16,0	29,9	-1,0	1,0	3,0	16,0	30,0	-1,0	1,0	3,0	16,0	29,8	-2,0	-2,0	0,0	16,0	29,8	-2,0	-1,0	0,0
27	17/04/2012 08.00	11,0	29,9	0,0	1,0	4,0	11,0	30,0	1,0	-1,0	3,0	11,0	29,8	0,0	-2,0	1,0	11,0	29,8	0,0	-2,0	1,0
28	02/05/2012 10.30	18,0	29,9	1,0	1,0	3,0	18,0	30,0	0,0	0,0	2,0	18,0	29,8	0,0	-1,0	0,0	18,0	29,8	0,0	-1,0	-1,0
29	15/05/2012 08.30	13,0	29,9	0,0	1,0	4,0	13,0	30,0	1,0	0,0	2,0	13,0	29,8	0,0	-2,0	-1,0	13,0	29,8	0,0	-2,0	-1,0
30	23/05/2012 17.30	20,0	29,9	0,0	1,0	4,0	20,0	30,0	0,0	0,0	3,0	20,0	29,8	0,0	0,0	0,0	20,0	29,8	0,0	0,0	0,0
31	30/05/2012 08.30	18,0	29,9	0,0	0,0	4,0	18,0	30,0	0,0	0,0	2,0	18,0	29,8	-1,0	0,0	0,0	18,0	29,8	0,0	0,0	0,0
32	06/06/2012 16.30	25,0	29,9	-1,0	0,0	5,0	25,0	30,0	-1,0	-1,0	2,0	25,0	29,8	0,0	1,0	1,0	25,0	29,8	0,0	1,0	0,0
33	13/06/2012 08.30	20,0	29,9	0,0	0,0	5,0	20,0	30,0	-1,0	-1,0	4,0	20,0	29,8	-1,0	0,0	0,0	20,0	29,8	-1,0	0,0	0,0
34	20/06/2012 16.30	31,0	29,9	0,0	0,0	3,0	31,0	30,0	0,0	-1,0	2,0	31,0	29,8	0,0	1,0	-2,0	31,0	29,8	0,0	1,0	-1,0
35	28/06/2012 08.30	28,0	29,9	-1,0	0,0	6,0	28,0	30,0	0,0	-1,0	5,0	28,0	29,8	0,0	1,0	1,0	28,0	29,8	-1,0	1,0	1,0
36	04/07/2012 19.30	29,0	29,9	-1,0	-2,0	4,0	29,0	30,0	-1,0	-4,0	3,0	29,0	29,8	-1,0	-1,0	0,0	29,0	29,8	0,0	0,0	0,0
37	12/07/2012 08.30	25,0	29,9	-1,0	1,0	6,0	25,0	30,0	0,0	0,0	4,0	25,0	29,8	-1,0	1,0	0,0	25,0	29,8	-1,0	0,0	1,0
38	18/07/2012 16.30	34,0	29,9	-2,0	0,0	6,0	34,0	30,0	-2,0	-2,0	5,0	34,0	29,8	-2,0	1,0	0,0	34,0	29,8	-2,0	2,0	-1,0
39	24/07/2012 09.00	23,0	29,9	-2,0	2,0	4,0	23,0	30,0	-2,0	1,0	2,0	23,0	29,8	-3,0	1,0	0,0	23,0	29,8	-2,0	2,0	-1,0
40	01/08/2012 09.00	26,0	29,9	-2,0	1,0	3,0	26,0	30,0	-2,0	0,0	3,0	26,0	29,8	-3,0	1,0	0,0	26,0	29,8	-3,0	2,0	0,0
41	09/08/2012 08.30	26,0	29,9	-3,0	-1,0	7,0	26,0	30,0	-2,0	-1,0	5,0	26,0	29,8	-3,0	0,0	1,0	26,0	29,8	-3,0	1,0	1,0
42	29/08/2012 16.00	30,0	29,9	-3,0	0,0	5,0	30,0	30,0	-2,0	-2,0	4,0	30,0	29,8	-2,0	1,0	0,0	30,0	29,8	-3,0	2,0	0,0
43	13/09/2012 15.00	22,0	29,9	-2,0	-2,0	7,0	22,0	30,0	-2,0	-2,0	5,0	22,0	29,8	-1,0	1,0	1,0	22,0	29,8	-1,0	0,0	2,0
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46	04/10/2012 08.00	18,0	29,9	-2,0	-2,0	7,0	18,0	30,0	-2,0	-3,0	5,0	18,0	29,8	-1,0	0,0	2,0	18,0	29,8	-2,0	0,0	1,0
47	17/10/2012 08.30	14,0	29,9	-5,0	0,0	6,0	14,0	30,0	-4,0	-2,0	6,0	14,0	29,8	-3,0	1,0	2,0	14,0	29,8	-3,0	1,0	1,0
48	07/11/2012 08.30	14,0	29,9	-3,0	-1,0	7,0	14,0	30,0	-2,0	-1,0	7,0	14,0	29,8	-2,0	2,0	3,0	14,0	29,8	-2,0	1,0	2,0
49	27/11/2012 08.30	11,0	29,9	-2,0	-1,0	8,0	11,0	30,0	-2,0	-2,0	6,0	11,0	29,8	-3,0	1,0	1,0	11,0	29,8	-2,0	1,0	1,0
50	17/12/2012 08.30	13,0	29,9	-4,0	-2,0	7,0	13,0	30,0	-4,0	-2,0	6,0	13,0	29,8	-4,0	1,0	2,0	13,0	29,8	-4,0	0,0	1,0
51	09/01/2013 08.30	10,0	29,9	-3,0	-1,0	8,0	10,0	30,0	-3,0	-2,0	5,0	10,0	29,8	-3,0	1,0	1,0	10,0	29,8	-3,0	0,0	1,0
52	29/01/2013 08.30	8,0	29,9	-3,0	-1,0	8,0	8,0	30,0	-2,0	-3,0	5,0	8,0	29,8	-4,0	0,0	2,0	8,0	29,8	-4,0	1,0	2,0
53	07/02/2013 15.00	8,0	29,9	-2,0	0,0	6,0	8,0	30,0	-1,0	-1,0	5,0	8,0	29,8	-2,0	0,0	0,0	8,0	29,8	-2,0	1,0	0,0
54	14/02/2013 08.30	6,0	29,9	-1,0	-1,0	8,0	6,0	30,0	-1,0	0,0	8,0	6,0	29,8	-2,0	1,0	1,0	6,0	29,8	-2,0	2,0	3,0
55	19/02/2013 15.30	12,0	29,9	-2,0	0,0	8,0	12,0	30,0	-2,0	-1,0	6,0	12,0	29,8	-3,0	1,0	1,0	12,0	29,8	-3,0	1,0	1,0
56	27/02/2013 08.30	6,0	29,9	-1,0	-2,0	5,0	6,0	30,0	-1,0	-3,0	4,0	6,0	29,8	-2,0	-1,0	0,0	6,0	29,8	-2,0	0,0	0,0
57	05/03/2013 10.30	12,0	29,9	-2,0	0,0	7,0	12,0	30,0	-2,0	0,0	6,0										
58	12/03/2013 08.30	10,0	29,9	-2,0	-2,0	7,0	10,0	30,0	-1,0	-2,0	5,0										
59	19/03/2013 16.00	16,0	29,9	-1,0	-1,0	7,0	16,0	30,0	0,0	-2,0	5,0										
60	26/03/2013 08.30	13,0	29,9	-3,0	-1,0	4,0	13,0	30,0	-2,0	-1,0	3,0										
61	28/03/2013 11.00	15,0	29,9	-2,0	0,0	6,0	15,0	30,0	-2,0	-1,0	3,0										
62	03/04/2013 17.30	16,0	29,9	-2,0	0,0	5,0	16,0	30,0	-1,0	-1,0	5,0	16,0	29,8	-2,0	2,0	0,0	16,0	29,8	-3,0	3,0	1,0
63	10/04/2013 10.30	16,0	29,9	-2,0	-2,0	5,0	16,0	30,0	-1,0	-2,0	5,0	16,0	29,8	-3,0	1,0	0,0	16,0	29,8	-3,0	3,0	0,0
64	16/04/2013 15.00	23,0	29,9	-1,0	-1,0	4,0	23,0	30,0	-1,0	-2,0	3,0	23,0	29,8	-1,0	1,0	-1,0					

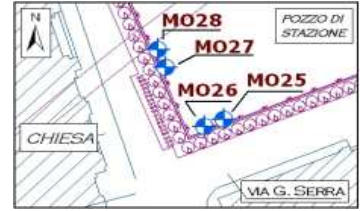
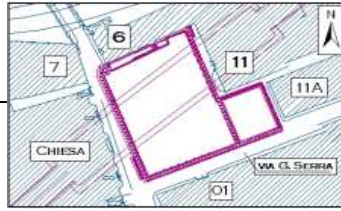


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Il Ordine di Tiranti \ 25-  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 25/07/2011  
**Data lettura di zero** 25/07/2011

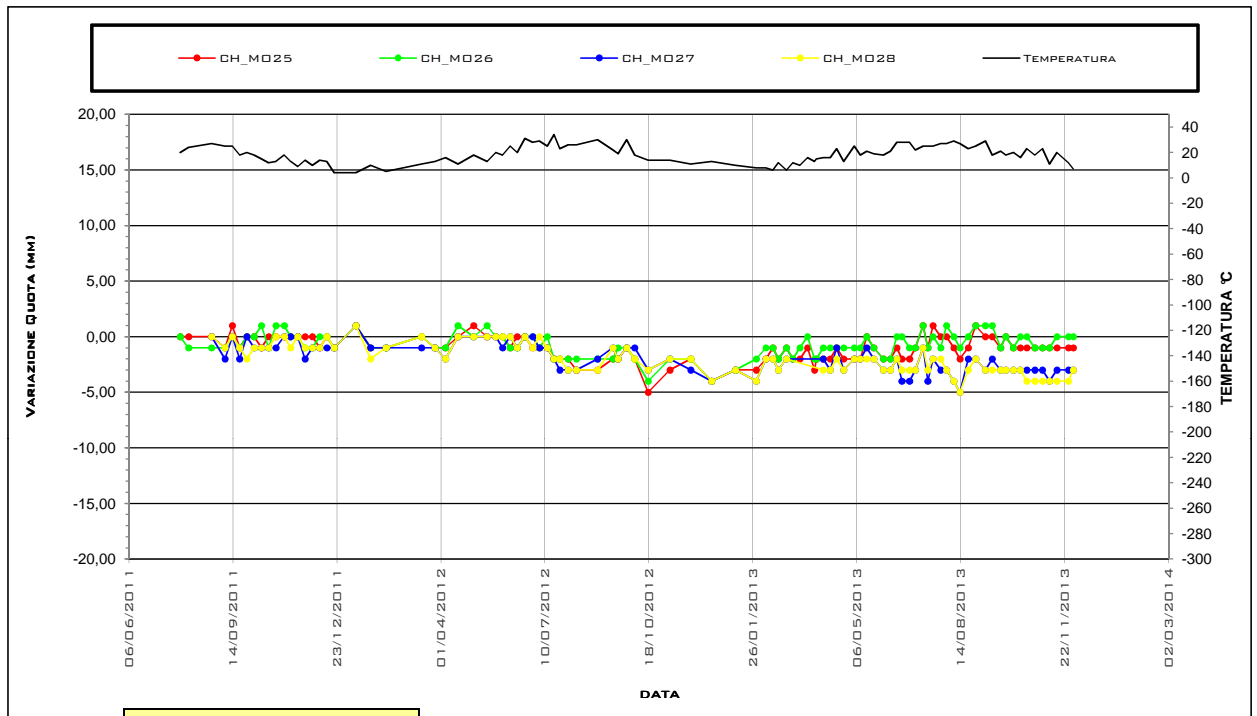
**UBICAZIONE**

**STAZIONE CHIAIA**

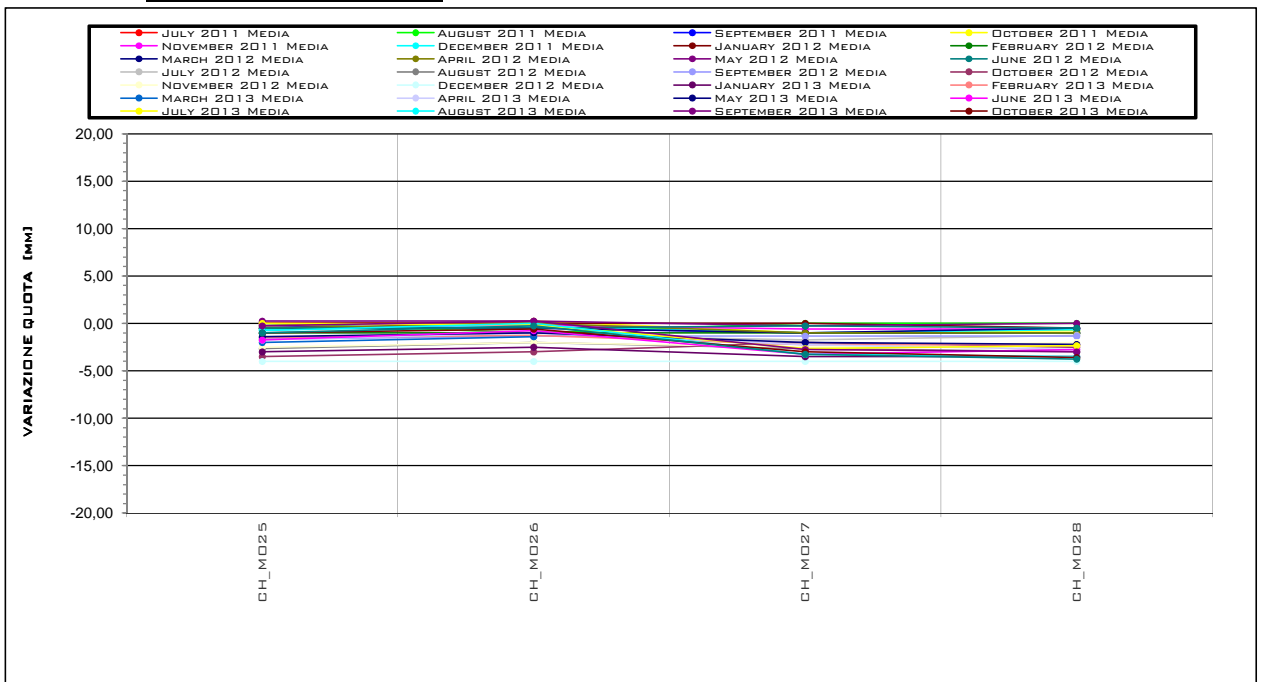
\ \ Il Ordine di Tiranti \ 25-28



**GRAFICO QUOTA**

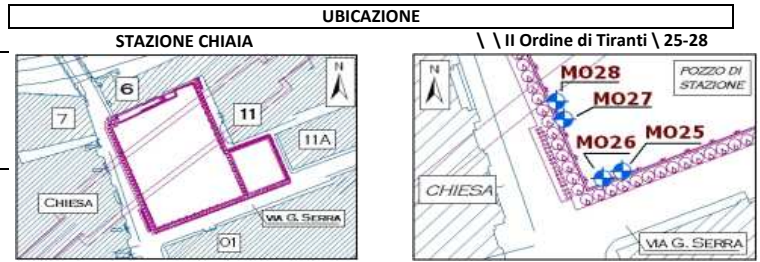


**GRAFICO ISOCRONE**

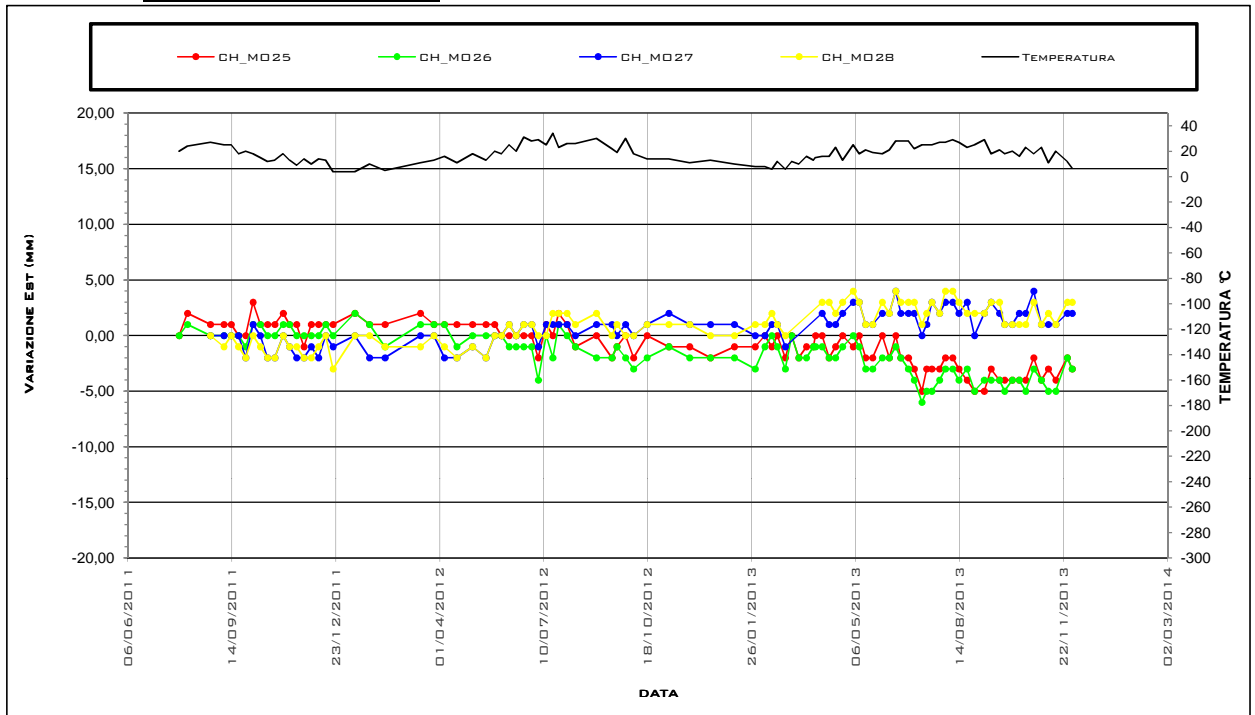




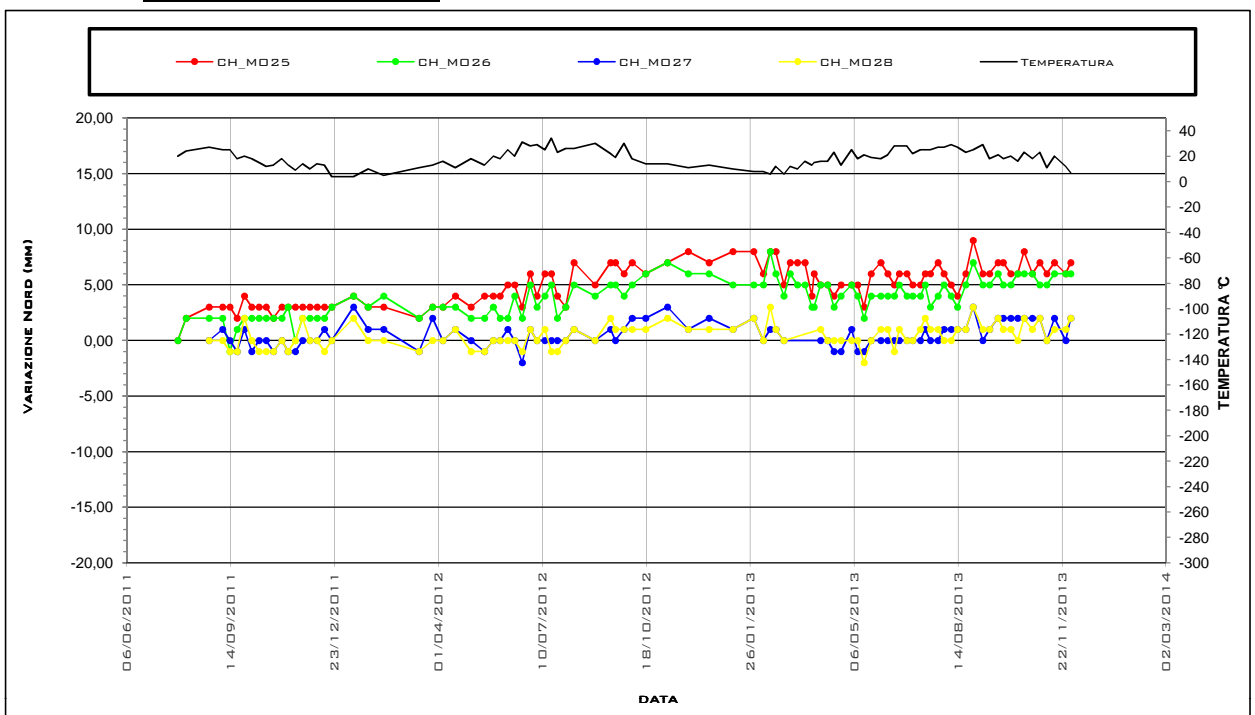
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Il Ordine di Tiranti \ 25-  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 25/07/2011  
**Data lettura di zero** 25/07/2011



**GRAFICO EST**



**GRAFICO NORD**



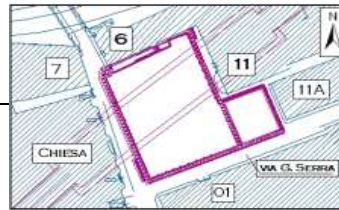




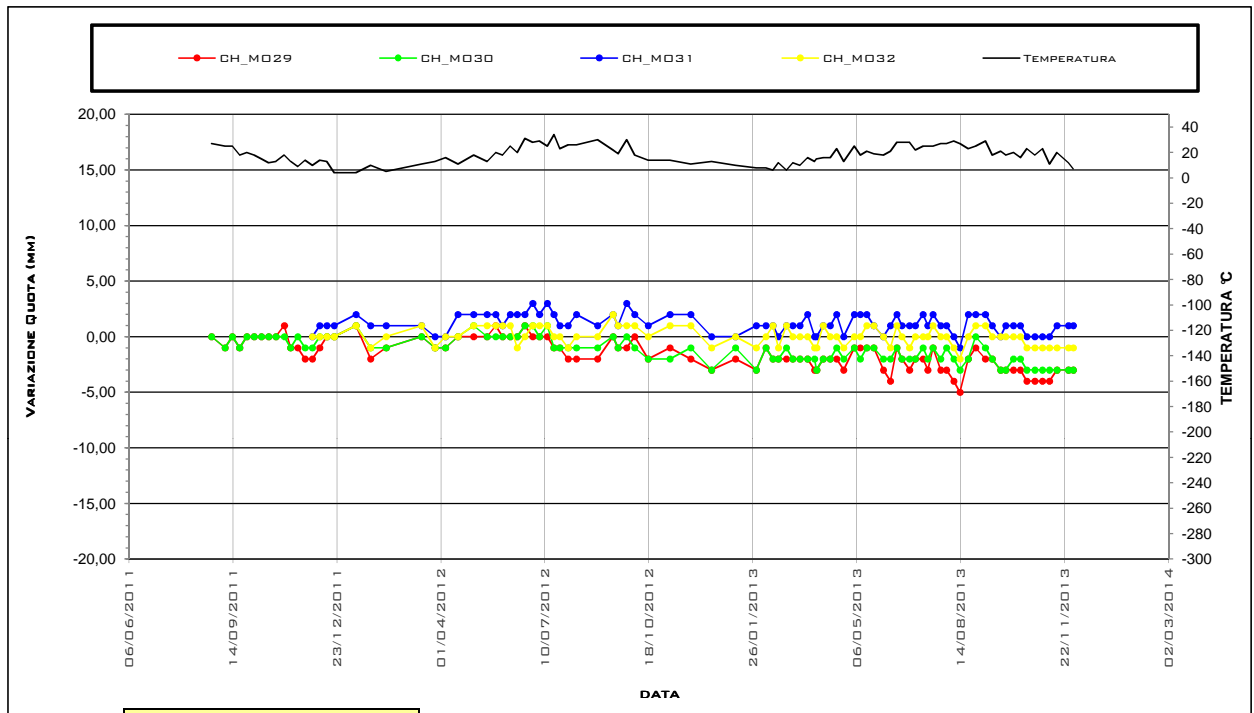


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Il Ordine di Tiranti \ 29-  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 24/08/2011  
**Data lettura di zero** 24/08/2011

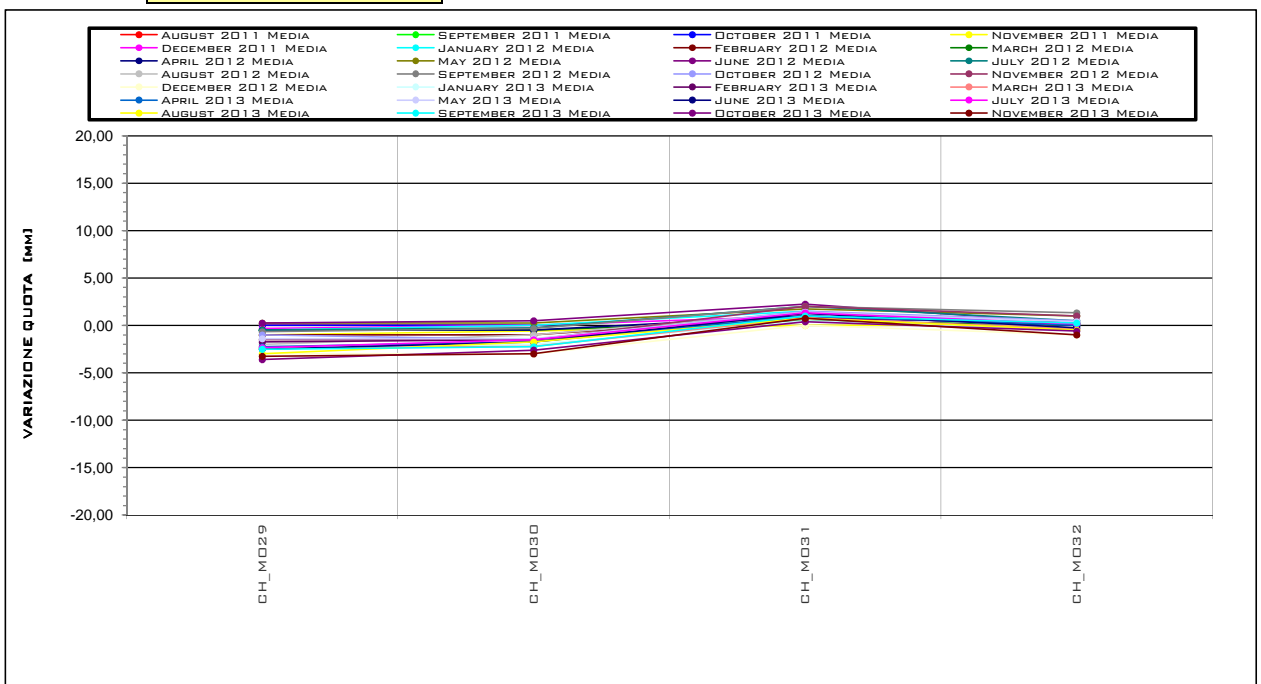
**UBICAZIONE**  
STAZIONE CHIAIA \ \ Il Ordine di Tiranti \ 29-32



**GRAFICO QUOTA**

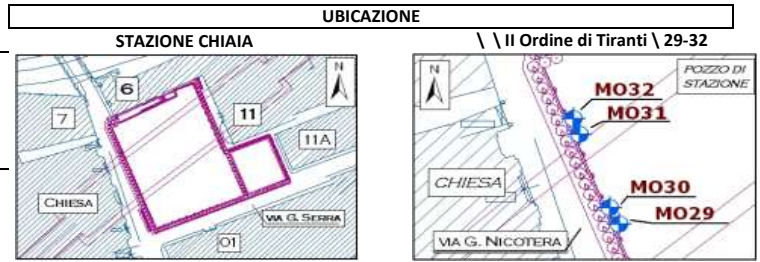


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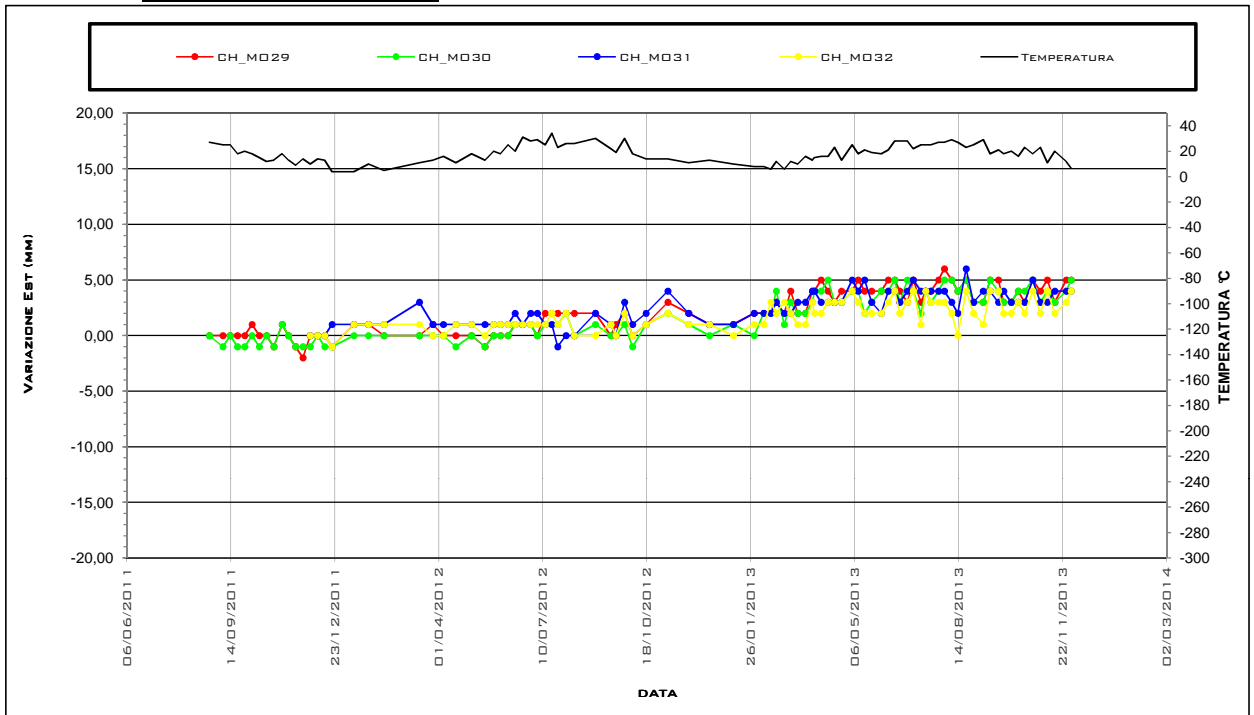




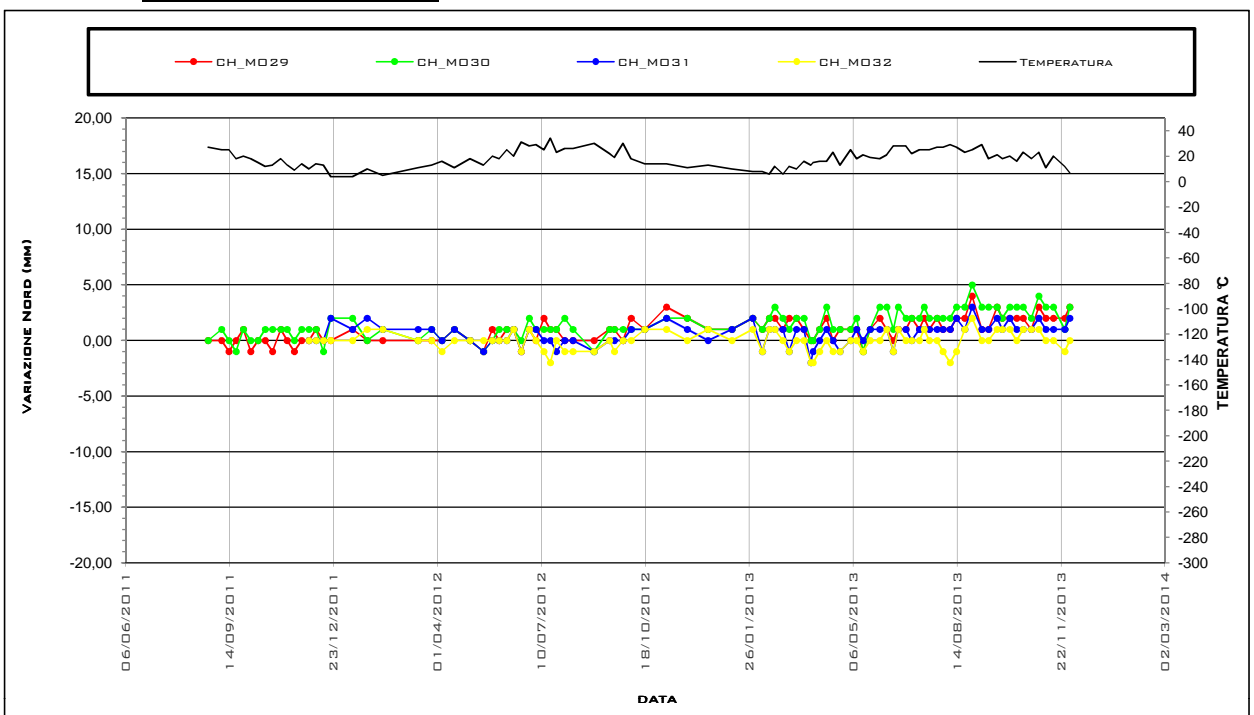
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Il Ordine di Tiranti \ 29-  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 24/08/2011  
**Data lettura di zero** 24/08/2011



**GRAFICO EST**



**GRAFICO NORD**



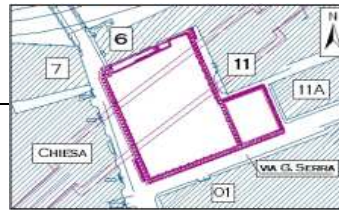




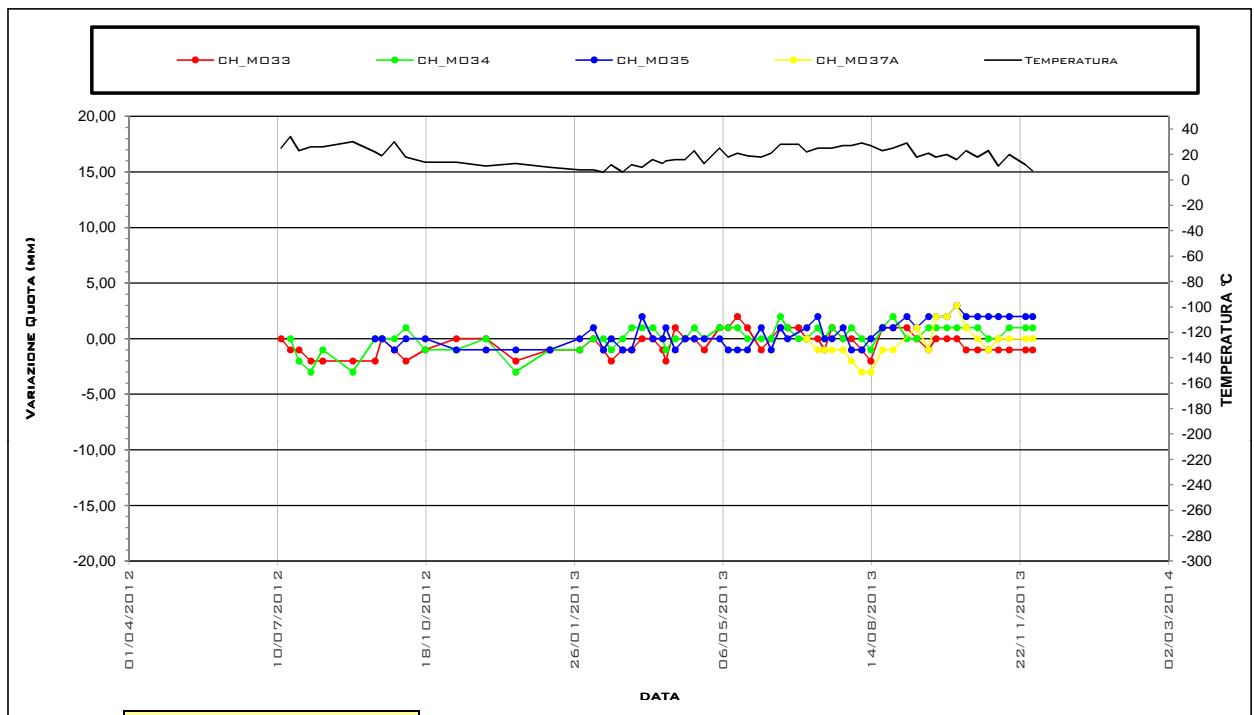


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ III Ordine - Tufo \ 33-37  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 12/07/2012  
**Data lettura di zero** 12/07/2012

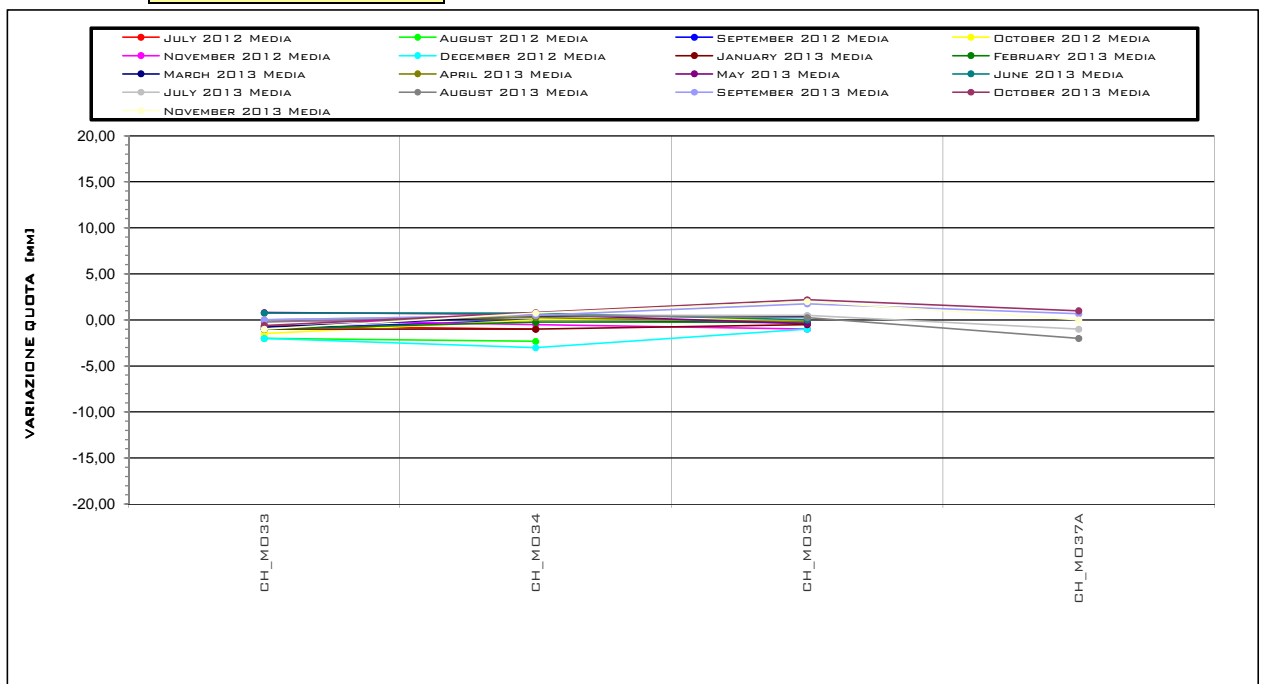
**UBICAZIONE**  
STAZIONE CHIAIA \ \ III Ordine - Tufo \ 33-37



**GRAFICO QUOTA**

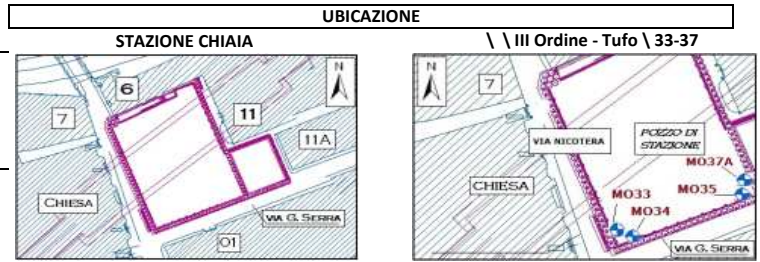


**GRAFICO ISOCRONE**

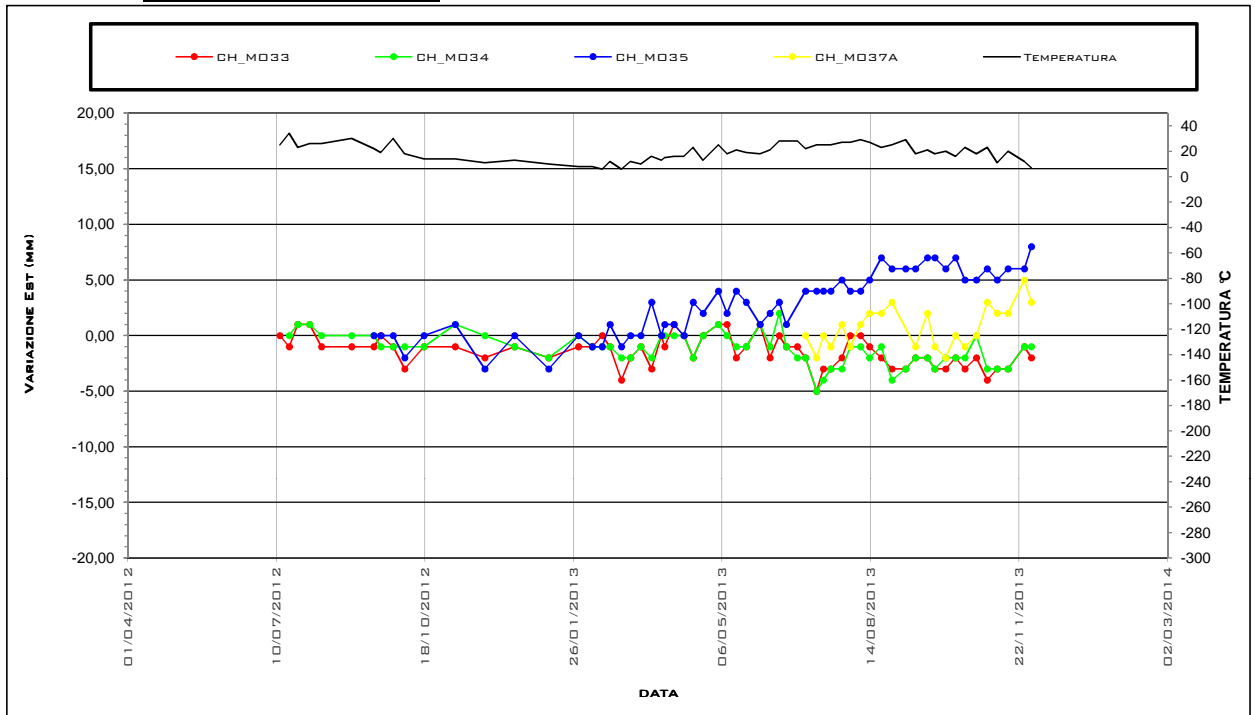




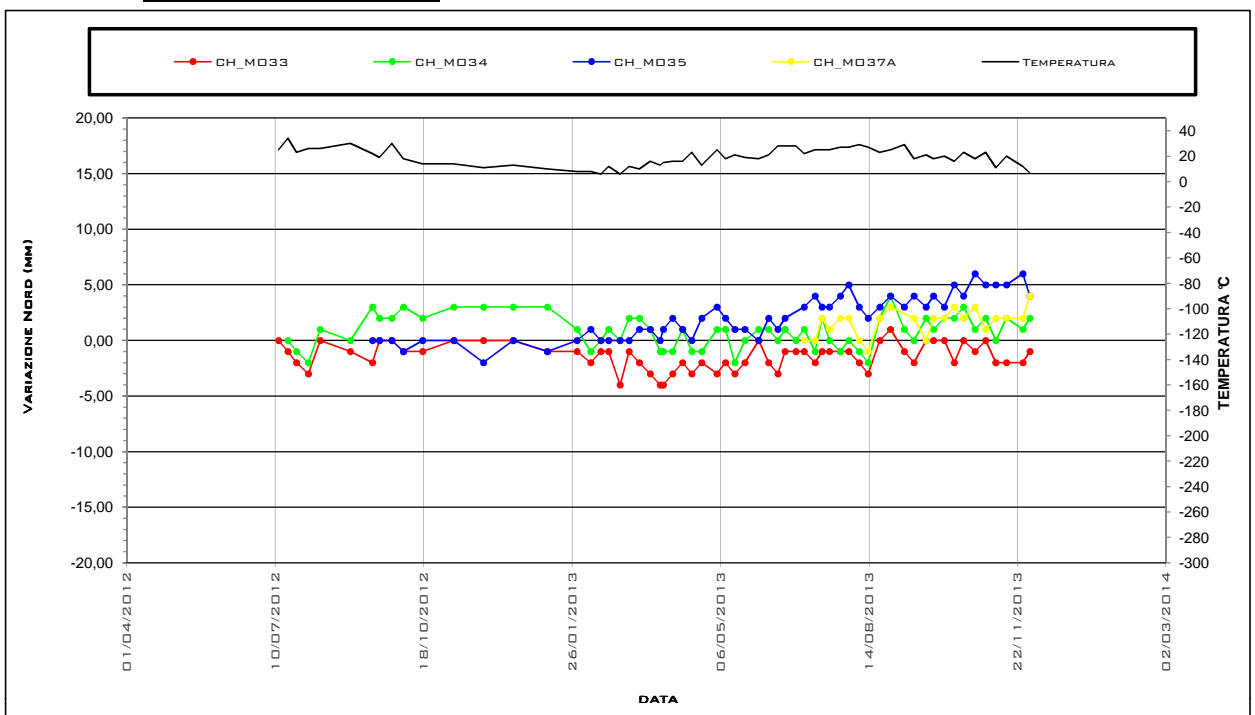
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ III Ordine - Tufo \ 33-37  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 12/07/2012  
**Data lettura di zero** 12/07/2012



**GRAFICO EST**



**GRAFICO NORD**





**Ubicazione STAZIONE CHIAIA**

**Opera \ \ IV Ordine - Tufo \ 36A**

**Tipo Strumento Mire Ottiche**

**Data posa in opera 13/09/2012**

**Data lettura di zero 13/09/2012**

**Ultima Misura** 50 **in data** 30/11/2013

Letto. n°	DATA	CH_M036					CH_M036A				
		Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]
1	13/09/2012 15.00	22,0	7,6	0,0	0,0	0,0					
2	18/09/2012 08.00	19,0	7,6	-1,0	0,0	0,0					
3	26/09/2012 15.00	30,0	7,6	0,0	1,0	2,0					
4	04/10/2012 09.00	18,0	7,6	-1,0	-2,0	0,0					
5	17/10/2012 08.30	14,0	7,6	-2,0	0,0	1,0					
6	07/11/2012 08.30	14,0	7,6	-1,0	1,0	2,0					
7	27/11/2012 08.30	11,0	7,6	0,0	1,0	1,0					
8	17/12/2012 08.30	13,0	7,6	-2,0	0,0	2,0					
9	09/01/2013 08.30	10,0	7,6	-1,0	-1,0	0,0					
10	29/01/2013 08.30	8,0	7,6	-2,0	0,0	0,0					
11	07/02/2013 15.00	8,0	7,6	0,0	-1,0	-1,0					
12	14/02/2013 08.30	6,0	7,6	-1,0	0,0	1,0					
13	19/02/2013 15.30	12,0	7,6	-1,0	0,0	1,0					
14	28/03/2013 11.00						15,0	9,3	0,0	0,0	0,0
15	03/04/2013 17.30						16,0	9,3	0,0	3,0	-1,0
16	10/04/2013 10.30						16,0	9,3	0,0	1,0	1,0
17	16/04/2013 15.00						23,0	9,3	0,0	2,0	-1,0
18	23/04/2013 08.30						13,0	9,3	-1,0	3,0	-1,0
19	03/05/2013 14.30						25,0	9,3	-1,0	5,0	0,0
20	09/05/2013 08.30						18,0	9,3	-2,0	4,0	-1,0
21	15/05/2013 14.30						21,0	9,3	-1,0	2,0	-2,0
22	22/05/2013 08.30						19,0	9,3	-1,0	1,0	-1,0
23	31/05/2013 15.30						18,0	9,3	-2,0	3,0	0,0
24	07/06/2013 08.30						21,0	9,3	-2,0	2,0	-1,0
25	13/06/2013 14.30						28,0	9,3	-1,0	4,0	-2,0
26	18/06/2013 09.00						28,0	9,3	0,0	2,0	0,0
27	25/06/2013 18.00						28,0	9,3	-2,0	3,0	-1,0
28	01/07/2013 07.30						22,0	9,3	-1,0	2,0	-1,0
29	08/07/2013 17.30						25,0	9,3	-1,0	-1,0	-1,0
30	13/07/2013 07.30						25,0	9,3	-2,0	-1,0	2,0
31	18/07/2013 07.30						25,0	9,3	-1,0	0,0	1,0
32	25/07/2013 18.00						27,0	9,3	-1,0	0,0	1,0
33	31/07/2013 09.00						27,0	9,3	-1,0	3,0	2,0
34	07/08/2013 09.00						29,0	9,2	-3,0	2,0	0,0
35	13/08/2013 09.00						27,0	9,2	-4,0	1,0	-1,0
36	21/08/2013 07.30						23,0	9,3	-1,0	1,0	2,0
37	28/08/2013 10.30						25,0	9,3	1,0	0,0	4,0
38	06/09/2013 17.30						29,0	9,3	-1,0	0,0	0,0
39	13/09/2013 07.30						18,0	9,3	-1,0	0,0	1,0
40	21/09/2013 09.30						21,0	9,3	-2,0	1,0	2,0
41	26/09/2013 09.30						18,0	9,3	-2,0	0,0	1,0
42	03/10/2013 16.30						20,0	9,3	-2,0	1,0	2,0
43	10/10/2013 08.30						16,0	9,3	-1,0	1,0	2,0
44	16/10/2013 14.30						23,0	9,3	-2,0	1,0	2,0
45	24/10/2013 08.30						18,0	9,3	-2,0	3,0	2,0
46	31/10/2013 14.30						23,0	9,2	-3,0	0,0	3,0
47	07/11/2013 08.30						11,0	9,3	-2,0	0,0	2,0
48	14/11/2013 14.30						20,0	9,3	-2,0	0,0	1,0
49	25/11/2013 15.30						12,0	9,3	-2,0	1,0	2,0
50	30/11/2013 08.30						7,0	9,3	-2,0	1,0	3,0

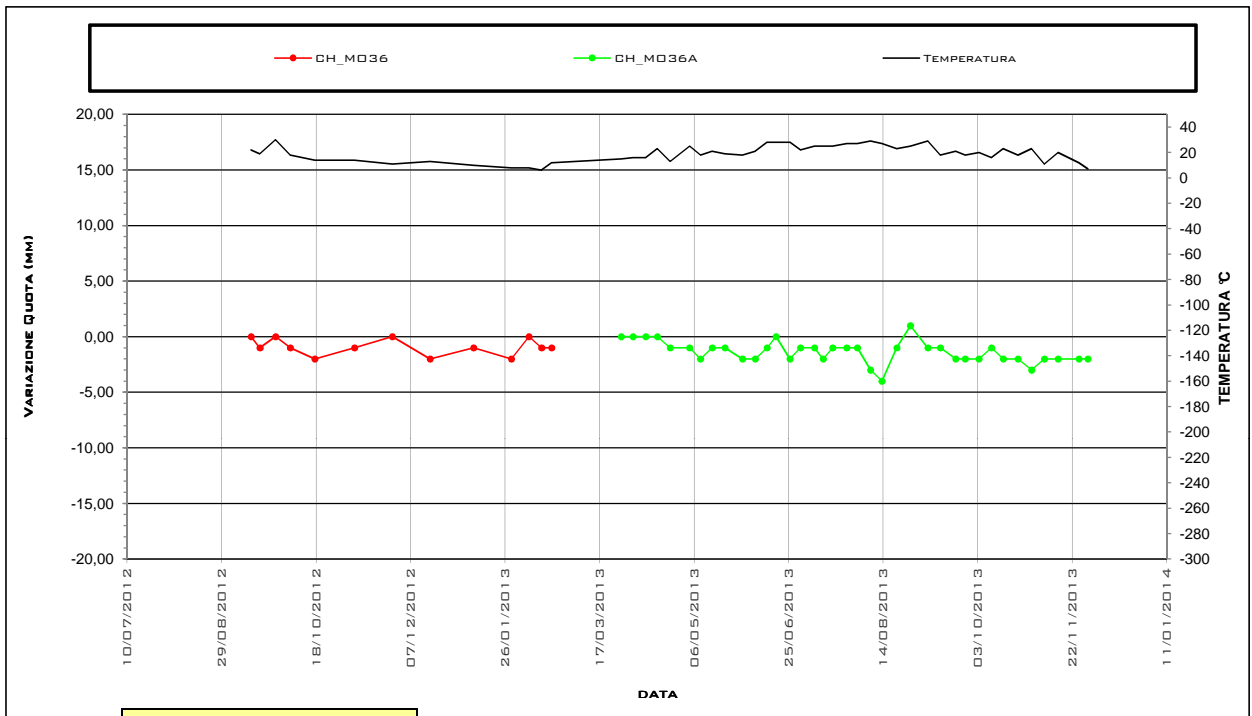


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ IV Ordine - Tufo \ 36A  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 13/09/2012  
**Data lettura di zero** 13/09/2012

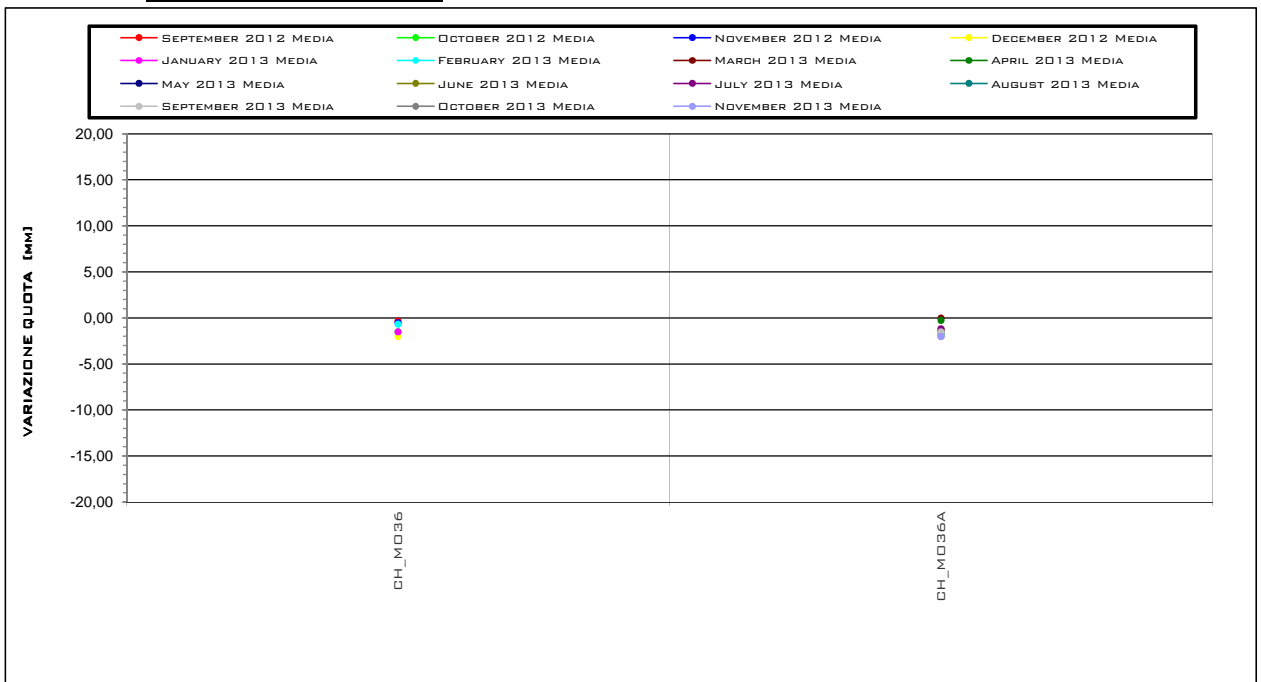
**UBICAZIONE**



**GRAFICO QUOTA**

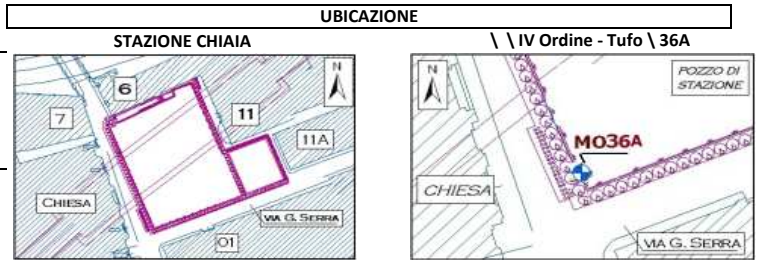


**GRAFICO ISOCRONE**

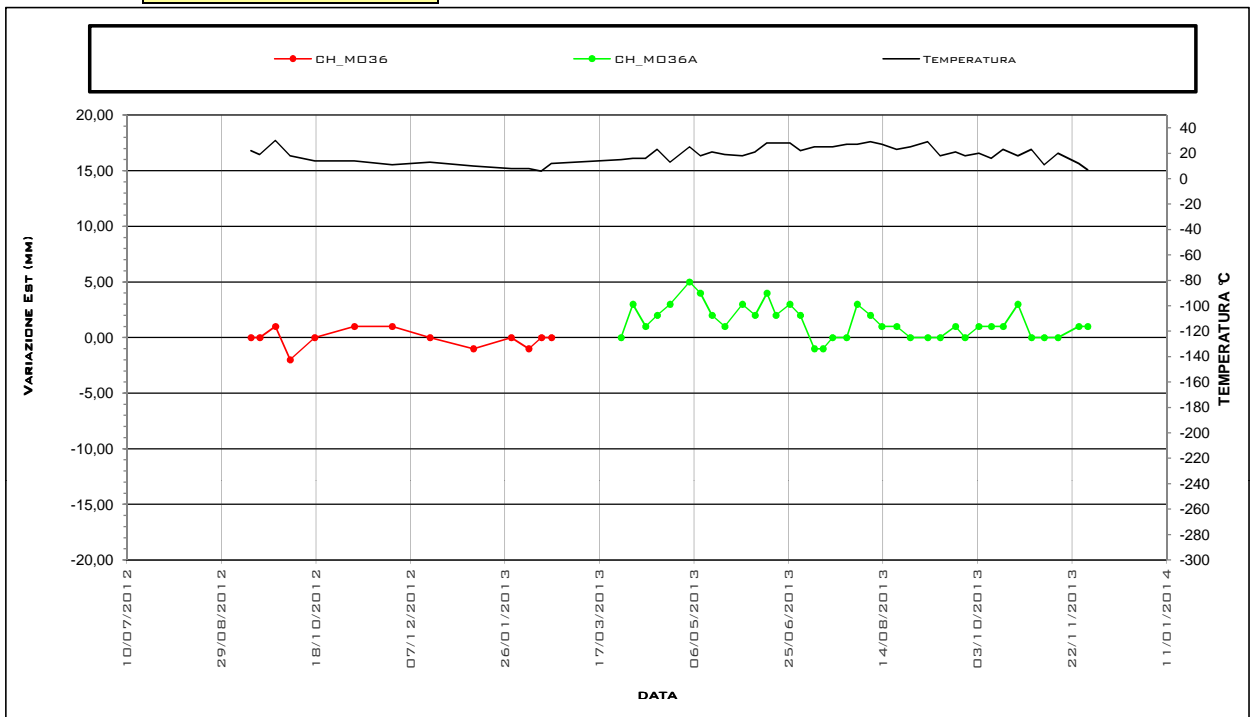




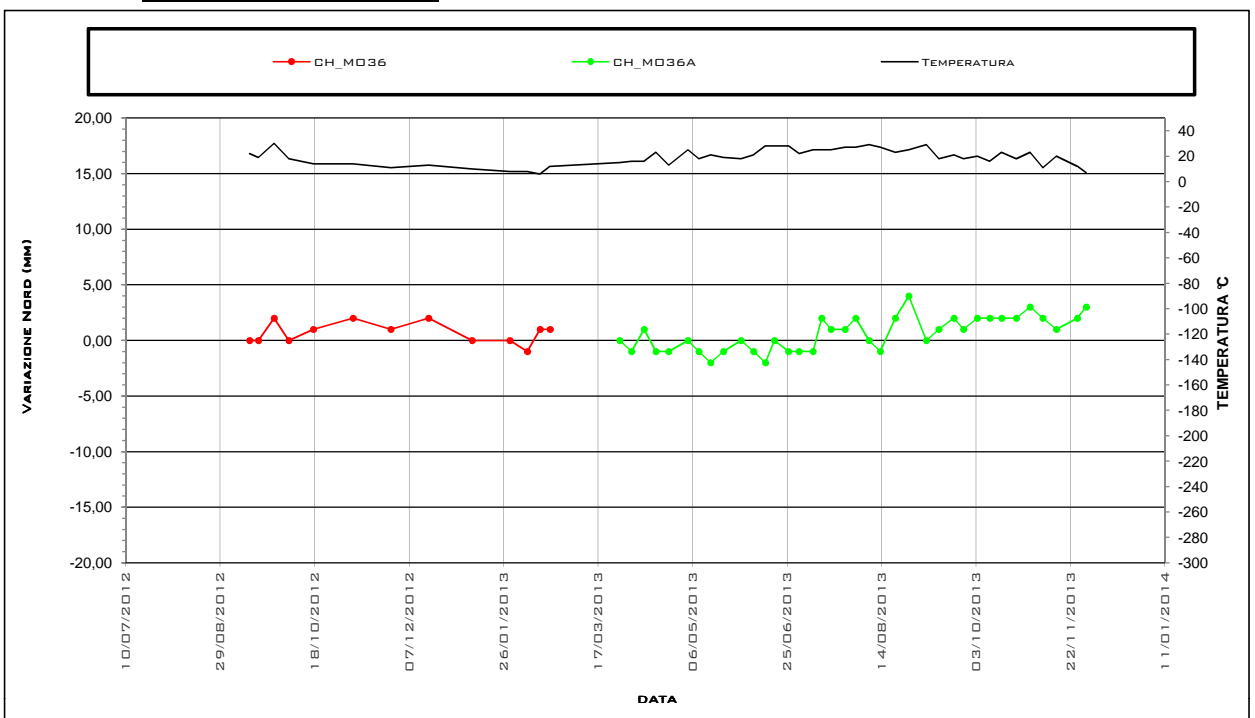
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ IV Ordine - Tufo \ 36A  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 13/09/2012  
**Data lettura di zero** 13/09/2012



**GRAFICO EST**



**GRAFICO NORD**





Ubicazione STAZIONE CHIAIA

Opera \ \ III Ordine - Tufo \ 38-40

Tipo Strumento Mire Ottiche

Data posa in opera 07/02/2013

Data lettura di zero 07/02/2013

Ultima Misura 46 in data 30/11/2013

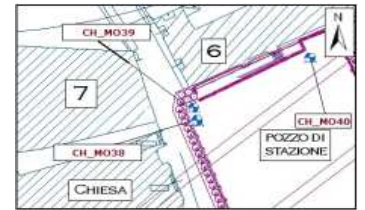
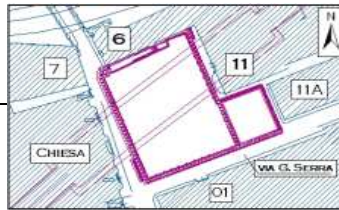
Letto. n°	DATA	CH_M038					CH_M039					CH_M040				
		Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]
1	07/02/2013 15.01	8,0	14,7	0,0	0,0	0,0	8,0	14,6	0,0	0,0	0,0					
2	14/02/2013 08.30	6,0	14,7	1,0	0,0	3,0	6,0	14,6	0,0	0,0	3,0					
3	14/02/2013 08.31															
4	19/02/2013 15.30	12,0	14,7	-2,0	0,0	2,0	12,0	14,6	0,0	1,0	4,0	12,0	14,8	2,0	-1,0	-1,0
5	27/02/2013 08.30	6,0	14,7	0,0	-1,0	2,0	6,0	14,6	1,0	0,0	1,0	6,0	14,8	1,0	0,0	-1,0
6	05/03/2013 10.30	12,0	14,7	0,0	-1,0	3,0	12,0	14,6	0,0	-1,0	3,0	12,0	14,8	1,0	1,0	0,0
7	12/03/2013 08.30	10,0	14,7	-1,0	-1,0	3,0	10,0	14,6	-1,0	-1,0	3,0	10,0	14,8	2,0	1,0	-1,0
8	19/03/2013 16.00	16,0	14,7	0,0	-1,0	2,0	16,0	14,6	2,0	-1,0	3,0	16,0	14,8	3,0	2,0	-1,0
9	26/03/2013 08.30	13,0	14,7	-1,0	0,0	0,0	13,0	14,6	0,0	0,0	-1,0	13,0	14,8	3,0	1,0	-1,0
10	28/03/2013 11.00	15,0	14,7	-2,0	0,0	0,0	15,0	14,6	-1,0	0,0	0,0	15,0	14,8	3,0	1,0	-1,0
11	03/04/2013 17.30	16,0	14,7	0,0	-1,0	0,0	16,0	14,6	2,0	-1,0	1,0	16,0	14,8	2,0	0,0	-2,0
12	10/04/2013 10.30	16,0	14,7	-1,0	-1,0	1,0	16,0	14,6	1,0	-1,0	2,0	16,0	14,8	2,0	1,0	1,0
13	16/04/2013 15.00	23,0	14,7	0,0	-2,0	2,0	23,0	14,6	2,0	-1,0	0,0	23,0	14,8	2,0	1,0	-2,0
14	23/04/2013 08.30	13,0	14,7	-2,0	-2,0	1,0	13,0	14,6	-1,0	-1,0	0,0	13,0	14,8	2,0	-1,0	-1,0
15	03/05/2013 14.30	25,0	14,7	1,0	2,0	2,0	25,0	14,6	2,0	1,0	1,0	25,0	14,8	4,0	3,0	1,0
16	09/05/2013 08.30	18,0	14,7	0,0	-1,0	2,0	18,0	14,6	1,0	-1,0	1,0	18,0	14,8	5,0	2,0	2,0
17	15/05/2013 14.30	21,0	14,7	1,0	0,0	1,0	21,0	14,6	2,0	-1,0	0,0	21,0	14,8	4,0	3,0	0,0
18	22/05/2013 08.30	19,0	14,7	0,0	-2,0	2,0	19,0	14,6	1,0	-4,0	1,0	19,0	14,8	4,0	3,0	1,0
19	31/05/2013 15.30	18,0	14,7	-2,0	-2,0	3,0	18,0	14,6	0,0	-3,0	2,0	18,0	14,8	5,0	2,0	0,0
20	07/06/2013 08.30	21,0	14,7	-1,0	-1,0	3,0	21,0	14,6	0,0	-1,0	1,0	21,0	14,8	5,0	3,0	0,0
21	13/06/2013 14.30	28,0	14,7	0,0	0,0	1,0	28,0	14,6	2,0	0,0	-1,0	28,0	14,8	6,0	4,0	-1,0
22	18/06/2013 09.00	28,0	14,7	-1,0	-2,0	3,0	28,0	14,6	2,0	-2,0	1,0	28,0	14,8	4,0	2,0	1,0
23	25/06/2013 18.00	28,0	14,7	0,0	-1,0	2,0	28,0	14,6	2,0	-1,0	1,0	28,0	14,8	4,0	4,0	0,0
24	01/07/2013 07.30	22,0	14,7	0,0	0,0	3,0	22,0	14,6	2,0	-1,0	2,0	22,0	14,8	3,0	3,0	-1,0
25	08/07/2013 17.30	25,0	14,7	0,0	-1,0	2,0	25,0	14,6	3,0	-2,0	0,0	25,0	14,8	4,0	4,0	1,0
26	13/07/2013 07.30	25,0	14,7	0,0	0,0	2,0	25,0	14,6	1,0	-2,0	2,0	25,0	14,8	4,0	2,0	1,0
27	18/07/2013 07.30	25,0	14,7	-1,0	-2,0	2,0	25,0	14,6	2,0	-3,0	1,0	25,0	14,8	4,0	2,0	0,0
28	25/07/2013 18.00	27,0	14,7	0,0	-1,0	2,0	27,0	14,6	2,0	-1,0	1,0	27,0	14,8	5,0	2,0	0,0
29	31/07/2013 09.00	27,0	14,7	0,0	-1,0	2,0	27,0	14,6	2,0	-1,0	0,0	27,0	14,8	5,0	3,0	-1,0
30	07/08/2013 09.00	29,0	14,7	-2,0	-2,0	3,0	29,0	14,6	1,0	-3,0	1,0	29,0	14,8	4,0	4,0	1,0
31	13/08/2013 09.00	27,0	14,7	-3,0	-3,0	4,0	27,0	14,6	0,0	-4,0	2,0	27,0	14,8	3,0	4,0	2,0
32	21/08/2013 07.30	23,0	14,7	1,0	2,0	4,0	23,0	14,6	2,0	0,0	2,0	23,0	14,8	4,0	4,0	0,0
33	28/08/2013 10.30	25,0	14,7	1,0	-1,0	4,0	25,0	14,6	3,0	-2,0	4,0	25,0	14,8	6,0	3,0	-1,0
34	06/09/2013 17.30	29,0	14,7	0,0	-2,0	2,0	29,0	14,6	3,0	-3,0	0,0	29,0	14,8	7,0	1,0	-2,0
35	13/09/2013 07.30	18,0	14,7	-1,0	-1,0	3,0	18,0	14,6	1,0	-2,0	0,0	18,0	14,8	7,0	1,0	-2,0
36	21/09/2013 09.30	21,0	14,7	-1,0	-2,0	2,0	21,0	14,6	2,0	-2,0	2,0	21,0	14,8	8,0	0,0	-3,0
37	26/09/2013 09.30	18,0	14,7	-1,0	-2,0	2,0	18,0	14,6	2,0	-3,0	0,0	18,0	14,8	8,0	0,0	-2,0
38	03/10/2013 16.30	20,0	14,7	-1,0	-1,0	3,0	20,0	14,6	2,0	-2,0	2,0	20,0	14,8	7,0	1,0	-2,0
39	10/10/2013 08.30	16,0	14,7	-1,0	-2,0	2,0	16,0	14,6	2,0	-3,0	0,0	16,0	14,8	8,0	2,0	-1,0
40	16/10/2013 14.30	23,0	14,7	-1,0	-2,0	3,0	23,0	14,6	1,0	-3,0	2,0	23,0	14,8	8,0	0,0	-1,0
41	24/10/2013 08.30	18,0	14,7	-1,0	0,0	2,0	18,0	14,6	1,0	-1,0	0,0	18,0	14,8	7,0	1,0	-1,0
42	31/10/2013 14.30	23,0	14,7	-1,0	-2,0	3,0	23,0	14,6	1,0	-2,0	2,0	23,0	14,8	8,0	2,0	-1,0
43	07/11/2013 08.30	11,0	14,7	-1,0	-2,0	1,0	11,0	14,6	1,0	-2,0	0,0	11,0	14,8	8,0	1,0	0,0
44	14/11/2013 14.30	20,0	14,7	-1,0	-3,0	2,0	20,0	14,6	1,0	-4,0	0,0					
45	25/11/2013 15.30	12,0	14,7	-1,0	-2,0	1,0	12,0	14,6	1,0	-1,0	0,0					
46	30/11/2013 08.30	7,0	14,7	-1,0	-1,0	2,0	7,0	14,6	1,0	-1,0	2,0					



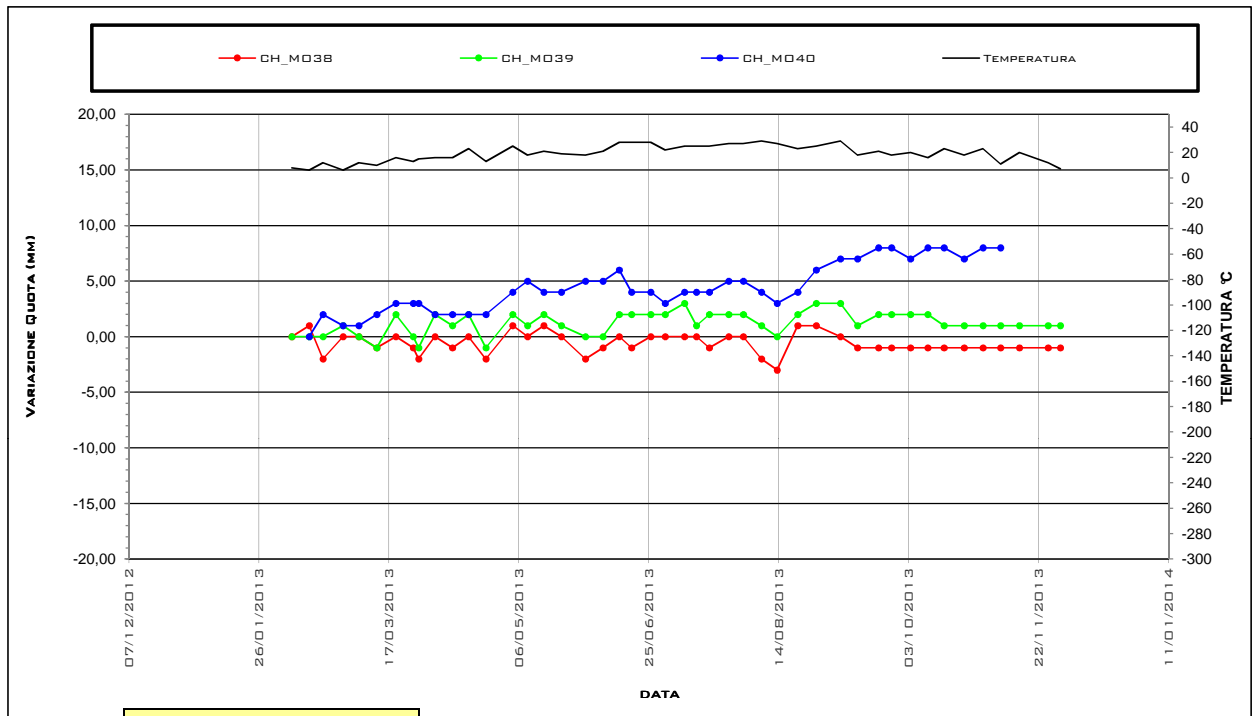


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ III Ordine - Tufo \ 38-40  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 07/02/2013  
**Data lettura di zero** 07/02/2013

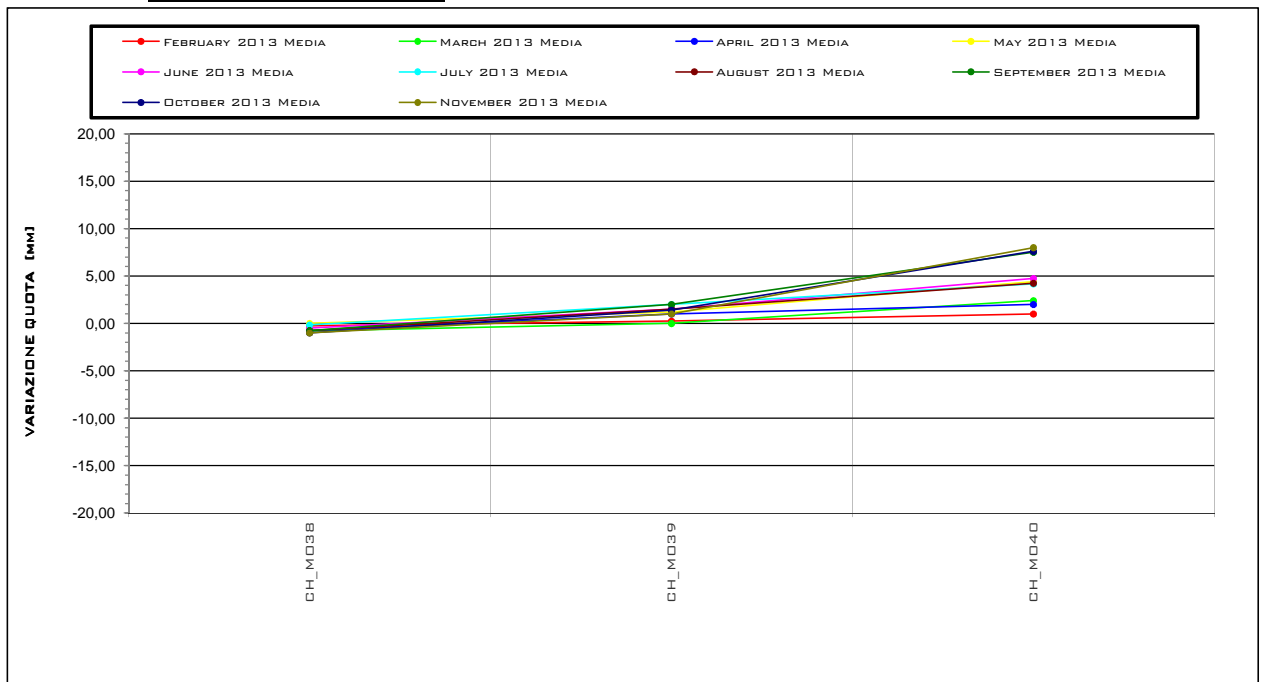
**UBICAZIONE**  
STAZIONE CHIAIA \ \ III Ordine - Tufo \ 38-40



**GRAFICO QUOTA**



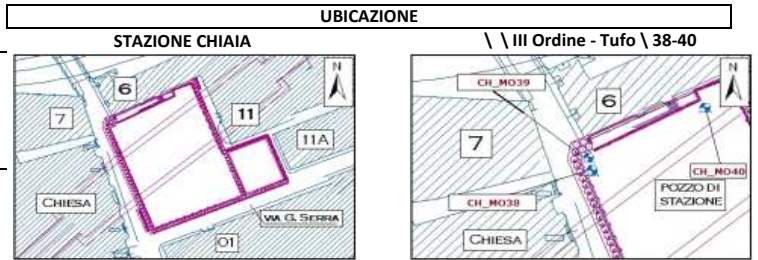
**GRAFICO ISOCRONE**



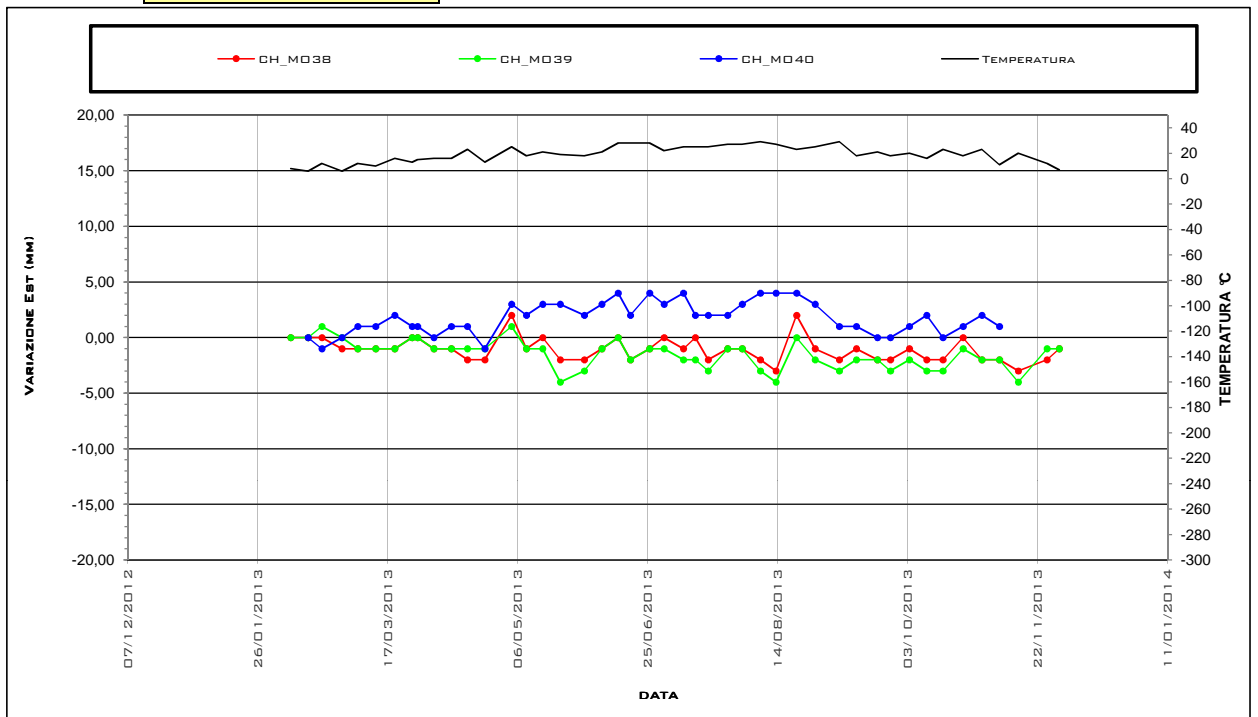




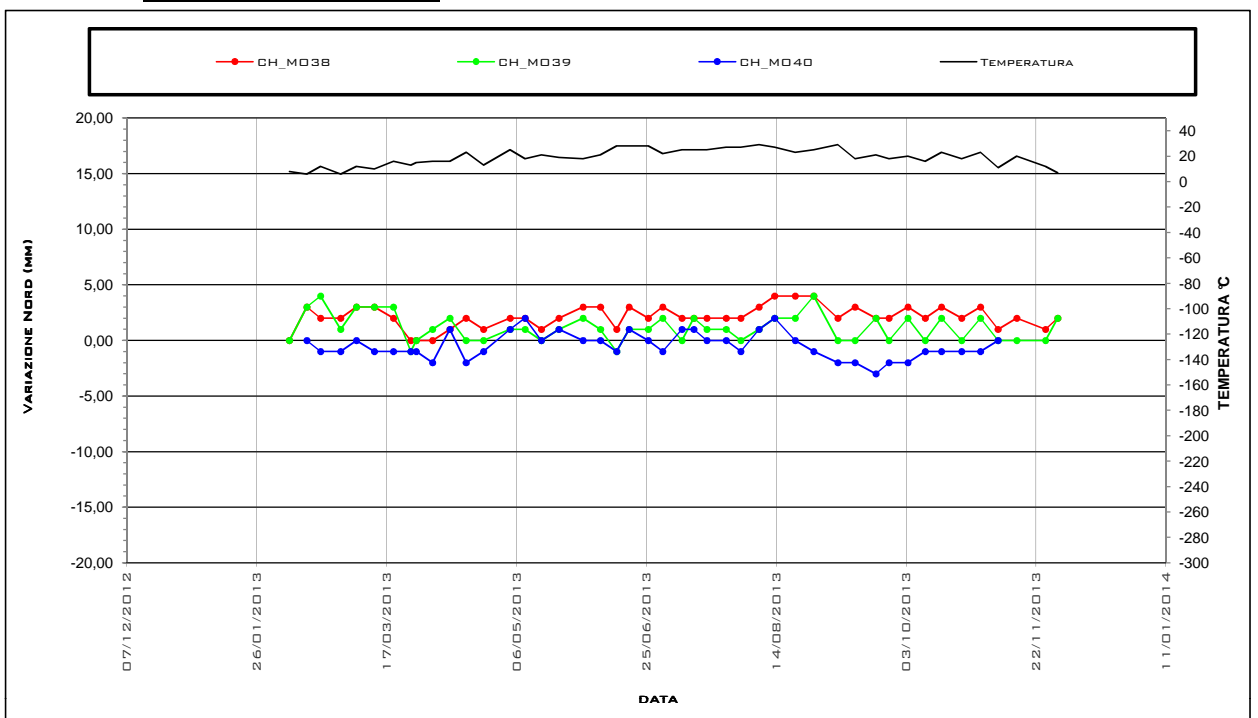
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ III Ordine - Tufo \ 38-40  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 07/02/2013  
**Data lettura di zero** 07/02/2013



**GRAFICO EST**



**GRAFICO NORD**





Ubicazione STAZIONE CHIAIA

Opera \ \ IV Ordine - Tufo \ 41-44

Tipo Strumento Mire Ottiche

Data posa in opera 05/03/2013

Data lettura di zero 05/03/2013

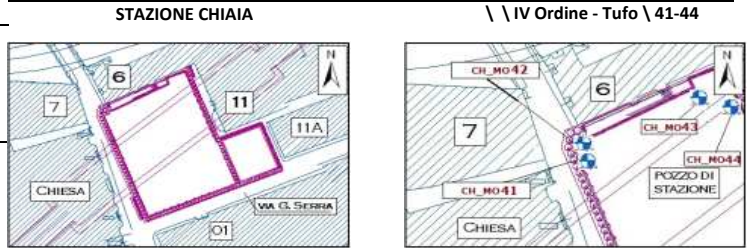
Ultima Misura 41 in data 30/11/2013

Letto. n°	DATA	CH_M041					CH_M042					CH_M043					CH_M044				
		Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est. Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est. Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est. Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est. Spost. [mm]	Nord Spost. [mm]
1	05/03/2013 10.30	12,0	9,5	0,0	0,0	0,0	12,0	9,4	0,0	0,0	0,0	12,0	9,7	0,0	0,0	0,0	12,0	10,2	0,0	0,0	0,0
2	12/03/2013 08.30	10,0	9,5	1,0	1,0	3,0	10,0	9,4	-1,0	-1,0	2,0	10,0	9,7	1,0	1,0	-2,0	10,0	10,2	0,0	-1,0	-2,0
3	19/03/2013 16.00	16,0	9,5	0,0	0,0	4,0	16,0	9,4	1,0	-1,0	2,0	16,0	9,7	1,0	2,0	-2,0	16,0	10,2	1,0	0,0	-2,0
4	26/03/2013 08.30	13,0	9,5	0,0	2,0	0,0	13,0	9,4	0,0	2,0	-2,0	13,0	9,7	0,0	1,0	-2,0	13,0	10,2	0,0	0,0	-3,0
5	28/03/2013 11.00	15,0	9,5	-2,0	0,0	1,0	15,0	9,4	0,0	0,0	0,0	15,0	9,7	1,0	1,0	-2,0	15,0	10,2	0,0	0,0	-2,0
6	03/04/2013 17.30	16,0	9,5	-3,0	0,0	2,0	16,0	9,4	1,0	0,0	0,0	16,0	9,7	-1,0	1,0	-4,0	16,0	10,2	-2,0	-1,0	-3,0
7	10/04/2013 10.30	16,0	9,5	-1,0	-1,0	2,0	16,0	9,4	0,0	0,0	2,0	16,0	9,7	1,0	1,0	-2,0	16,0	10,2	1,0	0,0	-1,0
8	16/04/2013 15.00	23,0	9,5	0,0	0,0	0,0	23,0	9,4	2,0	0,0	0,0	23,0	9,7	1,0	1,0	-4,0	23,0	10,2	-2,0	-1,0	-3,0
9	23/04/2013 08.30	13,0	9,5	0,0	0,0	0,0	13,0	9,4	0,0	0,0	0,0	13,0	9,7	0,0	0,0	-2,0	13,0	10,2	-1,0	-1,0	-1,0
10	03/05/2013 14.30	25,0	9,5	0,0	1,0	1,0	25,0	9,4	0,0	1,0	0,0	25,0	9,7	0,0	5,0	-3,0	25,0	10,2	-2,0	1,0	-2,0
11	09/05/2013 08.30	18,0	9,5	-1,0	-1,0	2,0	18,0	9,4	1,0	-1,0	1,0	18,0	9,7	0,0	3,0	-2,0	18,0	10,2	-1,0	-2,0	-2,0
12	15/05/2013 14.30	21,0	9,5	-1,0	0,0	2,0	21,0	9,4	1,0	1,0	0,0	21,0	9,7	1,0	4,0	-4,0	21,0	10,2	-1,0	0,0	-4,0
13	22/05/2013 08.30	19,0	9,5	0,0	-1,0	3,0	19,0	9,4	0,0	-1,0	0,0	19,0	9,7	1,0	4,0	-5,0	19,0	10,2	-1,0	0,0	-3,0
14	31/05/2013 15.30	18,0	9,5	-1,0	-1,0	3,0	18,0	9,4	-1,0	-2,0	1,0	18,0	9,7	1,0	4,0	-4,0	18,0	10,2	0,0	-1,0	-3,0
15	07/06/2013 08.30	21,0	9,5	-1,0	-1,0	2,0	21,0	9,4	-1,0	-1,0	2,0	21,0	9,7	1,0	4,0	-5,0	21,0	10,2	1,0	0,0	-4,0
16	13/06/2013 14.30	28,0	9,5	0,0	0,0	0,0	28,0	9,4	1,0	-1,0	0,0	28,0	9,7	2,0	5,0	-5,0	28,0	10,2	1,0	1,0	-4,0
17	18/06/2013 09.00	28,0	9,5	0,0	0,0	2,0	28,0	9,4	0,0	-2,0	1,0	28,0	9,7	1,0	3,0	-4,0	28,0	10,2	-1,0	0,0	-2,0
18	25/06/2013 18.00	28,0	9,5	0,0	0,0	2,0	28,0	9,4	0,0	0,0	1,0					28,0	10,2	0,0	0,0	-4,0	
19	01/07/2013 07.30	22,0	9,5	1,0	0,0	2,0	22,0	9,4	0,0	-1,0	1,0	22,0	9,7	1,0	4,0	-5,0	22,0	10,2	0,0	0,0	-3,0
20	08/07/2013 17.30	25,0	9,5	1,0	0,0	3,0	25,0	9,4	3,0	-1,0	0,0	25,0	9,7	2,0	5,0	-3,0	25,0	10,2	0,0	1,0	-1,0
21	13/07/2013 07.30	25,0	9,5	0,0	0,0	3,0	25,0	9,4	1,0	-2,0	0,0	25,0	9,7	2,0	3,0	-3,0	25,0	10,2	0,0	0,0	-3,0
22	18/07/2013 07.30	25,0	9,5	-1,0	-1,0	2,0	25,0	9,4	2,0	-2,0	0,0	25,0	9,7	1,0	3,0	-4,0	25,0	10,2	-1,0	-1,0	-2,0
23	25/07/2013 18.00	27,0	9,5	1,0	1,0	2,0	27,0	9,4	1,0	-1,0	1,0	27,0	9,7	2,0	4,0	-4,0	27,0	10,2	0,0	-1,0	-2,0
24	31/07/2013 09.00	27,0	9,5	1,0	-1,0	2,0	27,0	9,4	2,0	-2,0	0,0	27,0	9,7	2,0	3,0	-4,0	27,0	10,2	0,0	-1,0	-1,0
25	07/08/2013 09.00	29,0	9,5	0,0	-1,0	3,0	29,0	9,4	0,0	-4,0	1,0	29,0	9,7	1,0	4,0	-3,0	29,0	10,2	-1,0	-3,0	-1,0
26	13/08/2013 09.00	27,0	9,5	-1,0	-2,0	4,0	27,0	9,4	-1,0	-5,0	2,0	27,0	9,7	0,0	5,0	-2,0	27,0	10,2	-1,0	-2,0	-1,0
27	21/08/2013 07.30	23,0	9,5	1,0	1,0	3,0	23,0	9,4	2,0	0,0	1,0	23,0	9,7	2,0	5,0	-5,0	23,0	10,2	-1,0	1,0	-2,0
28	28/08/2013 10.30	25,0	9,5	2,0	-2,0	4,0	25,0	9,4	5,0	-1,0	2,0	25,0	9,7	3,0	4,0	-5,0	25,0	10,2	-1,0	1,0	-1,0
29	06/09/2013 17.30	29,0	9,5	1,0	-2,0	2,0	29,0	9,4	3,0	-1,0	0,0										
30	13/09/2013 07.30	18,0	9,5	0,0	0,0	2,0	18,0	9,4	3,0	0,0	0,0										
31	21/09/2013 09.30						21,0	9,4	3,0	-1,0	1,0										
32	26/09/2013 09.30	18,0	9,5	3,0	-1,0	4,0	18,0	9,4	3,0	-1,0	1,0										
33	03/10/2013 16.30	20,0	9,5	3,0	-1,0	5,0	20,0	9,4	3,0	-1,0	2,0										
34	10/10/2013 08.30	16,0	9,5	3,0	-3,0	3,0	16,0	9,4	3,0	-2,0	0,0										
35	16/10/2013 14.30	23,0	9,5	1,0	-3,0	4,0	23,0	9,4	2,0	-1,0	2,0										
36	24/10/2013 08.30	18,0	9,5	1,0	-1,0	4,0	18,0	9,4	2,0	1,0	0,0										
37	31/10/2013 14.30	23,0	9,5	0,0	-2,0	5,0	23,0	9,4	2,0	-1,0	1,0	23,0	9,7	5,0	5,0	-5,0					
38	07/11/2013 08.30	11,0	9,5	0,0	-1,0	3,0	11,0	9,4	2,0	0,0	0,0										
39	14/11/2013 14.30	20,0	9,5	1,0	-3,0	4,0	20,0	9,4	2,0	-2,0	0,0										
40	25/11/2013 15.30	12,0	9,5	1,0	-1,0	3,0	12,0	9,4	2,0	-1,0	0,0										
41	30/11/2013 08.30	7,0	9,5	1,0	0,0	5,0	7,0	9,4	1,0	1,0	1,0										

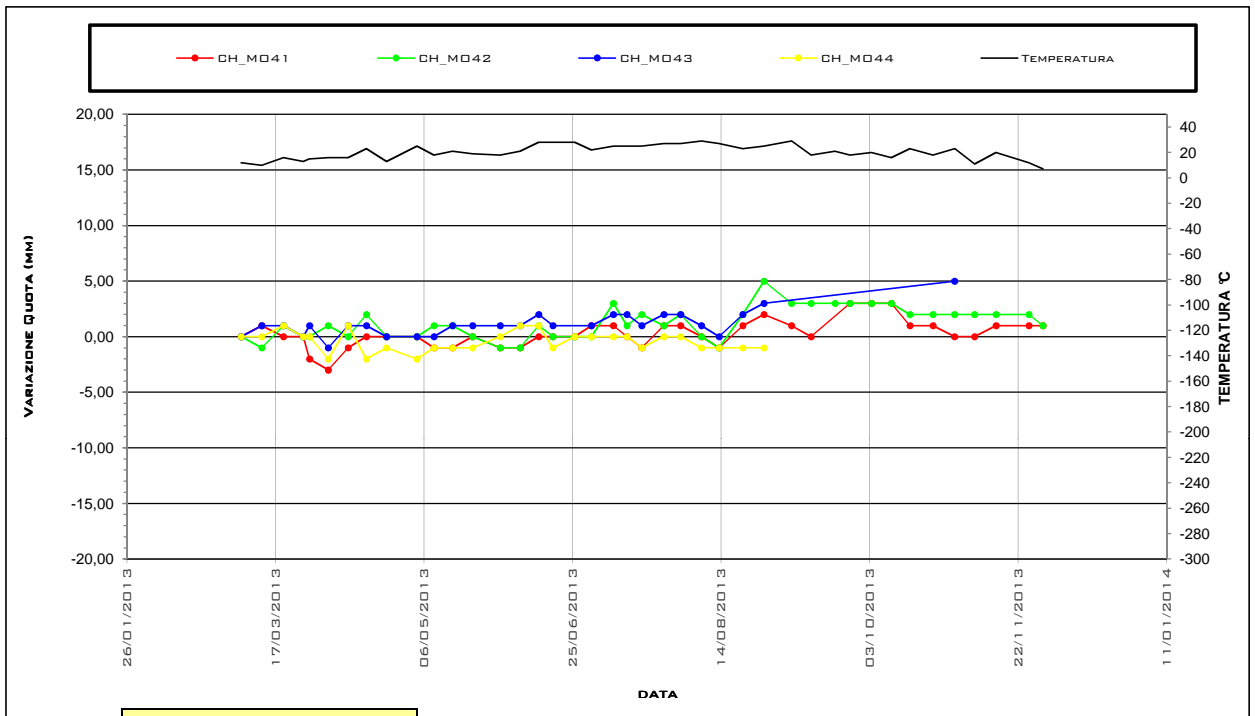


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ IV Ordine - Tufo \ 41-44  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 05/03/2013  
**Data lettura di zero** 05/03/2013

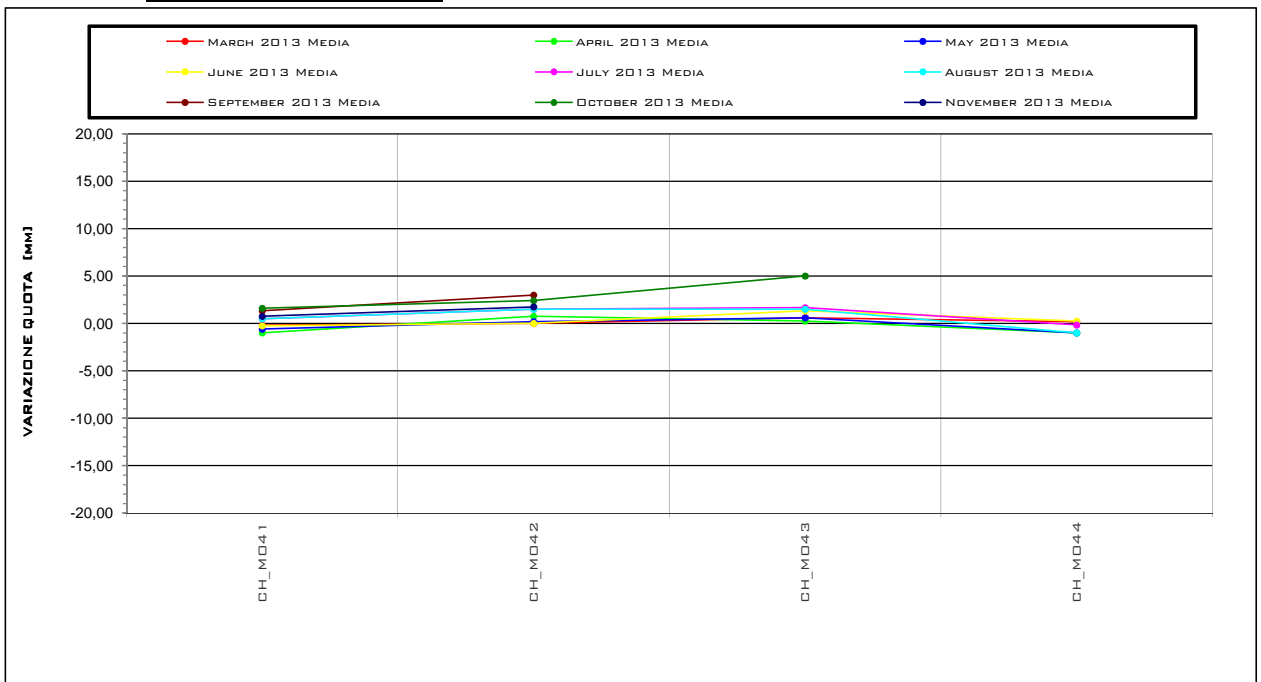
**UBICAZIONE**



**GRAFICO QUOTA**

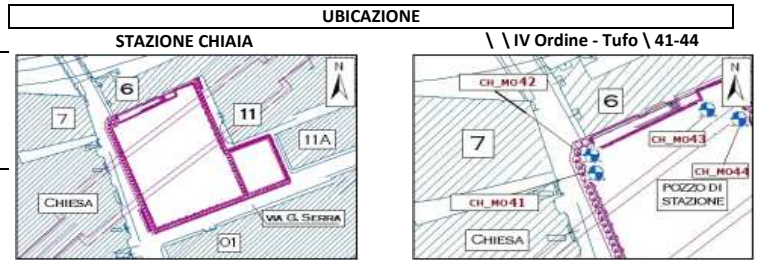


**GRAFICO ISOCRONE**

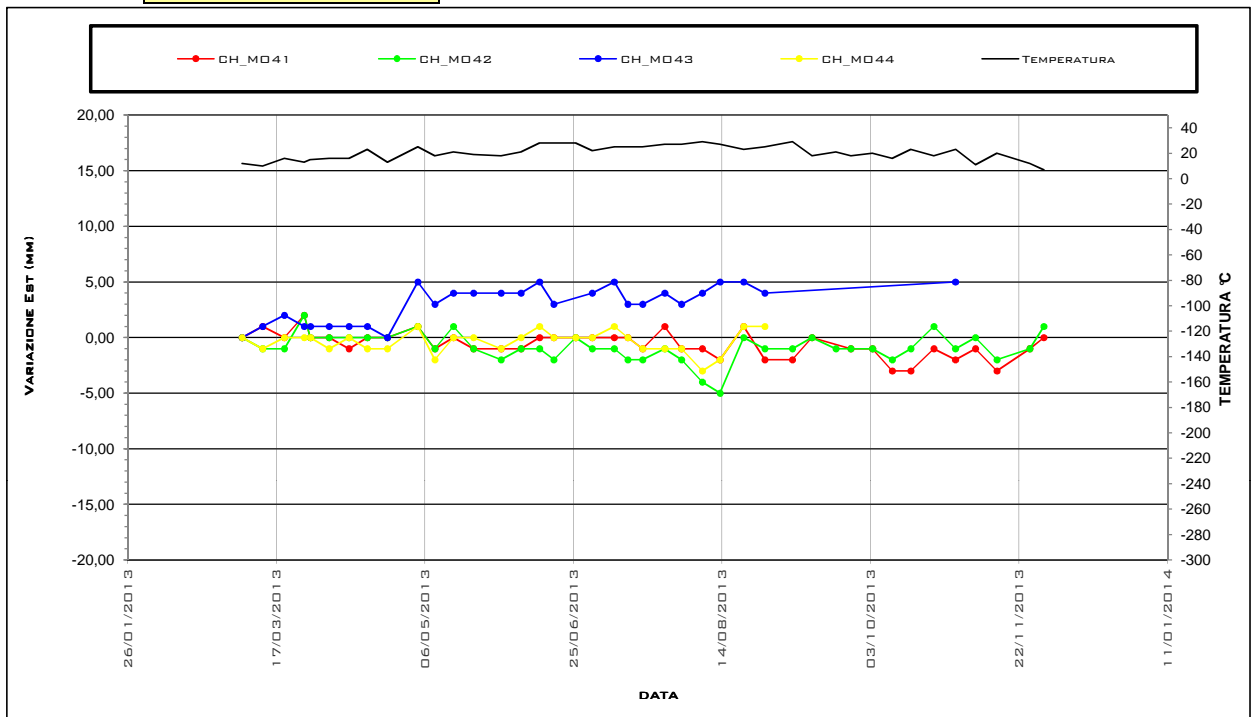




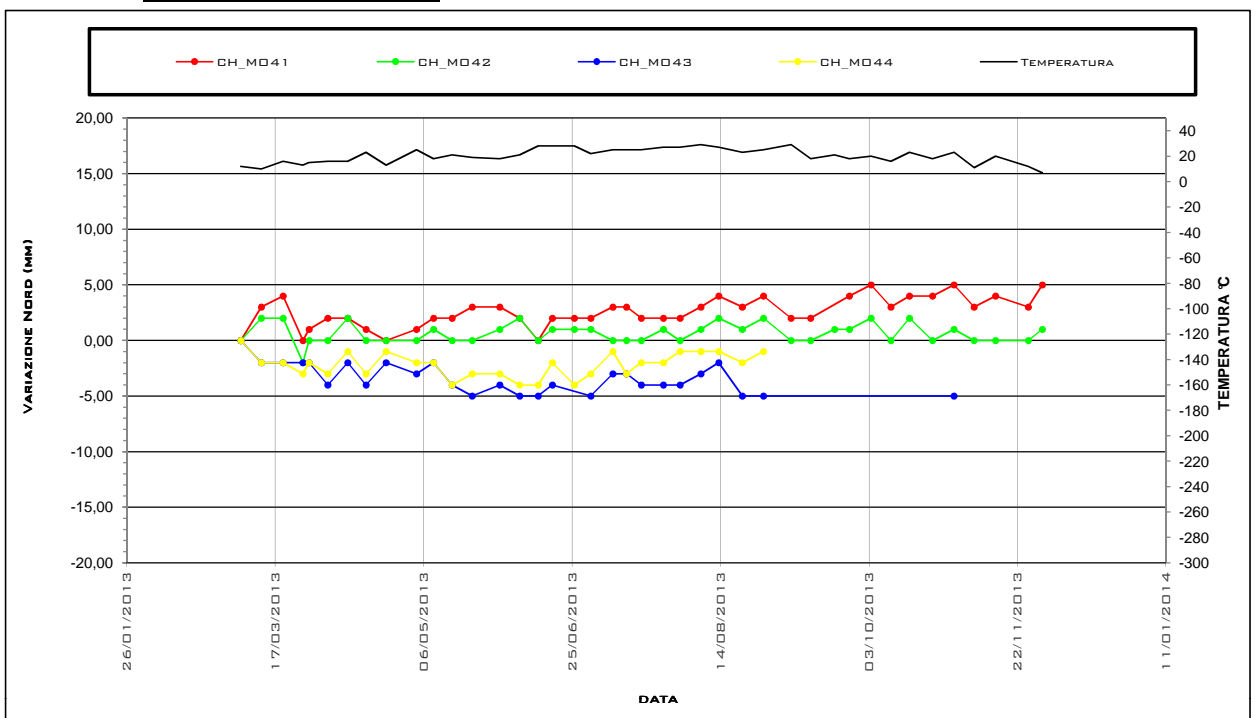
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ IV Ordine - Tufo \ 41-44  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 05/03/2013  
**Data lettura di zero** 05/03/2013



**GRAFICO EST**



**GRAFICO NORD**





Ubicazione STAZIONE CHIAIA

Opera \ \ Supplementari \ 45-47

Tipo Strumento Mire Ottiche

Data posa in opera 28/03/2013

Data lettura di zero 28/03/2013

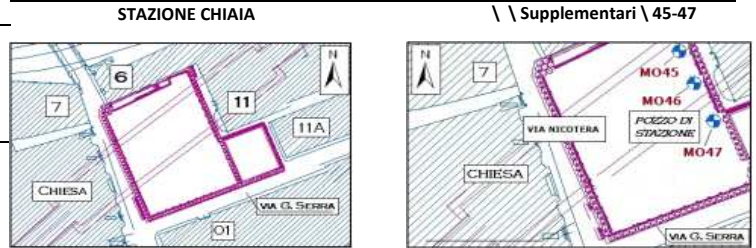
Ultima Misura 37 in data 30/11/2013

Letto. n°	DATA	CH_M045					CH_M046					CH_M047				
		Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]
1	28/03/2013 11.00	15,0	14,8	0,0	0,0	0,0	15,1	15,1	0,0	0,0	0,0	15,0	15,3	0,0	0,0	0,0
2	03/04/2013 17.30	16,0	14,8	1,0	0,0	-1,0	16,0	15,1	0,0	-1,0	0,0	16,0	15,3	-1,0	-1,0	0,0
3	10/04/2013 10.30	16,0	14,8	1,0	2,0	2,0	16,0	15,1	0,0	0,0	2,0	16,0	15,3	-1,0	-1,0	2,0
4	16/04/2013 15.00	23,0	14,8	1,0	0,0	0,0	23,0	15,1	-1,0	0,0	0,0	23,0	15,3	0,0	0,0	1,0
5	23/04/2013 08.30	13,0	14,8	0,0	-2,0	2,0	13,0	15,1	0,0	-1,0	2,0	13,0	15,3	0,0	0,0	2,0
6	03/05/2013 14.30	25,0	14,8	2,0	0,0	0,0	25,0	15,1	0,0	1,0	0,0	25,0	15,3	-1,0	1,0	2,0
7	09/05/2013 08.30	18,0	14,8	2,0	-1,0	2,0	18,0	15,1	0,0	0,0	1,0	18,0	15,3	0,0	-1,0	3,0
8	15/05/2013 14.30	21,0	14,8	1,0	0,0	0,0	21,0	15,1	0,0	1,0	0,0	21,0	15,3	0,0	2,0	2,0
9	22/05/2013 08.30	19,0	14,8	1,0	0,0	0,0	19,0	15,1	0,0	1,0	0,0	19,0	15,3	0,0	1,0	2,0
10	31/05/2013 15.30	18,0	14,8	1,0	1,0	0,0	18,0	15,1	0,0	0,0	0,0	18,0	15,3	0,0	1,0	1,0
11	07/06/2013 08.30	21,0	14,8	2,0	0,0	-1,0	21,0	15,1	-1,0	1,0	1,0	21,0	15,3	-1,0	2,0	1,0
12	13/06/2013 14.30	28,0	14,8	3,0	3,0	0,0	28,0	15,1	1,0	3,0	-1,0	28,0	15,3	0,0	3,0	1,0
13	18/06/2013 09.00	28,0	14,8	2,0	0,0	1,0	28,0	15,1	0,0	1,0	1,0	28,0	15,3	-1,0	1,0	2,0
14	25/06/2013 18.00	28,0	14,8	2,0	1,0	1,0	28,0	15,1	0,0	1,0	0,0	28,0	15,3	-1,0	1,0	1,0
15	01/07/2013 07.30	22,0	14,8	1,0	0,0	0,0	22,0	15,1	-1,0	1,0	0,0	22,0	15,3	-1,0	1,0	2,0
16	08/07/2013 17.30	25,0	14,8	2,0	2,0	1,0	25,0	15,1	-2,0	2,0	1,0	25,0	15,3	-1,0	2,0	2,0
17	13/07/2013 07.30	25,0	14,8	1,0	1,0	1,0	25,0	15,1	0,0	0,0	0,0	25,0	15,3	-1,0	1,0	3,0
18	18/07/2013 07.30	25,0	14,8	1,0	1,0	1,0	25,0	15,1	-2,0	2,0	1,0	25,0	15,3	-2,0	3,0	3,0
19	25/07/2013 18.00	27,0	14,8	1,0	1,0	1,0	27,0	15,1	-1,0	2,0	1,0	27,0	15,3	-2,0	3,0	3,0
20	31/07/2013 09.00	27,0	14,8	1,0	0,0	1,0	27,0	15,1	-1,0	1,0	1,0	27,0	15,3	-2,0	1,0	4,0
21	07/08/2013 09.00	29,0	14,8	0,0	2,0	2,0	29,0	15,1	-2,0	2,0	1,0	29,0	15,2	-4,0	2,0	3,0
22	13/08/2013 09.00	27,0	14,8	-1,0	3,0	3,0	27,0	15,1	-3,0	2,0	0,0	27,0	15,2	-5,0	3,0	2,0
23	21/08/2013 07.30	23,0	14,8	1,0	1,0	1,0	23,0	15,1	-2,0	3,0	1,0	23,0	15,3	-1,0	3,0	3,0
24	28/08/2013 10.30	25,0	14,8	0,0	2,0	1,0	25,0	15,1	-2,0	3,0	1,0	25,0	15,3	-2,0	3,0	4,0
25	06/09/2013 17.30	29,0	14,8	2,0	2,0	1,0	29,0	15,1	-1,0	2,0	1,0	29,0	15,3	-2,0	2,0	2,0
26	13/09/2013 07.30	18,0	14,8	1,0	2,0	1,0	18,0	15,1	-2,0	2,0	1,0	18,0	15,3	-1,0	1,0	2,0
27	21/09/2013 09.30	21,0	14,8	1,0	2,0	0,0	21,0	15,1	-2,0	2,0	1,0	21,0	15,3	-1,0	2,0	2,0
28	26/09/2013 09.30	18,0	14,8	2,0	1,0	1,0	18,0	15,1	-2,0	2,0	1,0	18,0	15,3	-2,0	3,0	3,0
29	03/10/2013 16.30	20,0	14,8	1,0	2,0	1,0	20,0	15,1	-2,0	3,0	1,0	20,0	15,3	-3,0	3,0	2,0
30	10/10/2013 08.30	16,0	14,8	2,0	2,0	2,0	16,0	15,1	-2,0	2,0	3,0	16,0	15,3	-3,0	4,0	4,0
31	16/10/2013 14.30	23,0	14,8	2,0	1,0	1,0	23,0	15,1	-2,0	2,0	2,0	23,0	15,3	-2,0	2,0	3,0
32	24/10/2013 08.30	18,0	14,8	2,0	2,0	1,0	18,0	15,1	-3,0	3,0	1,0	18,0	15,3	-2,0	3,0	4,0
33	31/10/2013 14.30	23,0	14,8	2,0	3,0	0,0	23,0	15,1	-2,0	2,0	1,0	23,0	15,3	-2,0	3,0	4,0
34	07/11/2013 08.30	11,0	14,8	2,0	3,0	2,0	11,0	15,1	-2,0	3,0	1,0	11,0	15,3	-3,0	4,0	4,0
35	14/11/2013 14.30	20,0	14,8	2,0	3,0	1,0	20,0	15,1	-2,0	2,0	1,0	20,0	15,3	-3,0	3,0	4,0
36	25/11/2013 15.30	12,0	14,8	2,0	2,0	2,0	12,0	15,1	-1,0	3,0	3,0	12,0	15,3	-2,0	3,0	4,0
37	30/11/2013 08.30	7,0	14,8	2,0	3,0	2,0	7,0	15,1	-1,0	3,0	1,0	7,0	15,3	-2,0	3,0	4,0

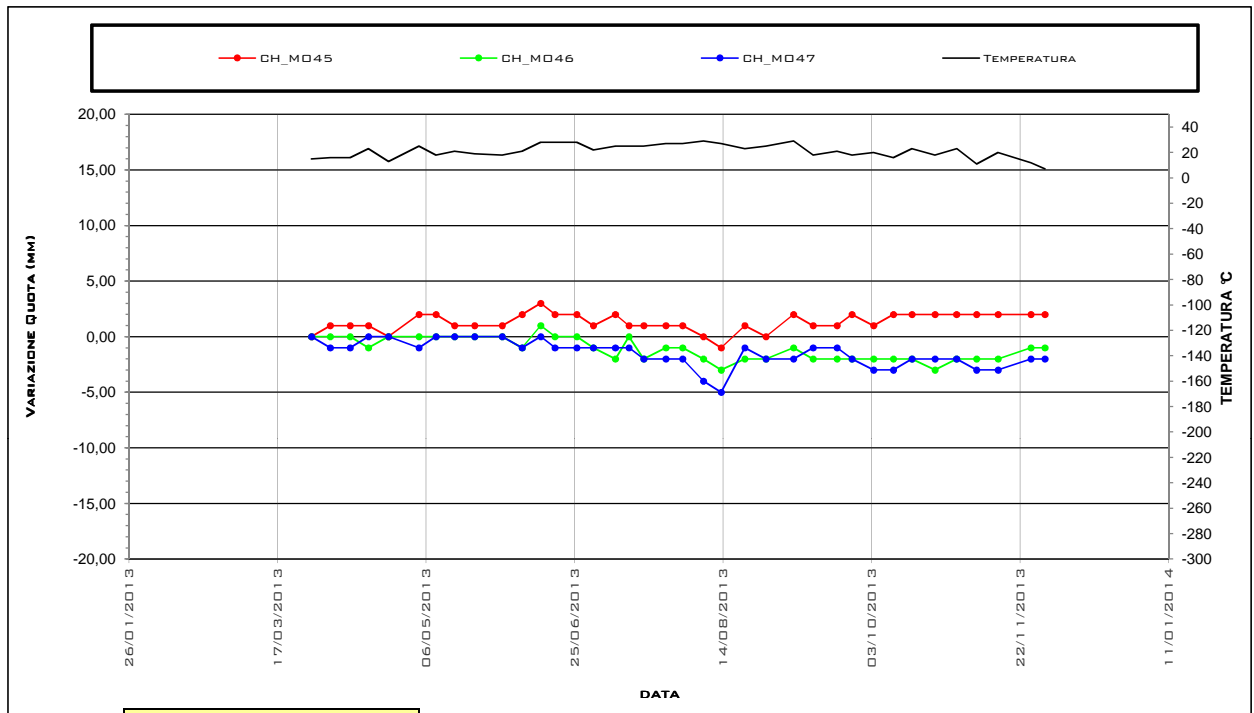


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Supplementari \ 45-47  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 28/03/2013  
**Data lettura di zero** 28/03/2013

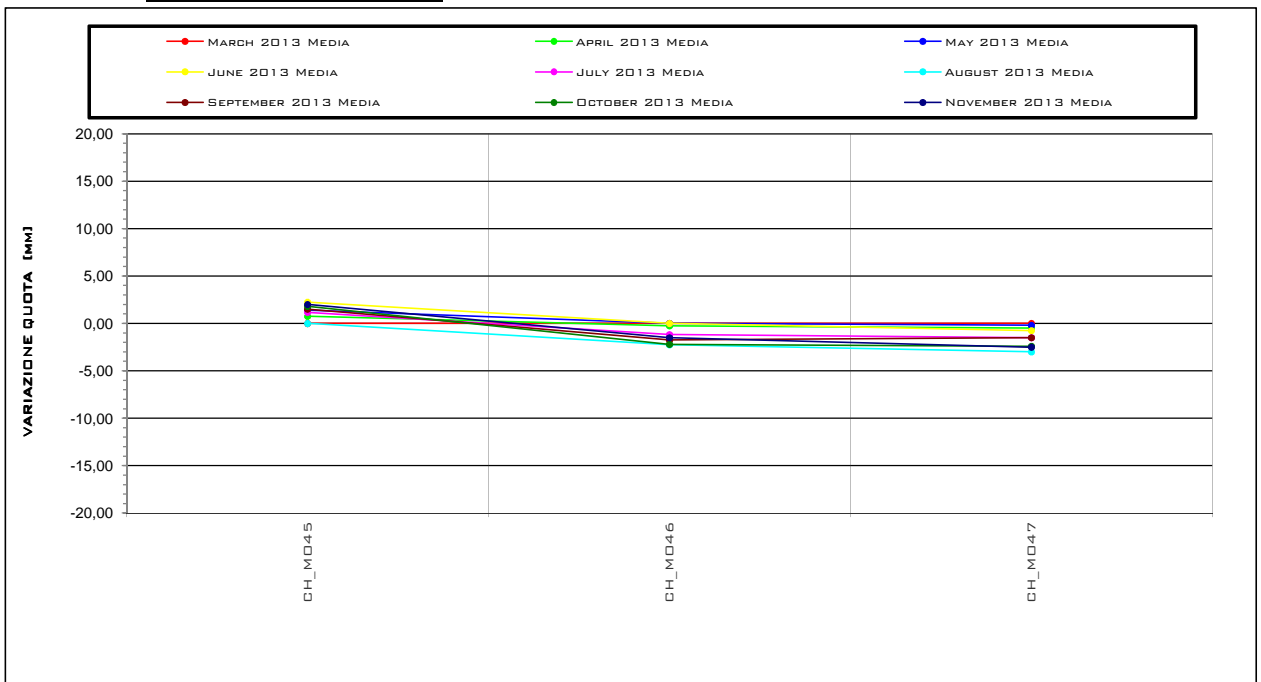
**UBICAZIONE**



**GRAFICO QUOTA**

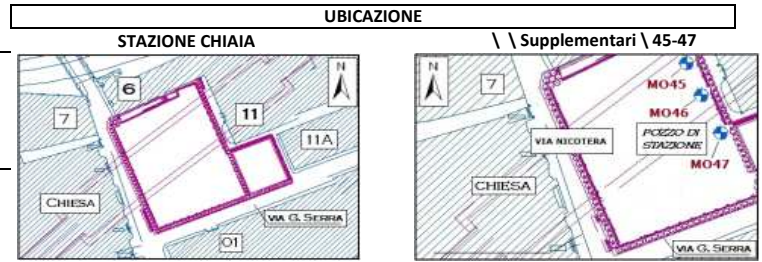


**GRAFICO ISOCRONE**

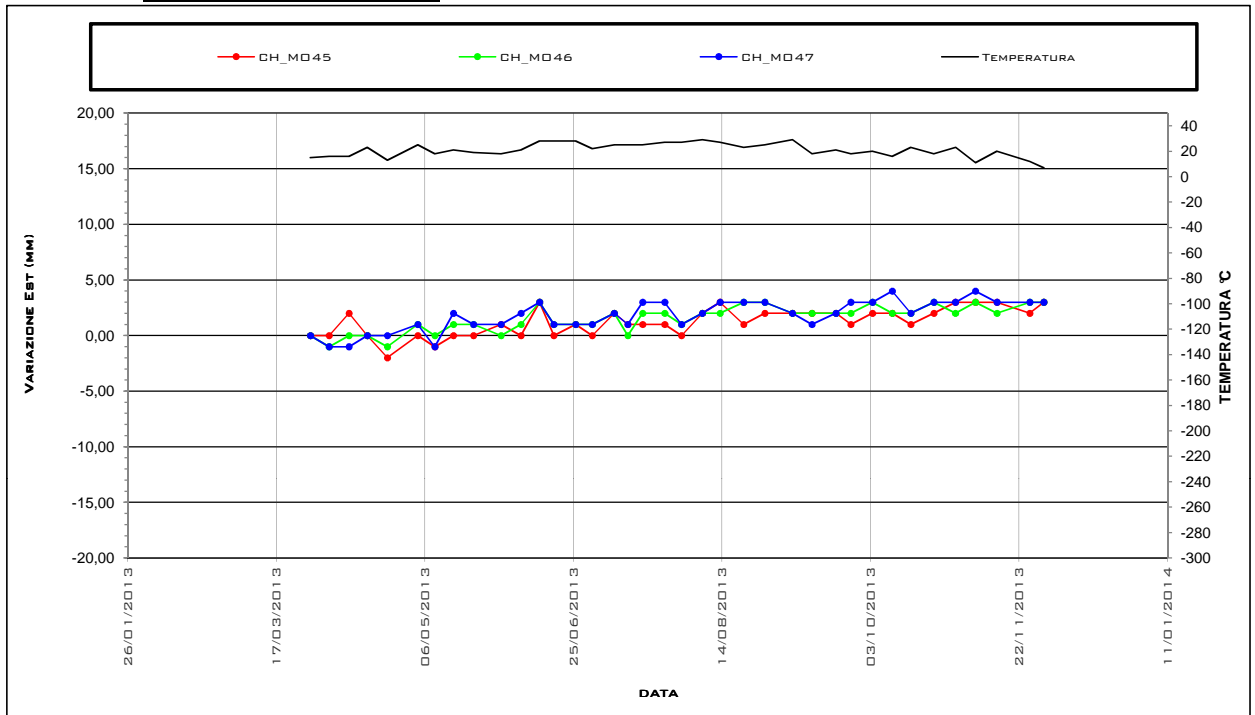




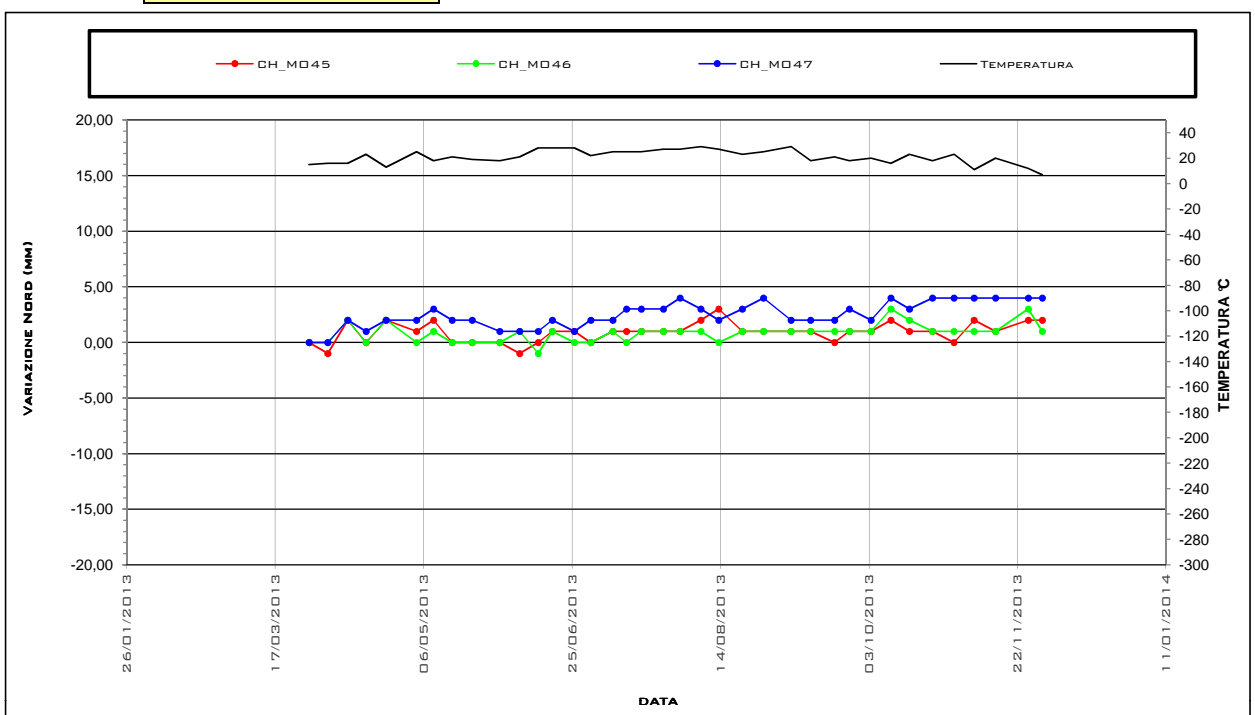
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Supplementari \ 45-47  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 28/03/2013  
**Data lettura di zero** 28/03/2013



**GRAFICO EST**



**GRAFICO NORD**







Ubicazione STAZIONE CHIAIA

Opera \ \ Supplementari \ 48-50

Tipo Strumento Mire Ottiche

Data posa in opera 28/03/2013

Data lettura di zero 28/03/2013

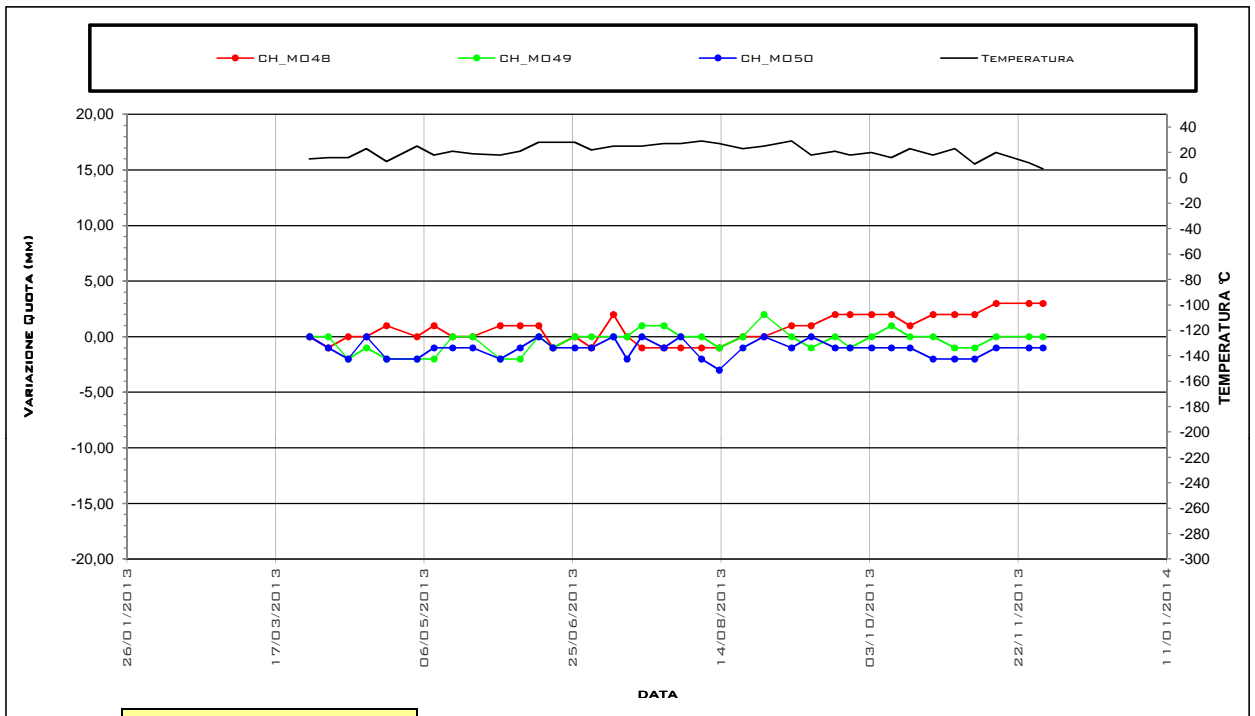
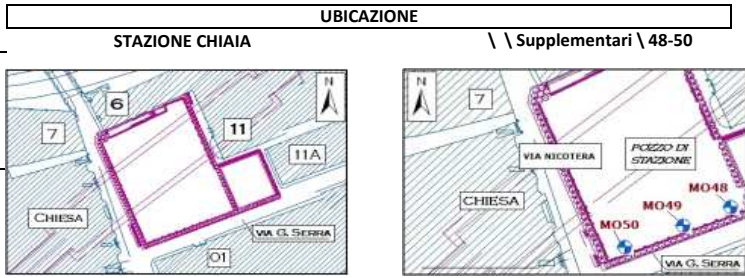
Ultima Misura 37 in data 30/11/2013

Letto. n°	DATA	CH_M048					CH_M049					CH_M050				
		Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est. Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est. Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est. Spost. [mm]	Nord Spost. [mm]
1	28/03/2013 11.00	15,0	16,1	0,0	0,0	0,0	17,4	17,4	0,0	0,0	0,0	15,0	20,6	0,0	0,0	0,0
2	03/04/2013 17.30	16,0	16,1	-1,0	-1,0	0,0	16,0	17,4	0,0	-3,0	1,0	16,0	20,6	-1,0	1,0	0,0
3	10/04/2013 10.30	16,0	16,1	0,0	0,0	0,0	16,0	17,4	-2,0	1,0	2,0	16,0	20,6	-2,0	2,0	0,0
4	16/04/2013 15.00	23,0	16,1	0,0	2,0	0,0	23,0	17,4	-1,0	0,0	-1,0	23,0	20,6	0,0	1,0	-1,0
5	23/04/2013 08.30	13,0	16,1	1,0	1,0	2,0	13,0	17,4	-2,0	1,0	-1,0	13,0	20,6	-2,0	2,0	0,0
6	03/05/2013 14.30	25,0	16,1	0,0	4,0	1,0	25,0	17,4	-2,0	2,0	-1,0	25,0	20,6	-2,0	3,0	-1,0
7	09/05/2013 08.30	18,0	16,1	1,0	1,0	2,0	18,0	17,4	-2,0	1,0	1,0	18,0	20,6	-1,0	3,0	-1,0
8	15/05/2013 14.30	21,0	16,1	0,0	3,0	0,0	21,0	17,4	0,0	-1,0	-2,0	21,0	20,6	-1,0	0,0	-2,0
9	22/05/2013 08.30	19,0	16,1	0,0	3,0	-1,0	19,0	17,4	0,0	0,0	-1,0	19,0	20,6	-1,0	0,0	-1,0
10	31/05/2013 15.30	18,0	16,1	1,0	1,0	-1,0	18,0	17,4	-2,0	0,0	2,0	18,0	20,6	-2,0	2,0	1,0
11	07/06/2013 08.30	21,0	16,1	1,0	2,0	0,0	21,0	17,4	-2,0	0,0	0,0	21,0	20,6	-1,0	1,0	0,0
12	13/06/2013 14.30	28,0	16,1	1,0	3,0	-1,0	28,0	17,4	0,0	2,0	0,0	28,0	20,6	0,0	4,0	-1,0
13	18/06/2013 09.00	28,0	16,1	-1,0	2,0	2,0	28,0	17,4	-1,0	-1,0	1,0	28,0	20,6	-1,0	1,0	0,0
14	25/06/2013 18.00	28,0	16,1	0,0	4,0	0,0	28,0	17,4	0,0	0,0	0,0	28,0	20,6	-1,0	1,0	1,0
15	01/07/2013 07.30	22,0	16,1	-1,0	4,0	1,0	22,0	17,4	0,0	-1,0	1,0	22,0	20,6	-1,0	0,0	0,0
16	08/07/2013 17.30	25,0	16,1	2,0	3,0	2,0	25,0	17,4	0,0	-3,0	-1,0	25,0	20,6	0,0	-3,0	0,0
17	13/07/2013 07.30	25,0	16,1	0,0	4,0	3,0	25,0	17,4	0,0	-2,0	0,0	25,0	20,6	-2,0	-1,0	1,0
18	18/07/2013 07.30	25,0	16,1	-1,0	3,0	2,0	25,0	17,4	1,0	-2,0	0,0	25,0	20,6	0,0	0,0	0,0
19	25/07/2013 18.00	27,0	16,1	-1,0	4,0	3,0	27,0	17,4	1,0	-1,0	1,0	27,0	20,6	-1,0	0,0	0,0
20	31/07/2013 09.00	27,0	16,1	-1,0	4,0	4,0	27,0	17,4	0,0	0,0	1,0	27,0	20,6	0,0	2,0	1,0
21	07/08/2013 09.00	29,0	16,1	-1,0	4,0	4,0	29,0	17,4	0,0	0,0	1,0	29,0	20,6	-2,0	2,0	-1,0
22	13/08/2013 09.00	27,0	16,1	-1,0	3,0	3,0	27,0	17,4	-1,0	-1,0	1,0	27,0	20,6	-3,0	1,0	-2,0
23	21/08/2013 07.30	23,0	16,1	0,0	7,0	2,0	23,0	17,4	0,0	-1,0	1,0	23,0	20,6	-1,0	-1,0	0,0
24	28/08/2013 10.30	25,0	16,1	0,0	5,0	3,0	25,0	17,4	2,0	-3,0	3,0	25,0	20,6	0,0	-2,0	3,0
25	06/09/2013 17.30	29,0	16,1	1,0	5,0	1,0	29,0	17,4	0,0	-2,0	1,0	29,0	20,6	-1,0	-1,0	0,0
26	13/09/2013 07.30	18,0	16,1	1,0	5,0	2,0	18,0	17,4	-1,0	-3,0	0,0	18,0	20,6	0,0	0,0	0,0
27	21/09/2013 09.30	21,0	16,1	2,0	4,0	1,0	21,0	17,4	0,0	-2,0	0,0	21,0	20,6	-1,0	-1,0	1,0
28	26/09/2013 09.30	18,0	16,1	2,0	6,0	3,0	18,0	17,4	-1,0	-3,0	0,0	18,0	20,6	-1,0	-2,0	0,0
29	03/10/2013 16.30	20,0	16,1	2,0	4,0	3,0	20,0	17,4	0,0	-1,0	1,0	20,0	20,6	-1,0	0,0	0,0
30	10/10/2013 08.30	16,0	16,1	2,0	7,0	3,0	16,0	17,4	1,0	-2,0	0,0	16,0	20,6	-1,0	-1,0	1,0
31	16/10/2013 14.30	23,0	16,1	1,0	5,0	3,0	23,0	17,4	0,0	-2,0	2,0	23,0	20,6	-1,0	0,0	3,0
32	24/10/2013 08.30	18,0	16,1	2,0	4,0	2,0	18,0	17,4	0,0	0,0	1,0	18,0	20,6	-2,0	0,0	0,0
33	31/10/2013 14.30	23,0	16,1	2,0	5,0	4,0	23,0	17,4	-1,0	-3,0	2,0	23,0	20,6	-2,0	-1,0	1,0
34	07/11/2013 08.30	11,0	16,1	2,0	6,0	3,0	11,0	17,4	-1,0	-2,0	0,0	11,0	20,6	-2,0	-1,0	-1,0
35	14/11/2013 14.30	20,0	16,1	3,0	5,0	4,0	20,0	17,4	0,0	-3,0	2,0	20,0	20,6	-1,0	-1,0	1,0
36	25/11/2013 15.30	12,0	16,1	3,0	5,0	4,0	12,0	17,4	0,0	-2,0	0,0	12,0	20,6	-1,0	0,0	1,0
37	30/11/2013 08.30	7,0	16,1	3,0	6,0	3,0	7,0	17,4	0,0	0,0	1,0	7,0	20,6	-1,0	1,0	2,0

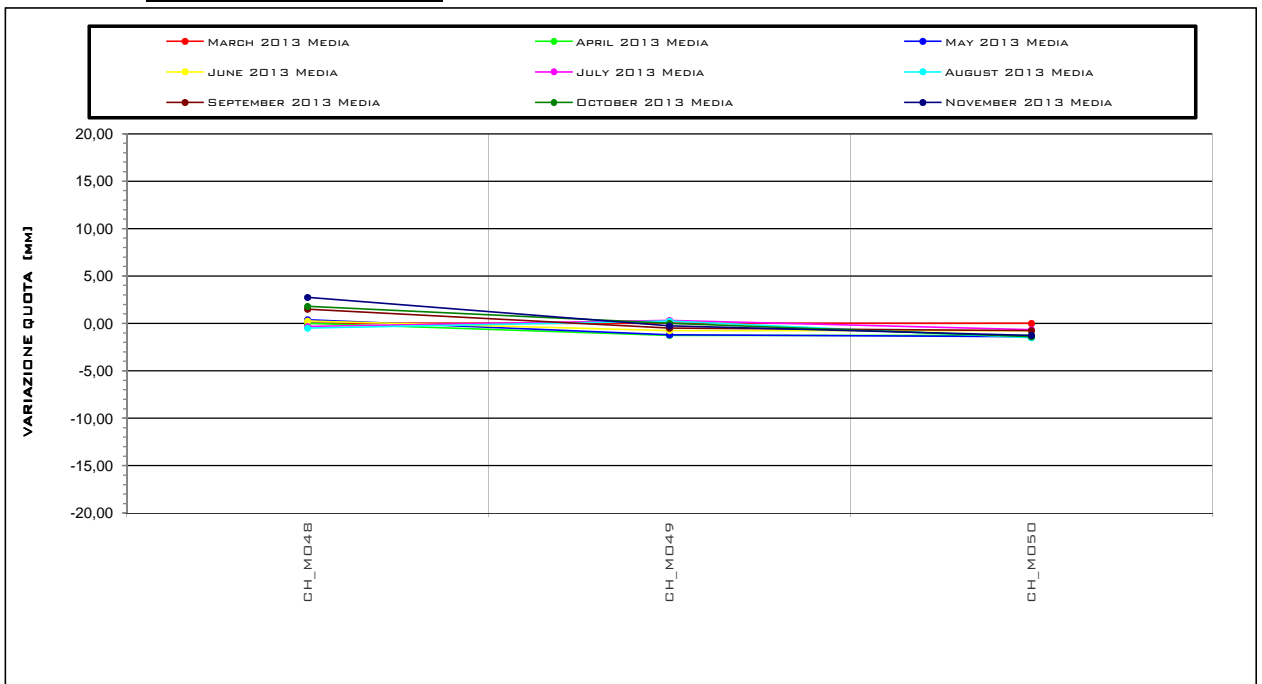


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Supplementari \ 48-50  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 28/03/2013  
**Data lettura di zero** 28/03/2013

**GRAFICO QUOTA**

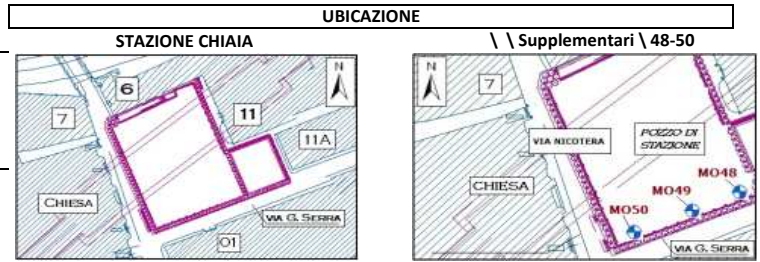


**GRAFICO ISOCRONE**

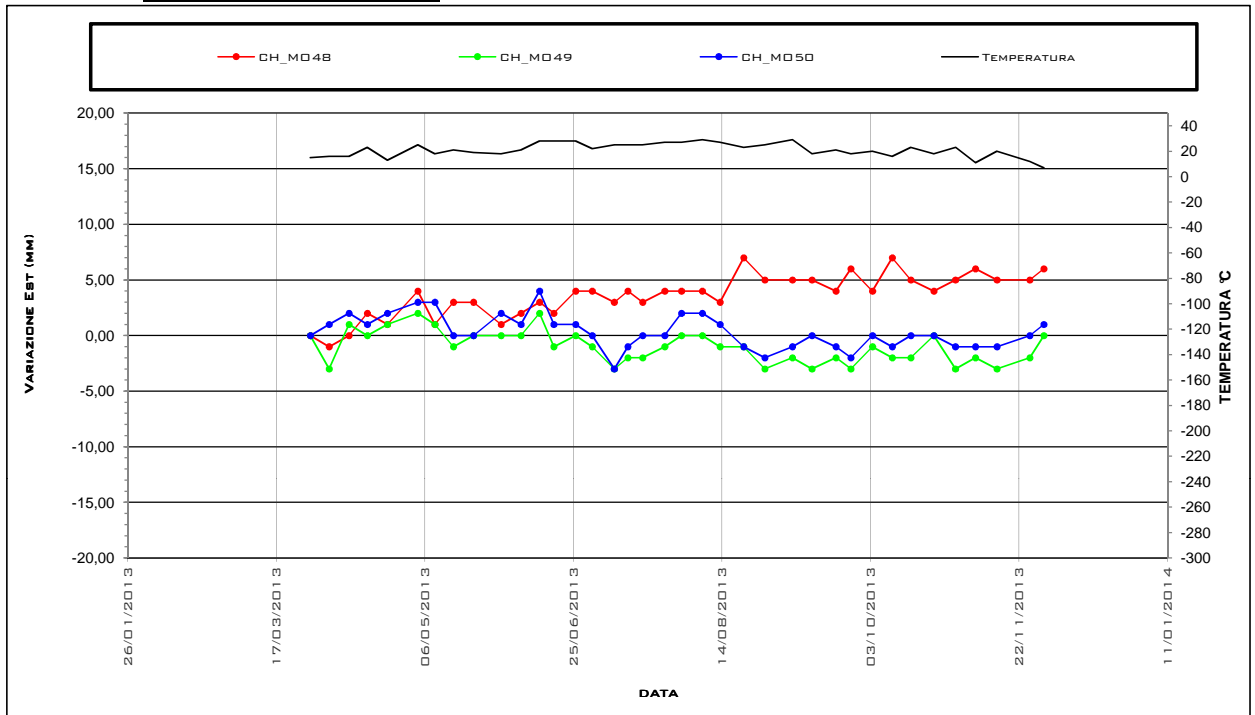




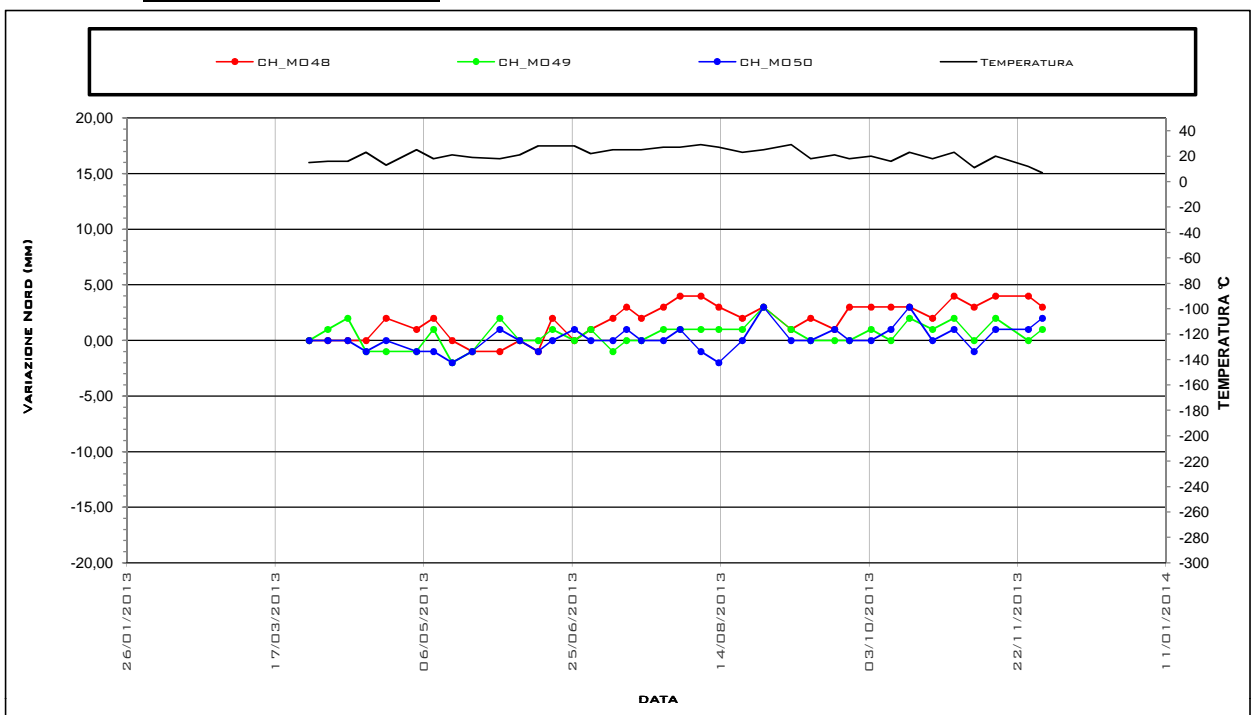
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Supplementari \ 48-50  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 28/03/2013  
**Data lettura di zero** 28/03/2013



**GRAFICO EST**



**GRAFICO NORD**





Ubicazione STAZIONE CHIAIA

Opera \ \ Supplementari \ 51-53

Tipo Strumento Mire Ottiche

Data posa in opera 03/04/2013

Data lettura di zero 03/04/2013

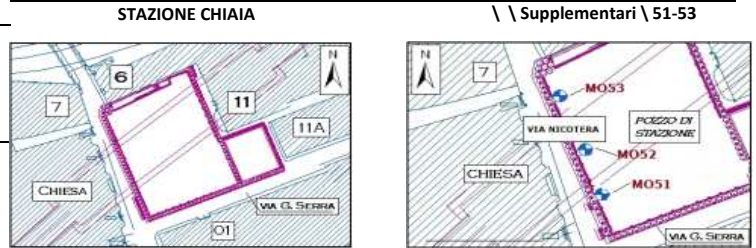
Ultima Misura 37 in data 30/11/2013

Letto. n°	DATA	CH_M051					CH_M052					CH_M053				
		Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est. Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est. Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est. Spost. [mm]	Nord Spost. [mm]
1	28/03/2013 11.00						15,0	21,9	0,0	0,0	0,0	15,0	22,3	0,0	0,0	0,0
2	03/04/2013 17.30	16,0	21,6	0,0	0,0	0,0	16,0	21,9	-1,0	1,0	0,0	16,0	22,3	1,0	0,0	-1,0
3	10/04/2013 10.30	16,0	21,6	0,0	1,0	0,0	16,0	21,9	-2,0	1,0	1,0	16,0	22,3	0,0	-1,0	0,0
4	16/04/2013 15.00	23,0	21,6	1,0	0,0	0,0	23,0	21,9	-1,0	1,0	0,0	23,0	22,3	0,0	0,0	-1,0
5	23/04/2013 08.30	13,0	21,6	-2,0	0,0	0,0	13,0	21,9	-2,0	2,0	0,0	13,0	22,3	-2,0	0,0	-2,0
6	03/05/2013 14.30	25,0	21,6	0,0	2,0	0,0	25,0	21,9	-1,0	3,0	0,0	25,0	22,3	0,0	1,0	-1,0
7	09/05/2013 08.30	18,0	21,6	0,0	2,0	0,0	18,0	21,9	-2,0	2,0	0,0	18,0	22,3	-1,0	-1,0	0,0
8	15/05/2013 14.30	21,0	21,6	0,0	1,0	-1,0	21,0	21,9	0,0	2,0	0,0	21,0	22,3	1,0	1,0	-2,0
9	22/05/2013 08.30	19,0	21,6	0,0	0,0	0,0	19,0	21,9	-2,0	1,0	0,0	19,0	22,3	-1,0	-1,0	0,0
10	31/05/2013 15.30	18,0	21,6	-2,0	1,0	1,0	18,0	21,9	-3,0	2,0	1,0	18,0	22,3	-2,0	0,0	0,0
11	07/06/2013 08.30	21,0	21,6	-1,0	1,0	1,0	21,0	21,9	-2,0	1,0	1,0	21,0	22,3	-1,0	0,0	0,0
12	13/06/2013 14.30	28,0	21,6	0,0	4,0	-1,0	28,0	21,9	0,0	4,0	-1,0	28,0	22,3	0,0	1,0	-2,0
13	18/06/2013 09.00	28,0	21,6	0,0	2,0	1,0	28,0	21,9	-2,0	2,0	2,0	28,0	22,3	-1,0	-1,0	0,0
14	25/06/2013 18.00	28,0	21,6	-2,0	1,0	2,0	28,0	21,9	-2,0	2,0	2,0	28,0	22,3	0,0	0,0	0,0
15	01/07/2013 07.30	22,0	21,6	-1,0	2,0	2,0	22,0	21,9	-2,0	3,0	2,0	22,0	22,3	0,0	2,0	0,0
16	08/07/2013 17.30	25,0	21,6	0,0	-1,0	1,0	25,0	21,9	-2,0	-1,0	0,0	25,0	22,3	0,0	0,0	0,0
17	13/07/2013 07.30	25,0	21,6	-2,0	1,0	3,0	25,0	21,9	-3,0	2,0	1,0	25,0	22,3	-2,0	0,0	0,0
18	18/07/2013 07.30	25,0	21,6	-1,0	1,0	1,0	25,0	21,9	-2,0	1,0	1,0	25,0	22,3	0,0	0,0	0,0
19	25/07/2013 18.00	27,0	21,6	-1,0	1,0	1,0	27,0	21,9	-3,0	2,0	1,0	27,0	22,3	-1,0	1,0	0,0
20	31/07/2013 09.00	27,0	21,6	-2,0	1,0	1,0	27,0	21,9	-2,0	2,0	1,0	27,0	22,3	-1,0	0,0	0,0
21	07/08/2013 09.00	29,0	21,6	-3,0	1,0	1,0	29,0	21,9	-4,0	1,0	1,0	29,0	22,3	-2,0	0,0	0,0
22	13/08/2013 09.00	27,0	21,6	-4,0	0,0	1,0	27,0	21,9	-5,0	0,0	1,0	27,0	22,3	-3,0	-1,0	1,0
23	21/08/2013 07.30	23,0	21,6	-2,0	1,0	1,0	23,0	21,9	-2,0	3,0	2,0	23,0	22,3	-1,0	2,0	0,0
24	28/08/2013 10.30	25,0	21,6	0,0	0,0	4,0	25,0	21,9	-1,0	1,0	3,0	25,0	22,3	1,0	1,0	3,0
25	06/09/2013 17.30	29,0	21,6	-1,0	0,0	0,0	29,0	21,9	-2,0	1,0	2,0	29,0	22,3	1,0	0,0	0,0
26	13/09/2013 07.30	18,0	21,6	-2,0	1,0	1,0	18,0	21,9	-2,0	1,0	1,0	18,0	22,3	0,0	0,0	0,0
27	21/09/2013 09.30	21,0	21,6	-3,0	0,0	2,0	21,0	21,9	-4,0	2,0	1,0	21,0	22,3	-2,0	0,0	1,0
28	26/09/2013 09.30	18,0	21,6	-2,0	0,0	2,0	18,0	21,9	-3,0	1,0	1,0	18,0	22,3	0,0	0,0	0,0
29	03/10/2013 16.30	20,0	21,6	-1,0	1,0	2,0	20,0	21,9	-2,0	2,0	3,0	20,0	22,3	-1,0	0,0	1,0
30	10/10/2013 08.30	16,0	21,6	-1,0	1,0	2,0	16,0	21,9	-2,0	2,0	1,0	16,0	22,3	-1,0	0,0	0,0
31	16/10/2013 14.30	23,0	21,6	-3,0	0,0	3,0	23,0	21,9	-3,0	2,0	3,0	23,0	22,3	-1,0	-1,0	0,0
32	24/10/2013 08.30	18,0	21,6	-2,0	1,0	2,0	18,0	21,9	-3,0	4,0	1,0	18,0	22,3	-1,0	1,0	0,0
33	31/10/2013 14.30	23,0	21,6	-2,0	0,0	2,0	23,0	21,9	-5,0	1,0	1,0	23,0	22,3	-2,0	-1,0	1,0
34	07/11/2013 08.30	11,0	21,6	-2,0	0,0	1,0	11,0	21,9	-4,0	1,0	1,0	11,0	22,3	-1,0	0,0	0,0
35	14/11/2013 14.30	20,0	21,6	-2,0	0,0	2,0	20,0	21,9	-4,0	1,0	1,0	20,0	22,3	-1,0	-1,0	0,0
36	25/11/2013 15.30	12,0	21,6	-2,0	1,0	1,0	12,0	21,9	-3,0	3,0	2,0	12,0	22,3	-1,0	0,0	0,0
37	30/11/2013 08.30	7,0	21,6	-2,0	2,0	2,0	7,0	21,9	-3,0	3,0	2,0	7,0	22,3	-1,0	1,0	0,0

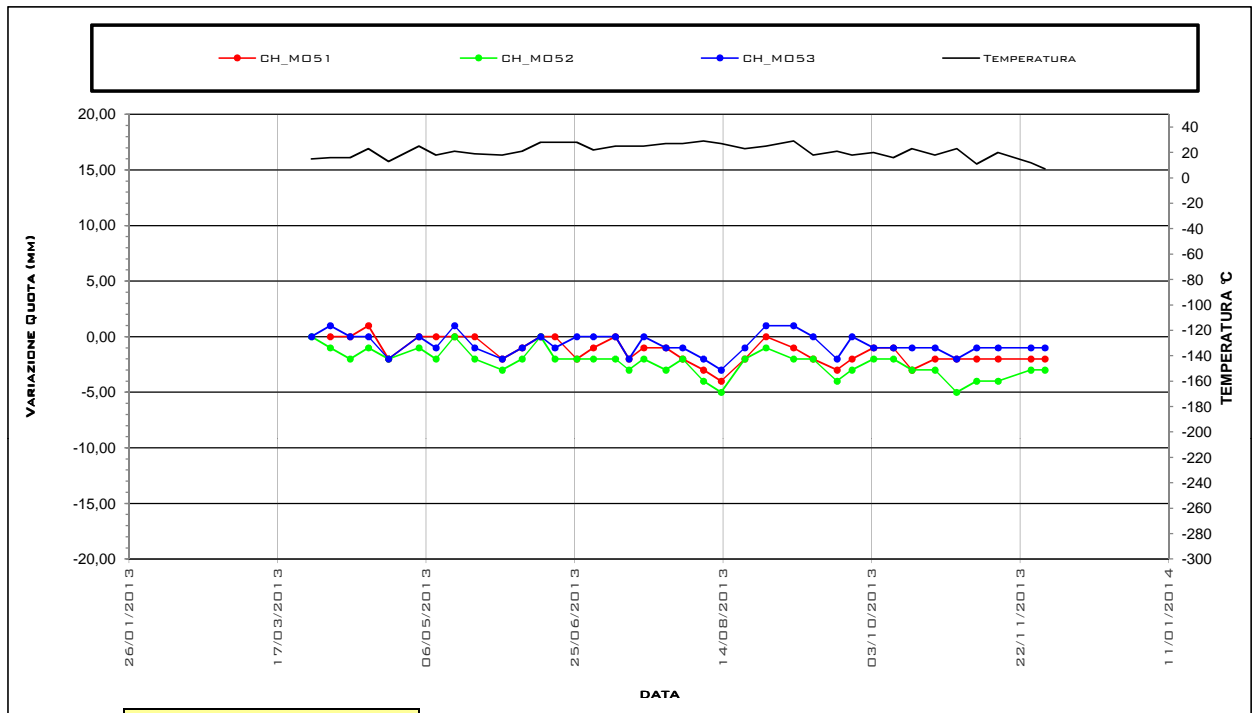


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Supplementari \ 51-53  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 03/04/2013  
**Data lettura di zero** 03/04/2013

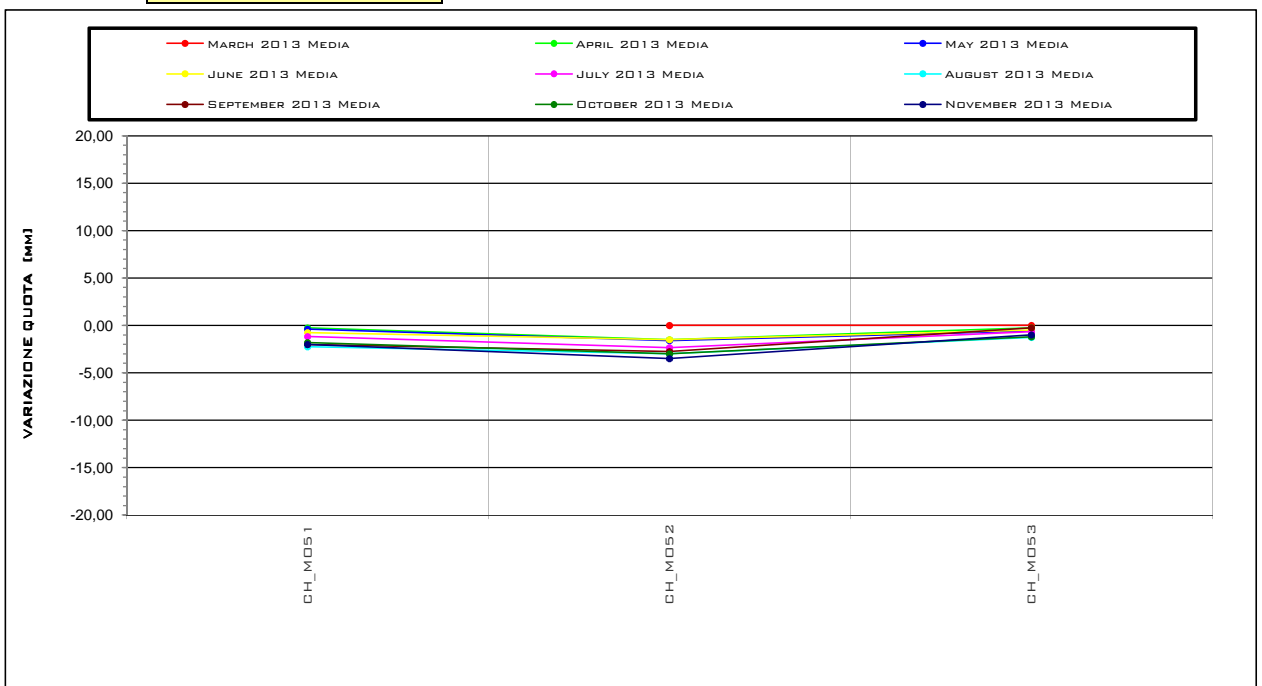
**UBICAZIONE**



**GRAFICO QUOTA**

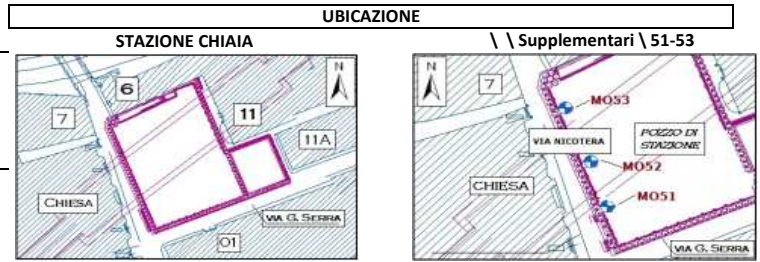


**GRAFICO ISOCRONE**

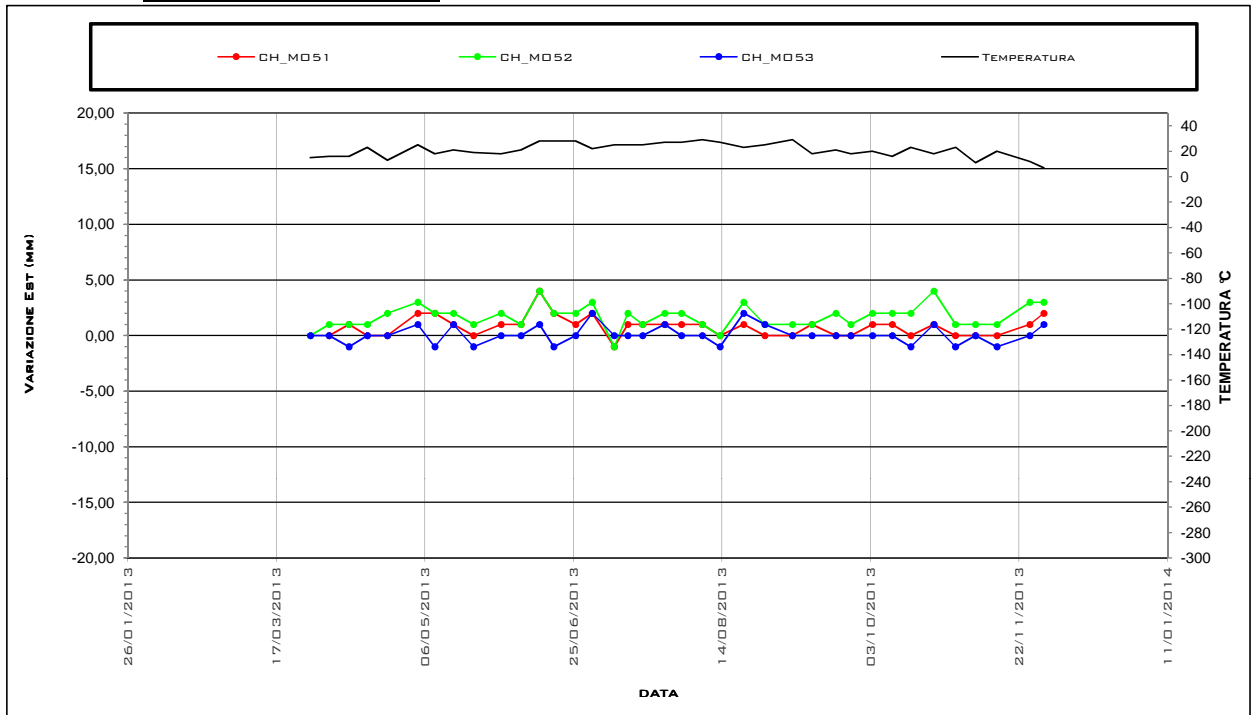




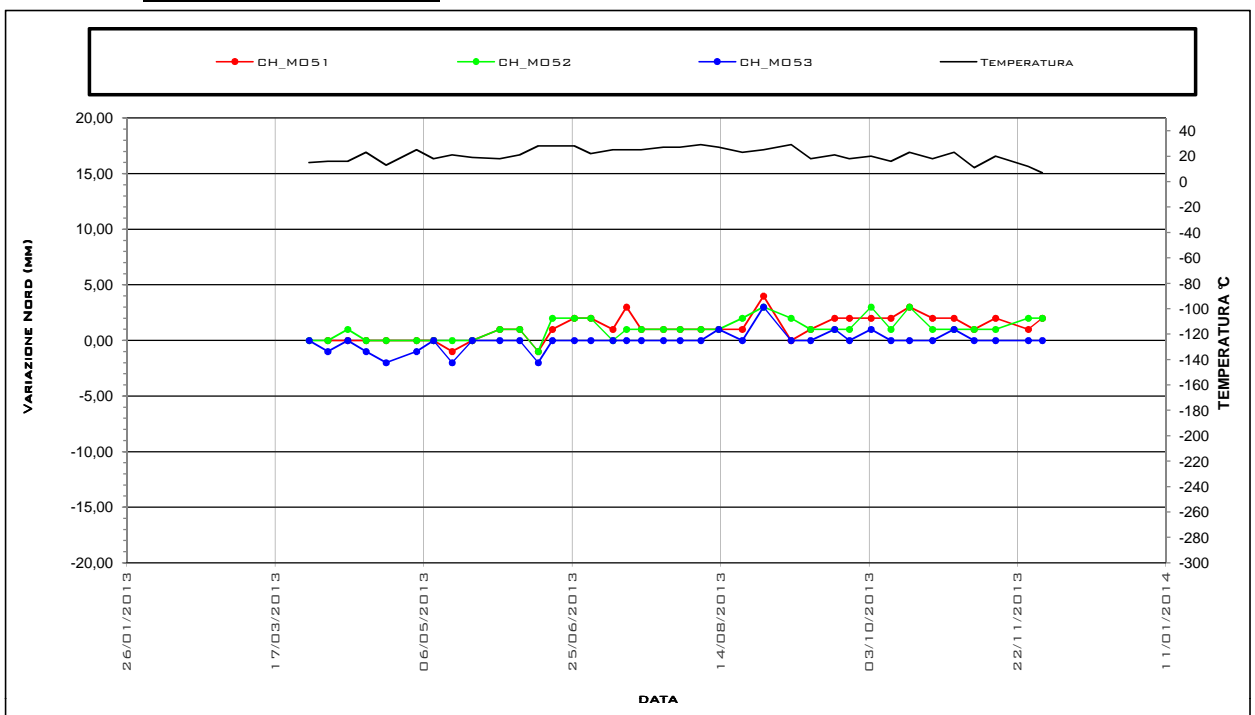
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Supplementari \ 51-53  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 03/04/2013  
**Data lettura di zero** 03/04/2013



**GRAFICO EST**



**GRAFICO NORD**





Ubicazione STAZIONE CHIAIA

Opera \ \ Supplementari \ 54-55

Tipo Strumento Mire Ottiche

Data posa in opera 28/03/2013

Data lettura di zero 28/03/2013

Ultima Misura 37 in data 30/11/2013

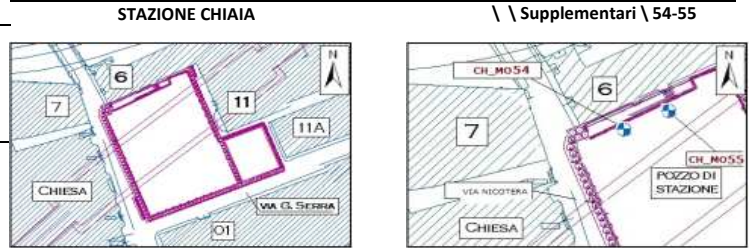
Letto. n°	DATA	CH_M054					CH_M055				
		Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]
1	28/03/2013 11.00	15,0	14,4	0,0	0,0	0,0	15,0	14,5	0,0	0,0	0,0
2	03/04/2013 17.30	16,0	14,4	-2,0	-2,0	0,0	16,0	14,5	0,0	0,0	0,0
3	10/04/2013 10.30	16,0	14,4	-2,0	-2,0	0,0	16,0	14,5	0,0	1,0	2,0
4	16/04/2013 15.00	23,0	14,4	-1,0	-1,0	-1,0	23,0	14,5	0,0	1,0	-1,0
5	23/04/2013 08.30	13,0	14,4	-2,0	-2,0	-1,0	13,0	14,5	-1,0	0,0	1,0
6	03/05/2013 14.30	25,0	14,4	0,0	-1,0	-1,0	25,0	14,5	0,0	2,0	1,0
7	09/05/2013 08.30	18,0	14,4	-1,0	-3,0	-1,0	18,0	14,5	0,0	1,0	3,0
8	15/05/2013 14.30	21,0	14,4	0,0	0,0	-2,0	21,0	14,5	0,0	2,0	0,0
9	22/05/2013 08.30	19,0	14,4	-1,0	-3,0	-1,0	19,0	14,5	0,0	2,0	0,0
10	31/05/2013 15.30	18,0	14,4	-2,0	-3,0	0,0	18,0	14,5	1,0	1,0	0,0
11	07/06/2013 08.30	21,0	14,4	-2,0	-2,0	-1,0	21,0	14,5	1,0	2,0	1,0
12	13/06/2013 14.30	28,0	14,4	0,0	-2,0	-3,0	28,0	14,5	2,0	4,0	-1,0
13	18/06/2013 09.00	28,0	14,4	-2,0	-3,0	0,0	28,0	14,5	1,0	1,0	0,0
14	25/06/2013 18.00	28,0	14,4	-1,0	-2,0	0,0	28,0	14,5	1,0	3,0	0,0
15	01/07/2013 07.30	22,0	14,4	0,0	-2,0	-1,0	22,0	14,5	1,0	2,0	0,0
16	08/07/2013 17.30	25,0	14,4	1,0	-3,0	-1,0	25,0	14,5	0,0	2,0	1,0
17	13/07/2013 07.30	25,0	14,4	0,0	-2,0	0,0	25,0	14,5	0,0	1,0	0,0
18	18/07/2013 07.30	25,0	14,4	1,0	-3,0	0,0	25,0	14,5	0,0	2,0	-1,0
19	25/07/2013 18.00	27,0	14,4	0,0	-2,0	-1,0	27,0	14,5	0,0	2,0	-1,0
20	31/07/2013 09.00	27,0	14,4	0,0	-4,0	-1,0	27,0	14,5	2,0	2,0	-1,0
21	07/08/2013 09.00	29,0	14,4	-2,0	-4,0	0,0	29,0	14,5	2,0	2,0	-1,0
22	13/08/2013 09.00	27,0	14,4	-3,0	-5,0	1,0	27,0	14,5	2,0	1,0	-1,0
23	21/08/2013 07.30	23,0	14,4	0,0	-1,0	-1,0	23,0	14,5	1,0	3,0	-1,0
24	28/08/2013 10.30	25,0	14,4	1,0	-3,0	1,0	25,0	14,5	2,0	3,0	0,0
25	06/09/2013 17.30	29,0	14,4	0,0	-4,0	-1,0	29,0	14,5	3,0	3,0	0,0
26	13/09/2013 07.30	18,0	14,4	0,0	-3,0	-2,0	18,0	14,5	2,0	3,0	-2,0
27	21/09/2013 09.30	21,0	14,4	-1,0	-4,0	-1,0	21,0	14,5	3,0	3,0	-1,0
28	26/09/2013 09.30	18,0	14,4	0,0	-4,0	-1,0	18,0	14,5	3,0	3,0	-1,0
29	03/10/2013 16.30	20,0	14,4	0,0	-3,0	0,0	20,0	14,5	3,0	2,0	0,0
30	10/10/2013 08.30	16,0	14,4	0,0	-4,0	-1,0	16,0	14,5	2,0	4,0	1,0
31	16/10/2013 14.30	23,0	14,4	0,0	-5,0	0,0	23,0	14,5	3,0	4,0	1,0
32	24/10/2013 08.30	18,0	14,4	-1,0	-3,0	-1,0	18,0	14,5	2,0	4,0	2,0
33	31/10/2013 14.30	23,0	14,4	-2,0	-5,0	0,0	23,0	14,5	3,0	4,0	0,0
34	07/11/2013 08.30	11,0	14,4	-2,0	-4,0	-1,0	11,0	14,5	3,0	5,0	2,0
35	14/11/2013 14.30	20,0	14,4	-2,0	-5,0	-1,0	20,0	14,5	2,0	4,0	1,0
36	25/11/2013 15.30	12,0	14,4	-1,0	-3,0	-2,0	12,0	14,5	2,0	5,0	2,0
37	30/11/2013 08.30	7,0	14,4	-1,0	-3,0	0,0	7,0	14,5	3,0	4,0	0,0



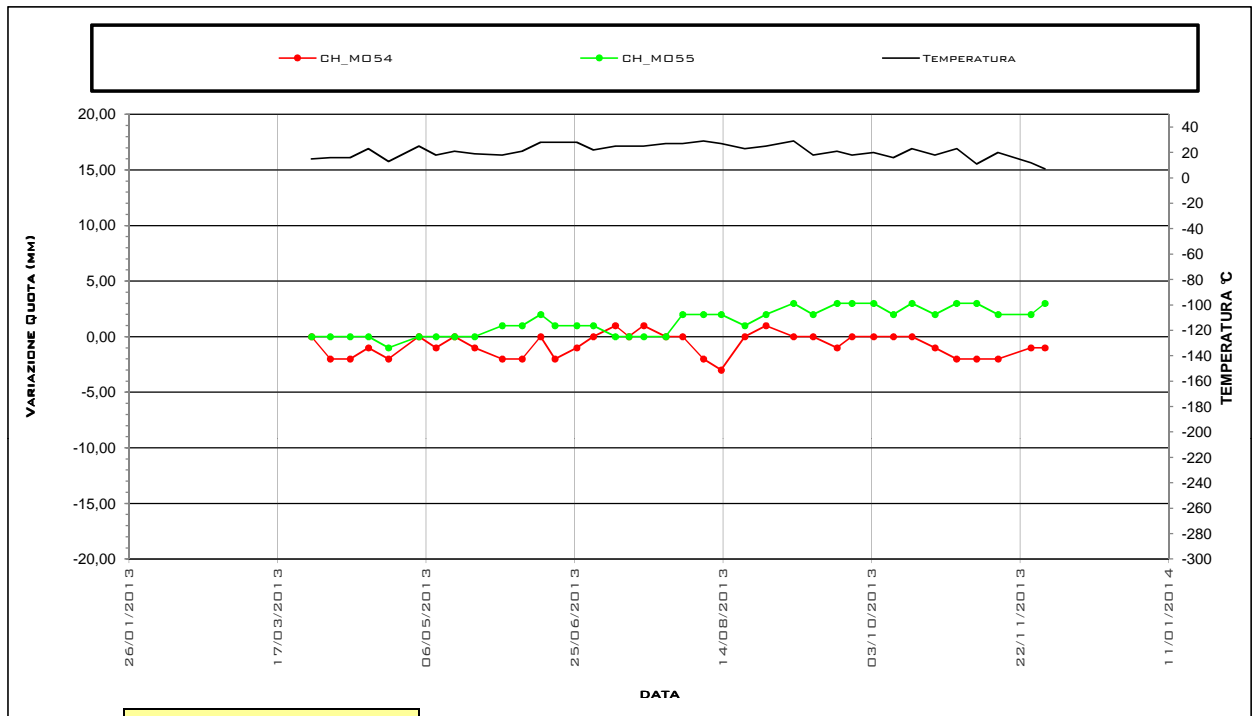


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Supplementari \ 54-55  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 28/03/2013  
**Data lettura di zero** 28/03/2013

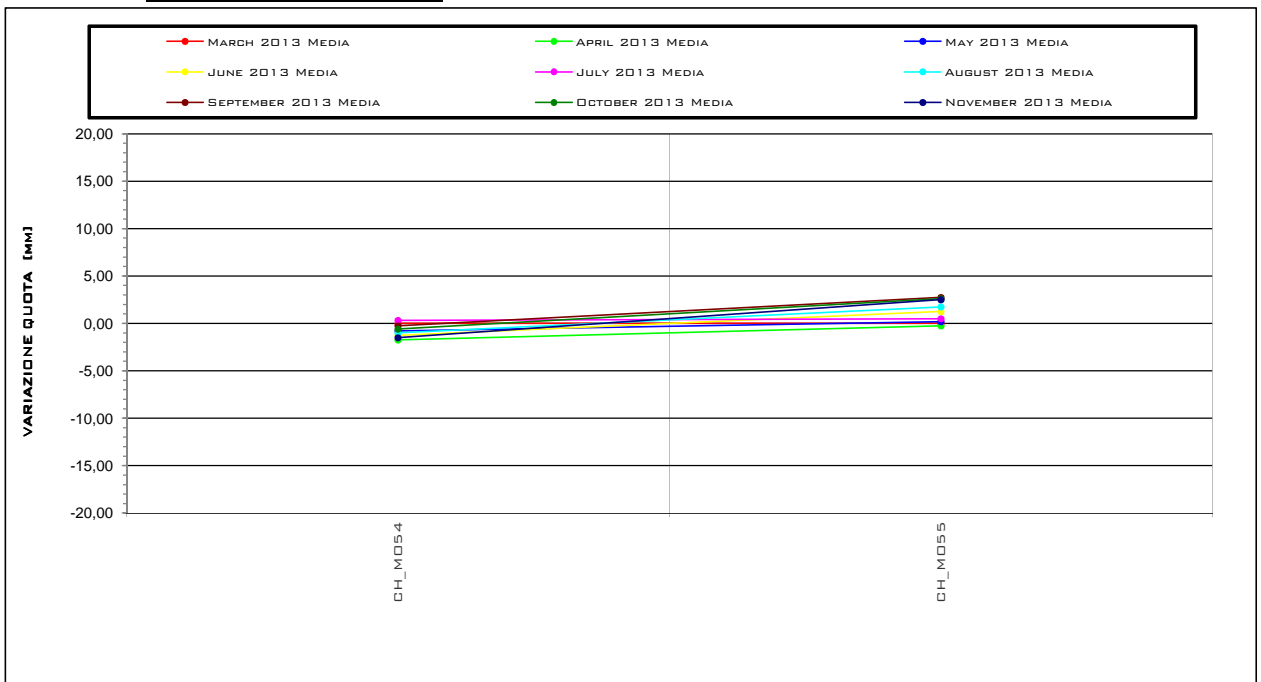
**UBICAZIONE**



**GRAFICO QUOTA**

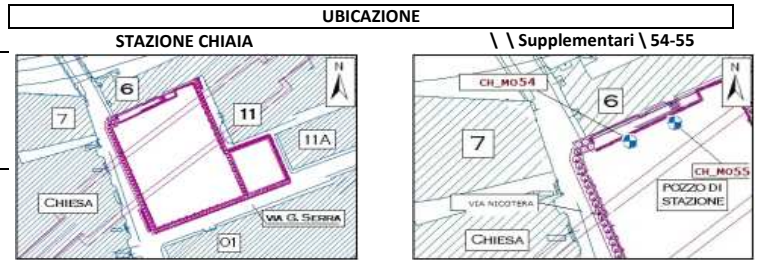


**GRAFICO ISOCRONE**

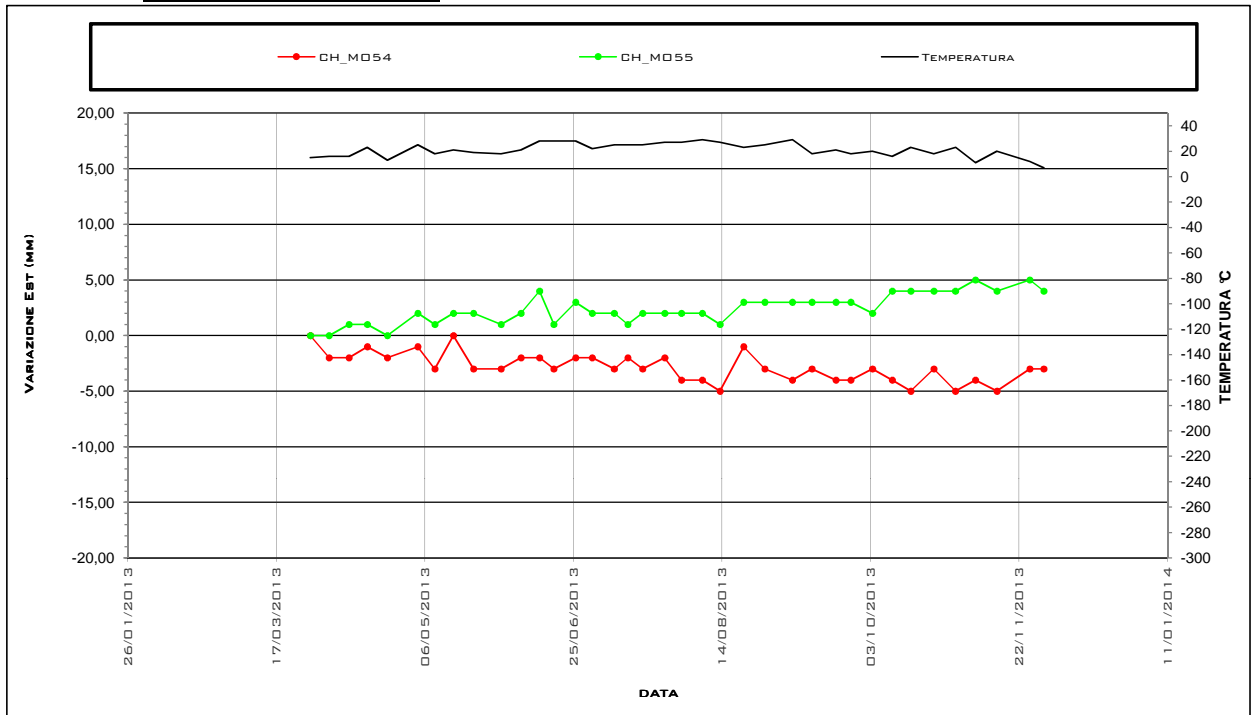




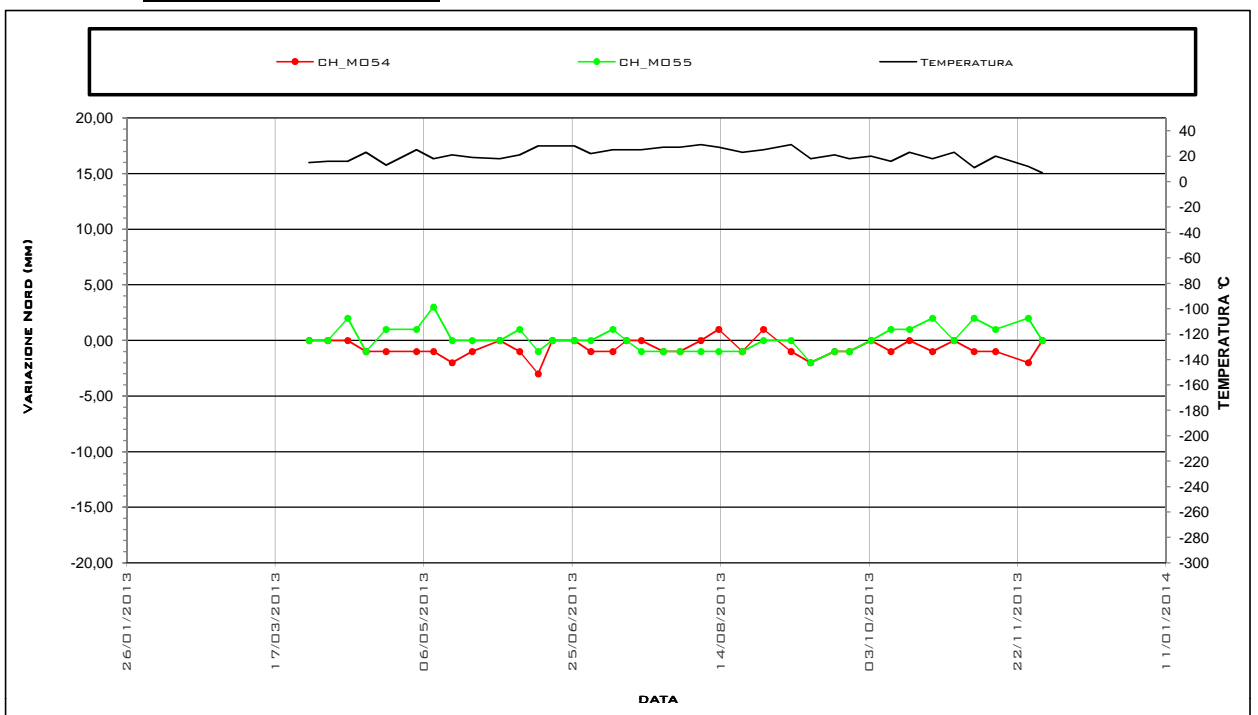
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Supplementari \ 54-55  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 28/03/2013  
**Data lettura di zero** 28/03/2013



**GRAFICO EST**



**GRAFICO NORD**





Ubicazione STAZIONE CHIAIA

Opera \ \ Supplementari \ 56-59

Tipo Strumento Mire Ottiche

Data posa in opera 28/03/2013

Data lettura di zero 28/03/2013

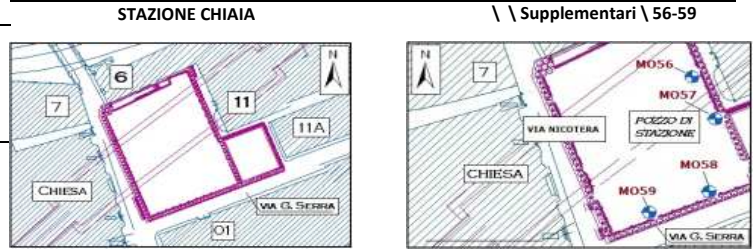
Ultima Misura 37 in data 30/11/2013

Letto. n°	DATA	CH_M056					CH_M057					CH_M058					CH_M059				
		Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]
1	28/03/2013 11.00	15,0	9,4	0,0	0,0	0,0	15,0	9,6	0,0	0,0	0,0	15,0	11,3	0,0	0,0	0,0	15,0	11,3	0,0	0,0	0,0
2	03/04/2013 17.30	16,0	9,4	-2,0	0,0	0,0	16,0	9,6	0,0	-2,0	0,0	16,0	11,3	0,0	-3,0	2,0	16,0	11,3	-1,0	1,0	2,0
3	10/04/2013 10.30	16,0	9,4	-2,0	1,0	0,0	16,0	9,6	1,0	-1,0	1,0	16,0	11,3	-1,0	-2,0	1,0	16,0	11,3	-1,0	1,0	3,0
4	16/04/2013 15.00	23,0	9,4	-3,0	2,0	0,0	23,0	9,6	0,0	1,0	0,0	23,0	11,3	-1,0	3,0	0,0	23,0	11,3	0,0	0,0	1,0
5	23/04/2013 08.30	13,0	9,4	-2,0	2,0	1,0	13,0	9,6	0,0	-1,0	1,0	13,0	11,3	0,0	1,0	2,0	13,0	11,3	-2,0	2,0	2,0
6	03/05/2013 14.30	25,0	9,4	-2,0	3,0	0,0	25,0	9,6	0,0	2,0	1,0	25,0	11,3	-1,0	4,0	1,0	25,0	11,3	0,0	2,0	2,0
7	09/05/2013 08.30	18,0	9,4	-1,0	1,0	2,0	18,0	9,6	-1,0	1,0	3,0	18,0	11,3	0,0	2,0	3,0	18,0	11,3	-1,0	2,0	2,0
8	15/05/2013 14.30	21,0	9,4	-2,0	3,0	0,0	21,0	9,6	0,0	2,0	1,0	21,0	11,3	-1,0	3,0	1,0	21,0	11,3	1,0	0,0	0,0
9	22/05/2013 08.30	19,0	9,4	-2,0	1,0	-1,0	19,0	9,6	0,0	0,0	0,0	19,0	11,3	-1,0	3,0	2,0	19,0	11,3	0,0	0,0	1,0
10	31/05/2013 15.30	18,0	9,4	-2,0	2,0	-1,0	18,0	9,6	0,0	0,0	0,0	18,0	11,3	0,0	0,0	0,0	18,0	11,3	-3,0	1,0	3,0
11	07/06/2013 08.30	21,0	9,4	0,0	1,0	-1,0	21,0	9,6	-1,0	1,0	0,0	21,0	11,3	0,0	2,0	1,0	21,0	11,3	-2,0	1,0	2,0
12	13/06/2013 14.30	28,0	9,4	-1,0	3,0	-2,0	28,0	9,6	1,0	3,0	-1,0	28,0	11,3	1,0	3,0	2,0	28,0	11,3	0,0	3,0	2,0
13	18/06/2013 09.00	28,0	9,4	-2,0	1,0	1,0	28,0	9,6	-1,0	1,0	1,0	28,0	11,3	-1,0	2,0	3,0	28,0	11,3	0,0	1,0	2,0
14	25/06/2013 18.00	28,0	9,4	-1,0	2,0	-1,0	28,0	9,6	0,0	2,0	0,0	28,0	11,3	0,0	4,0	2,0	28,0	11,3	0,0	1,0	3,0
15	01/07/2013 07.30	22,0	9,4	-2,0	3,0	-1,0	22,0	9,6	-1,0	1,0	0,0	22,0	11,3	0,0	5,0	2,0	22,0	11,3	0,0	0,0	1,0
16	08/07/2013 17.30	25,0	9,4	-3,0	3,0	1,0	25,0	9,6	-1,0	2,0	1,0	25,0	11,3	0,0	3,0	2,0	25,0	11,3	1,0	-2,0	2,0
17	13/07/2013 07.30	25,0	9,4	-2,0	1,0	0,0	25,0	9,6	-1,0	1,0	2,0	25,0	11,3	-2,0	4,0	3,0	25,0	11,3	0,0	-1,0	2,0
18	18/07/2013 07.30	25,0	9,4	-2,0	1,0	1,0	25,0	9,6	-1,0	1,0	2,0	25,0	11,3	-1,0	4,0	3,0	25,0	11,3	1,0	0,0	3,0
19	25/07/2013 18.00	27,0	9,4	-2,0	2,0	1,0	27,0	9,6	-1,0	1,0	3,0	27,0	11,3	-1,0	6,0	4,0	27,0	11,3	1,0	0,0	1,0
20	31/07/2013 09.00	27,0	9,4	-2,0	0,0	0,0	27,0	9,6	-1,0	1,0	3,0	27,0	11,3	-2,0	5,0	5,0	27,0	11,3	1,0	1,0	3,0
21	07/08/2013 09.00	29,0	9,4	-3,0	2,0	0,0	29,0	9,6	-1,0	2,0	2,0	29,0	11,3	-2,0	5,0	5,0	29,0	11,3	-1,0	1,0	1,0
22	13/08/2013 09.00	27,0	9,4	-4,0	3,0	1,0	27,0	9,6	-2,0	3,0	1,0	27,0	11,3	-1,0	4,0	5,0	27,0	11,3	-2,0	1,0	2,0
23	21/08/2013 07.30	23,0	9,4	-2,0	3,0	1,0	23,0	9,6	-2,0	3,0	2,0	23,0	11,3	-1,0	8,0	4,0	23,0	11,3	1,0	0,0	2,0
24	28/08/2013 10.30	25,0	9,4	-3,0	3,0	1,0	25,0	9,6	-2,0	2,0	3,0	25,0	11,3	0,0	6,0	4,0	25,0	11,3	2,0	-3,0	5,0
25	06/09/2013 17.30	29,0	9,4	-2,0	3,0	1,0	29,0	9,6	-1,0	2,0	2,0	29,0	11,3	1,0	6,0	3,0	29,0	11,3	0,0	-2,0	1,0
26	13/09/2013 07.30	18,0	9,4	-2,0	2,0	1,0	18,0	9,6	-1,0	2,0	1,0	18,0	11,3	1,0	5,0	3,0	18,0	11,3	1,0	0,0	1,0
27	21/09/2013 09.30	21,0	9,4	-3,0	3,0	-1,0	21,0	9,6	-1,0	2,0	1,0	21,0	11,3	1,0	5,0	2,0	21,0	11,3	1,0	0,0	3,0
28	26/09/2013 09.30	18,0	9,4	-3,0	3,0	0,0	18,0	9,6	-1,0	2,0	2,0	18,0	11,3	0,0	7,0	3,0	18,0	11,3	1,0	-1,0	3,0
29	03/10/2013 16.30	20,0	9,4	-3,0	3,0	0,0	20,0	9,6	-1,0	4,0	1,0	20,0	11,3	1,0	6,0	2,0	20,0	11,3	0,0	-1,0	4,0
30	10/10/2013 08.30	16,0	9,4	-3,0	4,0	1,0	16,0	9,6	0,0	3,0	3,0	16,0	11,3	1,0	8,0	3,0	16,0	11,3	0,0	-1,0	2,0
31	16/10/2013 14.30	23,0	9,4	-2,0	3,0	1,0	23,0	9,6	0,0	2,0	2,0	23,0	11,3	0,0	5,0	4,0	23,0	11,3	0,0	-2,0	3,0
32	24/10/2013 08.30	18,0	9,4	-3,0	3,0	1,0	18,0	9,6	-1,0	2,0	3,0	18,0	11,3	1,0	5,0	4,0	18,0	11,3	0,0	0,0	1,0
33	31/10/2013 14.30	23,0	9,4	-3,0	3,0	1,0	23,0	9,6	-1,0	2,0	2,0	23,0	11,3	1,0	7,0	4,0	23,0	11,3	-1,0	-2,0	3,0
34	07/11/2013 08.30	11,0	9,4	-3,0	3,0	1,0	11,0	9,6	-2,0	4,0	2,0	11,0	11,3	1,0	6,0	4,0	11,0	11,3	0,0	-1,0	1,0
35	14/11/2013 14.30	20,0	9,4	-3,0	2,0	1,0	20,0	9,6	-1,0	3,0	3,0	20,0	11,3	1,0	7,0	3,0	20,0	11,3	0,0	-1,0	2,0
36	25/11/2013 15.30	12,0	9,4	-2,0	3,0	1,0	12,0	9,6	0,0	3,0	4,0	12,0	11,3	1,0	8,0	4,0	12,0	11,3	0,0	0,0	1,0
37	30/11/2013 08.30	7,0	9,4	-3,0	3,0	1,0	7,0	9,6	-1,0	4,0	4,0	7,0	11,3	2,0	8,0	4,0	7,0	11,3	0,0	1,0	2,0

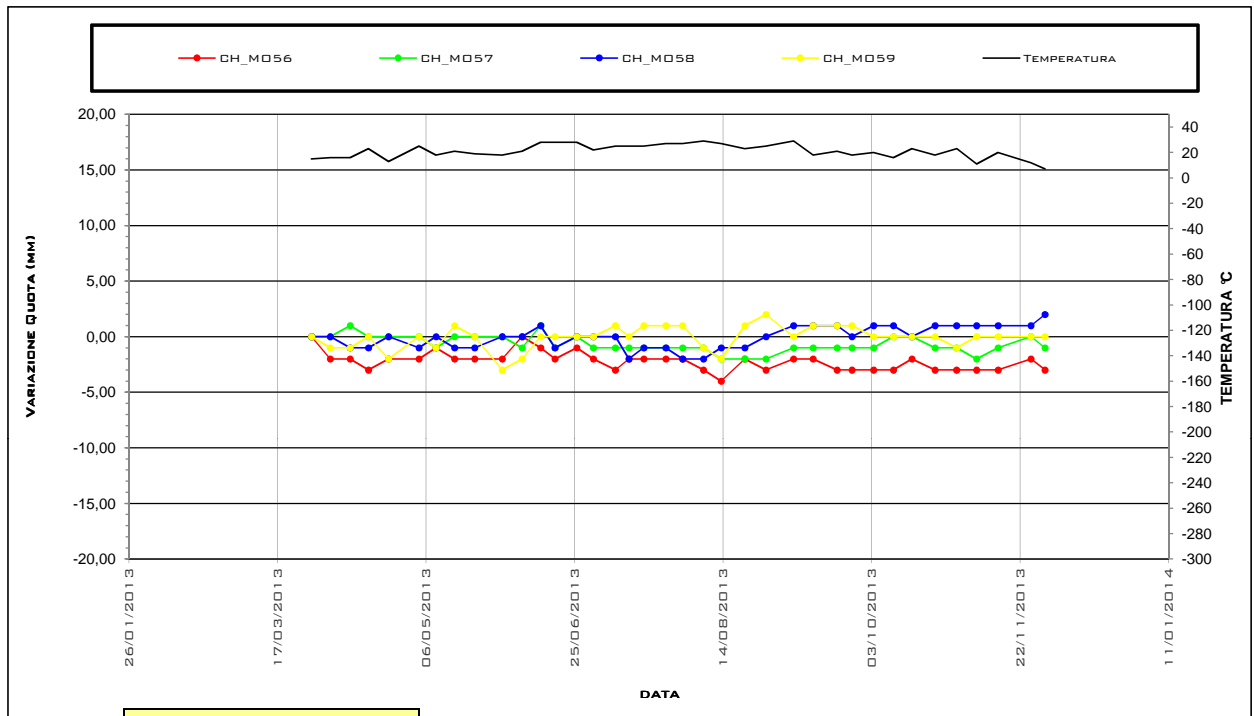


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Supplementari \ 56-59  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 28/03/2013  
**Data lettura di zero** 28/03/2013

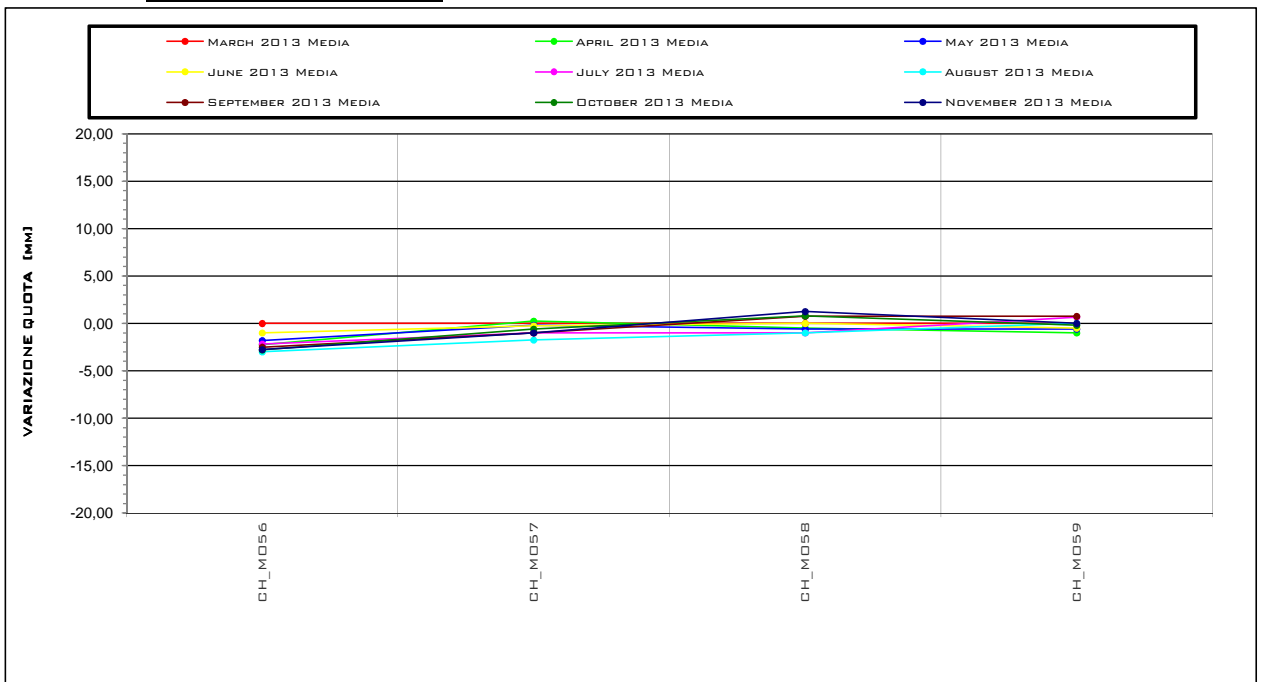
**UBICAZIONE**



**GRAFICO QUOTA**

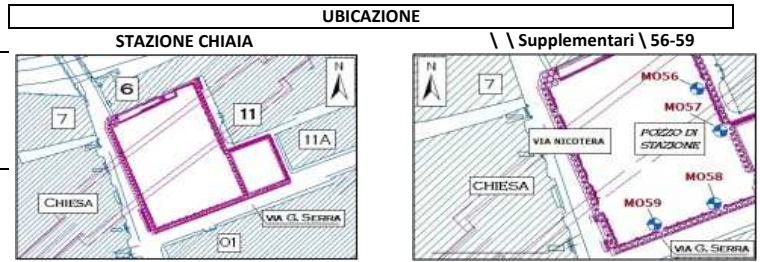


**GRAFICO ISOCRONE**

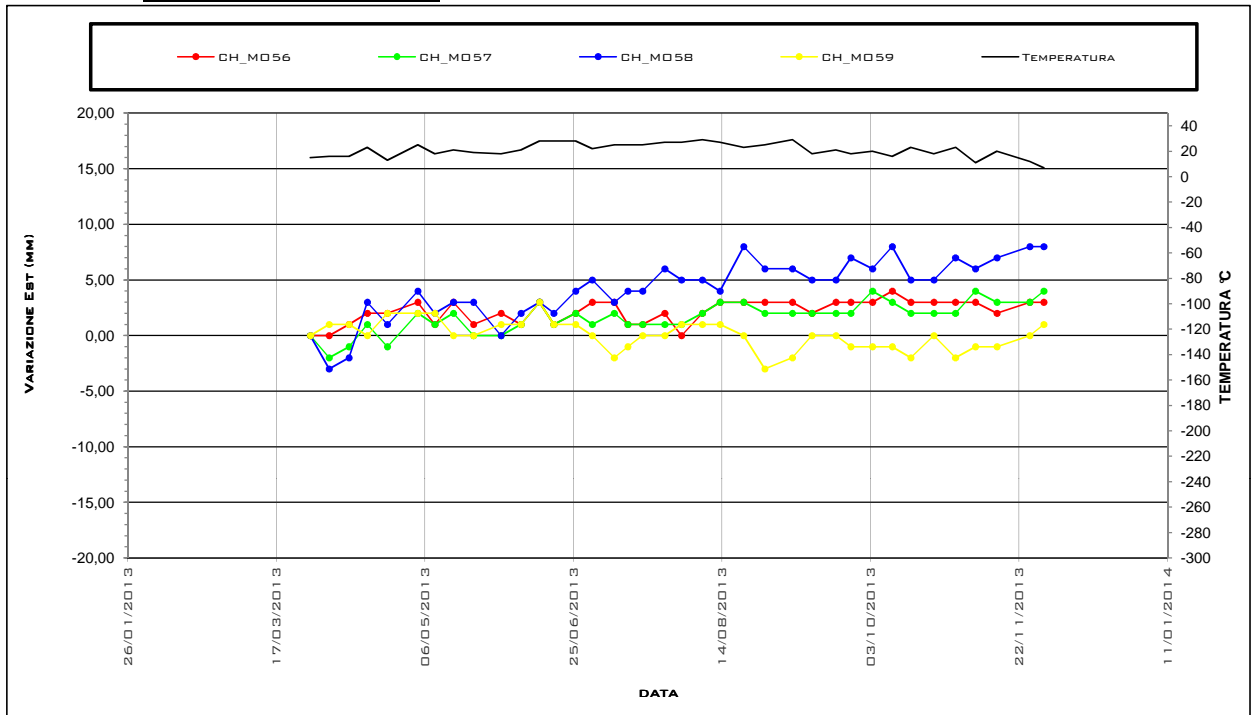




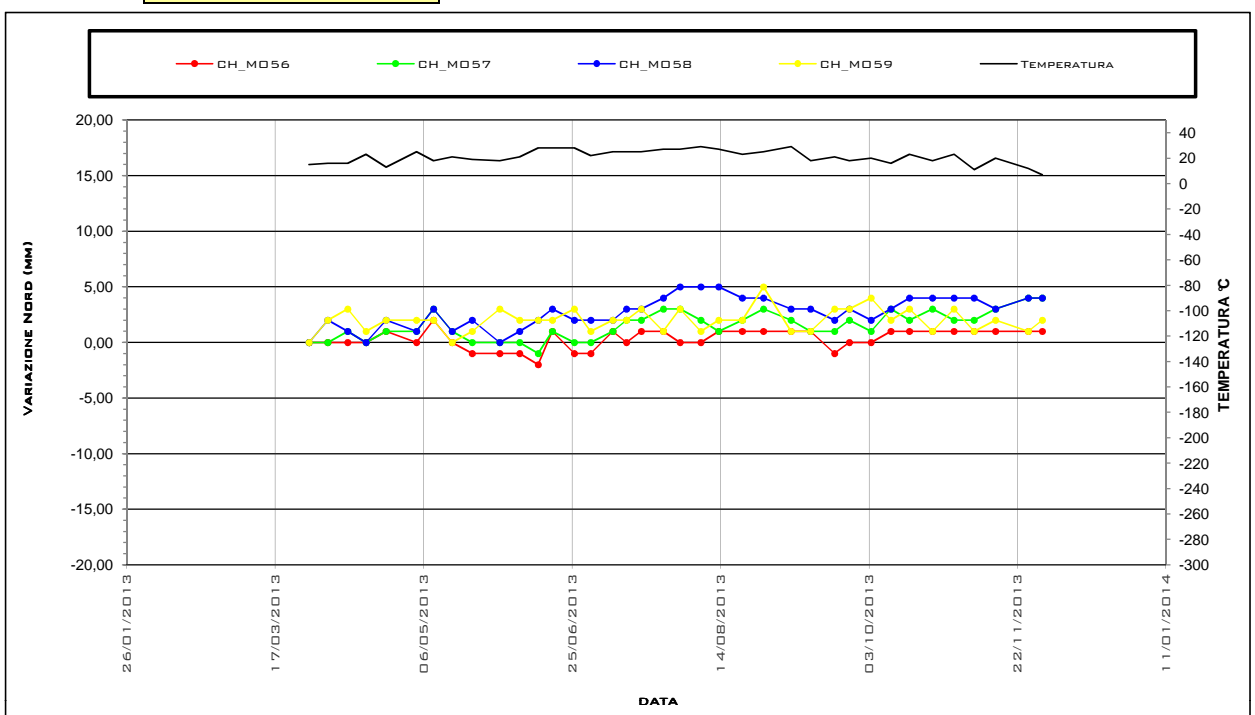
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Supplementari \ 56-59  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 28/03/2013  
**Data lettura di zero** 28/03/2013



**GRAFICO EST**



**GRAFICO NORD**





Ubicazione STAZIONE CHIAIA

Opera \ \ Supplementari \ 60-61

Tipo Strumento Mire Ottiche

Data posa in opera 28/03/2013

Data lettura di zero 28/03/2013

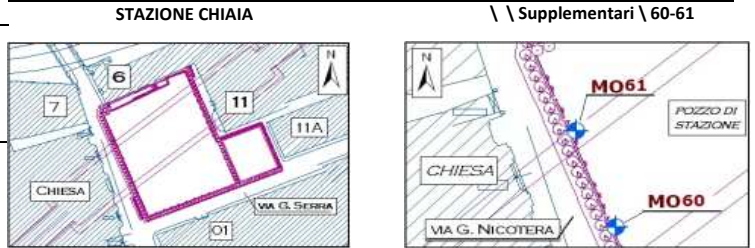
Ultima Misura 37 in data 30/11/2013

Letto. n°	DATA	CH_M060					CH_M061				
		Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]
1	28/03/2013 11.00	15,0	14,3	0,0	0,0	0,0	15,0	14,5	0,0	0,0	0,0
2	03/04/2013 17.30	16,0	14,3	-1,0	0,0	0,0	16,0	14,5	0,0	0,0	0,0
3	10/04/2013 10.30	16,0	14,3	0,0	1,0	1,0	16,0	14,5	0,0	-1,0	1,0
4	16/04/2013 15.00	23,0	14,3	-1,0	-1,0	0,0	23,0	14,5	1,0	-1,0	0,0
5	23/04/2013 08.30	13,0	14,3	-2,0	1,0	1,0	13,0	14,5	-1,0	0,0	0,0
6	03/05/2013 14.30	25,0	14,3	-1,0	2,0	-1,0	25,0	14,5	1,0	0,0	0,0
7	09/05/2013 08.30	18,0	14,3	-2,0	1,0	1,0	18,0	14,5	-1,0	-1,0	-1,0
8	15/05/2013 14.30	21,0	14,3	0,0	0,0	0,0	21,0	14,5	0,0	0,0	0,0
9	22/05/2013 08.30	19,0	14,3	-2,0	0,0	0,0	19,0	14,5	0,0	-1,0	1,0
10	31/05/2013 15.30	18,0	14,3	-2,0	1,0	1,0	18,0	14,5	0,0	-1,0	1,0
11	07/06/2013 08.30	21,0	14,3	-2,0	1,0	1,0	21,0	14,5	-1,0	1,0	2,0
12	13/06/2013 14.30	28,0	14,3	-1,0	4,0	-1,0	28,0	14,5	0,0	2,0	-1,0
13	18/06/2013 09.00	28,0	14,3	-2,0	2,0	2,0	28,0	14,5	-1,0	0,0	2,0
14	25/06/2013 18.00	28,0	14,3	-3,0	1,0	1,0	28,0	14,5	-2,0	0,0	1,0
15	01/07/2013 07.30	22,0	14,3	-4,0	0,0	1,0	22,0	14,5	-1,0	0,0	1,0
16	08/07/2013 17.30	25,0	14,3	-2,0	-2,0	0,0	25,0	14,5	-1,0	-1,0	1,0
17	13/07/2013 07.30	25,0	14,3	-3,0	0,0	2,0	25,0	14,5	-2,0	0,0	2,0
18	18/07/2013 07.30	25,0	14,3	-3,0	1,0	1,0	25,0	14,5	-1,0	-1,0	1,0
19	25/07/2013 18.00	27,0	14,3	-3,0	0,0	2,0	27,0	14,5	-2,0	0,0	1,0
20	31/07/2013 09.00	27,0	14,3	-2,0	1,0	1,0	27,0	14,5	0,0	0,0	2,0
21	07/08/2013 09.00	29,0	14,3	-4,0	0,0	1,0	29,0	14,5	-2,0	-2,0	2,0
22	13/08/2013 09.00	27,0	14,3	-5,0	-1,0	1,0	27,0	14,5	-3,0	-3,0	2,0
23	21/08/2013 07.30	23,0	14,3	-3,0	0,0	2,0	23,0	14,5	-2,0	0,0	2,0
24	28/08/2013 10.30	25,0	14,3	-2,0	-1,0	5,0	25,0	14,5	1,0	-2,0	4,0
25	06/09/2013 17.30	29,0	14,3	-2,0	0,0	2,0	29,0	14,5	0,0	-1,0	2,0
26	13/09/2013 07.30	18,0	14,3	-3,0	0,0	0,0	18,0	14,5	-1,0	0,0	0,0
27	21/09/2013 09.30	21,0	14,3	-4,0	-1,0	3,0	21,0	14,5	-1,0	-1,0	2,0
28	26/09/2013 09.30	18,0	14,3	-2,0	-1,0	1,0	18,0	14,5	-1,0	-2,0	1,0
29	03/10/2013 16.30	20,0	14,3	-3,0	0,0	2,0	20,0	14,5	-1,0	-2,0	2,0
30	10/10/2013 08.30	16,0	14,3	-3,0	-1,0	1,0	16,0	14,5	-1,0	-1,0	1,0
31	16/10/2013 14.30	23,0	14,3	-4,0	-1,0	2,0	23,0	14,5	-2,0	-2,0	2,0
32	24/10/2013 08.30	18,0	14,3	-4,0	1,0	1,0	18,0	14,5	-2,0	-1,0	0,0
33	31/10/2013 14.30	23,0	14,3	-5,0	-1,0	2,0	23,0	14,5	-3,0	-2,0	2,0
34	07/11/2013 08.30	11,0	14,3	-5,0	-1,0	0,0	11,0	14,5	-2,0	-1,0	0,0
35	14/11/2013 14.30	20,0	14,3	-3,0	-1,0	2,0	20,0	14,5	-1,0	-1,0	1,0
36	25/11/2013 15.30	12,0	14,3	-3,0	1,0	1,0	12,0	14,5	-1,0	-1,0	0,0
37	30/11/2013 08.30	7,0	14,3	-3,0	1,0	2,0	7,0	14,5	-1,0	1,0	1,0

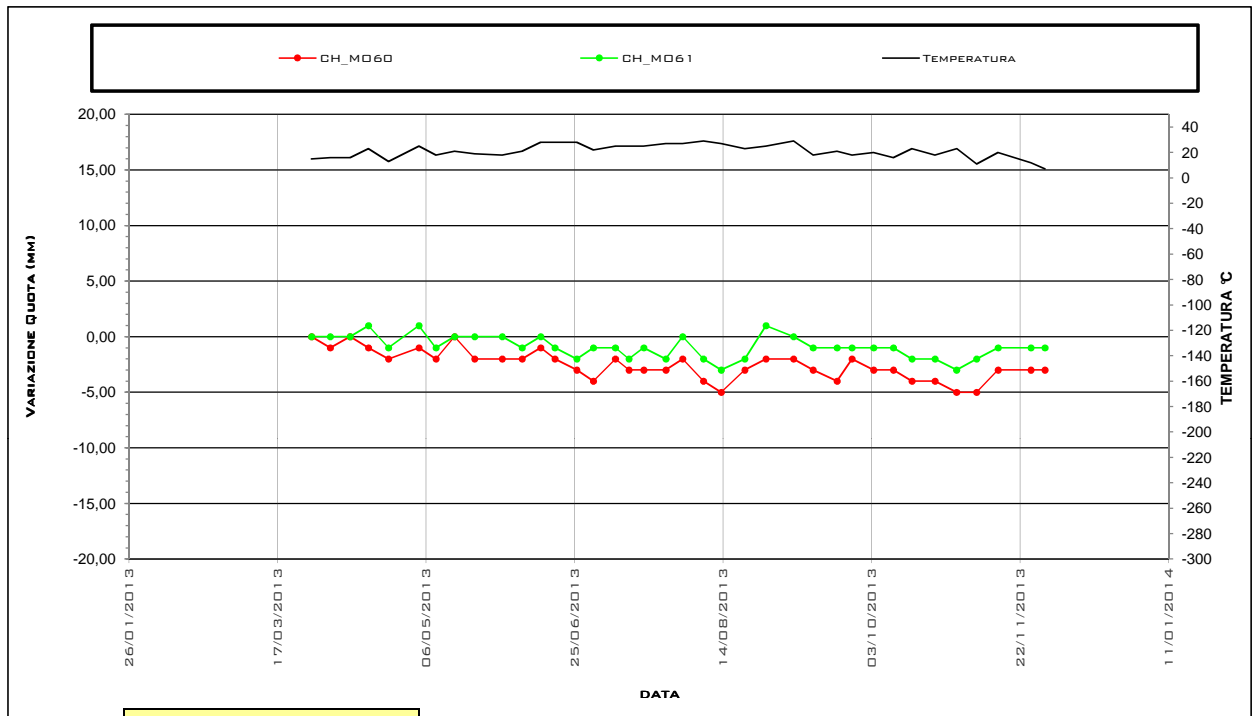


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Supplementari \ 60-61  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 28/03/2013  
**Data lettura di zero** 28/03/2013

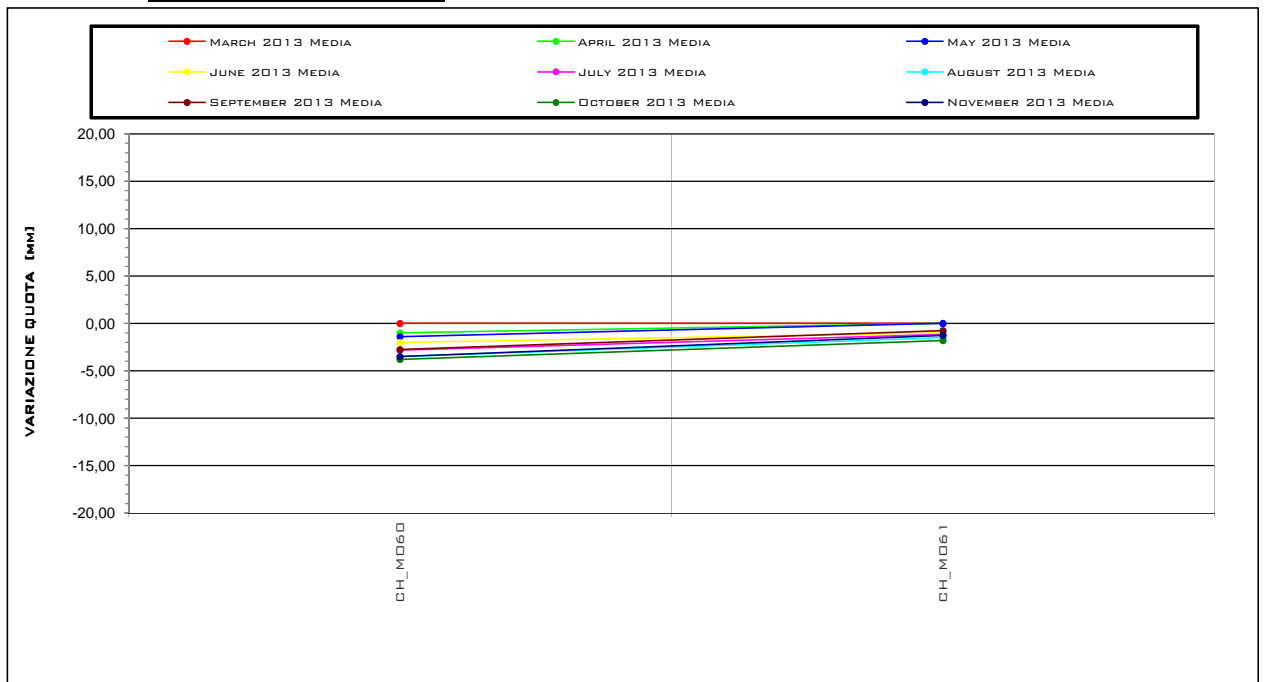
**UBICAZIONE**



**GRAFICO QUOTA**



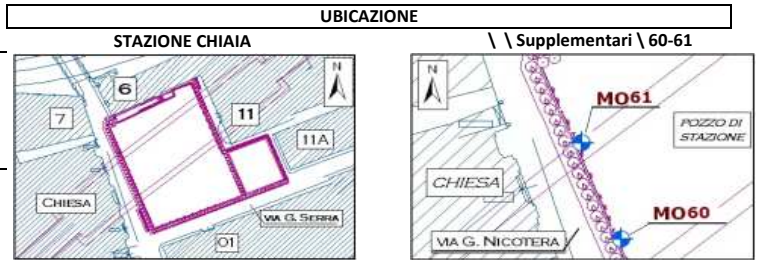
**GRAFICO ISOCRONE**



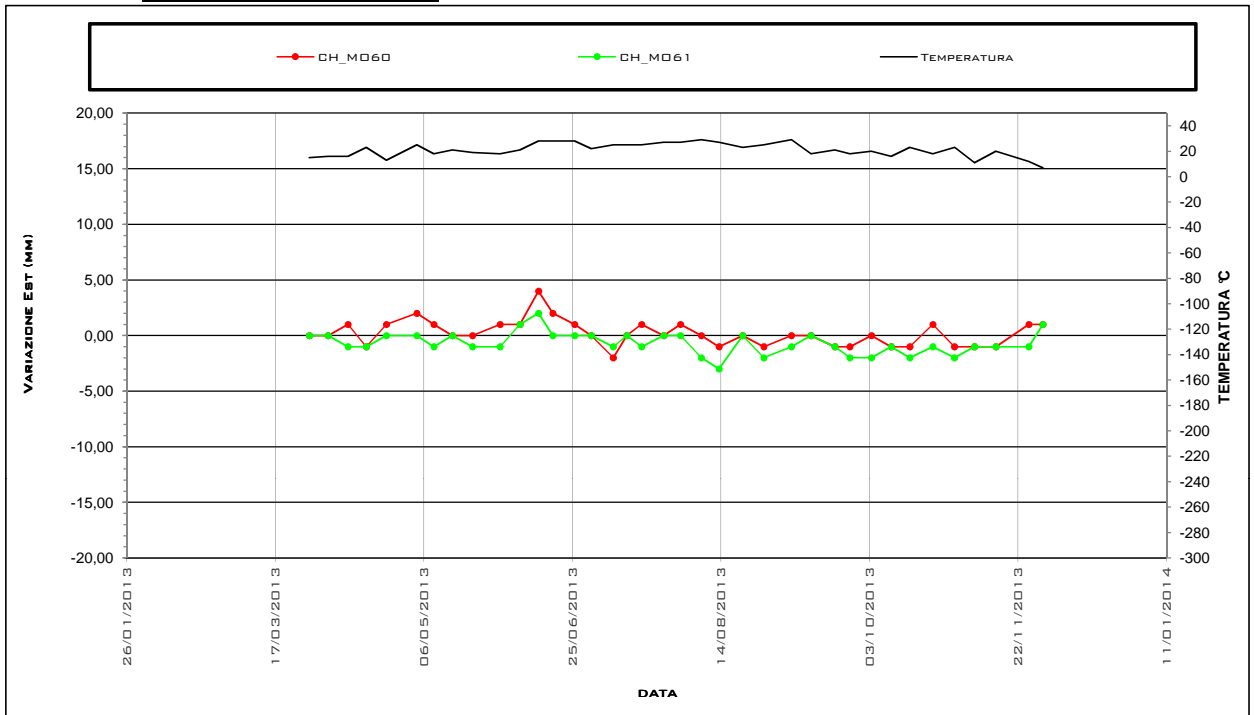




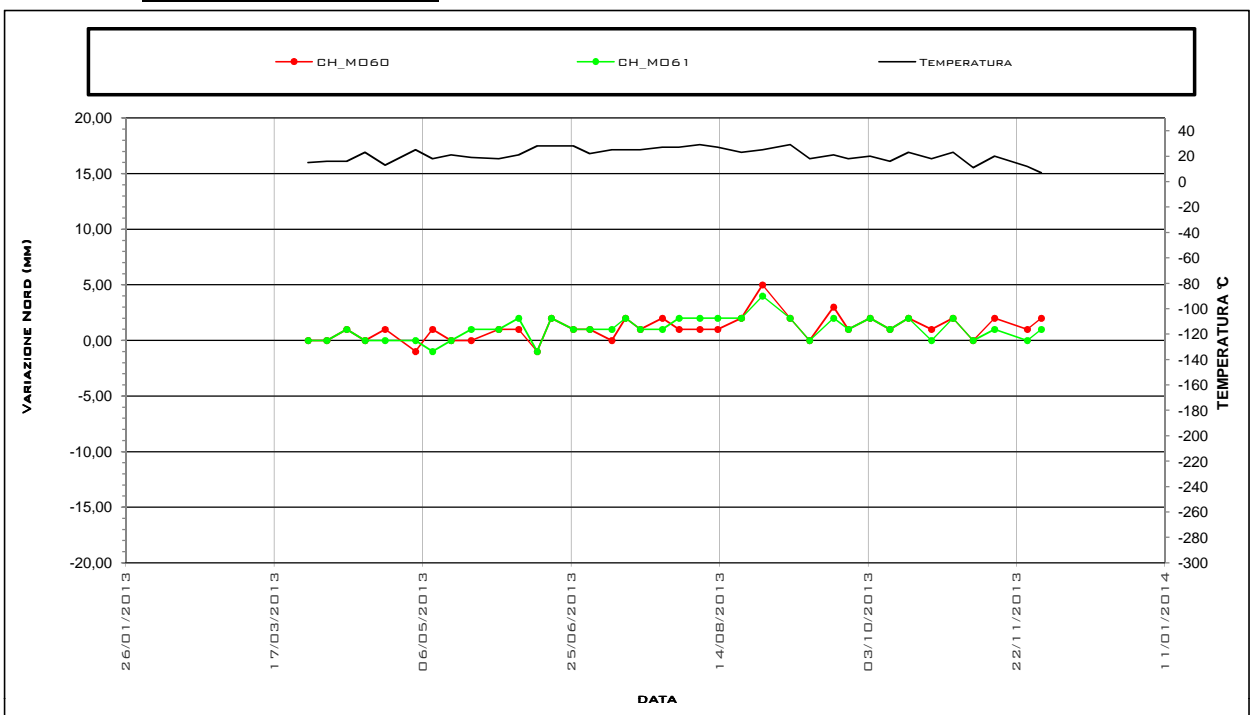
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Supplementari \ 60-61  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 28/03/2013  
**Data lettura di zero** 28/03/2013



**GRAFICO EST**



**GRAFICO NORD**





Ubicazione STAZIONE CHIAIA

Opera \ \ Supplementari \ 62-64

Tipo Strumento Mire Ottiche

Data posa in opera 28/03/2013

Data lettura di zero 28/03/2013

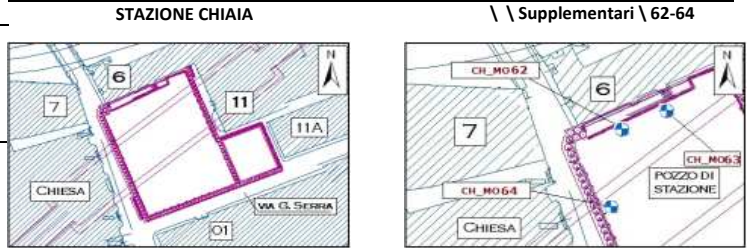
Ultima Misura 37 in data 30/11/2013

Letto. n°	DATA	CH_M062					CH_M063					CH_M064				
		Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]	Temp. Media [°C]	Quota [m]	Quota Spost. [mm]	Est Spost. [mm]	Nord Spost. [mm]
1	28/03/2013 11.00	15,0	9,4	0,0	0,0	0,0	15,0	9,4	0,0	0,0	0,0	15,0	9,0	0,0	0,0	0,0
2	03/04/2013 17.30	16,0	9,4	-3,0	-2,0	0,0	16,0	9,4	2,0	-1,0	-1,0	16,0	9,0	0,0	-1,0	1,0
3	10/04/2013 10.30	16,0	9,4	-3,0	-2,0	0,0	16,0	9,4	2,0	0,0	1,0	16,0	9,0	-1,0	-1,0	2,0
4	16/04/2013 15.00	23,0	9,4	-3,0	0,0	-1,0	23,0	9,4	3,0	0,0	-3,0	23,0	9,0	0,0	-1,0	1,0
5	23/04/2013 08.30	13,0	9,4	-3,0	-2,0	0,0	13,0	9,4	1,0	0,0	-1,0	13,0	9,0	-2,0	1,0	1,0
6	03/05/2013 14.30	25,0	9,4	-3,0	-1,0	-2,0	25,0	9,4	1,0	1,0	-2,0	25,0	9,0	0,0	0,0	0,0
7	09/05/2013 08.30	18,0	9,4	-2,0	-2,0	-1,0	18,0	9,4	1,0	0,0	0,0	18,0	9,0	-1,0	0,0	2,0
8	15/05/2013 14.30	21,0	9,4	-1,0	0,0	-1,0	21,0	9,4	1,0	1,0	-2,0	21,0	9,0	-1,0	0,0	0,0
9	22/05/2013 08.30	19,0	9,4	-2,0	-3,0	0,0	19,0	9,4	1,0	0,0	-2,0	19,0	9,0	-1,0	-1,0	1,0
10	31/05/2013 15.30	18,0	9,4	-4,0	-3,0	0,0	18,0	9,4	2,0	1,0	-1,0	18,0	9,0	-2,0	-1,0	2,0
11	07/06/2013 08.30	21,0	9,4	-3,0	-2,0	0,0	21,0	9,4	3,0	0,0	-2,0	21,0	9,0	-2,0	0,0	2,0
12	13/06/2013 14.30	28,0	9,4	-2,0	-2,0	-1,0	28,0	9,4	4,0	3,0	-2,0	28,0	9,0	-2,0	3,0	0,0
13	18/06/2013 09.00	28,0	9,4	-4,0	-3,0	0,0	28,0	9,4	2,0	1,0	0,0	28,0	9,0	-3,0	0,0	2,0
14	25/06/2013 18.00	28,0	9,4	-2,0	-3,0	0,0	28,0	9,4	3,0	2,0	-3,0	28,0	9,0	-3,0	0,0	2,0
15	01/07/2013 07.30	22,0	9,4	-1,0	-2,0	-1,0	22,0	9,4	3,0	1,0	-2,0	22,0	9,0	-3,0	1,0	0,0
16	08/07/2013 17.30	25,0	9,4	-1,0	-3,0	-1,0	25,0	9,4	4,0	1,0	-2,0	25,0	9,0	-2,0	-3,0	2,0
17	13/07/2013 07.30	25,0	9,4	-3,0	-2,0	0,0	25,0	9,4	4,0	-1,0	-2,0	25,0	9,0	-3,0	-1,0	3,0
18	18/07/2013 07.30	25,0	9,4	-1,0	-3,0	-1,0	25,0	9,4	4,0	-1,0	-2,0	25,0	9,0	-1,0	-1,0	3,0
19	25/07/2013 18.00	27,0	9,4	-1,0	-1,0	-1,0	27,0	9,4	4,0	0,0	-3,0	27,0	9,0	-3,0	0,0	2,0
20	31/07/2013 09.00	27,0	9,4	0,0	-3,0	-2,0	27,0	9,4	5,0	0,0	-3,0	27,0	9,0	-3,0	0,0	3,0
21	07/08/2013 09.00	29,0	9,4	0,0	-3,0	-2,0	29,0	9,4	5,0	0,0	-3,0	29,0	9,0	-4,0	-1,0	3,0
22	13/08/2013 09.00	27,0	9,4	-1,0	-3,0	-3,0	27,0	9,4	5,0	-1,0	-3,0	27,0	9,0	-5,0	-2,0	3,0
23	21/08/2013 07.30	23,0	9,4	-1,0	-2,0	0,0	23,0	9,4	4,0	2,0	-5,0	23,0	9,0	-2,0	1,0	3,0
24	28/08/2013 10.30	25,0	9,4	0,0	-3,0	0,0	25,0	9,4	5,0	1,0	-5,0	25,0	9,0	-2,0	-2,0	4,0
25	06/09/2013 17.30	29,0	9,4	-1,0	-4,0	-1,0	29,0	9,4	8,0	0,0	-5,0	29,0	9,0	-2,0	-2,0	3,0
26	13/09/2013 07.30	18,0	9,4	-1,0	-3,0	-2,0	18,0	9,4	5,0	3,0	-2,0	18,0	9,0	-3,0	-1,0	2,0
27	21/09/2013 09.30	21,0	9,4	-1,0	-2,0	0,0	21,0	9,4	5,0	1,0	-4,0	21,0	9,0	-3,0	0,0	4,0
28	26/09/2013 09.30	18,0	9,4	-1,0	-4,0	0,0	18,0	9,4	5,0	0,0	-5,0	18,0	9,0	-3,0	-2,0	3,0
29	03/10/2013 16.30	20,0	9,4	0,0	-3,0	0,0	20,0	9,4	5,0	1,0	-4,0	20,0	9,0	-4,0	-2,0	3,0
30	10/10/2013 08.30	16,0	9,4	0,0	-3,0	-1,0	16,0	9,4	5,0	2,0	-2,0	16,0	9,0	-4,0	-2,0	3,0
31	16/10/2013 14.30	23,0	9,4	-2,0	-4,0	0,0	23,0	9,4	5,0	1,0	-3,0	23,0	9,0	-5,0	-2,0	3,0
32	24/10/2013 08.30	18,0	9,4	-3,0	-3,0	-1,0	18,0	9,4	6,0	2,0	-2,0	18,0	9,0	-5,0	-1,0	2,0
33	31/10/2013 14.30	23,0	9,4	-2,0	-3,0	0,0	23,0	9,4	5,0	3,0	-3,0	23,0	9,0	-5,0	-2,0	3,0
34	07/11/2013 08.30	11,0	9,4	-2,0	-3,0	-2,0	11,0	9,4	5,0	3,0	-2,0	11,0	9,0	-5,0	-3,0	1,0
35	14/11/2013 14.30	20,0	9,4	-1,0	-4,0	0,0	20,0	9,4	5,0	2,0	-4,0	20,0	9,0	-5,0	-5,0	2,0
36	25/11/2013 15.30	12,0	9,4	-1,0	-3,0	0,0	12,0	9,4	6,0	3,0	-2,0	12,0	9,0	-5,0	-2,0	2,0
37	30/11/2013 08.30	7,0	9,4	-1,0	-3,0	0,0	7,0	9,4	6,0	2,0	-2,0	7,0	9,0	-5,0	-2,0	3,0

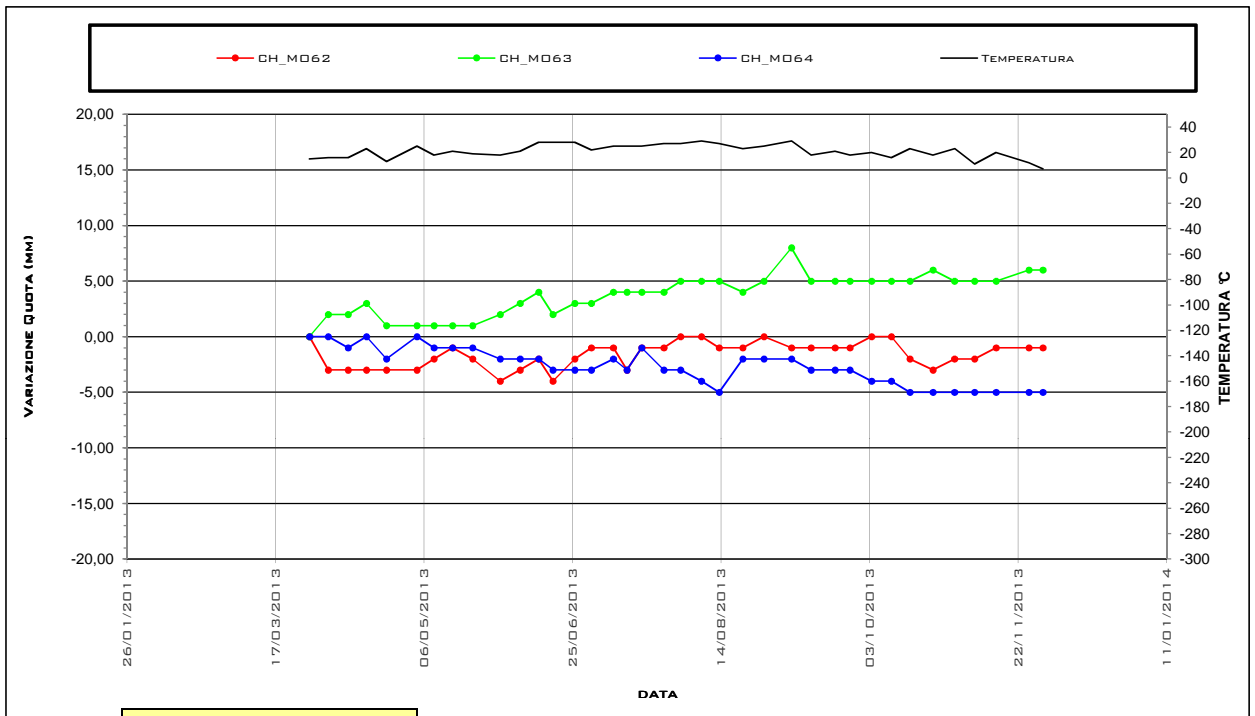


**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Supplementari \ 62-64  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 28/03/2013  
**Data lettura di zero** 28/03/2013

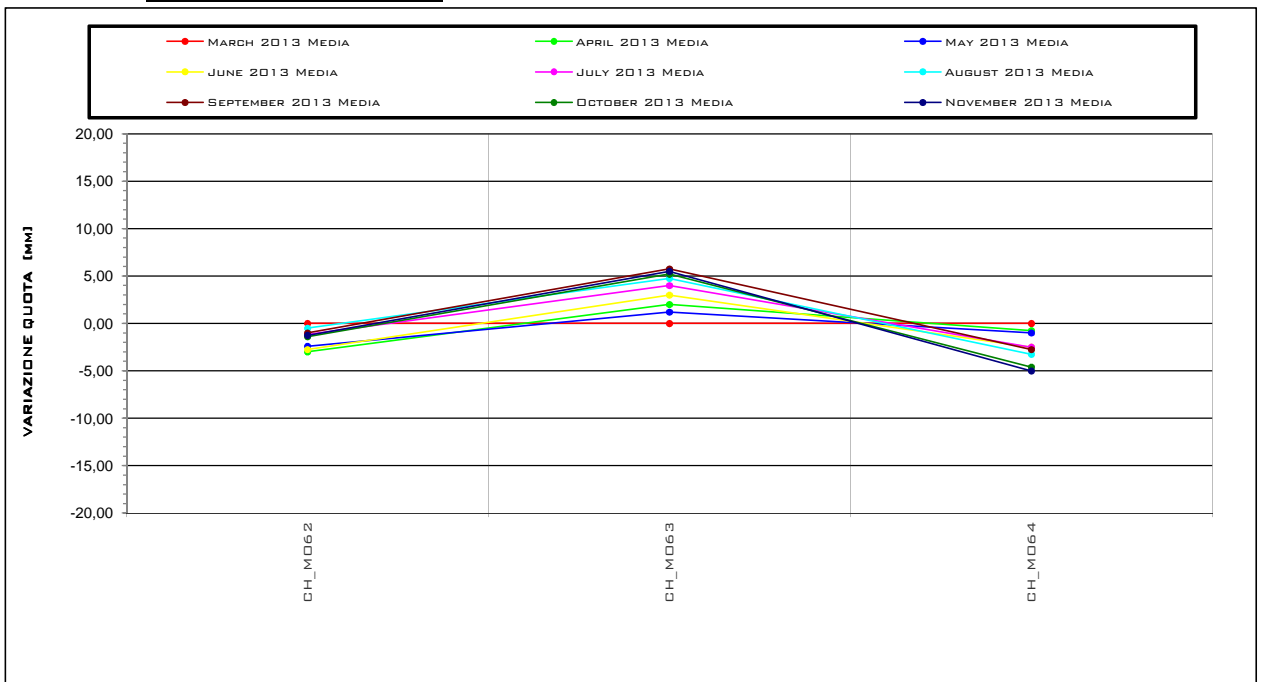
**UBICAZIONE**



**GRAFICO QUOTA**

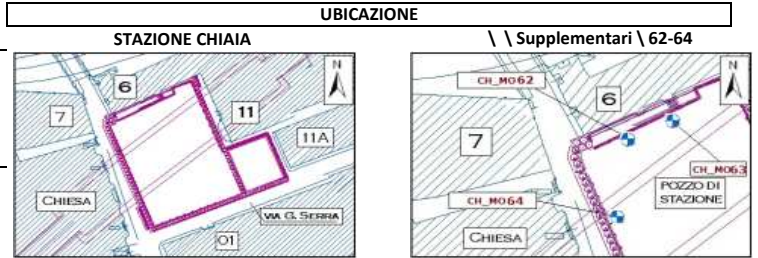


**GRAFICO ISOCRONE**

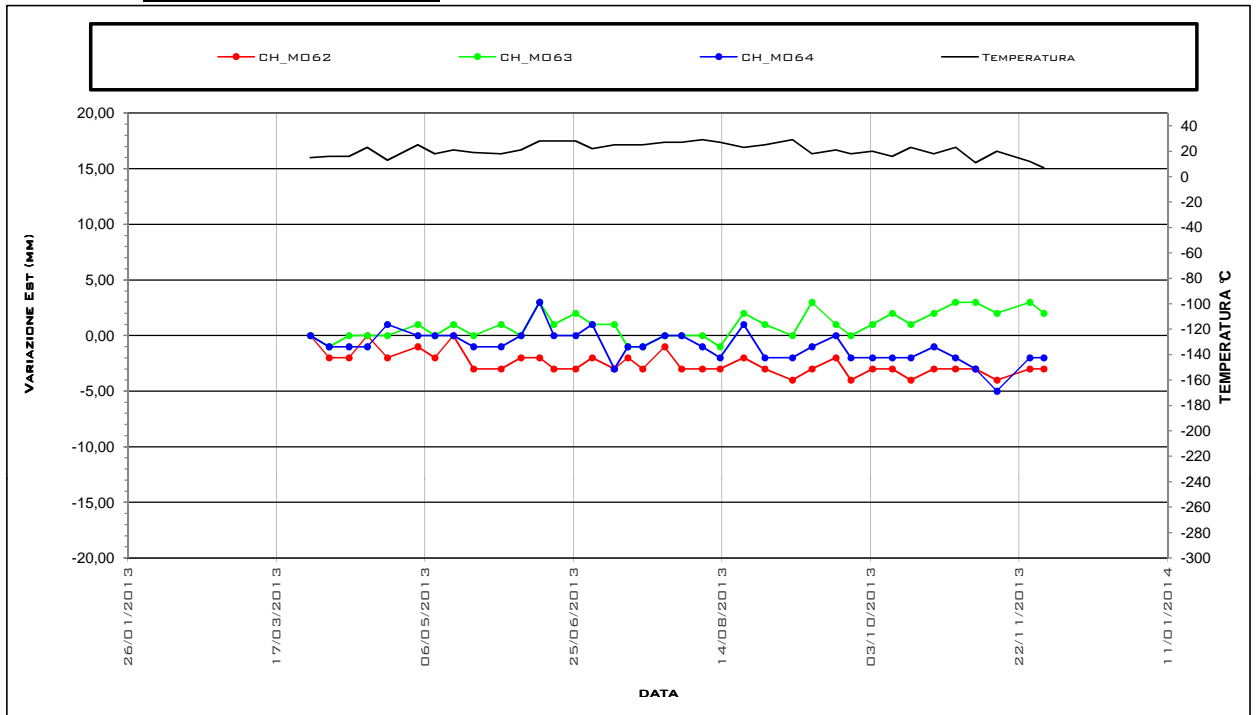




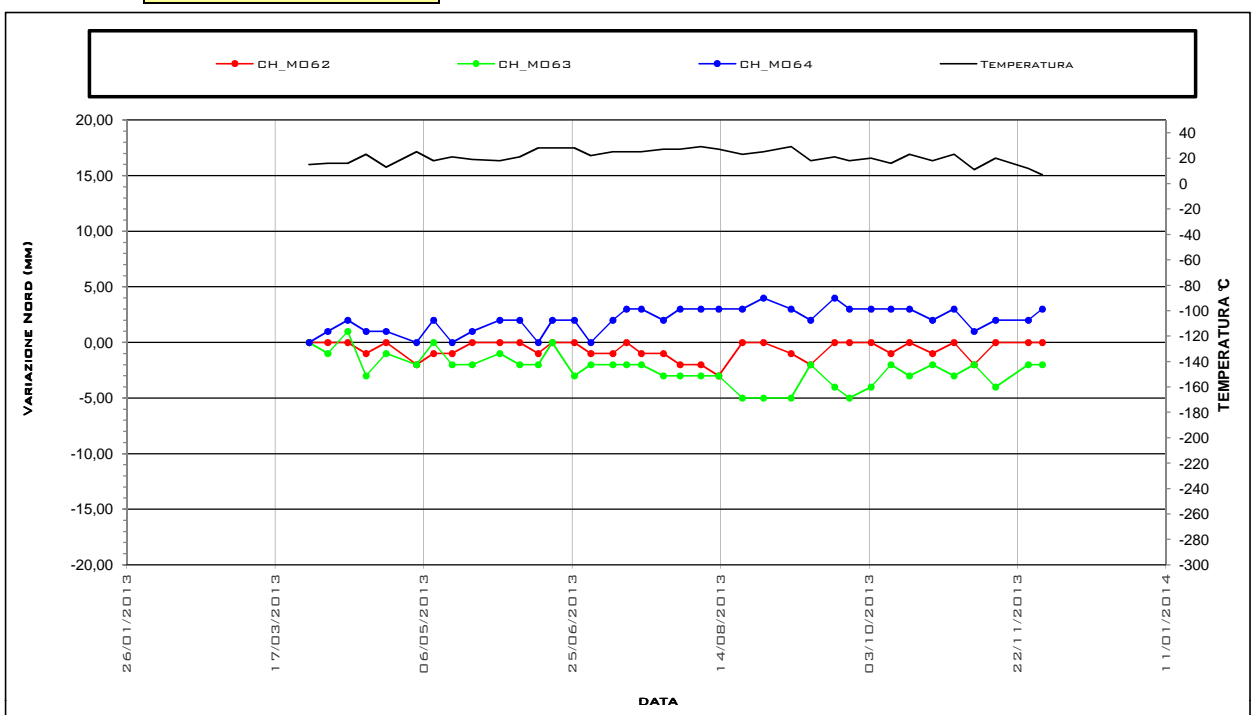
**Ubicazione** STAZIONE CHIAIA  
**Opera** \ \ Supplementari \ 62-64  
**Tipo Strumento** Mire Ottiche  
**Data posa in opera** 28/03/2013  
**Data lettura di zero** 28/03/2013



**GRAFICO EST**



**GRAFICO NORD**



METROPOLITANA LINEA 6 - RESOCONTO MANUTENZIONE TREESSE ENGINEERING S.R.L.



ott-13

**SAN PASQUALE**

COD.STAZIONE	COD. STRUM.	TIPOLOGIA STRUM.	METRI da p.c.	7/10	8/10	9/10	10/10	11/10	Esito	TOT MESE	TOTALE
SP	SP_PZ1_S	PIEZ. CASAGRANDE	15							0	2
	SP_PZ1_P	PIEZ. CASAGRANDE	30							0	1
SP (nuova installazione)	SP_PZ1_S	PIEZ. CASAGRANDE	15							0	3
	SP_PZ1_P	PIEZ. CASAGRANDE	30							0	3
SP	SP_PZ2_S	PIEZ. CASAGRANDE	15							0	5
	SP_PZ2_P	PIEZ. CASAGRANDE	30							0	5
SP	SP_PZ3_S	PIEZ. CASAGRANDE	15							0	6
	SP_PZ3_P	PIEZ. CASAGRANDE	30							0	6
SP	SP_PZ4_S	PIEZ. CASAGRANDE	15							0	4
	SP_PZ4_P	PIEZ. CASAGRANDE	30							0	4
SP	SP_PZ5_S	PIEZ. CASAGRANDE	15							0	4
	SP_PZ5_P	PIEZ. CASAGRANDE	30							0	4
SP	SP_PZ6_S	PIEZ. CASAGRANDE	15							0	3
	SP_PZ6_P	PIEZ. CASAGRANDE	30							0	3
SP	SP_PZ7_S	PIEZ. CASAGRANDE	15							0	2
	SP_PZ7_P	PIEZ. CASAGRANDE	30							0	2
SP	SP_PZ8_S	PIEZ. CASAGRANDE	40							0	2
	SP_PZ8_P	PIEZ. CASAGRANDE	43							0	2
SP	SP_PZ9_S	PIEZ. CASAGRANDE	15							0	2
	SP_PZ9_P	PIEZ. CASAGRANDE	30							0	2
SP	SP_PZ10_S	PIEZ. CASAGRANDE	40							0	2
	SP_PZ10_P	PIEZ. CASAGRANDE	43							0	2
SP	SP_PZ11_S	PIEZ. CASAGRANDE	40							0	2
	SP_PZ11_P	PIEZ. CASAGRANDE	43							0	2
SP	SP_PZ12_S	PIEZ. CASAGRANDE	15							0	2
	SP_PZ12_P	PIEZ. CASAGRANDE	30							0	2
SP	SP_PZ13_S	PIEZ. CASAGRANDE	15							0	2
	SP_PZ13_P	PIEZ. CASAGRANDE	30							0	2
SP	SP_PZ14_S	PIEZ. CASAGRANDE	40							0	2
	SP_PZ14_P	PIEZ. CASAGRANDE	43							0	2
SP	SP_PZ15_S	PIEZ. CASAGRANDE	22,5							0	1
	SP_PZ15_P	PIEZ. CASAGRANDE	45,5							0	1
SP	SP_PZ16_S	PIEZ. CASAGRANDE	22					1	P	1	2
	SP_PZ16_P	PIEZ. CASAGRANDE	39,5					1	P	1	2
SP	SP_IN1	INCLINOMETRO	20/54							0	2
SP	SP_IN1_1	INCLINOMETRO	44/44							0	4
SP	SP_EI2/ES2	ESTENSO-INCLINOMETRO	54/54							0	4
SP	SP_IN3	INCLINOMETRO	45/45							0	5
SP	SP_IN4	INCLINOMETRO	0/54							0	0
SP	SP_IN4_1	INCLINOMETRO	50/50					1	P	1	4
SP	SP_EI5/ES5	ESTENSO-INCLINOMETRO	54/54							0	2
SP	SP_IN6	INCLINOMETRO	35/54							0	2
SP	SP_IN6_1	INCLINOMETRO	48/48	1					P	1	4
SP	SP_IN_P3	INCLINOMETRO	0/43							0	0
SP	SP_IN_P3_1	INCLINOMETRO	16/33							0	5
SP	SP_IN_P5	INCLINOMETRO	48/48							0	6
SP	SP_IN_P12	INCLINOMETRO	37/45							0	1
SP	SP_IN_P12_1	INCLINOMETRO	43/43							0	2
SP	SP_IN_P13	INCLINOMETRO	49/49							0	6
SP	SP_IN_P25	INCLINOMETRO	0/51							0	0
SP	SP_IN_P26	INCLINOMETRO	45/45							0	9
SP	SP_IN_P61	INCLINOMETRO	0/51							0	0
SP	SP_IN_P64	INCLINOMETRO	28/46							0	6
SP	SP_IN_P74	INCLINOMETRO	42/42		1				P	1	6
SP	SP_IN_P75	INCLINOMETRO	47/47		1				P	1	6
SP	SP_IN_P83	INCLINOMETRO	47/47		1				P	1	6
SP	SP_IN_P84	INCLINOMETRO	35/51							0	1
SP	SP_IN_P84_1	INCLINOMETRO	47/47		1				P	1	5












**LEGENDA**

	IN ROSSO STRUMENTO FUORI USO (per il quale è inutile programmare attività di manutenzione e monitoraggio)
	IN GIALLO STRUMENTO A FUNZIONALITA' RIDOTTA
	IN VERDE STRUMENTO SOSTITUITO
<b>P</b>	ESITO POSITIVO
<b>N</b>	ESITO NEGATIVO
<b>Video</b>	VIDEOISPEZIONE ESEGUITA

**NOTE**

Gli strumenti sottoposti a manutenzione nel periodo indicato, dopo il trattamento di spurgo, lavaggio a pressione, verifica dell'accessibilità tubi di misura, hanno migliorato la loro funzionalità. Superando le prove con esito positivo.

GL\_MA\_PZ1

Per i piezometri tipo Casagrande sotto riportati, si evince la scarsa comunicazione fra i tubi di misura, che indica un ridotto ricircolo dell'acqua all'interno della cella. Dalla risposta strumentale ottenuta durante le fasi di manutenzione, si suppone un funzionamento assimilabile più a piezometri tubo aperto che non a celle tipo Casagrande, ciò potrebbe comportare tempi di risposta più lunghi. Tuttavia questi strumenti continuano a fornire misure correlabili con gli altri strumenti funzionanti, continueranno ad essere regolarmente inseriti nel programma di monitoraggio e di manutenzione.

Cantiere San Pasquale

SP\_PZ1\_P

SP\_PZ1\_S

Cantiere Arco Mirelli

AM\_PZ6\_S

AM\_PZ5\_S

Tratta Mergellina-Arco Mirelli

GL\_MA\_PZ4