

FX08 / 15\_20131124\_130352 - RIO CAÍ/RS - SOP/RS - CONSÓRCIO ENGEPLUS / AEROGEO - VOO 1:10.000 -

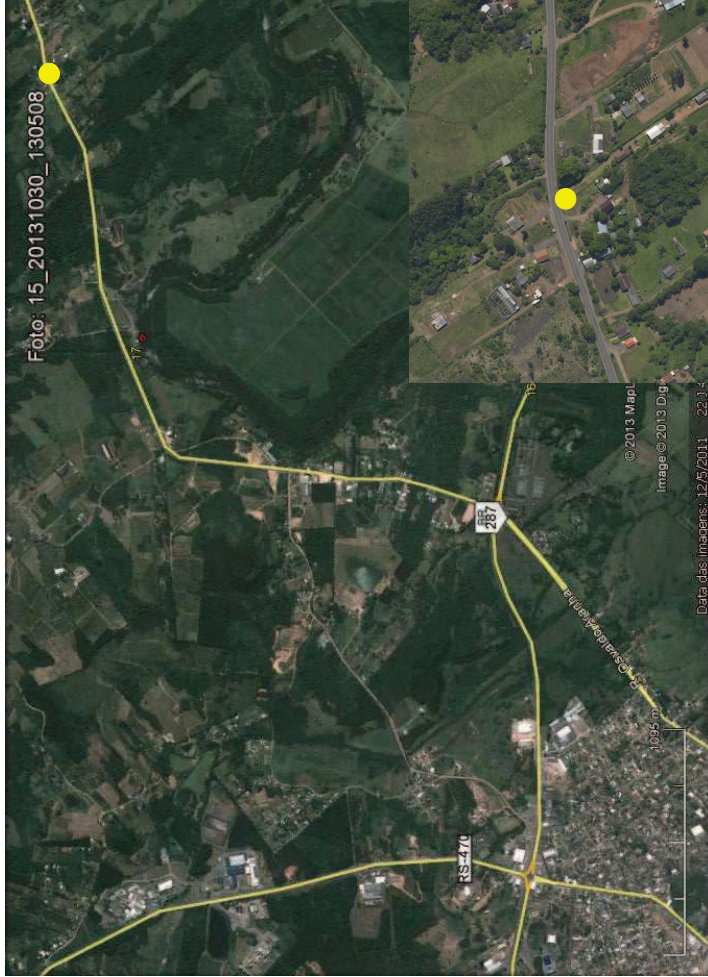


DIST. FOCAL 50mm

**MONOGRAFIA DE PONTO DE APOIO SUPLEMENTAR  
RESTITUIÇÃO RIO CAÍ**

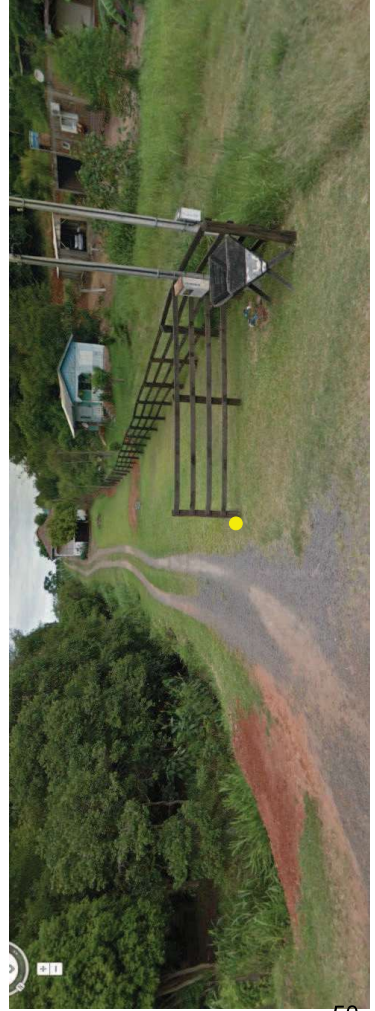
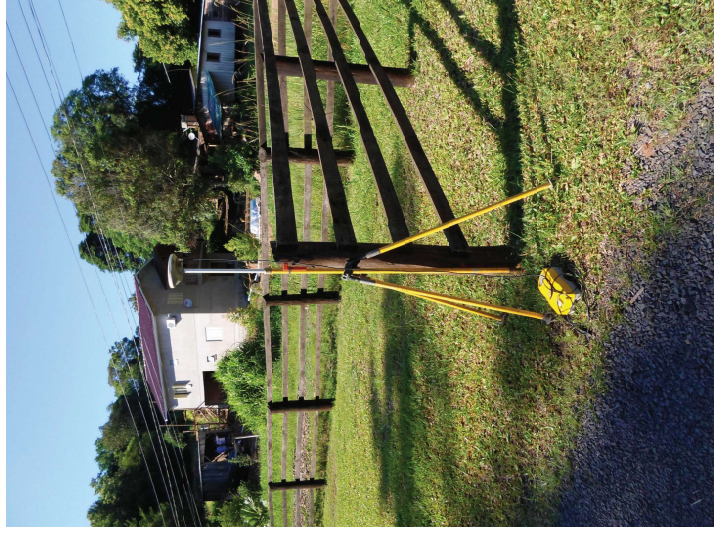


**Apoio GPS Bloco Norte // Foto:** FX16 - 15\_20131030\_130508 // **Feição:** canto de cerca  
**Operador:** Jorge Mello **Data:** 14/12/2013 **Equipamento:** GPS L1/L2 TRIMBLE 5700  
**Nome Ponto:** FX16\_130508 **Hora Liga:** 09:08 **Hora Desliga:** 09:53 **Alt. Antena:** 1,73m

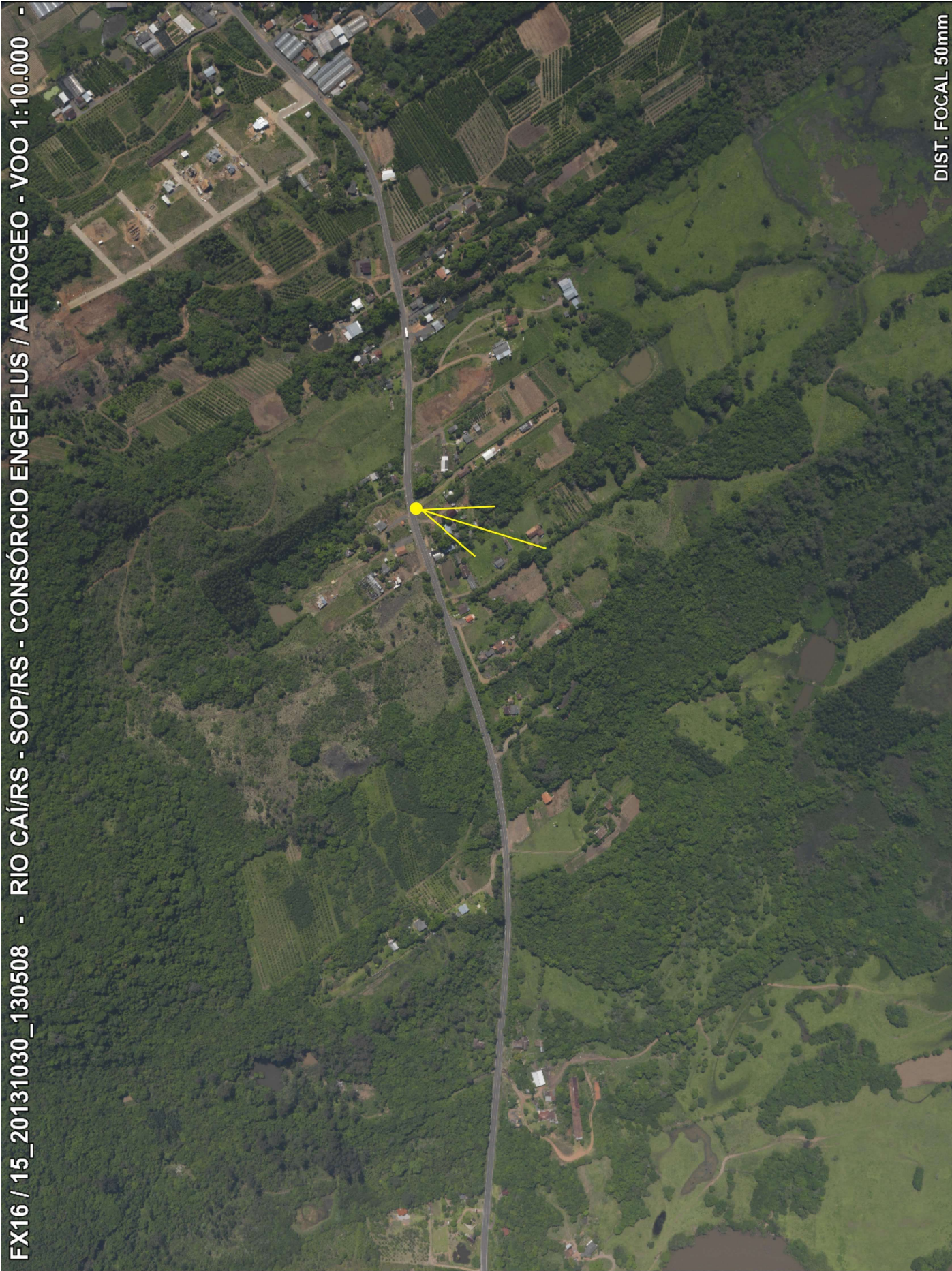


\* Ponto rastreado no canto de uma cerca de madeira, na entrada de uma propriedade. Localiza-se na Estrada para Pareci Novo / saindo pela RS-240 // BR-287 – Pareci Novo - RS

**Coordenadas:** N=6.720.101,355m // E= 459.955,567m // **Alt. Ortométrica=** 25,098m  
**Sistema de Projeção UTM – Fuso 22 – Datum Hor.= SIRGAS2000 – Datum Vertical=** Imbituba/SC



FX16 / 15\_20131030\_130508 - RIO CAÍ/RS - SOP/RS - CONSÓRCIO ENGEPLUS / AEROGEO - VOO 1:10.000 -

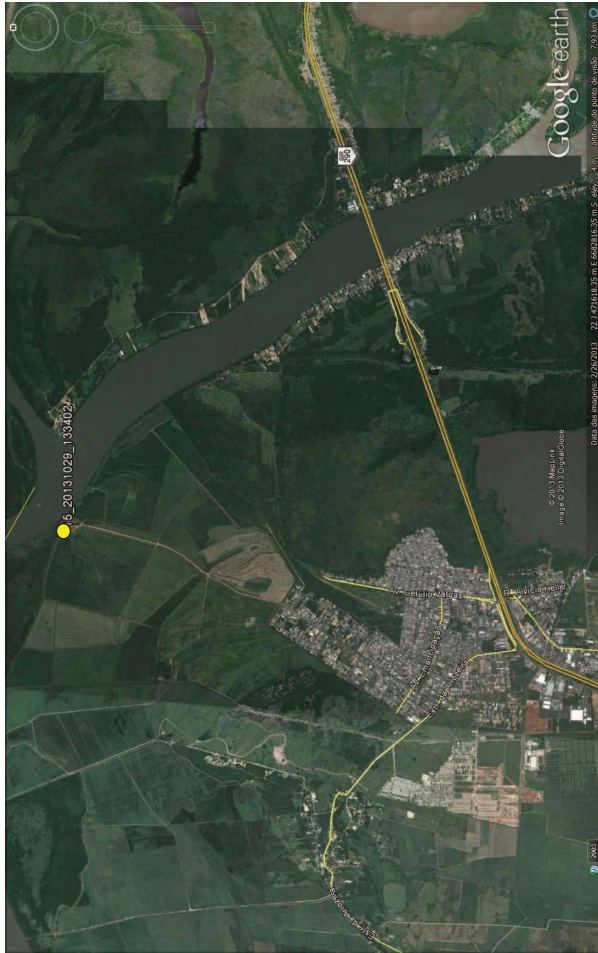


DIST. FOCAL 50mm

**MONOGRAFIA DE PONTO DE APOIO SUPLEMENTAR  
RESTITUIÇÃO RIO CAÍ**

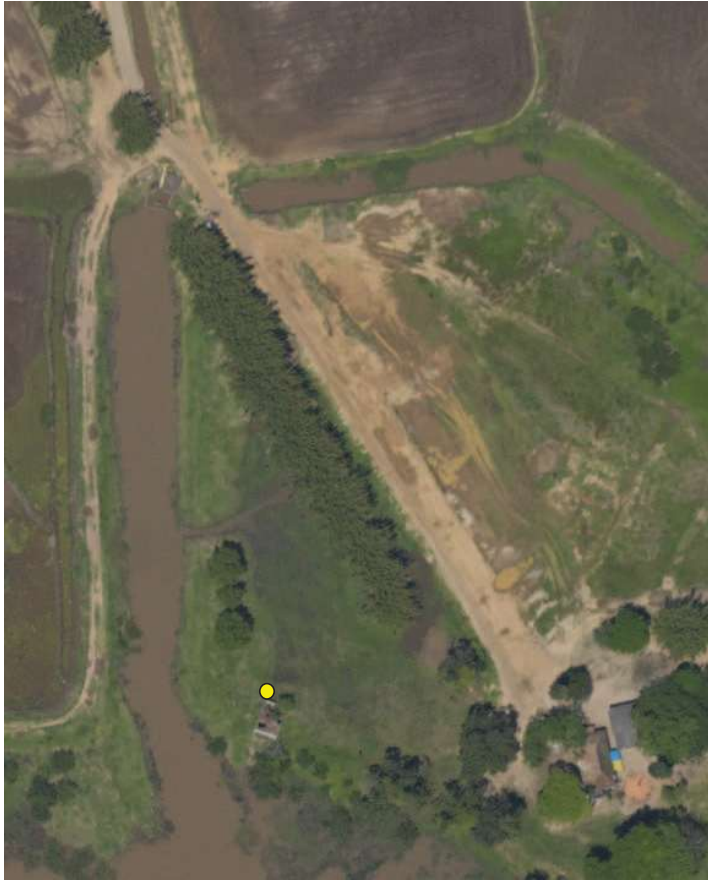
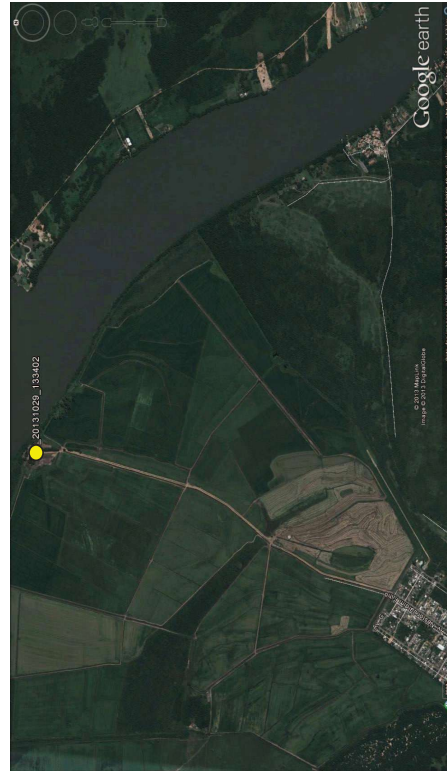


**Apoio GPS Bloco Sul // Foto:** FX01 - 15\_20131029\_133402 // **Feição:** Canto de alvenaria (ruína)  
**Operador:** Jorge Mello **Data:** 16/12/2013 **Equipamento:** GPS L1/L2 TRIMBLE 5700  
**Nome Ponto:** FX01\_133402 **Hora Liga:** 12:05 **Hora Desliga:** 12:50 **Alt. Antena:** 2,04m



\* Ponto rastreado em um canto de alvenaria em ruínas, localizada na continuação da Av. Nestor Jardim Filho – Eldorado do Sul - RS

**Coordenadas:** N=6.685.059,991m // E= 471.198,122m // **Alt. Ortométrica=** 2,234m  
Sistema de Projeção UTM – Fuso 22 – Datum Hor.= SIRGAS2000 – Datum Vertical= Imbituba/SC



FX01 / 15\_20131029\_133402 - RIO CAÍ/RS - SOP/RS - CONSÓRCIO ENGEPLUS / AEROGEO - VOO 1:10.000 -

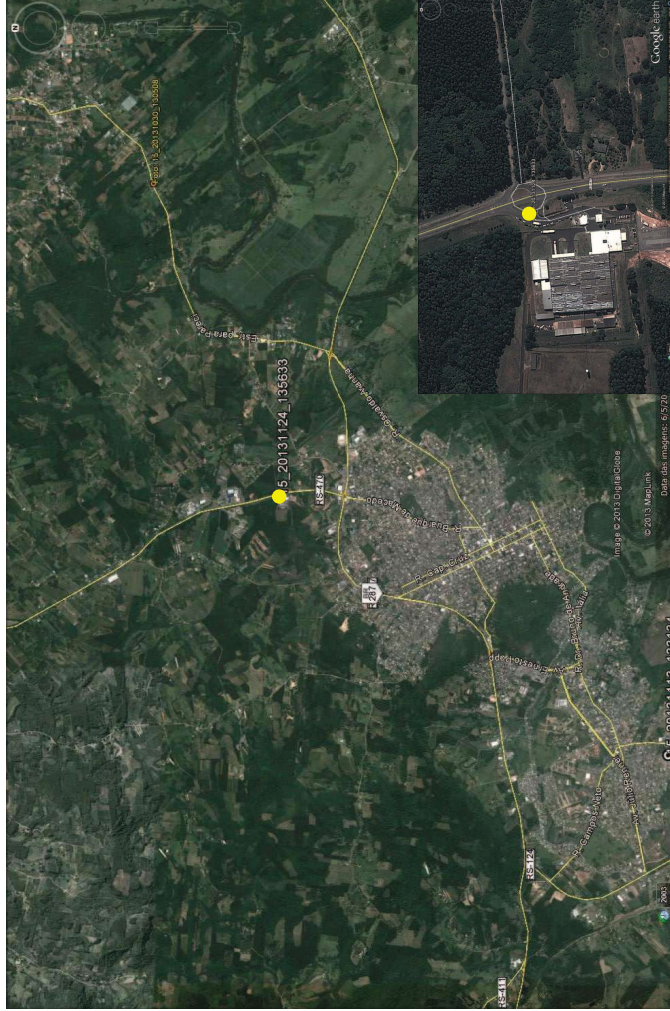


DIST. FOCAL 50mm

**MONOGRAFIA DE PONTO DE APOIO SUPLEMENTAR  
RESTITUIÇÃO RIO CAÍ**



**Apoio GPS Bloco Central // Foto:** FX11 - 15\_20131124\_135633 // **Feição:** vértice MF do canteiro  
**Operador:** Jorge Mello **Data:** 14/12/2013 **Equipamento:** GPS L1/L2 TRIMBLE 5700  
**Nome Ponto:** FX11\_135633 **Hora Liga:** 13:00 **Hora Desliga:** 13:45 **Alt. Antena:** 1,92m



\* Ponto rastreado em um dos vértices do canteiro do trevo da RS-470 com a rua Bélgica (acesso à empresa CBC) – Montenegro - RS

**Coordenadas:** N=6.718.543,580m // E= 456.099,626m // **Alt. Ortométrica=** 35,503m  
Sistema de Projeção UTM – Fuso 22 – Datum Hor.= SIRGAS2000 – Datum Vertical= Imbituba/SC



FX11 / 15\_20131124\_135633 - RIO CAÍRS - SOP/RS - CONSÓRCIO ENGEPLUS / AEROGEO - VOO 1:10.000 -

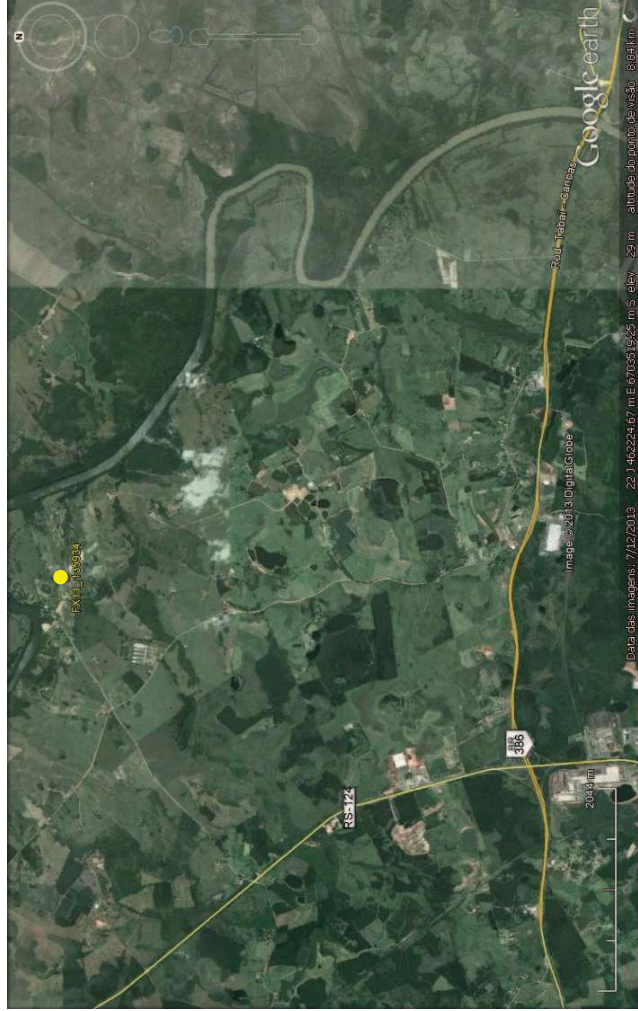


DIST. FOCAL 50mm

**MONOGRAFIA DE PONTO DE APOIO SUPLEMENTAR  
RESTITUIÇÃO RIO CAÍ**



**Apoio GPS Bloco Central // Foto:** FX11\_1520131124\_135934 // **Feição:** tubulação / drenagem  
**Operador:** Jorge Mello **Data:** 14/12/2013 **Equipamento:** GPS L1/L2 TRIMBLE 5700  
**Nome Ponto:** FX11\_135934 **Hora Liga:** 16:23 **Hora Desliga:** 17:10 **Alt. Antena:** 2,19m



\* Ponto rastreado na parte superior externa da tubulação de concreto para drenagem de via. Localiza-se próxima à Estrada do Pesqueiro, acesso pela RS-124 – Montenegro - RS

**Coordenadas:** N=6.706.108,777m // E= 461.463,500m // **Alt. Ortométrica=** 5,346m  
 Sistema de Projeção UTM – Fuso 22 – Datum Hor.= SIRGAS2000 – Datum Vertical= Imbituba/SC



FX11 / 15\_20131124\_135934 - RIO CAÍRS - SOP/RS - CONSÓRCIO ENGEPLUS / AEROGEO - VOO 1:10.000 -

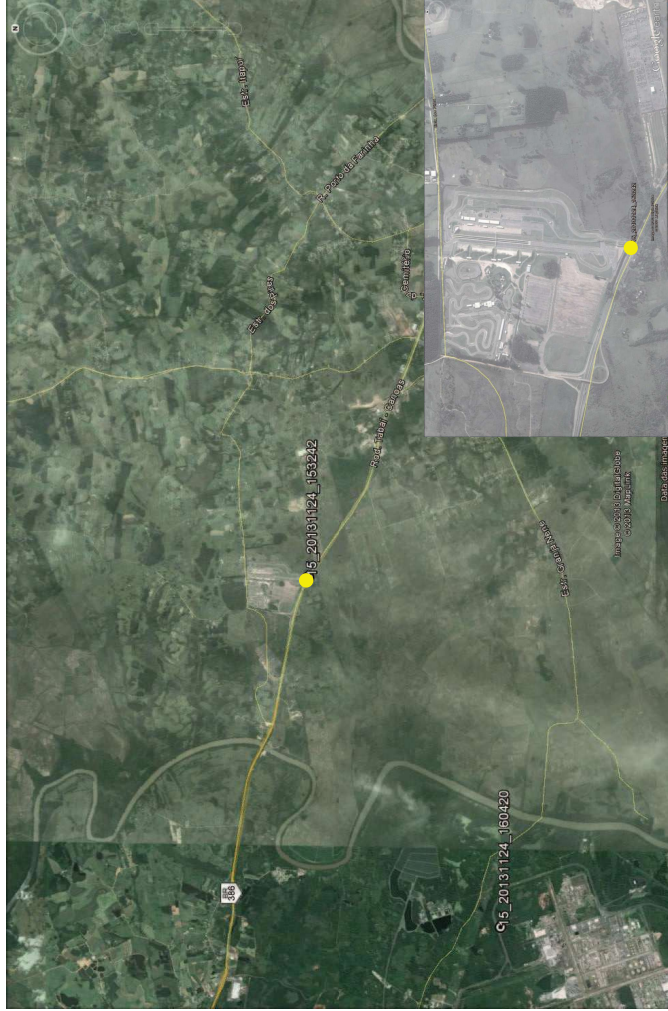


DIST. FOCAL 50mm

**MONOGRAFIA DE PONTO DE APOIO SUPLEMENTAR  
RESTITUIÇÃO RIO CAÍ**

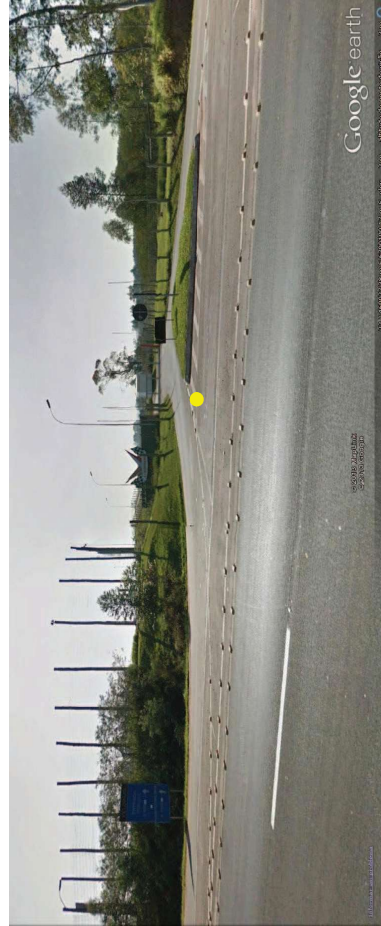


**Apoio GPS Bloco Central // Foto:** FX15 - 15\_20131124\_153245 // **Feição:** Marca de tinta no asfalto  
**Operador:** Jorge Mello **Data:** 15/12/2013 **Equipamento:** GPS L1/L2 TRIMBLE 5700  
**Nome Ponto:** FX15\_153245 **Hora Liga:** 10:17 **Hora Desliga:** 11:02 **Alt. Antena:** 1,89m



\* Ponto rastreado na BR-386, em pintura sinalizadora no asfalto do canteiro em frente ao Portão 1 do Velopark (autódromo) – Nova Santa Rita - RS

**Coordenadas:** N=6.700.112,272m // E= 469.017,609m // **Alt. Ortométrica=** 9,167m  
Sistema de Projeção UTM – Fuso 22 – Datum Hor.= SIRGAS2000 – Datum Vertical= Imbituba/SC



FX15 / 15\_20131124\_153245 - RIO CAÍ/RS - SOP/RS - CONSÓRCIO ENGEPLUS / AEROGEO - VOO 1:10.000 -

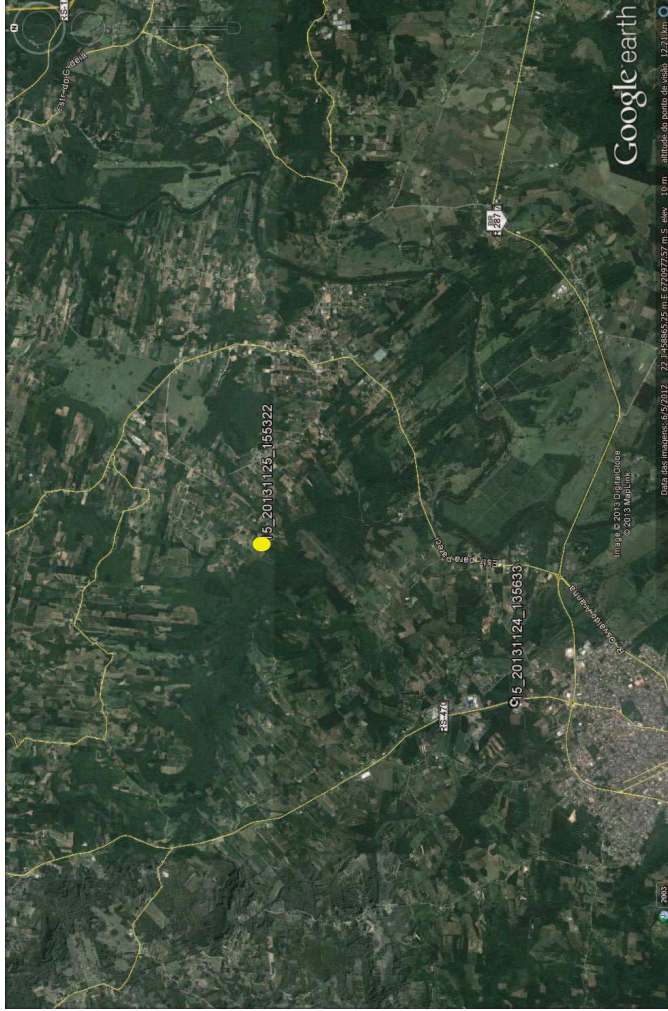


DIST: FOCAL 50mm

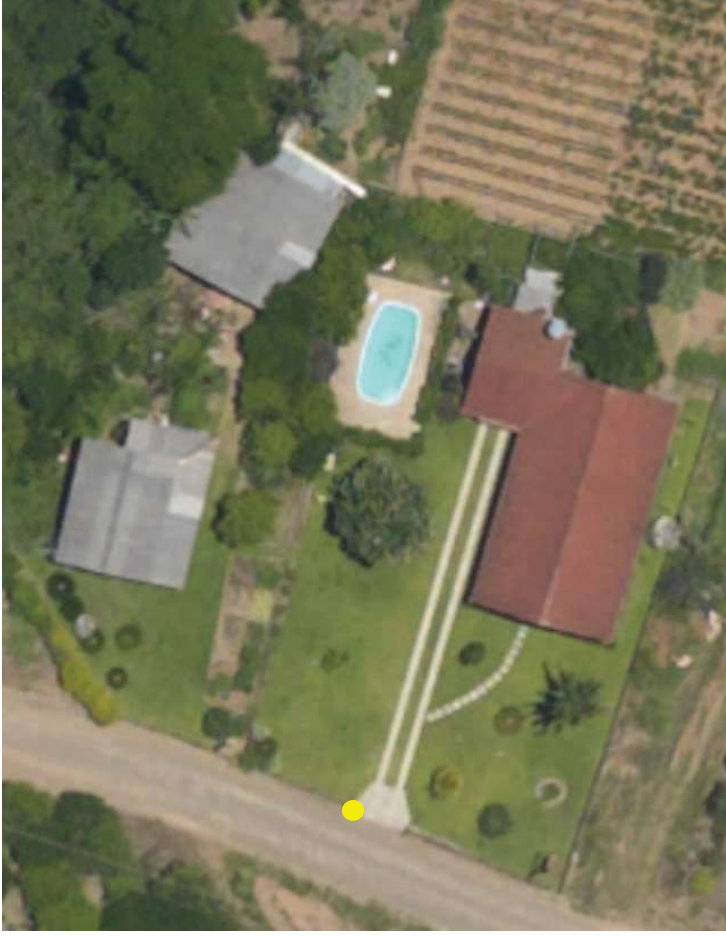
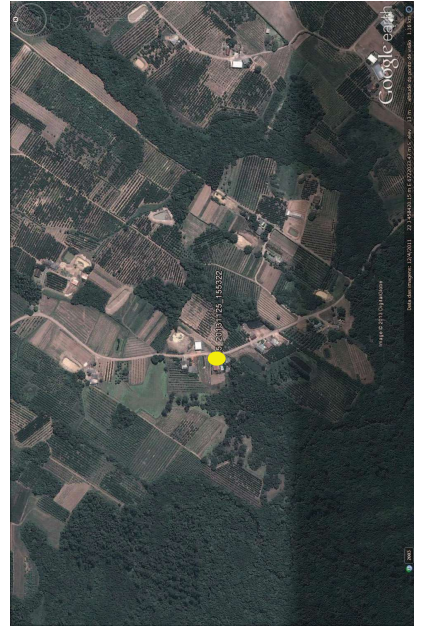
**MONOGRAFIA DE PONTO DE APOIO SUPLEMENTAR  
RESTITUIÇÃO RIO CAÍ**



**Apoio GPS Bloco Central // Foto:** FX14 - 15\_20131125\_155322 // **Feição:** canto de muro/portão  
**Operador:** Jorge Mello **Data:** 14/12/2013 **Equipamento:** GPS L1/L2 TRIMBLE 5700  
**Nome Ponto:** FX14\_155322 **Hora Liga:** 11:46 **Hora Desliga:** 12:40 **Alt. Antena:** 1,78m



\* Ponto rastreado no pilar de pedra do portão de residência. Localidade rural – Pareci Novo - RS  
**Coordenadas:** N=6.722.018,871m // E= 458.331,060m // **Alt. Ortométrica=** 11,177m  
Sistema de Projeção UTM – Fuso 22 – Datum Hor.= SIRGAS2000 – Datum Vertical= Imbituba/SC



FX14 / 15\_20131125\_155322 - RIO CAÍ/RS - SOP/RS - CONSÓRCIO ENGEPLUS / AEROGEO - VOO 1:10.000 -

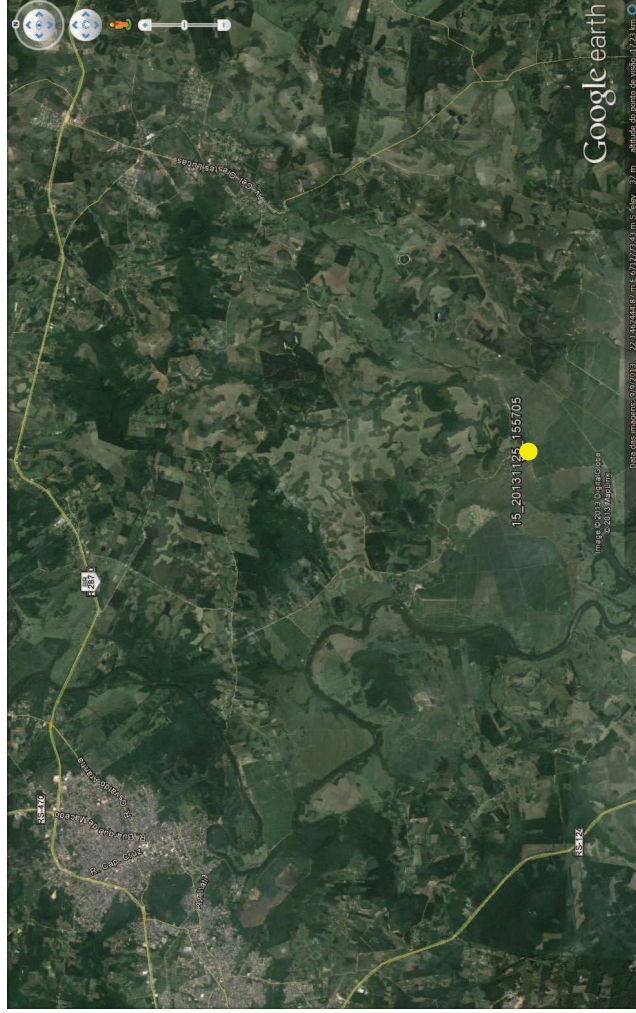


DIST. FOCAL 50mm

**MONOGRAFIA DE PONTO DE APOIO SUPLEMENTAR  
RESTITUIÇÃO RIO CAÍ**

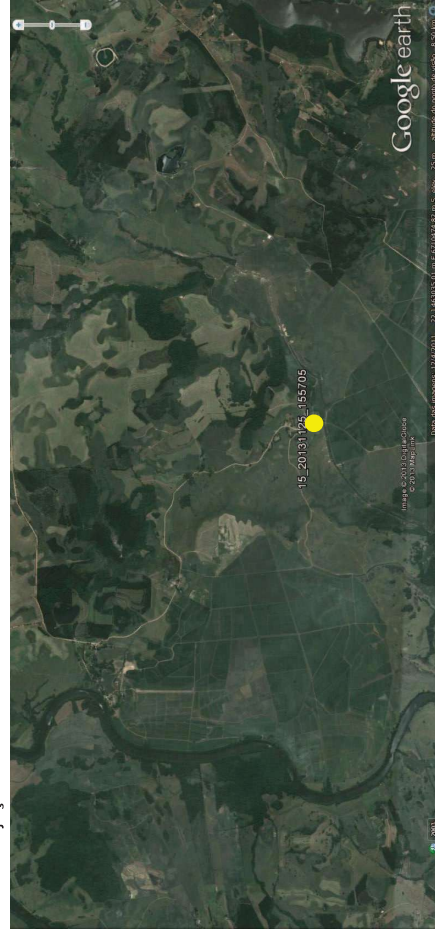


**Apoio GPS Bloco Central // Foto: FX14 - 15\_20131125\_155705 // Feição: balança de veículo**  
**Operador: Jorge Mello Data: 15/12/2013 Equipamento: GPS L1/L2 TRIMBLE 5700**  
**Nome Ponto: FX14\_155705 Hora Liga: 08:16 Hora Desliga: 09:36 Alt. Antena: 1,99m**



**\* Ponto rastreado em um dos vértices de uma balança de veículos, localizada em propriedade rural – Capela de Santa - RS**

**Coordenadas: N=6.708.949,453m // E= 463.526,840m // Alt. Ortométrica= 7,895m**  
**Sistema de Projeção UTM – Fuso 22 – Datum Hor.= SIRGAS2000 – Datum Vertical= Imituba/SC**



FX14 / 15\_20131125\_155705 - RIO CAÍ/RS - SOP/RS - CONSÓRCIO ENGEPLUS / AEROGEO - VOO 1:10.000 -

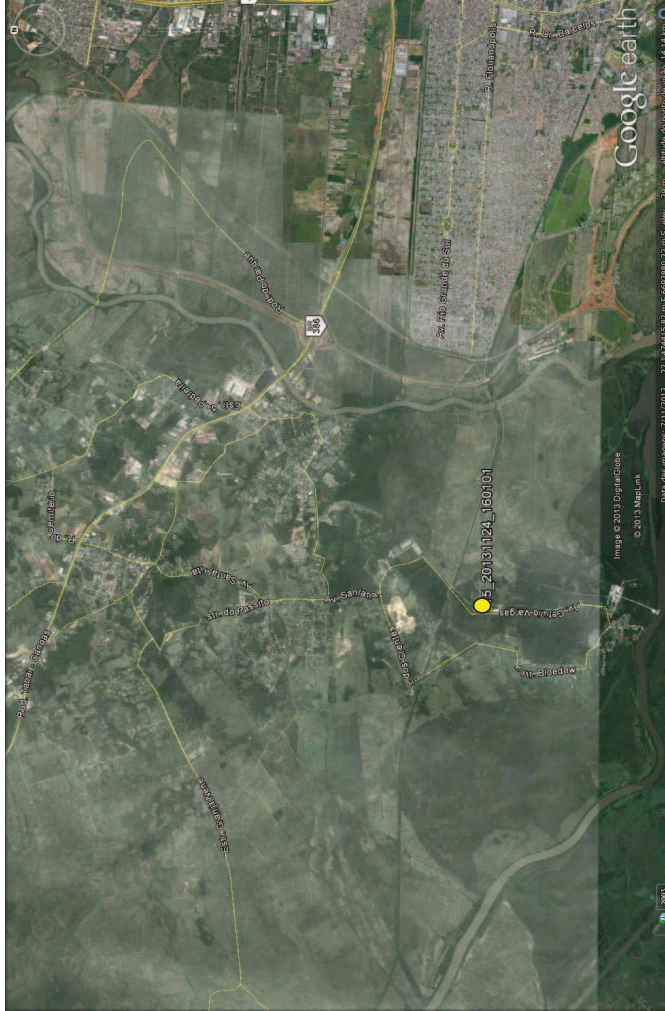


DIST. FOCAL 50mm

**MONOGRAFIA DE PONTO DE APOIO SUPLEMENTAR  
RESTITUIÇÃO RIO CAÍ**



**Apoio GPS Bloco Sul // Foto: FX06 - 15\_20131124\_160101 // Feição: vértice canteiro**  
**Operador: Jorge Mello Data: 15/12/2013 Equipamento: GPS L1/L2 TRIMBLE 5700**  
**Nome Ponto: FX06\_160101 Hora Liga: 13:45 Hora Desliga: 14:30 Alt. Antena: 1,84m**

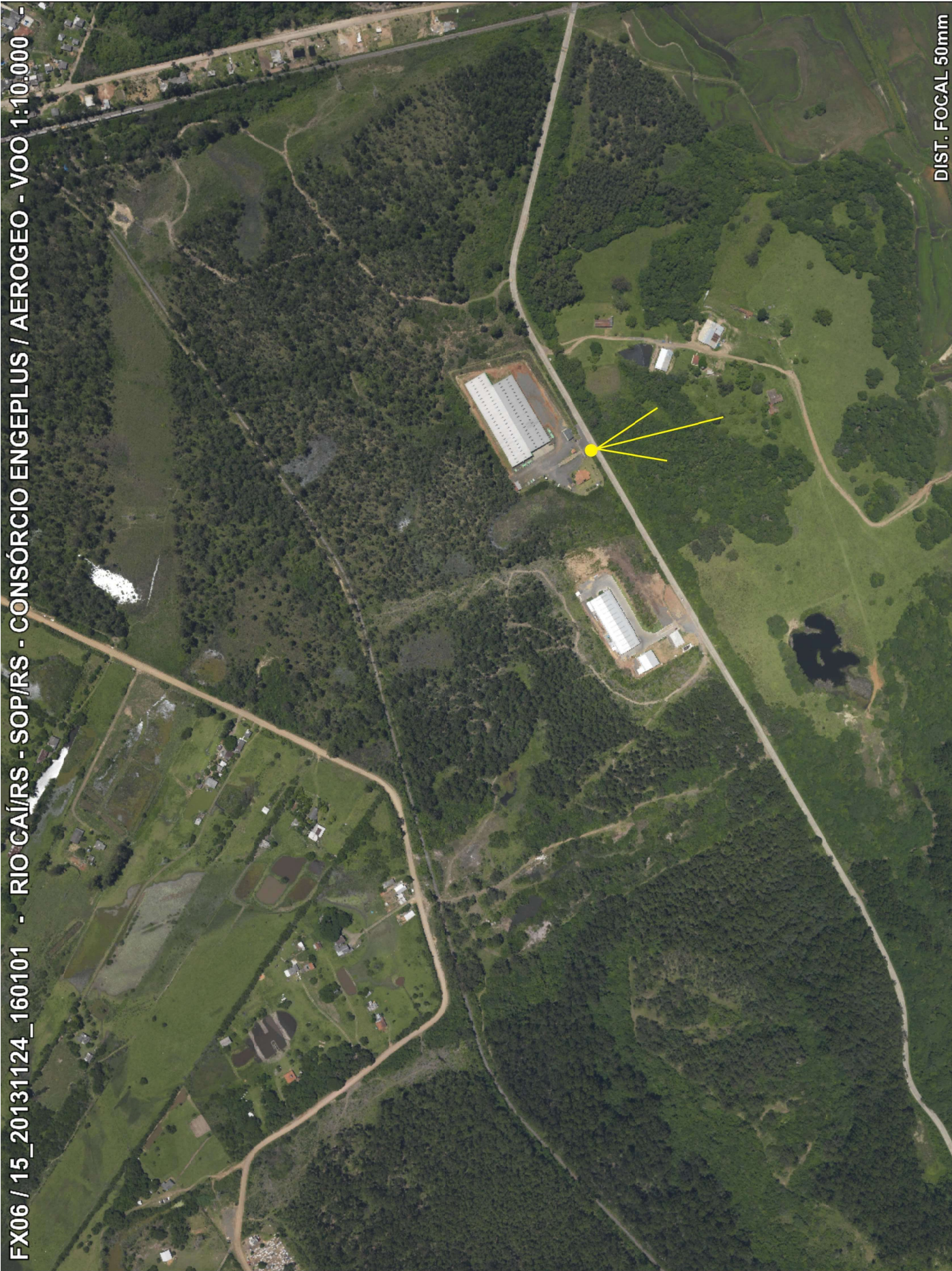


\* Ponto rastreado no acesso para o cais da Cimbagé – Av. Getúlio Vargas / ponto no canteiro de entrada da empresa SAPOTEC – Nova Santa Rita - RS

**Coordenadas: N=6.691.541,281m // E= 472.821,117m // Alt. Ortométrica= 12.694m**  
**Sistema de Projeção UTM – Fuso 22 – Datum Hor.= SIRGAS2000 – Datum Vertical= Imbituba/SC**



FX06 / 15\_20131124\_160101 - RIO CAI/RS - SOP/RS - CONSÓRCIO ENGEPLUS / AEROGEO - VOO 1:10.000 -

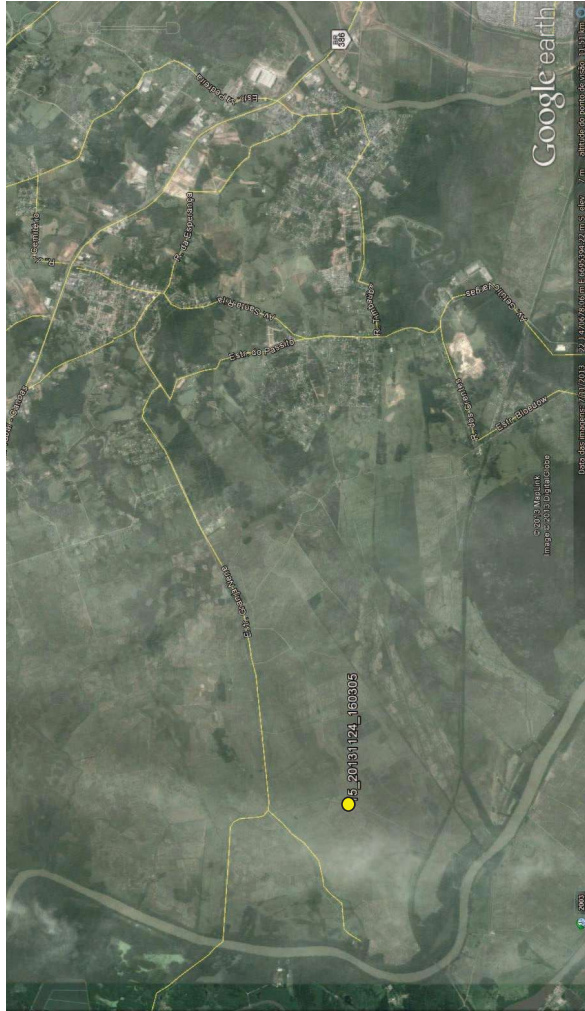


DIST. FOCAL 50mm

**MONOGRAFIA DE PONTO DE APOIO SUPLEMENTAR  
RESTITUIÇÃO RIO CAÍ**



**Apoio GPS Bloco Sul // Foto: FX06 - 15\_20131124\_160305 // Feição: vértice alvenaria**  
**Operador: Jorge Mello Data: 15/12/2013 Equipamento: GPS L1/L2 TRIMBLE 5700**  
**Nome Ponto: FX06\_160305 Hora Liga: 11:52 Hora Desliga: 12:37 Alt. Antena: 1,47m**

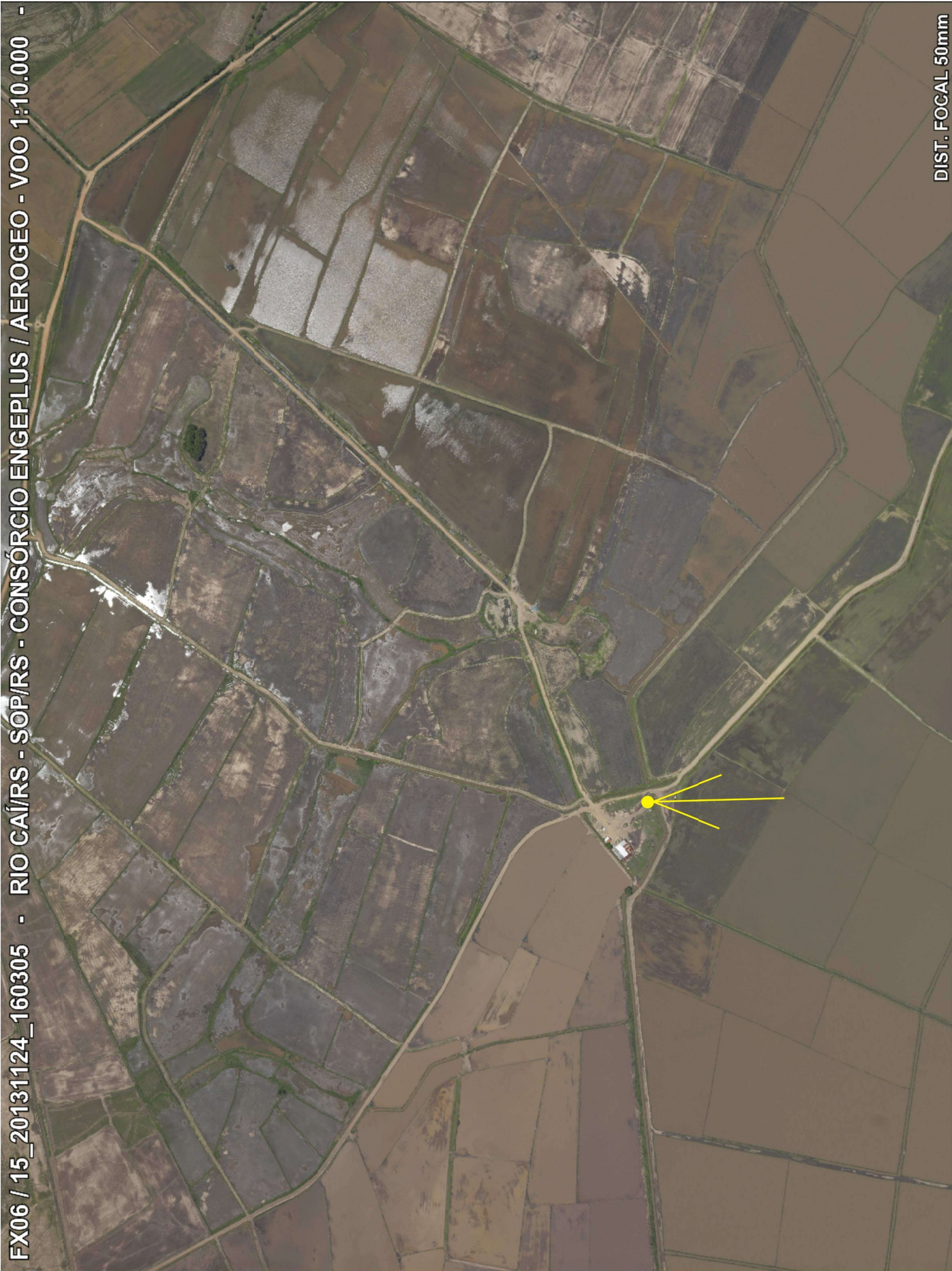


\* Ponto rastreado próximo à Estrada Granja Nene, localizado no canto de uma estrutura retangular de alvenaria - Nova Santa Rita - RS

**Coordenadas: N=6.694.364,852m // E= 466.831,229m // Alt. Ortométrica= 3,136m**  
**Sistema de Projeção UTM – Fuso 22 – Datum Hor.= SIRGAS2000 – Datum Vertical= Imituba/SC**



FX06 / 15\_20131124\_160305 - RIO CAÍ/RS - SÓP/RS - CONSÓRCIO ENGEPLUS / AEROGEO - VOO 1:10.000 -

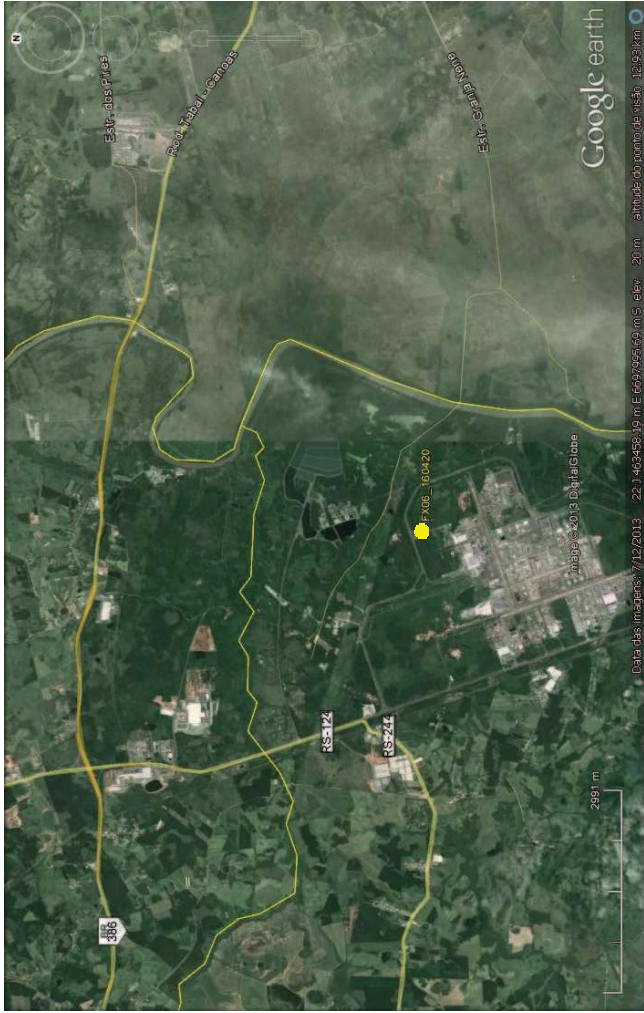


DIST. FOCAL 50mm

**MONOGRAFIA DE PONTO DE APOIO SUPLEMENTAR  
RESTITUIÇÃO RIO CAÍ**



**Apoio GPS Bloco Sul // Foto:** FX06 - 15\_20131124\_160420 // **Feição:** meio-fio/sinalizador  
**Operador:** Jorge Mello **Data:** 15/12/2013 **Equipamento:** GPS L1/L2 TRIMBLE 5700  
**Nome Ponto:** FX06\_160420 **Hora Liga:** 16:18 **Hora Desliga:** 17:05 **Alt. Antena:** 1,89m



\* Ponto rastreado em um dos acessos ao Polo Petroquímico, entrando pela RS-124. Localiza-se junto ao meio-fio com o alinhamento de sinalizador de pista tipo "tartaruga". – Triunfo - RS

**Coordenadas:** N=6.696.577,097m // E= 463.098,090m // Alt. Ortométrica= 24,56m  
Sistema de Projeção UTM – Fuso 22 – Datum Hor.= SIRGAS2000 – Datum Vertical= Imbituba/SC



FX06 / 15\_20131124\_160420 - RIO CAÍ/RS - SOP/RS - CONSÓRCIO ENGEPLUS / AEROGEO - VOO 1:10.000 -

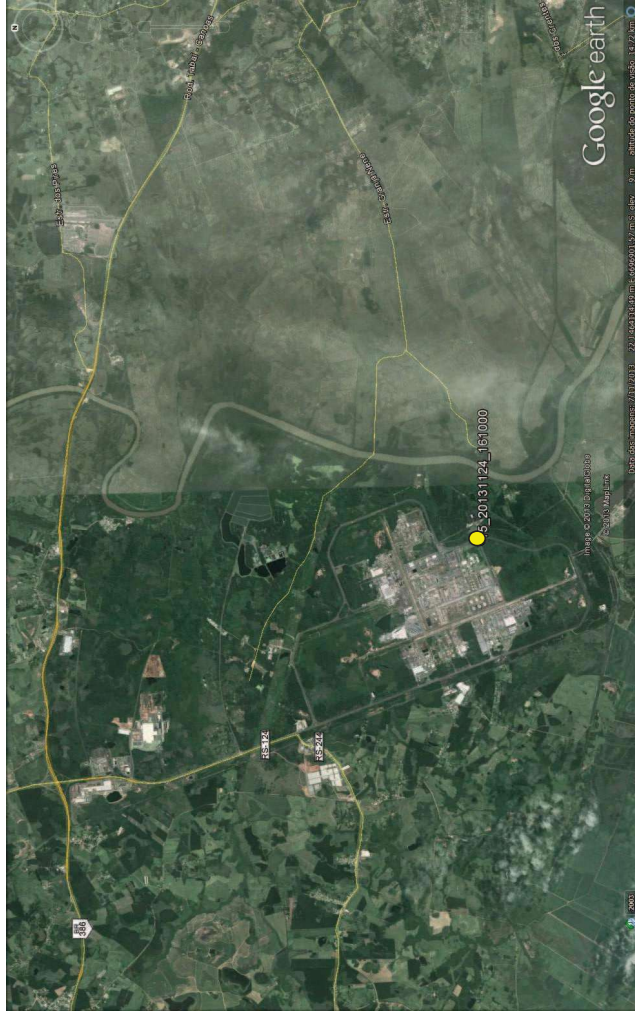


DIST. FOCAL 50mm

**MONOGRAFIA DE PONTO DE APOIO SUPLEMENTAR  
RESTITUIÇÃO RIO CAÍ**

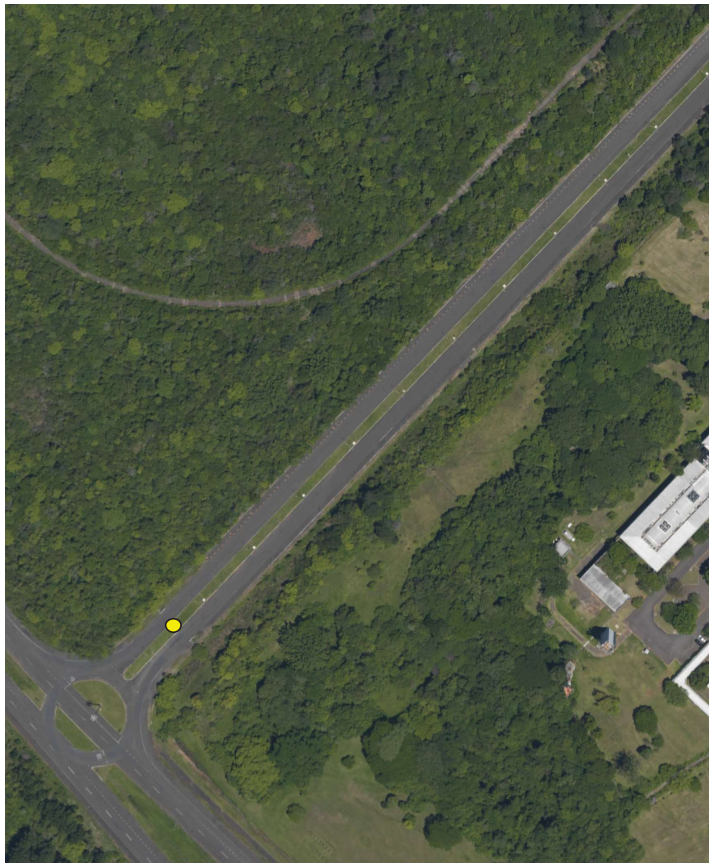
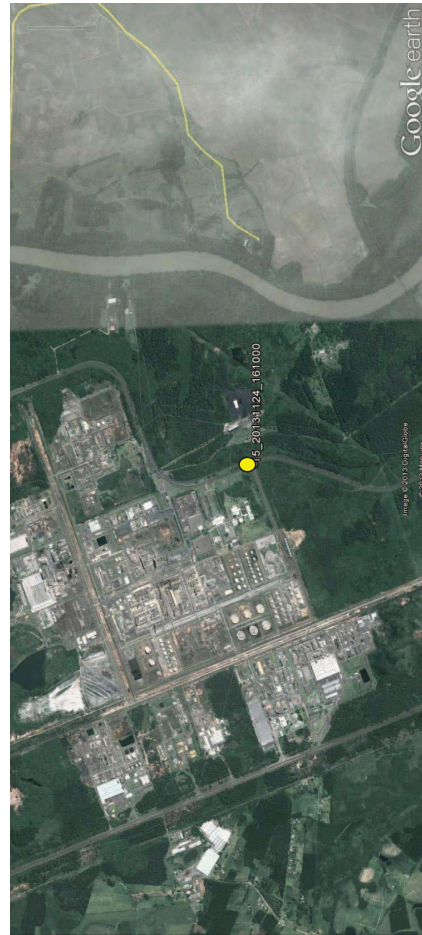


**Apoio GPS Bloco Sul // Foto: FX04 - 15\_20131124\_161000 // Feição: canteiro central/portão**  
**Operador: Jorge Mello Data: 15/12/2013 Equipamento: GPS L1/L2 TRIMBLE 5700**  
**Nome Ponto: FX04\_161000 Hora Liga: 17:14 Hora Desliga: 18:00 Alt. Antena: 2,38m**



\* Ponto rastreado no canteiro central de um dos acessos ao Polo Petroquímico de Triunfo, junto ao pilar do portão de ferro – Triunfo - RS

**Coordenadas: N=6.694.286,857m // E= 463.397,853m // Alt. Ortométrica= 18,800m**  
**Sistema de Projeção UTM – Fuso 22 – Datum Hor.= SIRGAS2000 – Datum Vertical= Imbituba/SC**



FX04 / 15\_20131124\_161000 - RIO CAÍ/RS - SOP/RS - CONSÓRCIO ENGEPLUS / AEROGEO - VOO 1:10.000 -



DIST. FOCAL 50mm

**MONOGRAFIA DE PONTO DE APOIO SUPLEMENTAR  
RESTITUIÇÃO RIO CAÍ**

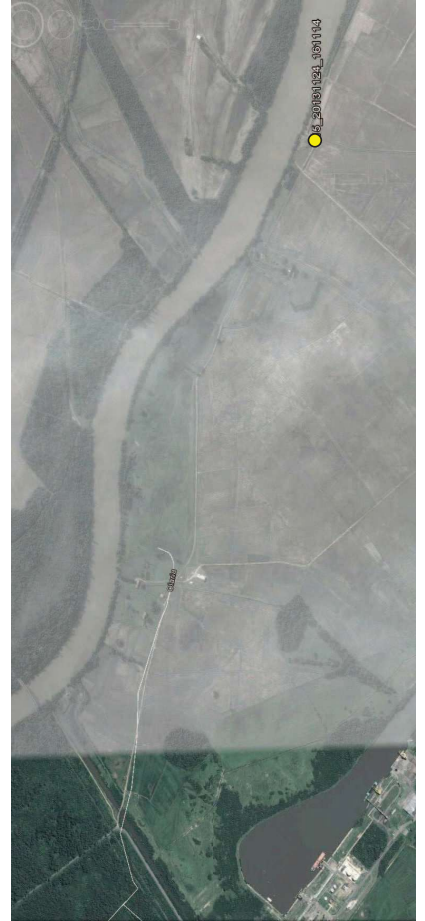


**Apoio GPS Bloco Sul // Foto:** FX04 - 15\_20131124\_161114 // **Feição:** moirão madeira  
**Operador:** Jorge Mello **Data:** 16/12/2013 **Equipamento:** GPS L1/L2 TRIMBLE 5700  
**Nome Ponto:** FX04\_161114 **Hora Liga:** 08:48 **Hora Desliga:** 09:32 **Alt. Antena:** 2,04m



\* Ponto rastreado junto à um moirão de madeira, que sustenta o portão de uma cerca. Localiza-se passando o Polo Petroquímico em direção ao Rio Caí. Continuação da Estrada da Olaria – Triunfo - RS

**Coordenadas:** N=6.692.026,308m // E= 466.701,496m // **Alt. Ortométrica=** 2,626m  
Sistema de Projeção UTM – Fuso 22 – Datum Hor.= SIRGAS2000 – Datum Vertical= Imbituba/SC



FX04 / 15\_20131124\_161114 - RIO CAÍRS - SOP/RS - CONSÓRCIO ENGEPLUS / AEROGEO - VOO 1:10.000 -

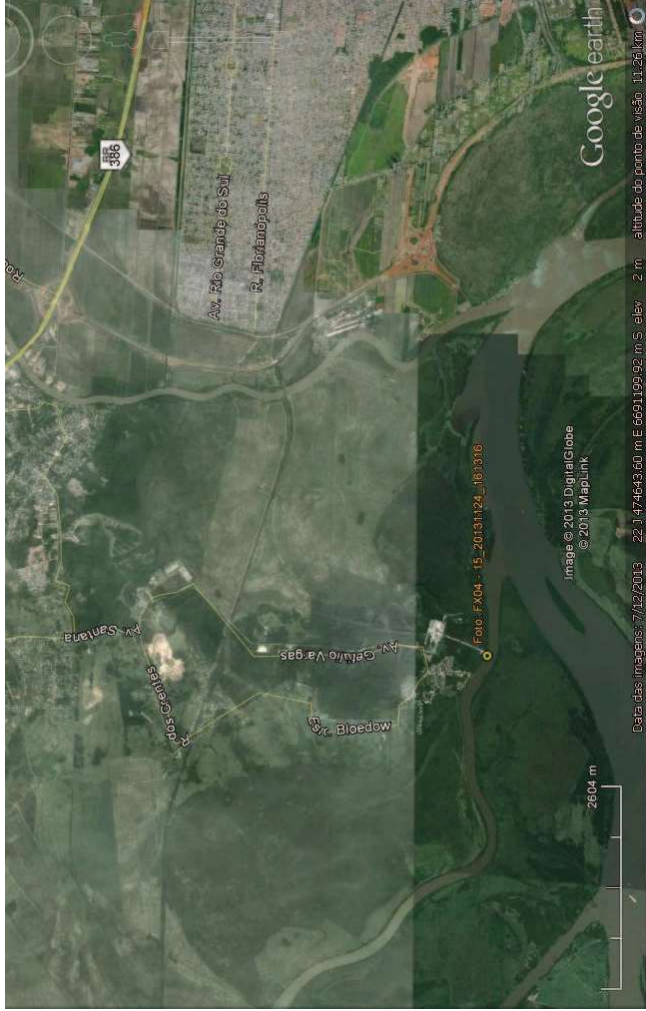


DIST. FOCAL 50mm

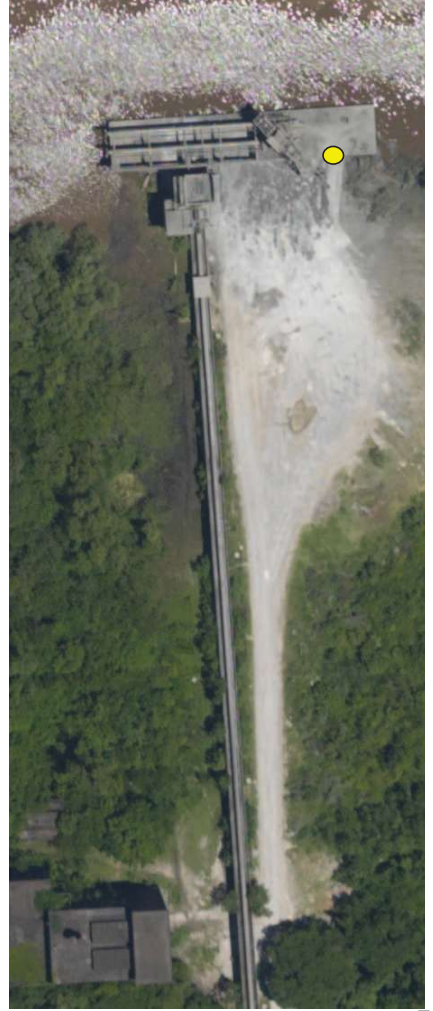
**MONOGRAFIA DE PONTO DE APOIO SUPLEMENTAR  
RESTITUIÇÃO RIO CAÍ**



**Apoio GPS Bloco Sul // Foto:** FX04 - 15\_20131124\_161316 // **Feição:** vértice plataforma  
**Operador:** Jorge Mello **Data:** 15/12/2013 **Equipamento:** GPS L1/L2 TRIMBLE 5700  
**Nome Ponto:** FX04\_161316 **Hora Liga:** 14:50 **Hora Desliga:** 15:30 **Alt. Antena:** 1,64m



\* Ponto rastreado em um vértice da plataforma do porto da Cimbrigé, – Nova Santa Rita - RS  
**Coordenadas:** N=6.688.770,283m // E= 472.696,896m // **Alt. Ortométrica=** 3,162m  
**Sistema de Projeção UTM – Fuso 22 – Datum Hor.= SIRGAS2000 – Datum Vertical= Imbituba/SC**



FX04 / 15\_20131124\_161316 - RIO CAÍ/RS - SOP/RS - CONSÓRCIO ENGEPLUS / AEROGEO - VOO 1:10.000 -



DIST. FOCAL 50mm

**MONOGRAFIA DE PONTO DE APOIO SUPLEMENTAR  
RESTITUIÇÃO RIO CAÍ**

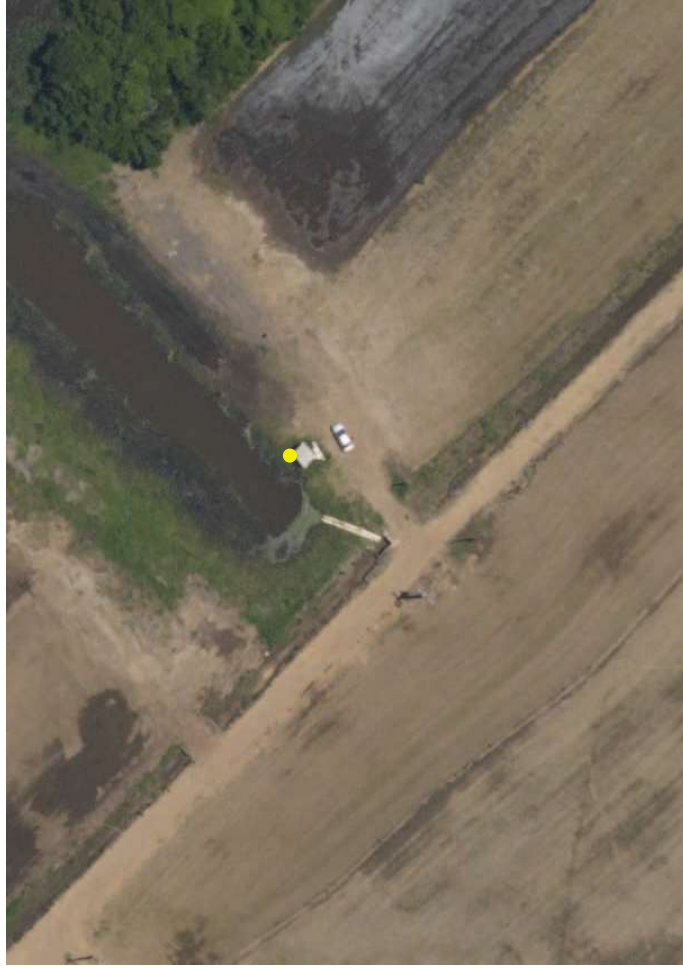
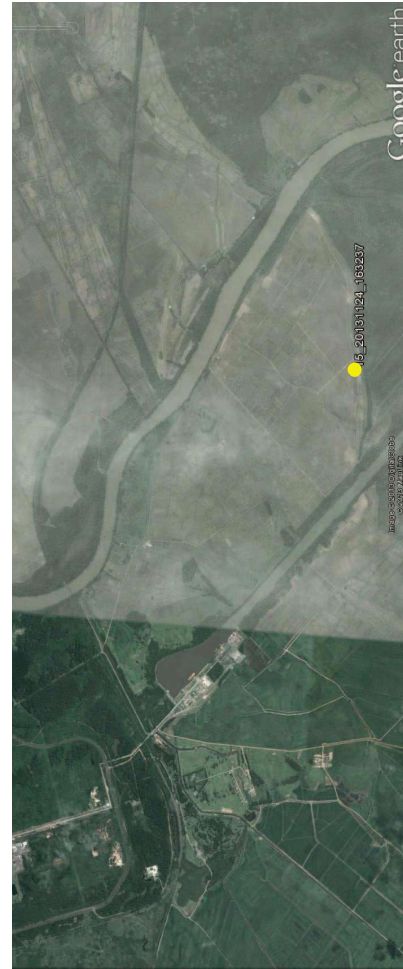


**Apoio GPS Bloco Sul // Foto:** FX03 - 15\_20131124\_163237 // **Feição:** construção de madeira  
**Operador:** Jorge Mello **Data:** 16/12/2013 **Equipamento:** GPS L1/L2 TRIMBLE 5700  
**Nome Ponto:** FX03\_163237 **Hora Liga:** 09:42 **Hora Desliga:** 10:30 **Alt. Antena:** 2,29m



\* Ponto rastreado em um canto de edificação de madeira, próximo a dutos de irrigação de lavoura, localizada no Município de Triunfo - RS

**Coordenadas:** N=6.690.666,669m // E= 466.717,782m // **Alt. Ortométrica=** 2,239m  
Sistema de Projeção UTM – Fuso 22 – Datum Hor.= SIRGAS2000 – Datum Vertical= Imituba/SC



FX03 / 15\_20131124\_163237 - RIO CAÍ/RS - SOP/RS - CONSÓRCIO ENGEPLUS / AEROGEO - VOO 1:10.000 -



DIST. FOCAL 50mm



FX02 / 15\_20131124\_164336 - RIO CAÍ/RS - SOP/RS - CONSÓRCIO ENGEPLUS / AEROGEO - VOO 1:10.000 -



DIST. FOCAL 50mm



## **ANEXO 2 – RELATÓRIOS DE PROCESSAMENTO DA AEROTRIANGULAÇÃO DIGITAL**



Quadro 5.1: Resumo Geral do Processamento:

MATCH-AT statistic file		
Project: Prj_Rio_Cai.prj		
Date of creation: Thu Jan 23 20:01:00 2014		
1. Summary:		
sigm 0 in micron		1.3
number block points		43629
number of images		1016
number of iteration		4
redundandancy		192928
mean std dev ground	x	0.042 [units of terrain system]
	y	0.040 [units of terrain system]
	z	0.145 [units of terrain system]
mean std dev ori	omega	6.5 [mgrd]
	phi	6.4 [mgrd]
	kapp	1.4 [mgrd]
mean std dev ori	x	0.175 [units of terrain system]
	y	0.173 [units of terrain system]
	z	0.108 [units of terrain system]
rms image points	x	0.908 [micron]
	y	0.954 [micron]
rms control in image	x	2.731 [micron]
	y	4.544 [micron]
rms control in terr	x	0.249 [units of terrain system]
	y	0.114 [units of terrain system]
	z	0.077 [units of terrain system]
max res.control	x	0.948 [units of terrain system]
	y	-0.368[units of terrain system]
	z	-0.372[units of terrain system]
rms check points	x	0.000 [units of terrain system]
	y	0.000 [units of terrain system]
	z	0.000 [units of terrain system]
max res.check	x	0.000 [units of terrain system]
	y	0.000 [units of terrain system]
	z	0.000 [units of terrain system]



Quadro 5.2: Relatório da Média do Erro dos pontos de Apoio

Adjusted coordinates including control/check points and standard deviations:																
Point ID	x	y	z	sx	sy	sz	code	fold	check	blind	given x	given y	given z	res x	res y	res z
FX01_133402	471198.105	6685060.181	2.208	0.04	0.039	0.042	6	3	0	0	471198.122	6685059.991	2.234	0.017	-0.19	0.026
FX02_164336	463037.568	6691530.022	7.594	0.034	0.034	0.041	6	3	0	0	463037.612	6691529.98	7.621	0.044	-0.042	0.027
FX03_163237	466717.778	6690666.767	2.261	0.028	0.029	0.04	6	3	0	0	466717.783	6690666.669	2.239	0.005	-0.098	-0.022
FX04_161000	463398.002	6694286.822	18.721	0.024	0.025	0.039	6	8	0	0	463397.853	6694286.857	18.8	-0.149	0.035	0.079
FX04_161114	466701.486	6692026.329	2.586	0.027	0.027	0.04	6	3	0	0	466701.497	6692026.308	2.626	0.011	-0.021	0.04
FX04_161316	472697.205	6688769.994	3.151	0.034	0.034	0.041	6	2	0	0	472696.897	6688770.284	3.162	-0.308	0.029	0.011
FX06_160305	466831.171	6694364.805	3.148	0.026	0.025	0.04	6	6	0	0	466831.23	6694364.852	3.136	0.059	0.047	-0.012
FX06_160420	463098.04	66965577	24.53	0.025	0.025	0.039	6	6	0	0	463098.09	6696577.098	24.56	0.05	0.098	0.03
FX07_123145	452789.818	6714820.117	43.369	0.038	0.039	0.042	6	3	0	0	452789.845	6714820.125	43.37	0.027	0.008	0.001
FX08_130352	459393.994	6702486.437	48.352	0.054	0.053	0.041	3	3	0	0	48.325	---	---	-0.027	---	---
FX11_135633	456099.635	6718543.47	35.46	0.026	0.026	0.04	6	3	0	0	456099.627	6718543.58	35.503	-0.008	0.11	0.043
FX11_135934	461464.046	6706108.863	5.237	0.027	0.027	0.04	6	3	0	0	461463.501	6706108.778	5.346	-0.545	-0.085	0.109
FX14_155322	458331.132	6722018.9	11.245	0.032	0.029	0.041	6	3	0	0	458331.061	6722018.872	11.177	-0.071	-0.028	-0.068
FX14_155705	463526.89	6708949.474	7.921	0.027	0.027	0.04	6	5	0	0	463526.84	6708949.453	7.895	-0.05	-0.021	-0.026
FX15_153245	469017.427	6700112.332	9.079	0.036	0.036	0.041	6	4	0	0	469017.61	6700112.273	9.167	0.183	-0.059	0.088
FX16_130508	459955.476	6720101.313	25.079	0.032	0.028	0.04	6	3	0	0	459955.568	6720101.356	25.098	0.092	0.043	0.019
FX16_130619	459012.07	6724604.902	16.879	0.031	0.031	0.041	6	3	0	0	459011.985	6724604.851	16.876	-0.085	0.058	-0.003
FX16_130801	458565.314	6731613.888	77.523	0.03	0.028	0.04	6	6	0	0	458565.219	6731613.896	77.619	-0.095	0.008	0.096
FX19_133436	461800.482	6732436.256	16.417	0.022	0.021	0.036	6	3	0	0	461800.427	6732436.084	16.39	-0.055	-0.172	-0.027
FX19_133606	462738.542	6726211.527	11.937	0.029	0.029	0.041	6	6	0	0	462738.607	6726211.523	11.91	0.065	-0.004	-0.027
FX19_133747	463626.092	6718758.96	38.544	0.042	0.042	0.042	6	3	0	0	463626.051	6718758.912	38.598	-0.041	-0.048	0.054
FX22_130140	465631.395	6736436.597	26.871	0.031	0.03	0.039	6	6	0	0	465631.389	6736436.602	26.867	-0.006	0.005	-0.004
FX23_130141	465045.431	6731048.894	19.49	0.03	0.03	0.041	6	3	0	0	465045.447	6731048.917	19.485	0.016	0.023	-0.005
FX23_130236	465620.161	672288.554	39.793	0.033	0.033	0.041	6	3	0	0	465620.18	672288.553	39.791	0.019	-0.001	-0.002
FX23_130330	466089.336	6723614.034	33.858	0.025	0.025	0.039	6	3	0	0	466089.357	6723614.011	33.921	0.021	-0.023	0.063
HVA01	460948.623	6732113.395	14.989	0.028	0.026	0.04	6	5	0	0	460948.694	6732113.304	14.974	0.071	-0.091	-0.015
HVA02	459683.667	6730890.345	29.215	0.028	0.026	0.04	6	3	0	0	459683.462	6730890.566	29.19	-0.205	0.221	-0.025
HVA03	459491.34	6728683.076	91.857	0.026	0.027	0.04	6	3	0	0	459491.385	6728683.125	91.88	0.045	0.049	0.023
HVA04	461513.989	6729823.946	30.871	0.021	0.021	0.037	6	6	0	0	461514.156	6729823.891	30.929	0.167	-0.055	0.058
HVA05	464885.329	6729479.1	24.551	0.026	0.026	0.039	6	6	0	0	464885.303	6729479.148	24.552	-0.026	0.048	0.001
HVA06	461210.554	6726214.713	27.706	0.027	0.027	0.041	6	2	0	0	461210.667	6726214.626	27.7	0.113	-0.087	-0.006
HVA07	460750.476	6723222.887	12.222	0.027	0.025	0.04	6	3	0	0	460750.399	6723222.879	12.185	-0.077	-0.008	-0.037
HVA08	463238.819	6720941.962	26.198	0.026	0.026	0.04	6	3	0	0	463238.809	6720941.925	26.199	-0.01	0.037	0.001
HVA09	460985.088	6716501.359	11.377	0.024	0.024	0.039	6	6	0	0	460985.137	6716501.408	11.334	0.049	0.049	-0.043
HVA10	455832.998	6715315.916	7.154	0.029	0.028	0.04	6	3	0	0	455832.86	6715316.051	7.162	-0.138	0.135	0.008
HVA11	460185.342	6713371.668	7.933	0.024	0.024	0.038	6	6	0	0	460185.612	6713371.746	7.88	0.27	0.078	-0.053
HVA12	454296.226	6710498.075	48.341	0.036	0.036	0.041	6	3	0	0	454296.165	6710497.998	48.391	-0.061	-0.077	0.05
HVA13	458373.924	6706867.695	44.807	0.029	0.029	0.039	6	6	0	0	458374.32	6706867.637	44.818	0.396	-0.058	0.011
HVA14	455320.299	6720309.942	39.657	0.032	0.034	0.041	6	2	0	0	455320.183	6720309.976	39.69	-0.116	0.034	0.033
HVA15	454833.007	6717068.952	34.767	0.033	0.033	0.041	6	3	0	0	454833.111	6717068.928	34.745	0.104	-0.024	-0.022
HVA16	463604.249	6701341.912	10.781	0.036	0.037	0.041	3	3	0	0	10.844	---	---	0.063	---	---
HVA17	462062.15	6698632.942	14.81	0.031	0.03	0.041	6	6	0	0	462062.165	6698632.937	14.759	0.015	-0.005	-0.051
HVA18	466414.604	6707221.03	4.311	0.035	0.035	0.041	6	3	0	0	466414.585	6707221.001	4.382	-0.019	-0.029	0.071



Quadro 5.3: Valores Ajustados das orientações exteriores

photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131029_133220	0.96084	0.360072	-131.901543	465756.656	6688599.861	1710.775	9.937	13.24	2.499	0.218	0.33	0.252
15_20131029_133226	0.836229	0.585314	-132.195323	466117.207	6688393.128	1711.976	9.57	13.15	2.209	0.213	0.324	0.253
15_20131029_133232	0.684435	0.526629	-132.280585	466479.099	6688185.264	1712.788	9.483	13.183	2.19	0.214	0.324	0.256
15_20131029_133239	0.745811	0.55216	-132.142264	466841.442	6687977.809	1713.909	9.58	13.461	2.335	0.227	0.325	0.261
15_20131029_133245	1.033061	0.463234	-132.078306	467203.989	6687772.071	1714.687	10.044	13.63	2.555	0.235	0.332	0.268
15_20131029_133252	0.890128	0.523254	-132.05153	467567.765	6687564.799	1715.195	10.083	14.359	2.696	0.255	0.336	0.274
15_20131029_133258	0.968241	0.51941	-132.346903	467930.72	6687358.025	1715.529	12.101	15.006	3.124	0.292	0.365	0.278
15_20131029_133304	1.463563	0.268134	-132.391715	468289.594	6687151.891	1716.771	18.644	17.823	4.188	0.38	0.487	0.294
15_20131029_133311	1.327257	0.208832	-132.181096	468654.354	6686943.255	1717.693	19.432	19.046	4.672	0.416	0.498	0.315
15_20131029_133317	1.290543	0.413285	-132.112481	469017.322	6686733.948	1719.016	20.441	19.719	5.786	0.439	0.521	0.356
15_20131029_133330	1.988534	1.028695	-132.344551	469761.479	6686292.701	1723.899	113.161	61.421	12.117	2.487	1.67	0.558
15_20131029_133336	1.513511	0.871631	-132.35845	470117.26	6686089.79	1718.702	24.008	29.712	6.297	0.721	0.525	0.333
15_20131029_133343	1.478306	0.725621	-132.528684	470479.842	6685879.92	1715.166	16.83	21.911	4.514	0.49	0.435	0.241
15_20131029_133349	1.492235	0.666101	-132.426413	470843.019	6685668.356	1712.21	15.906	21.37	4.025	0.458	0.432	0.174
15_20131029_133356	1.378554	0.711911	-132.473663	471206.361	6685456.998	1709.818	14.775	22.136	3.772	0.448	0.413	0.139
15_20131029_133402	1.528199	0.652556	-132.439228	471568.731	6685246.924	1708.266	14.932	22.049	4.049	0.482	0.408	0.153
15_20131029_133408	1.560101	0.788814	-132.494465	471931.375	6685034.627	1706.85	18.188	21.794	5.133	0.512	0.442	0.218
15_20131030_130442	-1.939081	2.884426	10.906164	460086.426	6718347.241	1750.663	9.362	9.289	2.023	0.257	0.265	0.109
15_20131030_130448	-1.488272	0.872068	11.285988	460025.108	6718769.804	1749.922	5.862	5.506	1.13	0.157	0.165	0.07
15_20131030_130455	-1.280819	1.066557	10.845206	459963.96	6719195.159	1751.174	6.077	5.141	1.056	0.146	0.173	0.066
15_20131030_130501	-1.61917	1.211885	10.724743	459903.895	6719617.435	1751.226	6.169	5.772	0.974	0.158	0.177	0.069
15_20131030_130508	-1.395108	1.683245	10.556241	459840.804	6720044.25	1751.511	5.863	7.037	0.952	0.197	0.158	0.077
15_20131030_130514	-1.537489	1.271366	10.442991	459779.48	6720466.025	1752.29	5.219	5.241	0.954	0.144	0.149	0.069
15_20131030_130521	-1.471583	1.448939	10.523464	459717.59	6720894.836	1752.79	4.927	5.42	0.797	0.148	0.14	0.074
15_20131030_130527	-1.349793	2.395743	11.136422	459657.706	6721319.329	1753.421	5.563	5.18	0.872	0.145	0.155	0.075
15_20131030_130534	-1.479392	0.802172	10.287515	459603.324	6721748.84	1752.883	5.982	5.741	0.977	0.16	0.168	0.081
15_20131030_130540	-1.484463	1.785349	10.03795	459549.562	6722175.373	1752.229	4.997	5.511	1.09	0.156	0.139	0.083
15_20131030_130547	-1.450801	0.006256	11.476422	459493.174	6722605.989	1751.827	6.639	6.339	1.254	0.184	0.181	0.091
15_20131030_130553	-1.768444	-0.162356	11.947832	459431.056	6723031.862	1754.568	6.28	5.632	1.55	0.162	0.18	0.091
15_20131030_130600	-1.034996	2.353001	11.422474	459367.82	6723462.637	1754.327	5.547	5.944	1.403	0.164	0.162	0.094
15_20131030_130606	-1.958742	1.013105	10.42653	459306.318	6723889.183	1755.289	6.101	5.9	1.274	0.164	0.175	0.098
15_20131030_130613	-2.078734	2.408743	11.334676	459242.752	6724314.047	1751.258	5.835	5.661	1.555	0.155	0.17	0.094
15_20131030_130619	-1.645549	2.183151	9.845242	459180.769	6724738.194	1751.396	5.72	6.302	1.415	0.176	0.159	0.099
15_20131030_130625	-1.58086	0.76132	10.403051	459118.44	6725162.991	1751.212	5.449	5.823	1.359	0.165	0.153	0.1
15_20131030_130632	-1.570658	0.064991	11.284057	459053.408	6725589.496	1748.996	5.56	5.878	1.41	0.166	0.155	0.108
15_20131030_130638	-1.419895	1.631152	10.677032	458987.733	6726016.028	1747.914	5.623	5.978	1.548	0.168	0.16	0.116
15_20131030_130645	-1.307967	0.747396	10.863935	458923.63	6726444.07	1747.847	5.675	6.029	1.454	0.169	0.159	0.121
15_20131030_130651	-1.421338	1.536026	10.873074	458860.074	6726867.394	1747.203	6.027	6.108	1.579	0.171	0.169	0.126
15_20131030_130657	-1.112192	1.006419	10.695787	458797.016	6727291.227	1747.427	5.646	6.098	1.607	0.17	0.158	0.124
15_20131030_130704	-1.355399	1.48978	11.033703	458732.238	6727714.52	1748.02	6.101	6.57	1.582	0.183	0.167	0.124
15_20131030_130710	-1.383778	1.731357	11.166539	458668.308	6728136.739	1748.846	5.793	6.292	1.511	0.174	0.161	0.119
15_20131030_130717	-1.577384	2.037326	10.080797	458605.874	6728559.928	1749.583	5.281	6.612	1.551	0.182	0.15	0.114
15_20131030_130723	-1.450299	1.513854	10.065141	458546.294	6728981.465	1749.176	4.982	6.063	1.482	0.166	0.141	0.11
15_20131030_130729	-1.290764	1.368597	8.86062	458488.044	6729405.83	1749.934	4.865	6.233	1.464	0.17	0.138	0.106
15_20131030_130736	-1.647378	1.647378	10.779645	458431.214	6729830.668	1749.325	4.364	6.272	1.431	0.172	0.125	0.102
15_20131030_130742	-1.392067	1.596218	10.141148	458376.182	6730255.832	1749.599	4.758	6.211	1.498	0.17	0.136	0.097
15_20131030_130749	-1.542404	1.398988	10.286762	458322.6	6730682.9	1749.967	4.96	6.255	1.525	0.171	0.142	0.091



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131030_130755	-1.4569	0.760338	10.684216	458269.653	6731108.783	1749.466	4.787	6.196	1.49	0.167	0.139	0.085
15_20131030_130801	-1.378338	-0.059157	10.134073	458212.854	6731536.379	1747.74	5.193	6.396	1.609	0.172	0.147	0.087
15_20131030_130808	-1.353974	0.486161	11.454607	458148.231	6731962.88	1746.989	6.675	7.032	1.994	0.193	0.187	0.098
15_20131030_130814	-1.560286	1.491365	1.944207	458078.338	6732389.427	1746.777	8.179	7.427	2.635	0.208	0.225	0.123
15_20131030_130821	-1.656205	1.867671	12.246571	458009.112	6732818.003	1747.077	19.021	9.86	4.725	0.294	0.488	0.177
15_20131030_131454	-1.598545	-1.598545	-192.390018	459042.721	6733013.813	1753.916	11.712	7.533	3.087	0.22	0.316	0.141
15_20131030_131501	1.693701	-2.455609	-192.181276	459094.702	6732583.681	1754.036	7.044	5.389	1.912	0.154	0.193	0.099
15_20131030_131507	1.397188	-1.15914	-191.860552	459144.882	6732155.325	1753.701	5.439	4.641	1.397	0.132	0.149	0.073
15_20131030_131513	1.327804	-0.410272	-191.179035	459198.506	6731725.372	1753.311	4.881	4.372	1.148	0.122	0.135	0.059
15_20131030_131519	1.504583	-0.826604	-189.421342	459257.384	6731295.151	1753.23	4.003	4.13	0.952	0.113	0.115	0.053
15_20131030_131525	1.675971	-2.132901	-189.876216	459316.879	6730871.847	1752.184	4.08	4.462	0.937	0.124	0.115	0.058
15_20131030_131531	1.48032	-2.326304	-190.136194	459371.545	6730447.786	1751.676	3.732	4.43	0.816	0.121	0.107	0.066
15_20131030_131537	1.382456	-1.0551	-189.75082	459422.668	6730021.285	1751.404	3.735	4.371	0.816	0.119	0.107	0.066
15_20131030_131544	1.421318	-1.367059	-189.729503	459473.726	6729593.417	1751.177	3.772	4.582	0.813	0.125	0.106	0.07
15_20131030_131550	1.363262	-1.209173	-190.087467	459524.339	6729166.204	1751.369	3.896	4.703	0.762	0.128	0.109	0.073
15_20131030_131556	1.39047	-0.262238	-189.16812	459576.226	6728742.438	1751.742	4.213	4.757	0.85	0.129	0.116	0.078
15_20131030_131602	1.472589	-1.297738	-188.436159	459632.732	6728316.188	1751.897	4.399	4.904	0.816	0.134	0.122	0.083
15_20131030_131608	1.533546	-0.890115	-188.21021	459689.949	6727889.579	1752.117	5.167	5.056	0.876	0.137	0.144	0.09
15_20131030_131614	1.316979	0.583183	-187.402621	459749.363	6727462.172	1751.727	4.951	5.067	0.906	0.138	0.138	0.095
15_20131030_131620	1.567789	-0.990149	-186.405366	459816.306	6727036.321	1750.894	5.292	5.303	0.983	0.148	0.146	0.097
15_20131030_131626	1.525222	-0.854713	-186.053225	459886.794	6726610.544	1750.397	5.083	4.976	0.909	0.138	0.142	0.096
15_20131030_131632	1.717594	-1.021369	-186.483215	459958.707	6726185.371	1749.472	4.745	4.867	0.882	0.137	0.132	0.093
15_20131030_131638	1.376216	-2.495412	-186.162616	460032.2	6725759.839	1750.251	4.639	4.795	0.821	0.136	0.129	0.089
15_20131030_131645	1.811251	-1.422856	-185.429964	460104.526	6725333.437	1751.305	4.604	4.669	0.817	0.134	0.127	0.084
15_20131030_131651	1.776387	-2.277582	-184.878235	460175.164	6724906.591	1750.209	4.049	4.447	0.765	0.126	0.114	0.081
15_20131030_131657	1.415794	-1.083931	-186.298612	460244.385	6724481.897	1749.432	3.917	4.349	0.736	0.125	0.109	0.078
15_20131030_131703	1.541421	-0.513129	-186.460997	460313.387	6724054.678	1749.018	4.377	4.477	0.757	0.13	0.121	0.078
15_20131030_131709	1.504798	-0.580498	-186.916635	460382.728	6723633.469	1747.87	4.058	4.392	0.714	0.125	0.114	0.076
15_20131030_131715	1.277353	-2.404269	-186.801885	460452.215	6723213.564	1748.214	4.327	4.34	0.744	0.123	0.122	0.076
15_20131030_131721	1.493691	-0.93181	-187.67067	460517.482	6722786.335	1749.621	4.429	4.652	0.775	0.133	0.123	0.076
15_20131030_131727	2.210485	-2.075393	-188.261692	460579.126	6722357.85	1748.561	4.35	4.257	0.706	0.121	0.121	0.073
15_20131030_131733	1.207451	-0.867882	-188.406987	460637.281	6721934.795	1746.174	4.697	4.267	0.72	0.121	0.129	0.074
15_20131030_131739	1.648383	-1.49505	-187.891536	460694.141	6721511.972	1746.131	4.326	3.85	0.631	0.108	0.12	0.07
15_20131030_131745	0.924019	-1.076716	-188.86684	460750.427	6721088.558	1746.815	3.429	3.616	0.55	0.102	0.096	0.064
15_20131030_131751	1.455684	0.225835	-188.727591	460807.367	6720694.521	1748.214	3.582	3.845	0.57	0.11	0.099	0.061
15_20131030_131757	1.732053	-1.147261	-188.577994	460865.653	6720239.84	1747.458	3.973	3.793	0.639	0.108	0.111	0.058
15_20131030_131803	2.002888	-1.506551	-187.5125	460923.341	6719814.301	1746.652	3.963	3.762	0.616	0.108	0.111	0.055
15_20131030_131809	1.565247	0.202894	-188.308367	460979.666	6719387.128	1743.891	4.433	3.823	0.675	0.109	0.126	0.048
15_20131030_131815	1.129786	0.572827	-187.89116	461038.008	6718966.694	1742.741	4.74	4.174	0.69	0.122	0.13	0.048
15_20131030_131821	1.071595	-1.123817	-187.439877	461100.24	6718540.952	1743.765	5.724	4.572	0.858	0.133	0.158	0.064
15_20131030_131827	1.458896	-0.732948	-186.532025	461164.261	6718116.987	1745.662	5.562	4.677	0.83	0.13	0.158	0.064
15_20131030_131833	1.506652	-0.775174	-187.167707	461230.951	6717694.853	1744.454	5.116	4.775	0.831	0.136	0.142	0.066
15_20131030_131839	1.177056	-1.189354	-187.096122	461296.015	6717270.94	1744.295	4.626	4.552	0.747	0.131	0.127	0.065
15_20131030_131845	1.436455	-2.810247	-187.284422	461361.299	6716848.634	1744.965	4.364	4.553	0.76	0.13	0.122	0.066
15_20131030_131851	1.019691	-2.55162	-185.763342	461426.42	6716425.454	1744.577	4.264	4.445	0.775	0.128	0.118	0.07
15_20131030_131857	1.441548	-2.514113	-188.935842	461489.371	6716003.098	1747.211	4.45	4.642	0.919	0.134	0.125	0.075
15_20131030_131903	1.246374	-0.557431	-189.295184	461551.058	6715518.886	1746.23	4.415	4.439	1.011	0.126	0.126	0.083
15_20131030_131909	1.126343	-1.696068	-187.945013	461613.821	6715157.588	1746.935	4.37	4.639	1.009	0.132	0.125	0.088
15_20131030_131915	1.843063	-2.174908	-188.222276	461676.227	6714734.077	1747.713	5.24	4.65	1.143	0.134	0.147	0.093



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131030_132357	-1.915554	1.562303	9.975764	462625.824	6716736.815	1742.858	4.822	5.773	1.468	0.164	0.133	0.103
15_20131030_132403	-1.585177	1.94748	10.868658	462561.583	6717161.087	1743.229	4.172	5.55	1.066	0.156	0.114	0.091
15_20131030_132410	-1.220048	-0.457079	10.270994	462497.766	6717584.97	1744.882	4.407	5.292	0.899	0.149	0.121	0.082
15_20131030_132416	-1.561383	1.494675	9.82402	462433.542	6718007.058	1746.644	4.182	5.009	0.827	0.141	0.116	0.074
15_20131030_132423	-1.746394	2.849852	10.558973	462370.143	6718429.868	1745.579	4.449	5.228	0.874	0.147	0.121	0.068
15_20131030_132429	-1.272974	1.854381	9.251891	462307.582	6718853.32	1745.036	4.402	4.229	0.765	0.119	0.124	0.056
15_20131030_132436	-1.705977	1.546524	10.428381	462244.477	6719277.461	1745.695	4.285	4.244	0.726	0.12	0.12	0.05
15_20131030_132442	-1.389193	1.39402	10.241429	462181.659	6719701.905	1746.743	3.815	4.154	0.624	0.12	0.105	0.048
15_20131030_132449	-1.847138	2.232815	10.08503	462120.166	672027.99	1746.661	4.071	4.321	0.661	0.123	0.115	0.051
15_20131030_132455	-1.638184	1.755199	9.558365	462061.287	6720594.733	1746.225	4.058	4.126	0.651	0.117	0.114	0.053
15_20131030_132502	-2.014563	1.451332	9.628604	462002.548	6720979.096	1745.207	3.735	3.868	0.578	0.109	0.105	0.053
15_20131030_132508	-1.460643	1.919331	8.556174	461946.742	6721399.913	1744.736	3.733	3.966	0.546	0.112	0.104	0.056
15_20131030_132514	-1.163587	0.164316	10.184106	461890.27	6721821.941	1746.156	3.69	4.054	0.551	0.115	0.102	0.061
15_20131030_132521	-1.428729	1.487625	9.81629	461830.536	6722250.468	1748.43	3.943	3.945	0.592	0.111	0.111	0.065
15_20131030_132527	-2.099397	2.240178	10.525886	461773.017	6722672.465	1746.391	3.868	3.934	0.582	0.109	0.11	0.068
15_20131030_132534	-1.615558	1.896914	9.582191	461718.333	6723096.998	1744.681	3.788	3.862	0.587	0.108	0.107	0.07
15_20131030_132540	-1.536606	1.684952	9.584095	461665.528	6723522.797	1744.669	3.807	3.882	0.579	0.108	0.108	0.072
15_20131030_132547	-1.939965	1.855905	9.020343	461611.415	6723948.66	1743.803	3.617	3.914	0.581	0.11	0.102	0.073
15_20131030_132553	-1.621975	0.997467	10.03055	461559.326	6724373.458	1743.864	3.691	4.024	0.556	0.114	0.103	0.072
15_20131030_132559	-1.425797	1.575157	8.577742	461509.421	6724798.992	1744.843	3.628	4.026	0.558	0.115	0.101	0.07
15_20131030_132606	-1.099273	-0.145299	8.604779	461460.36	6725224.412	1745.652	3.581	4.016	0.535	0.114	0.1	0.068
15_20131030_132612	-1.433044	0.081358	9.279634	461407.314	6725648.64	1747.286	3.918	4.243	0.597	0.121	0.109	0.067
15_20131030_132619	-1.707623	0.626906	10.272807	461348.615	6726074.289	1747.195	3.796	4.124	0.596	0.116	0.107	0.066
15_20131030_132625	-1.695579	1.214907	10.197905	461286.781	6726498.527	1746.687	4.075	4.276	0.628	0.119	0.114	0.068
15_20131030_132631	-1.664596	1.300622	10.661044	461223.973	6726923.721	1746.207	4.3	4.502	0.673	0.127	0.118	0.072
15_20131030_132638	-1.447997	1.064578	10.741688	461160.059	6727349.684	1745.773	4.748	4.57	0.679	0.13	0.129	0.071
15_20131030_132644	-1.544809	1.233702	10.885675	461095.554	6727775.347	1745.741	4.631	4.466	0.676	0.126	0.128	0.071
15_20131030_132651	-1.54097	1.173127	10.953362	461029.819	6728202.294	1745.55	4.097	4.555	0.679	0.128	0.114	0.068
15_20131030_132657	-1.419312	1.572218	11.046395	460963.385	6728626.556	1745.891	3.689	4.145	0.619	0.116	0.104	0.062
15_20131030_132703	-1.441535	1.694984	11.392303	460897.304	6729051.422	1746.113	4.106	4.181	0.638	0.117	0.114	0.059
15_20131030_132710	-1.454625	1.585796	11.075472	460832.882	6729476.559	1746.112	3.838	3.877	0.601	0.109	0.106	0.053
15_20131030_132716	-1.234913	1.263638	10.749116	460770.174	6729901.331	1745.751	3.288	3.74	0.588	0.104	0.092	0.048
15_20131030_132723	-1.396136	1.14256	10.812156	460706.891	6730325.961	1746.463	3.491	3.584	0.595	0.099	0.099	0.046
15_20131030_132729	-1.526901	1.646995	10.889763	460642.468	6730748.298	1747.105	3.345	3.594	0.604	0.1	0.096	0.046
15_20131030_132735	-1.419807	1.474727	10.684305	460578.327	6731171.69	1746.653	3.647	3.653	0.684	0.103	0.103	0.049
15_20131030_132742	-1.473385	1.032652	10.845385	460513.793	6731594.619	1746.586	3.506	3.631	0.725	0.103	0.098	0.05
15_20131030_132748	-1.489252	1.5227	11.118452	460447.242	6732019.033	1747.19	4.519	4.16	0.888	0.118	0.124	0.059
15_20131030_132755	-1.555095	1.850189	11.352494	460381.181	6732443.861	1747.775	5.31	4.352	1.12	0.126	0.144	0.075
15_20131030_132801	-1.514903	1.654089	10.744798	460317.552	6732866.908	1747.37	6.236	4.722	1.542	0.139	0.17	0.101
15_20131030_133242	-1.382744	1.077402	10.29617	460254.56	6733291.066	1746.305	10.314	7.197	2.72	0.211	0.28	0.142
15_20131030_133420	1.403409	-0.606357	-186.511015	461353.522	6733207.851	1750.466	7.98	5.754	2.056	0.178	0.214	0.117
15_20131030_133430	1.605542	-1.214358	-190.192519	461426.837	6732787.579	1750.226	6.179	5.076	1.378	0.148	0.171	0.084
15_20131030_133436	2.048358	-3.102604	-189.584254	461505.265	6732361.06	1750.971	5.825	4.975	1.135	0.144	0.161	0.064
15_20131030_133442	2.008809	-2.372241	-190.188383	461581.584	673194.126	1750.981	4.506	4.363	0.869	0.124	0.127	0.053
15_20131030_133454	1.584755	-0.47096	-189.327312	461714.724	6731095.285	1749.915	3.497	3.932	0.648	0.111	0.101	0.046
15_20131030_133500	1.655706	-1.032075	-188.057397	461782.136	6730671.624	1748.62	3.786	4.322	0.643	0.121	0.109	0.045
15_20131030_133506	1.503436	-0.749293	-189.166307	461850.091	6730248.379	1747.576	3.876	4.055	0.643	0.114	0.111	0.043
15_20131030_133512	1.503556	-0.783619	-189.883802	461920.233	6729825.851	1747.444	3.612	4.387	0.611	0.124	0.103	0.045



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131030_133518	1.714554	-1.25636	-189.321409	461992.443	6729403.092	1747.486	4.11	4.237	0.633	0.12	0.116	0.05
15_20131030_133524	1.433143	0.522762	-188.978117	462065.384	6728981.835	1747.434	3.858	3.915	0.567	0.109	0.111	0.051
15_20131030_133530	1.734253	-0.674382	-187.556699	462144.476	6728560.412	1747.13	3.831	4.025	0.612	0.114	0.109	0.054
15_20131030_133536	2.497313	-3.869135	-187.994448	462225.556	6728138.622	1747.113	3.689	4.013	0.582	0.113	0.106	0.052
15_20131030_133542	2.102344	-2.440277	-189.53647	462295.238	6727714.134	1745.923	4.275	4.319	0.647	0.122	0.12	0.05
15_20131030_133548	1.722205	-1.8276	-190.421235	462356.792	6727287.307	1744.584	5.028	4.347	0.699	0.121	0.141	0.051
15_20131030_133554	1.560787	-1.460981	-190.996768	462415.651	6726859.259	1744.124	4.243	3.954	0.587	0.111	0.119	0.045
15_20131030_133600	1.535444	-1.13339	-191.102258	462474.076	6726433.403	1744.208	3.828	3.856	0.565	0.109	0.107	0.045
15_20131030_133606	1.430902	-1.511656	-190.599283	462533.426	6726006.758	1744.96	3.608	3.887	0.526	0.11	0.101	0.047
15_20131030_133612	1.662267	-2.036763	-190.325197	462592.659	6725580.592	1745.422	3.453	3.876	0.513	0.109	0.098	0.053
15_20131030_133618	1.679647	-1.807777	-190.112306	462651.925	6725155.004	1746.204	3.89	4.006	0.558	0.113	0.109	0.061
15_20131030_133624	1.820015	-1.546099	-190.655881	462709.579	6724729.762	1746.465	3.894	4.005	0.557	0.113	0.108	0.069
15_20131030_133630	1.629205	-1.22009	-190.831496	462765.794	6724301.176	1746.249	3.784	3.881	0.529	0.107	0.107	0.069
15_20131030_133636	1.510015	-0.558536	-191.057269	462822.722	6723873.079	1746.353	3.71	3.99	0.555	0.112	0.105	0.071
15_20131030_133642	1.707547	-0.977852	-190.710031	462878.995	6723450.195	1745.425	3.453	3.866	0.522	0.109	0.097	0.069
15_20131030_133648	1.426641	-1.445036	-190.318444	462935.29	6723024.431	1745.536	3.548	4.046	0.549	0.114	0.101	0.066
15_20131030_133654	1.407354	-0.42615	-189.985653	462991.096	6722602.882	1746.606	3.488	4.048	0.546	0.114	0.099	0.062
15_20131030_133659	1.259106	-0.356198	-189.960528	463048.028	6722181.108	1747.615	3.36	3.903	0.516	0.11	0.096	0.058
15_20131030_133705	1.77486	-1.172191	-189.259431	463107.881	6721752.561	1747.123	3.877	4.195	0.605	0.119	0.108	0.059
15_20131030_133711	1.699038	-1.663867	-188.667653	463169.491	6721330.581	1745.875	3.66	4.02	0.578	0.114	0.102	0.057
15_20131030_133717	1.675794	-0.371979	-188.054117	463230.732	6720909.949	1745.402	3.673	4.332	0.632	0.122	0.104	0.06
15_20131030_133723	1.698026	-1.483957	-188.678004	463292.953	6720487.457	1744.667	3.587	4.254	0.635	0.12	0.102	0.064
15_20131030_133729	1.624033	-0.711653	-189.427583	463353.553	6720065.528	1745.728	3.528	4.487	0.678	0.127	0.101	0.068
15_20131030_133735	0.971234	-0.11379	-189.169123	463413.742	6719643.646	1746.667	3.474	4.581	0.698	0.129	0.1	0.072
15_20131030_133741	1.834406	-1.592684	-188.922181	463475.174	6719216.22	1747.192	3.648	4.581	0.769	0.128	0.104	0.078
15_20131030_133747	1.769322	-1.116083	-189.606887	463536.631	6718788.043	1746.081	3.989	4.798	0.845	0.134	0.112	0.086
15_20131030_133753	1.38727	-1.277154	-189.489727	463595.903	6718365.037	1746.058	4.203	4.911	0.922	0.138	0.117	0.096
15_20131030_133759	1.734155	-1.537928	-189.508972	463653.689	6717942.83	1746.694	4.578	5.233	1.077	0.147	0.127	0.109
15_20131030_133805	1.684071	-1.492833	-189.284411	463710.644	6717516.117	1744.806	4.975	5.796	1.325	0.163	0.136	0.121
15_20131030_133811	1.157958	-0.803405	-189.82973	463766.279	6717091.475	1745.254	5.706	7.413	1.693	0.207	0.157	0.143
15_20131030_133816	1.474935	-1.688511	-190.05218	463821.137	6716668.307	1747.305	7.288	8.147	2.456	0.231	0.204	0.167
15_20131030_133822	1.887895	-1.351944	-189.736246	463875.011	6716243.66	1747.48	12.083	9.156	3.697	0.26	0.33	0.204
15_20131030_134328	-1.876609	1.59367	9.238187	464641.226	6718614.793	1748.281	4.644	5.377	1.274	0.154	0.134	0.134
15_20131030_134334	-2.040437	1.585683	10.055166	464581.908	6719040.563	1747.365	4.1	5.146	1.155	0.146	0.119	0.123
15_20131030_134341	-1.898216	1.605353	9.431664	464523.476	6719468.18	1745.577	3.88	5.085	1.078	0.143	0.114	0.115
15_20131030_134347	-1.673799	2.350899	4.64464.832	6719895.705	1746.581	1746.581	3.821	4.878	0.949	0.138	0.11	0.107
15_20131030_134354	-1.784303	0.529821	8.883245	464408.74	6720324.961	1745.807	3.802	4.82	0.886	0.137	0.109	0.101
15_20131030_134400	-1.837057	1.636998	9.190968	464352.674	6720746.141	1745.08	3.705	4.737	0.83	0.134	0.106	0.096
15_20131030_134406	-1.859257	0.927592	9.317469	464295.876	6721168.477	1744.648	3.957	4.583	0.821	0.13	0.111	0.091
15_20131030_134413	-1.505216	1.246504	8.838811	464238.666	6721591.263	1743.83	4.166	4.587	0.752	0.13	0.117	0.086
15_20131030_134419	-1.553202	1.294699	9.841456	464180.639	6722012.723	1743.883	4.614	4.488	0.772	0.128	0.128	0.082
15_20131030_134426	-1.147972	1.606937	9.79237	464119.736	6722441.86	1743.602	3.603	4.178	0.642	0.119	0.102	0.077
15_20131030_134432	-1.211839	0.265732	9.036801	464060.025	67223290.627	1745.047	3.443	3.893	0.604	0.111	0.098	0.075
15_20131030_134439	-1.309225	2.101532	9.334417	463999.272	6723290.627	1745.623	3.896	4.168	0.589	0.119	0.104	0.077
15_20131030_134445	-1.310653	1.19367	9.524326	463940.811	6723709.938	1745.623	3.896	4.186	0.597	0.12	0.109	0.079
15_20131030_134452	-1.299445	1.05711	10.182281	463879.448	6724137.495	1746.483	3.727	3.94	0.606	0.111	0.106	0.078
15_20131030_134458	-1.458316	0.895899	10.853575	463818.39	6724564.921	1746.933	4.16	4.266	0.621	0.121	0.117	0.078
15_20131030_134505	-1.58214	1.244808	9.439153	463761.807	6724987.612	1746.132	3.646	3.975	0.576	0.111	0.105	0.073
15_20131030_134511	-1.605182	1.703716	8.942261	463708.429	6725411.904	1746.449	3.88	4.131	0.622	0.115	0.111	0.068



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131030_134518	-1.645959	1.525535	9.553205	463655.157	6725837.145	1746.606	3.769	3.815	0.561	0.107	0.107	0.062
15_20131030_134524	-1.603689	1.619029	9.483975	463601.064	6726263.21	1746.137	3.574	3.582	0.544	0.102	0.1	0.056
15_20131030_134531	-1.647896	2.221271	9.247348	463547.29	6726691.011	1745.362	3.74	3.735	0.574	0.107	0.104	0.054
15_20131030_134537	-1.425057	0.865209	8.836276	463493.775	6722119.47	1744.87	3.796	3.762	0.615	0.108	0.107	0.053
15_20131030_134544	-1.404108	0.792539	9.845656	463437.00	6727547.528	1745.332	5.289	4.299	0.736	0.123	0.148	0.056
15_20131030_134550	-1.521065	1.184574	10.118507	463375.906	6727974.332	1745.363	4.092	3.836	0.654	0.109	0.115	0.057
15_20131030_134557	-1.524481	1.016812	10.140066	463312.493	6728840.1299	1745.636	4.247	4.262	0.689	0.12	0.119	0.062
15_20131030_134603	-1.696992	1.341731	10.790508	463247.992	6728827.475	1746.092	4.007	4.061	0.68	0.115	0.113	0.062
15_20131030_134610	-1.59805	1.254684	10.793073	463183.427	6729255.405	1746.136	4.152	3.825	0.65	0.109	0.117	0.061
15_20131030_134616	-1.754573	1.887259	10.440534	463121.269	6729676.592	1747.029	4.212	3.857	0.637	0.112	0.117	0.06
15_20131030_134623	-1.730077	1.56031	10.653083	463061.271	6730101.608	1747.567	3.809	3.469	0.644	0.1	0.108	0.059
15_20131030_134629	-1.583178	1.124899	10.40128	463003.388	6730524	1747.368	3.924	3.536	0.641	0.103	0.11	0.059
15_20131030_134635	-1.634307	1.459527	10.005613	462946.037	6730949.791	1746.98	3.866	3.472	0.706	0.102	0.108	0.061
15_20131030_134642	-1.381091	-0.42994	10.430432	462888.332	6731374.706	1747.236	4.155	3.656	0.737	0.107	0.117	0.066
15_20131030_134648	-1.604882	1.090202	11.465348	462824.061	6731800.522	1746.551	6.399	4.163	0.957	0.12	0.178	0.079
15_20131030_134655	-1.547246	1.180273	11.932932	462756.316	6732226.287	1746.514	5.71	4.972	1.074	0.145	0.159	0.082
15_20131030_134701	-1.343689	0.74131	11.639237	462688.132	6732648.78	1746.882	6.814	5.427	1.254	0.157	0.19	0.095
15_20131030_134707	-1.470515	1.002027	11.830141	462618.498	6733071.355	1747.47	7.58	5.44	1.576	0.163	0.208	0.121
15_20131030_134714	-1.514865	1.118081	11.901047	462547.821	6733493.973	1748.098	12.26	6.379	2.517	0.194	0.331	0.169
15_20131030_135347	1.430442	-1.300539	-188.403819	463628.934	6733152.234	1749.126	9.426	2.26	6.179	0.189	0.257	0.134
15_20131030_135353	1.493543	-0.944464	-189.601595	463686.664	6732723.796	1748.555	7.034	5.378	1.58	0.159	0.195	0.105
15_20131030_135359	1.653111	-1.238677	-189.784054	463745.819	6732925.885	1748.492	6.432	4.65	1.298	0.136	0.181	0.086
15_20131030_135405	1.721146	-1.60295	-189.604448	463805.287	6731866.426	1748.715	5.73	4.381	1.075	0.127	0.162	0.075
15_20131030_135411	1.641583	-1.5442	-189.803511	463862.705	6731442.832	1748.015	4.288	3.789	0.902	0.11	0.122	0.066
15_20131030_135417	1.501238	-0.941222	-190.035115	463918.776	6731017.883	1747.438	4.48	3.851	0.859	0.111	0.127	0.063
15_20131030_135423	1.459267	0.342442	-189.476914	463976.323	6730592.41	1747.94	4.931	3.842	0.811	0.111	0.139	0.06
15_20131030_135429	1.783178	-0.99089	-188.208655	464039.641	6730167.344	1747.791	4.35	3.748	0.786	0.109	0.122	0.057
15_20131030_135435	1.719487	-0.845133	-187.860631	464105.957	6729740.907	1746.62	3.879	3.507	0.741	0.1	0.11	0.055
15_20131030_135441	1.786314	-1.539865	-188.054995	464173.06	6729313.404	1745.288	4.077	3.702	0.743	0.106	0.113	0.055
15_20131030_135447	1.717851	-1.390025	-187.897169	464238.577	6728892.894	1744.722	3.925	3.682	0.734	0.104	0.109	0.059
15_20131030_135453	1.684689	-1.519208	-189.191405	464303.52	6728471.164	1744.206	3.787	3.869	0.744	0.109	0.106	0.063
15_20131030_135459	1.567969	-1.232004	-189.689457	464367.46	6728050.114	1744.525	3.989	3.784	0.706	0.109	0.111	0.064
15_20131030_135505	1.566818	-0.972149	-189.921595	464431.143	6727629.635	1745.133	3.867	3.735	0.7	0.107	0.108	0.066
15_20131030_135511	1.717173	-1.142908	-189.951412	464495.6	6727207.956	1744.874	3.64	3.468	0.657	0.098	0.102	0.067
15_20131030_135517	1.660513	-1.304148	-189.985525	464560.57	6726783.745	1743.968	3.483	3.462	0.641	0.096	0.098	0.069
15_20131030_135523	1.447365	-0.4586	-190.510597	464625.377	6726363.017	1742.721	3.338	3.494	0.62	0.097	0.095	0.071
15_20131030_135528	1.27667	-1.48534	-190.084613	464690.942	6725940.231	1742.907	3.387	3.521	0.641	0.098	0.097	0.076
15_20131031_130129	0.995354	-0.084591	-187.385434	465013.165	6731832.742	1729.605	7.318	6.536	1.593	0.178	0.205	0.091
15_20131031_130135	0.862435	-0.517048	-188.076018	465082.522	6731417.132	1728.73	5.95	6.263	1.513	0.171	0.168	0.078
15_20131031_130141	0.653923	-0.247157	-188.027366	465152.5	6730998.917	1729.668	5.821	6.196	1.537	0.171	0.162	0.072
15_20131031_130147	0.797812	-0.492019	-188.476138	465221.654	6730582.409	1730.913	4.453	6.135	1.42	0.168	0.13	0.07
15_20131031_130153	0.752739	-0.198846	-188.070407	465291.008	6730163.946	1731.85	4.851	6.406	1.533	0.175	0.142	0.071
15_20131031_130159	1.028146	-0.682916	-188.051955	465360.6	6729747.054	1730.959	5.811	6.379	1.666	0.175	0.168	0.071
15_20131031_130205	0.831411	0.001199	-187.597825	465429.267	6729327.994	1730.94	5.532	6.691	1.747	0.185	0.156	0.074
15_20131031_130211	0.855671	-0.582567	-188.823939	465498.069	6728907.43	1730.768	4.883	6.544	1.531	0.18	0.139	0.08
15_20131031_130217	0.926255	0.295191	-188.505491	465565.035	6728485.412	1730.908	5.246	6.411	1.605	0.177	0.148	0.086
15_20131031_130224	1.160297	-0.797069	-188.453791	465632.862	6728062.283	1730.559	6.001	6.191	1.607	0.17	0.17	0.09
15_20131031_130230	0.794158	-0.032774	-188.478999	465699.915	6727628.269	1729.761	4.747	5.881	1.388	0.16	0.132	0.091
15_20131031_130236	0.830284	-0.406443	-188.27728	465763.365	6727215.45	1731.015	4.274	5.805	1.437	0.158	0.122	0.093



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131031_130242	1.269071	0.09908	-188.550654	465827.672	6726790.963	1730.657	4.298	5.758	1.291	0.156	0.125	0.096
15_20131031_130248	0.896839	-0.295675	-188.614869	465889.747	6726372.718	1729.619	4.445	5.717	1.379	0.156	0.13	0.1
15_20131031_130254	0.822181	-0.230589	-188.802139	465949.998	6725953.608	1729.675	4.596	5.641	1.469	0.155	0.136	0.103
15_20131031_130300	1.003233	0.964407	-189.089334	466009.929	6725528.783	1731.655	4.632	5.83	1.355	0.161	0.134	0.109
15_20131031_130306	1.309085	-0.203166	-188.882383	466070.619	6725109.265	1733.092	4.424	5.696	1.437	0.157	0.133	0.109
15_20131031_130312	1.390621	0.178302	-188.896685	466130.189	6724689.895	1734.073	4.323	5.665	1.311	0.154	0.129	0.111
15_20131031_130318	1.436228	-0.599386	-188.695396	466189.745	6724268.719	1732.357	4.526	5.77	1.327	0.156	0.133	0.111
15_20131031_130324	1.143869	0.270836	-189.598576	466247.921	6723846.251	1732.299	4.78	5.86	1.397	0.158	0.138	0.112
15_20131031_130330	1.529552	-0.110856	-189.048506	466307.095	6723423.026	1732.214	5.135	6.148	1.423	0.167	0.146	0.118
15_20131031_130336	1.078652	0.17311	-189.551782	466366.754	6722999.986	1730.226	6.609	6.266	1.888	0.171	0.19	0.129
15_20131031_130342	1.064646	0.35006	-187.285238	466426.296	6722577.541	1730.344	10.516	7.203	3.001	0.197	0.304	0.15
15_20131031_130348	-1.419946	-1.17685	12.476197	465621.201	6720165.075	1727.533	8.33	10.913	3.182	0.294	0.242	0.175
15_20131031_130950	-1.766035	1.606078	10.762028	465551.757	6720585.164	1726.377	5.506	6.936	2.065	0.191	0.16	0.147
15_20131031_130957	-1.459602	0.261718	10.21323	465488.443	6721002.482	1725.424	4.889	6.352	1.643	0.174	0.139	0.135
15_20131031_131004	-1.245002	0.320298	10.001399	465426.173	6721425.125	1726.481	5.092	5.975	1.428	0.163	0.142	0.125
15_20131031_131011	-1.220856	-0.079693	9.385407	465366.831	6721847.698	1729.178	4.871	5.839	1.321	0.162	0.135	0.116
15_20131031_131018	-1.521885	-0.251593	9.627128	465307.354	6722269.305	1730.649	5.193	5.38	1.138	0.151	0.144	0.105
15_20131031_131025	-1.699012	0.699761	10.261129	465246.023	6722691.068	1730.951	4.707	4.544	0.984	0.127	0.132	0.098
15_20131031_131032	-1.552428	-0.033909	9.8531	465186.865	6723114.309	1731.945	4.34	4.444	0.856	0.124	0.123	0.093
15_20131031_131039	-1.637199	0.782646	9.782646	465127.796	6723354.471	1732.267	3.875	4.15	0.767	0.116	0.109	0.089
15_20131031_131045	-1.532976	-1.113129	10.365963	465071.194	6723958.534	1731.866	4.052	4.047	0.769	0.112	0.116	0.089
15_20131031_131052	-1.45276	-1.03777	10.841083	465009.47	6724378.887	1729.93	3.986	3.969	0.73	0.11	0.114	0.089
15_20131031_131059	-1.688528	1.748461	10.888075	464945.213	6724798.693	1730.473	4.273	3.921	0.733	0.107	0.122	0.089
15_20131031_131066	-1.653591	0.420002	10.387494	464886.541	6725217.169	1732.025	3.549	3.588	0.677	0.099	0.102	0.084
15_20131031_131113	-1.624318	-0.736041	9.928757	464830.281	6725637.604	1733.119	3.367	3.586	0.665	0.096	0.1	0.097
15_20131031_131119	-1.663766	-0.12822	9.985432	464773	6726055.333	1733.045	3.321	3.454	0.63	0.096	0.095	0.075
15_20131031_131126	-1.717096	0.04573	9.290765	464716.506	6726475.71	1732.525	3.331	3.5	0.629	0.097	0.094	0.072
15_20131031_131133	-1.876383	1.335475	9.883042	464660.134	6726896.762	1731.496	3.499	3.461	0.665	0.096	0.098	0.07
15_20131113_122953	-2.054995	-1.228153	27.347371	455830.71	6707760.93	1704.517	9.656	10.032	3.586	0.269	0.263	0.171
15_20131113_122959	-2.169052	-0.675395	28.312262	455677.108	6708146.797	1704.256	7.43	9.189	2.62	0.232	0.213	0.15
15_20131113_123005	-2.756481	0.447322	30.55562	455516.868	6708532.214	1704.271	6.044	8.945	2.24	0.224	0.185	0.141
15_20131113_123011	-2.566156	0.053147	26.148265	455356.261	6708914.587	1704.337	5.659	8.418	1.783	0.211	0.177	0.133
15_20131113_123016	-2.111007	-0.985568	26.964379	455193.657	6709297.235	1703.94	5.422	8.205	1.668	0.203	0.172	0.124
15_20131113_123022	-2.270714	-0.431321	28.102937	455027.437	6709678.669	1703.565	5.444	8.037	1.475	0.198	0.167	0.115
15_20131113_123028	-2.528314	-0.068407	27.547005	454858.958	6710060.295	1703.696	5.781	8.051	1.383	0.199	0.171	0.105
15_20131113_123034	-2.502376	-0.301859	27.964398	454690.549	6710441.044	1703.842	6.001	8.013	1.388	0.201	0.173	0.098
15_20131113_123040	-2.630127	0.171714	27.748569	454521.443	6710822.564	1703.228	7.133	8.21	1.52	0.212	0.195	0.097
15_20131113_123046	-2.628993	0.108512	27.966762	454352.186	6711204.01	1703.761	7.216	8.053	1.518	0.213	0.194	0.108
15_20131113_123052	-2.540227	0.04841	27.648274	454182.879	6711585.739	1704.186	7.706	8.69	1.85	0.235	0.205	0.132
15_20131113_123058	-2.765492	0.078345	27.755142	454013.962	6711969.942	1704.219	9.139	9.022	2.126	0.247	0.245	0.149
15_20131113_123104	-2.702452	0.431828	27.5514	453845.345	6712355.644	1703.6	7.661	9.34	2.238	0.253	0.212	0.155
15_20131113_123110	-2.628287	0.214126	27.365707	453678.299	6712739.951	1703.534	7.494	9.583	2.108	0.26	0.213	0.158
15_20131113_123116	-2.636353	0.188506	26.988659	453511.786	6713124.108	1703.887	7.061	9.544	2.066	0.254	0.204	0.158
15_20131113_123121	-2.665571	0.149555	26.835728	453344.839	6713509.425	1704.48	7.745	9.87	2.275	0.262	0.218	0.159
15_20131113_123127	-2.879738	0.145521	27.037813	453178.552	6713894.409	1705.21	7.993	9.762	2.24	0.25	0.228	0.151
15_20131113_123133	-2.807739	-0.14797	26.991145	453012.188	6714281.03	1705.629	8.093	10.521	2.121	0.271	0.226	0.143
15_20131113_123139	-3.049609	0.045478	27.044443	452845.856	6714669.14	1706.285	9.142	10.509	2.355	0.27	0.245	0.14
15_20131113_123145	-3.132183	0.151851	27.084492	452682.41	6715053.277	1705.912	10.691	10.69	2.369	0.275	0.284	0.153
15_20131113_123151	-3.007275	0.153408	26.903117	452518.81	6715440.34	1704.134	12.304	10.653	2.724	0.274	0.329	0.191



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131113_123156	-2.768639	0.060398	26.674988	452357.231	6715824.554	1703.258	15.952	11.912	3.975	0.33	0.41	0.254
15_20131113_123202	-2.417782	-0.127403	26.43007	452194.973	67161210.552	1701.327	26.164	14.153	6.359	0.413	0.676	0.388
15_20131113_130005	-1.103892	1.125525	-12.266287	464119.593	6729892.131	1695.816	13.419	5.644	1.354	0.166	0.354	0.075
15_20131113_130011	-0.886638	1.440772	-12.317777	464220.111	6730300.281	1696.119	7.132	4.648	1.062	0.129	0.194	0.059
15_20131113_130017	-0.940017	1.768778	-12.453534	464320.026	6730702.483	1695.954	4.512	4.347	1.037	0.122	0.125	0.057
15_20131113_130023	-0.785056	1.272065	-12.591266	464421.973	6731103.369	1695.436	5.749	4.878	1.147	0.136	0.157	0.062
15_20131113_130029	-0.962024	0.807676	-11.990424	464525.657	6731504.703	1695.288	6.123	6.08	1.259	0.167	0.168	0.071
15_20131113_130035	-0.838895	0.97415	-13.490925	464630.5	6731906.948	1695.168	6.667	6.105	1.433	0.169	0.18	0.085
15_20131113_130041	-1.091866	-0.379994	-10.507922	464734.204	6732307.102	1695.173	7.718	7.275	1.778	0.202	0.206	0.107
15_20131113_130046	-1.087109	-0.86333	-9.762673	464830.667	6732708.188	1695.161	8.132	7.509	1.989	0.209	0.221	0.124
15_20131113_130052	-0.941558	-0.111862	-8.995926	464922.106	6733117.427	1696.936	9.441	8.508	2.278	0.24	0.253	0.157
15_20131113_130058	-0.994392	0.535336	-12.295797	465009.449	6733527.229	1698.651	9.905	8.428	2.643	0.242	0.268	0.193
15_20131113_130104	-0.981165	0.711629	-12.431473	465095.908	6733938.547	1698.145	11.814	9.709	2.977	0.276	0.328	0.222
15_20131113_130110	-0.845159	0.785995	-12.448294	465181.386	6734344.16	1696.481	11.41	10.875	2.991	0.31	0.328	0.245
15_20131113_130116	-0.832176	0.613122	-12.254537	465267.628	6734749.21	1696.06	11.764	11.722	2.855	0.33	0.351	0.267
15_20131113_130122	-0.674114	1.174536	-12.076909	465354.342	6735154.348	1696.029	13.78	12.602	3.404	0.347	0.443	0.264
15_20131113_130128	-0.805217	0.6224	-12.069368	465442.401	6735560.247	1695.92	15.524	13.749	4.051	0.378	0.457	0.242
15_20131113_130134	-0.772094	0.759347	-12.150997	465530.052	6735965.733	1694.855	16.633	13.876	4.883	0.373	0.465	0.227
15_20131113_130140	-0.667449	0.6572	-12.382994	465617.976	6736371.053	1692.806	23.45	14.654	5.869	0.385	0.613	0.252
15_20131113_130146	-0.441758	0.481946	-12.338857	465706.117	6736775.786	1691.887	24.836	16.377	6.585	0.434	0.634	0.336
15_20131113_130152	-0.57482	0.366874	-12.302796	465793.907	6737181.381	1691.824	29.497	17.692	8.136	0.477	0.751	0.466
15_20131113_130158	-0.591337	0.569838	-12.432766	465882.175	6737591.759	1691.526	48.246	19.962	14.069	0.601	1.278	0.637
15_20131124_130040	1.593124	0.60017	-172.294752	453359.832	6716111.445	1733.391	15.991	8.973	3.195	0.27	0.414	0.233
15_20131124_130051	1.461513	0.207415	-172.96637	453556.093	6715730.964	1728.725	11.79	7.883	2.147	0.223	0.313	0.176
15_20131124_130051	1.1815	-0.582353	-172.876004	453751.165	6715351.525	1728.462	9.542	6.767	1.556	0.185	0.258	0.141
15_20131124_130056	1.14762	-0.351411	-173.141483	453942.252	6714973.574	1731.387	8.469	6.262	1.259	0.168	0.231	0.123
15_20131124_130102	1.360495	-0.693886	-173.808904	454132.419	6714591.654	1733.671	7.634	5.858	1.177	0.156	0.211	0.116
15_20131124_130107	0.981197	0.068312	-173.321504	454319.607	6714208.615	1734.866	6.961	6.118	1.159	0.166	0.193	0.118
15_20131124_130113	0.874905	0.039849	-173.477702	454506.851	6713824.855	1734.718	7.172	6.946	1.217	0.191	0.199	0.122
15_20131124_130119	2.877757	-3.425018	-174.289718	454690.897	6713443.953	1735.161	7.952	7.536	1.39	0.213	0.215	0.128
15_20131124_130124	2.215102	-2.491684	-176.655318	454863.145	6713056.108	1736.446	6.726	8.597	1.276	0.246	0.179	0.109
15_20131124_130130	1.235702	-0.222741	-178.038262	455022.593	6712663.325	1739.274	7.232	8.071	1.251	0.236	0.19	0.109
15_20131124_130135	1.692614	-0.200653	-178.728361	455178.06	6712267.952	1742.454	7.925	7.366	1.239	0.215	0.215	0.098
15_20131124_130141	1.342597	1.779519	-178.760426	455333.938	6711868.491	1743.981	9.474	7.807	1.306	0.233	0.249	0.095
15_20131124_130147	1.443107	2.154052	-178.678981	455496.436	6711470.09	1742.959	10.12	6.891	1.241	0.185	0.286	0.095
15_20131124_130158	1.14163	2.112582	-171.180047	455843.795	6710686.533	1736.255	5.316	5.171	0.924	0.147	0.141	0.101
15_20131124_130203	1.438276	0.802885	-170.167506	456028.654	6710303.416	1733.501	4.363	4.761	0.802	0.132	0.122	0.103
15_20131124_130209	1.437832	0.39665	-171.22553	456213.632	6709924.804	1732.995	4.272	4.488	0.799	0.122	0.122	0.107
15_20131124_130214	1.927246	-0.812583	-173.732792	456400.499	6709538.913	1733.306	4.508	4.808	0.842	0.136	0.125	0.113
15_20131124_130219	1.715895	-0.420419	-173.563276	456582.283	6709151.223	1736.038	4.526	4.664	0.873	0.129	0.13	0.113
15_20131124_130225	1.695502	0.191994	-174.318825	456759.996	6708762.973	1739.258	5.569	4.883	0.981	0.132	0.157	0.11
15_20131124_130230	1.912522	0.56841	-173.098144	456936.149	6708374.051	1741.803	4.705	4.97	1.065	0.139	0.133	0.105
15_20131124_130236	2.199637	0.533139	-173.50467	457112.08	6707985.189	1743.472	4.572	5.035	1.218	0.141	0.13	0.1
15_20131124_130241	2.252033	1.021094	-173.36552	457289.49	6707589.567	1743.785	4.373	4.963	1.356	0.141	0.126	0.09
15_20131124_130247	2.395966	0.50792	-173.012399	457462.435	6707204.48	1741.6	4.178	4.996	1.23	0.139	0.12	0.085
15_20131124_130252	2.187109	0.355606	-172.754298	457636.875	6706814.044	1738.036	4.02	4.607	1.262	0.126	0.118	0.079
15_20131124_130258	1.686459	0.228619	-173.226249	457810.536	6706421.664	1735.524	3.878	4.774	1.166	0.131	0.113	0.077
15_20131124_130303	1.495907	0.218353	-173.402779	457983.07	6706028.833	1735.981	3.823	4.529	1.183	0.122	0.114	0.08
15_20131124_130309	1.865442	-0.290665	-173.68525	458151.519	6705641.231	1738.524	4.07	4.419	1.292	0.12	0.125	0.083



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131124_130314	1.110893	0.812602	-174.023972	458322.065	6705246.092	1741.273	3.757	4.585	1.314	0.126	0.116	0.088
15_20131124_130319	1.099857	0.68502	-174.178635	458493.27	6704852.096	1743.696	3.472	4.554	1.247	0.128	0.107	0.092
15_20131124_130325	1.133107	0.916524	-174.103147	458666.238	6704457.847	1745.457	3.685	4.639	1.284	0.131	0.112	0.096
15_20131124_130330	1.383968	0.880695	-173.225437	458841.201	6704064.57	1746.357	3.63	4.542	1.258	0.13	0.109	0.1
15_20131124_130336	1.292628	1.318617	-173.731276	459019.676	6703669.561	1745.945	5.483	4.768	1.567	0.145	0.151	0.102
15_20131124_130341	1.093345	1.206436	-173.158307	459198.212	6703283.025	1745.605	4.651	5.243	1.368	0.155	0.128	0.101
15_20131124_130347	1.307601	0.701539	-172.737139	459380.463	6702897.228	1745.421	4.649	4.569	1.488	0.13	0.136	0.102
15_20131124_130352	1.345716	0.250161	-172.9266	459565.456	6702509.75	1743.499	4.639	4.633	1.488	0.131	0.133	0.106
15_20131124_130358	1.018144	0.345479	-173.216809	459749.642	6702125.483	1741.171	4.112	4.717	1.553	0.135	0.123	0.109
15_20131124_130403	0.655976	0.106968	-173.052261	459934.424	6701742.062	1739.776	4.907	5.295	1.511	0.147	0.143	0.116
15_20131124_130408	0.752323	-0.238698	-172.729096	460122.098	6701353.964	1740.503	5.271	5.349	1.668	0.149	0.155	0.123
15_20131124_130414	0.809271	-0.286076	-173.163707	460307.698	6700967.237	1742.08	9.387	6.303	2.239	0.177	0.258	0.136
15_20131124_130419	1.447905	-1.742221	-174.147794	460489.309	6700580.441	1743.628	14.82	7.899	2.75	0.231	0.401	0.163
15_20131124_130425	1.185127	-0.99069	-174.97978	460663.585	6700189.276	1743.336	10.972	9.435	2.919	0.254	0.322	0.156
15_20131124_130430	1.560095	-2.04727	-174.588278	460835.263	6699793.994	1743.332	16.086	10.639	2.527	0.299	0.431	0.184
15_20131124_130436	0.805218	-0.723161	-176.812979	461000.744	6699393.832	1743.342	10.86	10.142	2.821	0.278	0.308	0.161
15_20131124_130442	0.68835	-0.534609	-177.109096	461160.869	6698996.099	1743.034	9.038	9.585	2.095	0.261	0.258	0.141
15_20131124_130447	0.667449	-0.477017	-177.288472	461319.938	6698597.472	1743.339	8.7	9.377	1.82	0.258	0.244	0.122
15_20131124_130453	0.706156	0.00903	-177.340175	461476.458	6698200.418	1744.157	7.48	9.355	1.573	0.255	0.21	0.114
15_20131124_130458	1.029079	0.202255	-177.832888	461632.227	6698022.859	1745.737	6.396	9.5	1.529	0.257	0.185	0.115
15_20131124_130504	1.145405	0.699444	-177.754792	461788.241	6697403.013	1745.428	8.479	8.591	1.592	0.22	0.249	0.112
15_20131124_130510	1.196373	0.520096	-176.126831	461946.828	6697005.779	1741.72	6.384	8.157	1.43	0.223	0.179	0.104
15_20131124_130515	0.681596	0.38852	-173.916975	462109.882	6696607.214	1736.452	7.319	9.019	1.23	0.256	0.185	0.104
15_20131124_130521	0.496903	-0.383799	-173.501813	462270.022	6696211.853	1735.156	6.363	5.702	1.128	0.169	0.163	0.094
15_20131124_130526	0.618156	-0.487695	-173.461655	462429.754	6695817.274	1737.785	4.402	4.885	0.983	0.137	0.122	0.081
15_20131124_133240	1.209522	0.782114	-173.187525	454396.29	6716131.276	1730.234	15.857	12.595	2.993	0.369	0.401	0.192
15_20131124_133246	0.851505	0.571489	-173.186428	454583.271	6715754.962	1726.751	11.469	7.496	1.812	0.22	0.301	0.128
15_20131124_133251	0.689318	-0.319888	-172.941222	454773.623	6715376.088	1724.307	8.648	6.226	1.528	0.179	0.228	0.096
15_20131124_133256	0.769993	-0.126254	-172.92318	454961.352	6715001.078	1724.087	8.889	6.238	1.369	0.181	0.233	0.089
15_20131124_133302	0.446251	0.132121	-172.759971	455148.063	6714626.097	1724.168	6.806	5.775	1.13	0.159	0.187	0.072
15_20131124_133307	0.885297	-0.158286	-173.037879	455338.686	6714241.646	1725.896	5.715	5.796	1.036	0.16	0.159	0.067
15_20131124_133312	0.654174	0.204521	-173.141331	455526.013	6713861.732	1725.874	6.367	6.238	1.141	0.174	0.175	0.073
15_20131124_133318	0.683607	0.108685	-173.21411	455714.127	6713480.222	1723.909	6.756	7.007	1.27	0.2	0.181	0.07
15_20131124_133323	0.597628	-0.274005	-172.752266	455901.447	6713099.821	1721.929	10.179	14.181	1.759	0.405	0.242	0.075
15_20131124_133328	0.500123	-0.343724	-172.719174	456085.526	6712719.049	1721.34	7.981	8.324	1.421	0.229	0.216	0.074
15_20131124_133334	0.387324	-0.320351	-172.875866	456269.66	6712337.036	1722.925	8.831	7.544	1.442	0.207	0.238	0.085
15_20131124_133339	0.513283	-0.014352	-173.327125	456449.267	6711960.571	1725.103	6.041	6.442	1.096	0.172	0.17	0.086
15_20131124_133345	0.63821	0.357005	-173.38185	456633.831	6711571.511	1727.539	6.696	5.686	1.014	0.163	0.175	0.098
15_20131124_133350	0.87738	0.492803	-173.853024	456817.522	6711186.579	1729.157	5.482	5.117	0.812	0.144	0.147	0.1
15_20131124_133356	0.764263	0.807037	-173.62083	457001.037	6710806.292	1727.756	4.467	4.614	0.72	0.127	0.124	0.101
15_20131124_133401	0.829221	0.385548	-173.52121	457186.515	6710426.134	1722.826	5.025	4.723	0.811	0.13	0.139	0.106
15_20131124_133406	0.342237	-0.340268	-172.755094	457372.806	6710045.624	1717.885	4.712	3.948	0.662	0.104	0.133	0.104
15_20131124_133412	0.239548	-0.983217	-172.433348	457558.506	6709664.592	1716.043	4.67	3.814	0.654	0.102	0.13	0.104
15_20131124_133417	0.113475	-1.082348	-173.276155	457741.392	6709284.192	1717.231	3.944	3.932	0.677	0.111	0.108	0.101
15_20131124_133423	0.021217	-0.737985	-173.362882	457922.511	6708901.863	1720.577	3.543	3.6	0.637	0.1	0.099	0.094
15_20131124_133428	0.327708	-0.532257	-173.292461	458102.285	6708517.629	1724.461	3.661	3.538	0.654	0.098	0.103	0.086
15_20131124_133434	0.449945	-0.162589	-173.452551	458280.837	6708131.701	1725.86	3.561	3.351	0.661	0.093	0.1	0.075
15_20131124_133439	0.567163	0.005079	-173.262615	458459.185	6707743.799	1724.49	3.497	3.229	0.657	0.089	0.098	0.066
15_20131124_133445	0.782144	-0.841544	-173.53209	458634.078	6707361.527	1720.736	3.381	3.046	0.636	0.084	0.095	0.057



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131124_133450	0.269134	-0.830033	-173.237765	458806.914	6706979.168	1718.3	3.458	2.964	0.642	0.08	0.098	0.051
15_20131124_133456	0.324059	-1.020735	-173.416673	458981.503	6706589.202	1718.868	3.456	2.933	0.664	0.082	0.098	0.05
15_20131124_133501	0.415542	-0.866201	-173.003725	459153.408	6706200.398	1721.874	2.994	2.874	0.658	0.08	0.087	0.052
15_20131124_133507	0.602077	-0.177917	-173.755321	459321.905	6705816.904	1726.497	2.997	3.014	0.673	0.087	0.086	0.057
15_20131124_133513	1.019499	0.243689	-174.094424	459492.471	6705428.914	1731.095	2.987	3.058	0.668	0.088	0.087	0.063
15_20131124_133518	1.070341	1.033667	-174.428737	459666.425	6705038.457	1732.643	3.384	3.116	0.71	0.091	0.096	0.069
15_20131124_133524	1.071001	1.131325	-173.678888	459843.22	6704651.687	1730.016	2.804	3.045	0.69	0.089	0.082	0.072
15_20131124_133535	0.723966	-0.049058	-173.488593	460022.189	6704269.308	1725.302	3.242	3.193	0.731	0.093	0.092	0.078
15_20131124_133540	0.496013	-0.512565	-173.565397	460381.066	6703502.756	1718.269	3.664	3.573	0.787	0.101	0.103	0.085
15_20131124_133546	0.142258	-0.30264	-173.614481	460558.114	6703121.141	1718.817	3.484	3.533	0.77	0.102	0.097	0.087
15_20131124_133551	-0.029376	-0.222945	-173.884614	460734.912	6702739.331	1720.767	3.373	3.451	0.782	0.097	0.097	0.089
15_20131124_133557	0.085423	-0.277102	-174.027782	460914.029	6702353.905	1722.401	3.421	3.398	0.799	0.097	0.099	0.094
15_20131124_133602	1.163887	-2.620667	-175.827122	461089.133	6701971.651	1722.826	3.506	3.544	0.813	0.101	0.101	0.099
15_20131124_133608	0.167372	-0.934444	-174.879824	461255.156	6701586.484	1721.954	4.006	3.83	0.935	0.108	0.115	0.105
15_20131124_133613	0.112883	-0.88608	-173.301616	461420.439	6701193.625	1722.251	7.175	5.863	1.243	0.156	0.198	0.115
15_20131124_133619	0.301665	-1.048409	-173.737961	461580.928	6700806.433	1723.852	7.438	6.751	1.52	0.183	0.205	0.121
15_20131124_133625	0.355751	-0.893288	-173.603345	461740.886	6700411.086	1725.5	7.946	8.673	1.462	0.237	0.215	0.121
15_20131124_133630	0.077468	-0.12628	-173.732637	461898.872	670015.732	1726.951	6.989	9.581	1.334	0.265	0.186	0.113
15_20131124_133636	0.415833	-0.111069	-172.985954	462058.451	6699620.013	1728.174	8.51	9.194	1.571	0.245	0.235	0.103
15_20131124_133642	0.722924	-0.480118	-173.533586	462217.172	6699225.219	1728.422	8.596	9.738	1.464	0.266	0.232	0.083
15_20131124_133648	0.114609	0.681598	-173.646887	462371.747	6698833.569	1728.295	8.936	7.479	1.4	0.198	0.249	0.08
15_20131124_133653	0.440153	-0.216307	-173.152176	462530.537	6698442.3	1729.341	7.029	6.401	1.111	0.18	0.188	0.07
15_20131124_133659	0.85754	-0.447432	-173.867352	462691.76	6698049.188	1730.152	5.955	5.846	0.98	0.161	0.164	0.072
15_20131124_133705	0.244162	1.316548	-174.566478	462852.63	6697656.174	1730.936	6.049	5.865	0.991	0.161	0.167	0.065
15_20131124_133716	0.47568	0.943564	-173.723695	463019.991	6697263.851	1730.616	5.267	4.971	0.936	0.136	0.147	0.072
15_20131124_133722	0.804474	-0.60525	-171.910045	463373.703	6696487.68	1725.804	4.377	4.415	0.759	0.125	0.117	0.066
15_20131124_133733	0.658242	-0.1712	-174.790504	463726.31	6695716.16	1727.453	4.166	4.618	0.801	0.129	0.113	0.056
15_20131124_133739	0.605078	0.111616	-174.66158	463900.262	6695330.011	1727.582	4.735	3.83	0.805	0.107	0.131	0.053
15_20131124_134202	-0.529913	1.857024	26.576852	465126.173	6695223.829	1719.707	4.193	3.671	0.701	0.107	0.118	0.057
15_20131124_134210	0.566157	-0.863402	27.190413	464976.915	6695168.707	1722.867	4.029	3.509	0.669	0.097	0.112	0.052
15_20131124_134217	0.183446	-1.18687	26.551306	464821.574	6696009.129	1729.222	3.94	3.415	0.656	0.096	0.11	0.051
15_20131124_134224	-1.17798	-2.03853	26.820857	464655.622	6696399.163	1731.965	4.577	3.536	0.662	0.095	0.13	0.051
15_20131124_134232	-1.46082	-1.338914	27.303153	464479.394	6696785.925	1729.56	4.444	3.818	0.746	0.106	0.124	0.061
15_20131124_134239	-2.023221	1.126074	26.887969	464299.486	6697166.224	1724.019	5.641	4.598	0.906	0.133	0.15	0.073
15_20131124_134247	-1.207681	0.841482	25.204788	464127.069	6697551.768	1719.364	6.003	4.668	0.927	0.131	0.165	0.077
15_20131124_134254	-1.120212	0.985274	24.882876	463964.195	6697938.945	1717.431	8.269	7.113	1.201	0.204	0.219	0.085
15_20131124_134301	-0.656114	0.423569	25.325449	463810.906	6698333.203	1717.529	5.9	6.797	0.978	0.195	0.154	0.078
15_20131124_134308	-0.323891	-1.340032	26.757878	463660.602	6698268.875	1720.781	6.697	7.272	1.086	0.21	0.171	0.085
15_20131124_134316	-1.105043	-1.021631	26.77481	463502.438	6699122.424	1726.395	7.773	7.015	1.189	0.2	0.206	0.087
15_20131124_134321	-1.460846	-1.304294	27.103541	463341.73	6699512.117	1729.737	7.617	7.617	1.464	0.22	0.22	0.102
15_20131124_134331	-1.550995	-1.674148	27.30768	463148.643	6699892.552	1726.341	74.203	402.617	5.055	11.168	4.727	1.436
15_20131124_134338	-1.457351	-1.052476	27.402476	463009.257	6700290.375	1725.126	10.014	7.588	1.555	0.218	0.266	0.108
15_20131124_134346	-1.250003	-0.876731	27.567522	462841.34	6700676.672	1721.282	6.443	5.905	1.092	0.167	0.171	0.097
15_20131124_134353	-1.143736	-0.237146	26.786204	462672.345	6701062.693	1718.735	5.465	5.374	0.982	0.151	0.148	0.098
15_20131124_134400	-1.263737	0.009845	26.705763	462505.457	6701446.603	1719.119	4.956	4.314	0.814	0.123	0.135	0.095
15_20131124_134407	-1.23079	-0.070552	26.288292	462338.041	6701834.198	1719.229	3.77	3.466	0.681	0.099	0.105	0.091



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131124_134414	-0.906073	-0.382603	26.537232	462169.484	6702219.51	1718.476	3.38	3.261	0.601	0.093	0.095	0.087
15_20131124_134422	-0.797633	-0.47694	26.547885	461999.624	6702601.727	1717.159	3.219	3.118	0.56	0.088	0.091	0.084
15_20131124_134429	-0.907436	-0.122412	26.356583	461825.972	6702986.363	1717.104	3.088	3.008	0.541	0.085	0.086	0.078
15_20131124_134436	-1.124611	0.478174	25.636433	461652.655	6703369.636	1717.882	3.095	3.094	0.551	0.087	0.087	0.08
15_20131124_134444	-1.082896	0.22199	24.813203	461484.115	6703754.304	1718.299	3.128	2.979	0.537	0.083	0.089	0.076
15_20131124_134451	-0.935602	-0.045973	24.860096	461318.44	6704137.071	1717.07	2.988	2.898	0.53	0.082	0.086	0.072
15_20131124_134459	-0.691041	0.324789	26.788094	461153.296	6704521.133	1713.405	3.013	2.946	0.54	0.083	0.085	0.068
15_20131124_134506	-0.556222	0.694145	26.831737	460988.844	6704909.464	1712.91	2.993	2.708	0.516	0.076	0.085	0.061
15_20131124_134513	-0.17135	-0.463944	27.116278	460826.221	6705298.145	1715.811	2.989	2.839	0.548	0.08	0.084	0.056
15_20131124_134521	-0.358922	-0.137029	26.692026	460659.832	6705683.954	1717.706	3.119	2.661	0.529	0.074	0.089	0.051
15_20131124_134528	-0.23684	-0.904182	27.017334	460493.9	6706068.645	1717.546	3.051	2.742	0.536	0.077	0.087	0.046
15_20131124_134536	-0.981233	0.034218	27.230238	460326.594	6706452.788	1716.376	3.019	2.628	0.543	0.072	0.087	0.043
15_20131124_134544	-1.26513	0.912261	27.703072	460159.934	6706837.299	1713.203	3.033	2.911	0.564	0.08	0.086	0.045
15_20131124_134551	-0.218441	-0.670947	27.18378	459997.215	6707220.966	1709.795	3.304	2.853	0.548	0.08	0.092	0.05
15_20131124_134559	-0.032094	0.366414	28.199223	459831.784	6707604.479	1708.268	3.457	2.893	0.562	0.079	0.096	0.057
15_20131124_134606	-0.027601	0.422828	26.480289	459666.731	6707986.422	1710.823	3.509	3	0.6	0.083	0.097	0.066
15_20131124_134614	-0.474314	0.555064	26.2028	459501.301	6708373.804	1715.185	3.752	3.588	0.719	0.099	0.104	0.078
15_20131124_134622	-0.242048	-1.300806	26.214237	459336.829	6708759.228	1716.647	4.106	4.461	0.783	0.12	0.115	0.092
15_20131124_134630	-0.514209	-0.200393	27.354136	459163.697	6709144.268	1717.878	4.679	4.711	0.791	0.132	0.125	0.096
15_20131124_134638	-1.240826	0.227617	27.026446	458990.048	6709524.882	1717.455	3.927	4.652	0.675	0.129	0.106	0.101
15_20131124_134646	-0.743688	0.5236	26.867613	458821.834	6709910.695	1715.217	4.715	4.808	0.677	0.134	0.126	0.108
15_20131124_134654	0.104837	-1.151139	27.367152	458658.197	6710299.326	1713.343	4.834	4.999	0.698	0.139	0.128	0.11
15_20131124_134702	-0.32364	0.43762	28.667034	458490.239	6710684.172	1710.026	5.347	5.764	0.871	0.163	0.139	0.11
15_20131124_134710	-0.220756	0.921935	28.205034	458322.608	6711064.24	1705.36	5.865	5.315	0.818	0.154	0.149	0.109
15_20131124_134718	0.331371	0.867002	26.797193	458158.983	6711446.303	1705.588	4.834	4.275	0.657	0.12	0.129	0.102
15_20131124_134725	0.144871	-0.846589	26.329828	458000.043	6711836.116	1709.282	4.25	4.187	0.599	0.115	0.116	0.095
15_20131124_134732	0.144871	-1.938887	27.742529	457831.666	6712218.893	1714.59	3.92	4.069	0.586	0.11	0.109	0.089
15_20131124_134740	-2.042354	0.19044	26.754938	457650.61	6712595.672	1720.238	3.957	4.193	0.651	0.114	0.111	0.084
15_20131124_134750	-2.409614	-0.077065	25.742173	457474.201	6712977.569	1722.047	4.015	4.199	0.723	0.113	0.114	0.082
15_20131124_134758	-2.19546	-0.736354	26.751497	457305.53	6713360.211	1719.921	4.64	4.842	0.913	0.131	0.131	0.08
15_20131124_134806	-1.735365	-1.277728	27.238193	457138.826	6713743.656	1717.097	5.361	4.897	1.095	0.13	0.153	0.078
15_20131124_134814	-2.011286	-0.261129	26.812052	456967.272	6714126.631	1716.031	5.713	5.008	1.026	0.137	0.158	0.071
15_20131124_134821	-1.745533	-0.697567	26.150933	456796.187	6714510.026	1715.569	7.048	5.138	1.104	0.139	0.195	0.061
15_20131124_134829	-1.922093	-0.454155	26.949436	456624.594	6714892.697	1714.198	6.278	4.907	1.045	0.143	0.166	0.057
15_20131124_134837	-1.51786	-0.544672	26.487033	456456.073	6715273.603	1712.271	6.3	5.757	0.994	0.171	0.157	0.06
15_20131124_134845	-1.500797	-0.60296	26.455184	456286.365	6715659.364	1712.036	5.32	5.487	0.9	0.16	0.133	0.062
15_20131124_134852	-1.438704	-0.487603	27.263245	456117.968	6716042.908	1710.781	5.344	5.29	1.062	0.152	0.141	0.067
15_20131124_134900	-1.706171	0.287233	26.181379	455950.484	6716426.681	1710.799	6.437	5.419	1.191	0.146	0.179	0.076
15_20131124_134908	-1.462078	-1.002283	25.5318	455784.264	6716813.651	1714.082	5.793	4.84	1.213	0.135	0.158	0.072
15_20131124_134916	-1.922484	-1.034273	25.48006	455615.372	6717199.388	1718.845	6.203	4.663	1.213	0.139	0.159	0.068
15_20131124_134924	-2.001288	-2.234424	26.843621	455442.668	6717582.079	1721.864	4.47	3.959	1.057	0.114	0.121	0.066
15_20131124_134931	-2.387643	-1.899428	27.612217	455260.647	6717962.463	1723.382	3.474	3.557	0.909	0.102	0.098	0.069
15_20131124_134939	-3.272292	-0.103332	26.637526	455071.057	6718342.047	1721.804	3.373	3.758	0.94	0.108	0.097	0.077
15_20131124_134947	-2.648171	-0.469432	25.358608	454887.895	6718722.612	1718.568	3.441	3.728	0.988	0.109	0.101	0.087
15_20131124_134955	-1.627667	-0.629914	24.840131	454711.799	6719102.59	1716.42	3.833	3.987	1.136	0.118	0.111	0.1
15_20131124_135002	-1.179238	0.147	25.144484	454538.379	6719482.96	1713.328	4.718	4.513	1.515	0.137	0.131	0.115
15_20131124_135610	1.473506	-0.623735	-174.843878	455328.602	6720115.94	1724.572	4.946	3.948	1.366	0.117	0.136	0.111
15_20131124_135616	1.26956	0.950563	-173.660615	455222.783	67219738.147	1729.3	3.855	3.253	0.984	0.096	0.11	0.095
15_20131124_135621	1.598444	0.916025	-173.031386	455720.809	6719358.128	1728.936	3.456	2.986	0.763	0.088	0.098	0.082



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131124_135627	1.930989	-0.093042	-172.133294	455919.217	6718983.386	1724.685	3.201	2.81	0.645	0.082	0.09	0.072
15_20131124_135633	2.71029	-2.502568	-173.754147	456117.477	6718605.078	1721.971	3.183	2.779	0.575	0.081	0.089	0.065
15_20131124_135638	2.930966	-3.584244	-175.162621	456302.347	6718226.75	1721.552	3.303	2.881	0.594	0.084	0.091	0.062
15_20131124_135644	1.932859	-2.03878	-174.328866	456473.175	6717838.315	1721.951	3.854	3.088	0.661	0.091	0.105	0.063
15_20131124_135650	0.883973	-0.022199	-172.829458	456634.571	6717445.046	1720.7	4.761	3.886	0.795	0.111	0.129	0.066
15_20131124_135655	0.859872	-0.484861	-173.23604	456794.084	6717051.976	1718.83	5.221	3.903	0.792	0.113	0.14	0.068
15_20131124_135701	0.418589	-0.054914	-172.35226	456951.448	6716661.168	1717.333	5.043	4.887	0.844	0.142	0.13	0.071
15_20131124_135712	0.431695	-0.079735	-170.985481	457112.031	6716263.492	1718.287	6.081	5.67	0.892	0.147	0.149	0.074
15_20131124_135718	0.378958	0.425033	-171.985671	457269.658	6715875.376	1721.459	5.404	4.846	0.854	0.143	0.14	0.073
15_20131124_135718	0.700034	0.829732	-172.789872	457433.614	6715480.891	1725.366	6.974	5.795	1.059	0.17	0.184	0.079
15_20131124_135723	0.96299	0.904852	-172.789747	457601.052	6715088.274	1726.571	6.424	5.335	1.002	0.156	0.171	0.073
15_20131124_135729	0.727839	1.188656	-172.713675	457770.845	6714699.137	1724.659	7.475	5.37	1.147	0.152	0.2	0.083
15_20131124_135735	0.797556	0.336863	-173.688868	457943.018	6714315.931	1722.54	4.642	4.354	0.768	0.119	0.129	0.072
15_20131124_135741	0.902721	-0.086763	-173.06021	458118.766	6713929.879	1721.889	4.107	4.447	0.661	0.12	0.116	0.071
15_20131124_135746	1.276773	-0.365008	-173.228557	458293.07	6713545.558	1723.716	4.185	4.3	0.678	0.116	0.118	0.071
15_20131124_135752	1.30586	0.122045	-173.75283	458466.634	6713160.256	1726.849	4.036	4.229	0.645	0.116	0.111	0.072
15_20131124_135758	1.382332	0.681163	-173.31981	458640.382	6712774.218	1729.195	4.005	4.189	0.7	0.114	0.112	0.074
15_20131124_135803	1.43855	0.820925	-173.46509	458817.024	6712385.882	1728.857	4.208	4.096	0.607	0.112	0.119	0.077
15_20131124_135809	1.434396	0.513053	-173.012747	458993.543	6712002.596	1725.954	5.689	4.651	0.792	0.126	0.159	0.089
15_20131124_135815	1.478484	-0.083836	-172.484814	459172.599	6711618.452	1722.689	7.334	5.695	1.06	0.156	0.199	0.104
15_20131124_135820	1.385926	-0.587149	-173.644907	459349.876	6711233	1721.168	7.814	7.041	1.069	0.198	0.21	0.101
15_20131124_135826	1.271309	-0.377691	-174.491915	459522.222	6710852.051	1722.303	7.385	7.011	1.076	0.199	0.191	0.114
15_20131124_135832	1.043345	0.452529	-173.317952	459694.104	6710468.316	1724.106	5.899	6.424	0.891	0.177	0.157	0.107
15_20131124_135837	0.810987	0.999732	-173.335551	459867.104	6710085.369	1724.45	6.615	6.581	0.991	0.182	0.177	0.108
15_20131124_135843	1.112543	0.17686	-172.795219	460043.149	6709702.452	1721.84	7.942	6.905	1.271	0.179	0.224	0.111
15_20131124_135848	0.894035	-0.181412	-172.74547	460219.73	6709317.227	1718.864	14.879	9.854	1.7	0.275	0.392	0.122
15_20131124_135854	0.772638	-0.366819	-172.101722	460392.891	6708956.736	1716.165	8.187	7.201	1.259	0.213	0.208	0.099
15_20131124_135900	0.740337	-0.539933	-173.876547	460567.246	6708550.526	1716.296	9.805	8.883	1.34	0.249	0.258	0.101
15_20131124_135905	0.718771	-0.294995	-174.199033	460738.928	6708163.361	1718.097	5.462	3.971	0.816	0.113	0.147	0.073
15_20131124_135911	0.754403	0.128764	-173.760892	460907.261	6707782.084	1720.496	4.531	3.706	0.669	0.104	0.123	0.061
15_20131124_135917	0.864104	0.393972	-173.582448	461078.397	6707396.683	1721.114	4.447	3.656	0.625	0.105	0.119	0.053
15_20131124_135922	0.677806	0.636922	-173.166023	461249.075	6707015.24	1720.199	3.804	3.396	0.588	0.096	0.105	0.047
15_20131124_135928	0.848072	-0.114218	-172.681192	461422.519	6706632.103	1717.515	3.937	3.736	0.635	0.102	0.11	0.044
15_20131124_135934	0.656954	-0.218036	-173.093948	461595.486	6706248.701	1714.964	3.295	3.298	0.532	0.092	0.091	0.043
15_20131124_135939	0.698244	-0.802706	-172.50691	461766.228	6705865.894	1713.441	4.192	3.85	0.614	0.111	0.11	0.048
15_20131124_140008	1.133126	0.622861	-173.481214	462428.566	6704310.658	1722.235	2.997	2.962	0.484	0.082	0.087	0.066
15_20131124_140014	1.157342	0.952983	-173.953995	462594.124	6703916.471	1724.445	2.911	2.927	0.484	0.082	0.083	0.066
15_20131124_140020	1.374674	0.738848	-173.754955	462759.945	6703527.421	1725.58	3.325	3.038	0.518	0.086	0.093	0.068
15_20131124_140026	1.498514	0.738848	-173.493964	462931.096	6703133.823	1725.837	3.038	2.938	0.474	0.083	0.086	0.068
15_20131124_140032	1.380529	0.522973	-173.411862	463099.534	6702749.915	1724.355	3.496	3.289	0.542	0.096	0.095	0.072
15_20131124_140037	1.105617	0.311778	-173.301753	463270.606	6702360.582	1722.316	3.415	3.289	0.542	0.094	0.095	0.076
15_20131124_140043	1.238042	0.235804	-173.115168	463440.687	6701972.256	1720.42	4.107	3.79	0.665	0.107	0.114	0.079
15_20131124_140049	1.238042	-0.444217	-172.778746	463610.91	6701582.696	1719.314	4.665	4.117	0.692	0.117	0.127	0.08
15_20131124_140049	0.995698	-0.242336	-173.064875	463779.135	6701194.03	1719.894	5.502	4.43	0.739	0.128	0.147	0.084
15_20131124_140054	1.019646	0.122403	-173.382477	463945.541	6700804.936	1721.568	6.651	4.969	0.834	0.133	0.185	0.085
15_20131124_140100	0.986439	0.382195	-173.630343	464111.56	6700416.396	1723.286	6.379	6.461	1.045	0.184	0.169	0.09



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131124_140106	1.027608	0.557637	-173.379734	464277.171	6700031.011	1724.498	6.152	6.792	1.031	0.186	0.171	0.087
15_20131124_140112	1.435027	0.197761	-173.365362	464445.02	6699642.448	1725.783	7.095	6.876	1.057	0.194	0.19	0.08
15_20131124_140117	1.343604	0.463467	-173.720893	464613.494	6699252.248	1727.112	8.443	8.884	1.283	0.249	0.225	0.079
15_20131124_140123	1.385947	0.641659	-173.662678	464782.444	6698863.087	1727.417	9.511	8.139	1.26	0.237	0.246	0.078
15_20131124_140129	1.376384	0.667736	-173.699045	464952.775	6698472.282	1726.633	8.45	9.53	1.439	0.275	0.221	0.083
15_20131124_140134	1.304937	0.517007	-173.724598	465125.299	6698080.966	1725.797	7.84	9.937	1.185	0.287	0.194	0.084
15_20131124_140140	1.344698	0.226946	-173.60993	465296.991	6697600.106	1724.738	8.094	5.914	1.096	0.174	0.213	0.093
15_20131124_140151	1.08937	0.019738	-173.321209	465645.224	6696911.568	1722.508	6.913	5.467	0.927	0.155	0.187	0.082
15_20131124_140157	1.390012	-0.178673	-173.25376	465817.186	6696526.292	1724.738	5.554	4.917	0.814	0.137	0.154	0.077
15_20131124_140203	1.639947	0.144934	-174.184399	465987.086	6696142.875	1728.041	5.465	4.832	0.88	0.141	0.143	0.076
15_20131124_140209	1.504001	0.973062	-174.287705	466158.213	6695756.841	1728.814	3.74	3.68	0.682	0.103	0.12	0.07
15_20131124_140214	1.603785	0.492617	-173.661501	466333.777	6695367.958	1724.386	3.621	3.47	0.632	0.095	0.103	0.068
15_20131124_140220	0.964146	-0.054212	-173.46051	466506.507	6694988.031	1716.63	3.763	3.56	0.65	0.098	0.105	0.069
15_20131124_140226	0.365871	-0.725459	-172.855895	466677.431	6694609.66	1711.605	4.919	3.76	0.771	0.107	0.132	0.071
15_20131124_140231	-0.004484	-0.853948	-173.169889	466847.87	6694227.308	1713.347	11.978	4.397	1.126	0.124	0.317	0.097
15_20131124_140237	-0.135988	-0.580989	-173.888926	467013.251	6693846.639	1721.342	13.991	9.381	1.973	0.293	0.352	0.127
15_20131124_140243	0.179595	0.358018	-174.3913	467178.74	6693458.379	1722.823	82.814	16.706	3.979	0.713	2.117	0.629
15_20131124_140248	0.731643	0.673902	-174.449184	467346.94	6693074.517	1731.721	23.132	15.392	3.301	0.4	0.65	0.243
15_20131124_140250	-1.764848	1.301817	27.021326	467960.026	6694511.111	1719.505	29.909	11.533	2.912	0.349	0.78	0.163
15_20131124_140258	-1.014392	1.094778	26.223703	467794.797	6694895.805	1715.171	6.892	7.154	1.382	0.201	0.182	0.114
15_20131124_140265	-0.558966	0.85427	25.847704	467634.599	6695276.739	1715.02	5.14	5.537	1.184	0.152	0.143	0.104
15_20131124_140272	-0.392656	-0.295477	26.238655	467478.962	6695677.795	1719.62	4.748	5.184	0.993	0.139	0.136	0.104
15_20131124_140279	-0.689725	-0.864957	26.259047	467319.635	6696069.956	1725.546	6.603	5.497	0.994	0.151	0.181	0.107
15_20131124_140284	-1.345658	-0.728673	25.710105	467156.387	6696461.515	1728.866	6.244	5.491	0.881	0.157	0.167	0.108
15_20131124_140804	-1.459975	-0.950397	27.12692	466988.874	6696851.641	1730.323	5.537	5.861	0.887	0.169	0.146	0.105
15_20131124_140811	-1.669438	-0.869623	26.718252	466817.252	6697238.877	1730.181	5.509	5.512	0.861	0.149	0.156	0.106
15_20131124_140819	-1.669051	-0.578926	27.034895	466642.222	6697624.19	1727.06	5.792	5.788	0.872	0.161	0.158	0.104
15_20131124_140826	-1.429124	-0.297395	26.826622	466464.395	6698010.821	1722.894	6.178	5.907	0.944	0.168	0.164	0.101
15_20131124_140833	-1.328393	0.181982	27.344605	466288.205	6698395.338	1718.779	6.074	6.374	1.079	0.179	0.163	0.096
15_20131124_140841	-1.051532	0.071939	26.978901	466114.57	6698777.257	1718.132	6.543	5.899	0.979	0.168	0.174	0.086
15_20131124_140848	-1.019479	-0.222709	26.679185	465942.159	6699160.646	1721.059	6.959	5.234	1.052	0.146	0.19	0.072
15_20131124_140855	-1.253984	-0.253947	26.700997	465767.16	6699547.429	1722.83	7.334	5.486	0.993	0.158	0.197	0.066
15_20131124_140902	-1.517875	0.180691	26.845559	465592.972	6699931.418	1720.437	6.676	6.04	0.978	0.179	0.171	0.065
15_20131124_140910	-1.429902	0.366839	26.341504	465421.854	6700317.332	1718.446	7.585	6.339	1.148	0.184	0.199	0.078
15_20131124_140917	-1.416278	0.038834	26.059395	465254.206	6700706.06	1719.633	7.117	5.723	0.925	0.16	0.194	0.08
15_20131124_140924	-1.536339	-0.836768	24.991577	465087.6	6701094.945	1723.221	5.871	5.707	0.863	0.159	0.162	0.081
15_20131124_140932	-1.616855	-1.317613	25.400396	464915.626	6701485.999	1723.077	5.465	6.078	0.832	0.169	0.151	0.083
15_20131124_140939	-1.684916	-0.522737	25.610505	464740.443	6701870.979	1720.266	6.018	6.232	0.869	0.176	0.163	0.083
15_20131124_140947	-1.656659	1.015884	26.092035	464564.882	6702253.579	1715.259	5.964	5.088	0.838	0.143	0.162	0.079
15_20131124_140954	-1.234042	1.711157	25.72266	464395.759	6702637.232	1709.973	4.208	4.612	0.661	0.128	0.116	0.07
15_20131124_141001	-0.113804	-0.162477	25.316137	464235.812	6703027.114	1710.682	3.79	4.512	0.672	0.125	0.105	0.062
15_20131124_141008	-0.406227	-0.663916	25.652855	464077.964	6703413.928	1717.832	3.667	4.163	0.696	0.115	0.103	0.061
15_20131124_141016	-0.988962	-0.633155	25.970449	463910.271	6703804.706	1721.364	4.021	3.993	0.68	0.109	0.113	0.058
15_20131124_141023	-1.063532	-0.655836	26.338992	463740.035	6704189.377	1721.333	3.877	3.847	0.674	0.101	0.113	0.059
15_20131124_141031	-1.074948	-0.355576	26.755728	463566.496	6704572.675	1718.281	3.565	4.07	0.772	0.11	0.103	0.063
15_20131124_141038	-1.072409	0.257463	27.019282	463392.198	6704957.671	1716.117	4.914	4.842	1.007	0.135	0.135	0.07
15_20131124_141045	-0.872597	0.11323	26.867603	463220.91	6705340.723	1716.334	4.851	4.482	0.75	0.129	0.129	0.065
15_20131124_141053	-0.894417	-0.09647	26.452063	463049.618	6705728.959	1718.161	3.646	3.715	0.659	0.104	0.102	0.06



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131124_141100	-1.124156	-0.224128	26.292993	462878.673	6706117.172	1719.844	3.475	3.593	0.568	0.099	0.098	0.055
15_20131124_141107	-1.188172	-0.194635	26.21248	462708.642	6706502.818	1719.986	3.117	3.62	0.513	0.102	0.086	0.052
15_20131124_141115	-1.173668	-0.208749	26.098865	462537.766	6706890.388	1719.012	3.176	3.733	0.557	0.105	0.087	0.052
15_20131124_141122	-0.996305	0.053626	26.455639	462368.509	6707273.424	1716.203	2.838	3.528	0.505	0.099	0.078	0.052
15_20131124_141129	-0.437563	-0.350775	26.006683	462199.913	6707656.531	1714.927	3.627	3.822	0.595	0.108	0.099	0.057
15_20131124_141137	-0.302279	0.086416	26.533259	462029.779	6708040.546	1714.368	4.067	4.004	0.659	0.116	0.106	0.062
15_20131124_141144	-0.392518	0.76125	26.855778	461859.679	6708425.38	1714.891	5.736	5.346	0.902	0.161	0.14	0.074
15_20131124_141151	-0.490428	0.57633	26.759577	461692.142	6708815.434	1716.664	10.766	7.603	1.608	0.232	0.274	0.109
15_20131124_141159	-0.490428	-0.090125	25.777732	461531.56	6709201.816	1719.811	10.156	11.223	1.733	0.303	0.286	0.126
15_20131124_141207	-0.511791	-0.510518	25.676605	461370.533	6709590.243	1722.031	11.068	8.665	1.516	0.25	0.306	0.112
15_20131124_141214	-0.686071	-0.087989	25.701411	461205.459	6709980.107	1720.054	5.989	6.034	1.217	0.157	0.168	0.102
15_20131124_141222	-0.628894	0.343178	26.676634	461041.448	6710365.272	1715.768	5.989	5.751	1.021	0.149	0.17	0.102
15_20131124_141229	-0.044617	-0.082143	27.29587	460879.595	6710749.855	1712.538	4.724	5.951	0.931	0.156	0.137	0.1
15_20131124_141237	0.065132	0.152894	26.875296	460718.637	6711136.314	1713.759	4.049	5.188	0.853	0.138	0.117	0.095
15_20131124_141244	-0.382814	-0.121518	26.584555	460557.475	6711527.945	1717.425	4.047	5.289	0.833	0.143	0.115	0.085
15_20131124_141252	-0.259621	-1.204874	27.51684	460393.544	6711914.636	1719.623	3.851	4.683	0.768	0.125	0.111	0.075
15_20131124_141300	-1.022344	0.393127	28.241723	460220.261	6712295.439	1718.156	4.202	4.935	0.761	0.134	0.117	0.066
15_20131124_141307	-0.811802	1.172942	27.932396	460048.047	6712681.512	1713.022	4.459	4.907	0.784	0.135	0.121	0.058
15_20131124_141315	-0.392011	0.957259	27.426544	459885.41	6713068.331	1709.951	4.402	4.811	0.724	0.133	0.118	0.053
15_20131124_141323	0.354471	-0.396339	27.109228	459729.314	6713454.797	1712.002	3.848	4.387	0.626	0.118	0.108	0.052
15_20131124_141330	0.253403	-1.248505	27.031647	459570.057	6713842.79	1718.875	3.885	4.314	0.632	0.116	0.109	0.058
15_20131124_141338	-0.606139	-1.121951	27.503142	459401.124	6714227.249	1725.309	4.282	4.601	0.691	0.125	0.119	0.064
15_20131124_141345	-0.883816	-1.655981	27.808411	459218.621	6714612.663	1727.175	4.482	4.518	0.685	0.121	0.126	0.069
15_20131124_141353	-1.424963	-0.463143	28.883163	459026.054	6714990.433	1724.308	5.748	5.443	0.954	0.153	0.152	0.077
15_20131124_141401	-1.127127	-0.090337	28.418284	458831.303	6715366.655	1719.383	7.362	5.774	1.017	0.163	0.195	0.089
15_20131124_141408	-1.265159	0.857145	28.00729	458640.16	6715744.088	1717.255	8.538	7.103	1.307	0.199	0.23	0.09
15_20131124_141416	-1.022625	0.31016	27.381849	458455.225	6716120.474	1718.784	7.431	6.632	1.08	0.181	0.201	0.087
15_20131124_141423	-1.132818	1.13451	26.933202	458271.31	6716500.213	1719.52	6.231	6.53	0.961	0.189	0.159	0.082
15_20131124_141430	-1.042019	-0.176007	26.650213	458088.499	6716881.528	1719.326	6.894	5.269	0.95	0.159	0.177	0.064
15_20131124_141438	-0.942152	-0.137727	26.665952	457907.057	6717259.423	1716.962	5.932	5.023	0.935	0.142	0.161	0.055
15_20131124_141445	-0.33165	-0.336853	26.925139	457724.847	6717636.209	1711.862	4.888	3.741	0.75	0.103	0.136	0.048
15_20131124_141453	-0.178113	0.717167	27.200018	457543.254	6718011.306	1707.972	4.095	3.219	0.652	0.088	0.114	0.05
15_20131124_141500	0.23903	0.810944	27.959931	457361.69	6718392.242	1705.898	3.718	3.08	0.594	0.087	0.101	0.054
15_20131124_141507	-0.36561	2.155342	27.743475	457188.615	6718769.557	1707.482	3.261	2.806	0.527	0.079	0.089	0.056
15_20131124_141515	0.021142	1.524244	26.964797	457024.341	6719151.94	1709.172	3.233	2.872	0.525	0.081	0.088	0.061
15_20131124_141522	-0.217171	1.188617	26.201467	456866.812	6719540.132	1711.358	3.342	2.888	0.562	0.082	0.092	0.069
15_20131124_141530	0.132565	-0.202866	25.663322	456713.577	6719930.274	1714.512	3.596	3.109	0.663	0.09	0.098	0.081
15_20131124_141538	-0.275643	0.163257	26.169013	456556.934	6720318.104	1715.981	3.84	3.417	0.769	0.097	0.105	0.094
15_20131124_141546	-0.008054	-0.008054	26.154385	456396.63	6720708.229	1717.149	4.422	3.545	0.982	0.101	0.121	0.109
15_20131124_141553	-0.501817	-0.026812	25.718199	456235.538	6721095.052	1716.944	5.303	3.858	1.274	0.111	0.144	0.128
15_20131124_141601	-0.571718	0.490698	26.868337	456071.014	6721483.996	1714.267	6.116	4.198	1.638	0.125	0.163	0.152
15_20131124_141609	-0.325043	0.398191	26.519599	455911.006	6721868.475	1713.182	7.735	4.554	1.954	0.139	0.206	0.181
15_20131124_141617	-0.425417	0.474557	26.249778	455751.849	6722259.829	1713.342	9.054	4.817	2.384	0.153	0.24	0.218
15_20131124_141624	-0.425417	0.343649	25.791275	455595.323	6722652.355	1714.438	10.841	7.008	3.129	0.219	0.289	0.266
15_20131124_153221	-1.574804	-0.559275	28.687687	469846.05	6698864.906	1716.421	7.751	8.076	1.913	0.21	0.178	0.121
15_20131124_153229	-1.957588	-0.33486	28.248714	469677.935	6699250.251	1716.185	6.355	7.724	1.678	0.193	0.166	0.104
15_20131124_153237	-1.673388	0.003816	28.349322	469510.65	6699637.552	1713.963	5.74	7.353	1.678	0.184	0.161	0.092
15_20131124_153245	-1.567384	0.246123	28.979212	469344.269	6700247.725	1711.798	5.679	7.008	1.646	0.179	0.158	0.092
15_20131124_153253	-1.408887	0.189463	28.854501	469179.438	6700413.059	1710.708	5.515	6.93	1.461	0.179	0.158	0.092



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131124_153252	-0.625398	-0.808062	28.779266	469016.718	6700800.375	1709.285	5.999	6.99	1.544	0.184	0.169	0.101
15_20131124_153300	-0.926426	-0.804152	29.700018	468849.964	6701186.998	1708.828	5.609	6.85	1.664	0.179	0.164	0.111
15_20131124_153308	-1.598013	0.263875	29.962004	468679.197	6701570.509	1709.177	6.002	7.049	1.643	0.187	0.173	0.125
15_20131124_153316	-1.134664	-0.509441	28.877943	468511.323	6701952.762	1710.188	5.895	6.796	1.648	0.182	0.172	0.136
15_20131124_153324	-1.487907	-0.133154	29.907019	468340.066	6702337.679	1709.483	5.679	6.848	1.62	0.184	0.165	0.148
15_20131124_153332	-1.55899	0.40089	29.977365	468169.878	6702718.929	1707.543	5.836	6.842	1.832	0.19	0.168	0.155
15_20131124_153339	-1.273413	0.069876	29.967975	468002.548	6703098.605	1707.206	5.767	7.25	1.685	0.203	0.162	0.163
15_20131124_153347	-1.118077	-0.41912	29.419088	467832.877	6703481.775	1709.577	6.625	7.579	1.866	0.216	0.181	0.172
15_20131124_153355	-1.670198	-0.139872	29.393559	467661.69	6703863.399	1711.766	6.95	8.097	2.062	0.238	0.185	0.173
15_20131124_153403	-1.436297	-0.98896	29.014763	467488.77	6704243.791	1712.395	7.898	7.873	2.177	0.225	0.215	0.177
15_20131124_153411	-1.231724	-1.318494	28.891133	467312.832	6704623.288	1712.816	7.391	7.484	2.039	0.217	0.207	0.163
15_20131124_153419	-1.886912	0.855485	27.26826	467135.139	6705006.434	1711.494	7.609	7.834	1.916	0.225	0.208	0.154
15_20131124_153427	-1.368656	0.145871	29.812364	466969.404	6705392.725	1709.081	6.107	7.17	1.946	0.198	0.175	0.14
15_20131124_153436	-0.896078	-0.033706	30.307083	466805.761	6705785.697	1707.05	5.799	7.072	1.714	0.192	0.166	0.131
15_20131124_153444	-0.72693	0.104613	30.274905	466648.562	6706165.971	1707.166	4.794	6.992	1.479	0.188	0.142	0.12
15_20131124_153452	-0.752881	-0.102477	30.440395	466489.226	6706552.258	1709.744	4.383	6.963	1.497	0.186	0.131	0.112
15_20131124_153500	-0.827063	-0.474241	30.007524	466327.689	6706941.885	1712.222	4.334	6.974	1.504	0.185	0.13	0.106
15_20131124_153508	-1.137902	-0.665153	30.062346	466163.064	6707330.499	1714.118	4.756	7.264	1.507	0.195	0.138	0.103
15_20131124_153517	-0.926049	-1.24393	29.692262	465995.017	6707716.443	1715.365	4.427	6.872	1.546	0.182	0.136	0.1
15_20131124_153525	-1.384834	-0.473294	30.561176	465821.905	6708097.888	1714.973	5.534	7.264	1.694	0.19	0.166	0.104
15_20131124_153533	-1.083442	-0.640926	31.360096	465644.648	6708478.897	1712.452	5.909	7.749	2.392	0.211	0.172	0.11
15_20131124_155948	-0.108775	-0.509672	67.843602	475874.608	6689817.568	1698.024	11.608	10.309	4.752	0.293	0.283	0.314
15_20131124_155956	-1.711286	0.212265	64.989068	475490.93	668994.554	1698.353	10.356	9.831	3.935	0.267	0.26	0.268
15_20131124_160005	-1.903567	0.153808	65.767842	475108.779	6690133.94	1698.056	9.216	9.279	3.421	0.239	0.233	0.229
15_20131124_160013	0.126917	-1.567304	62.495975	474735.15	6690309.248	1697.617	8.337	8.535	3.068	0.216	0.22	0.195
15_20131124_160021	-0.306953	-1.02744	63.925304	474365.108	6690496.887	1699.648	7.36	8.349	2.888	0.204	0.196	0.166
15_20131124_160029	-0.609801	-1.578192	65.59137	473995.657	6690687.922	1700.712	7.104	8.349	2.825	0.202	0.186	0.143
15_20131124_160037	-0.116885	-2.026468	63.569262	473627.101	6690882.869	1702.626	7.389	8.799	2.687	0.22	0.183	0.128
15_20131124_160045	-0.956622	-1.825045	66.649376	473258.251	6691076.333	1701.649	7.742	8.537	2.383	0.217	0.172	0.117
15_20131124_160053	-0.851756	-1.764397	66.576298	472891.547	6691269.723	1702.503	5.975	6.217	2.021	0.154	0.145	0.106
15_20131124_160101	-1.717297	-1.298663	64.990193	472522.005	6691463.854	1703.396	5.72	5.331	1.669	0.127	0.146	0.104
15_20131124_160109	-1.066081	-1.163688	65.676818	472151.387	6691657.998	1702.164	5.219	5.094	1.657	0.12	0.138	0.102
15_20131124_160117	-0.965421	-0.493773	65.473948	471782.836	6691847.59	1699.515	4.674	4.949	1.411	0.112	0.131	0.106
15_20131124_160125	0.157853	-1.113649	66.62567	471414.805	6692037.413	1699.712	4.623	4.875	1.436	0.108	0.131	0.108
15_20131124_160132	-2.004903	0.567351	65.807583	471044.853	6692226.926	1699.5	4.149	4.547	1.295	0.1	0.124	0.109
15_20131124_160140	-1.460803	-0.532757	64.044805	470683.778	6692429.485	1701.324	4.399	4.575	1.27	0.102	0.128	0.112
15_20131124_160148	-0.160962	-0.477096	63.418584	470323.966	6692639.687	1699.613	4.237	4.678	1.35	0.105	0.126	0.112
15_20131124_160156	-1.443403	0.030417	64.582679	469964.489	6692843.862	1699.975	4.463	4.564	1.438	0.104	0.128	0.113
15_20131124_160204	-1.857739	0.598812	64.833808	469602.398	6693045.563	1698.896	4.44	4.913	1.603	0.116	0.127	0.112
15_20131124_160212	-1.212308	-0.077794	65.242791	469237.417	6693250.271	1698.103	4.141	5.476	1.531	0.125	0.124	0.111
15_20131124_160219	-0.069884	64.481112	468877.99	6693452.541	1700.182	1700.182	4.417	5.25	1.515	0.119	0.13	0.11
15_20131124_160227	-0.766576	-0.463456	64.292239	468516.12	6693655.222	1702.25	5.551	5.872	1.786	0.136	0.155	0.108
15_20131124_160235	-0.497789	-1.076605	63.599468	468154.265	6693860.478	1704.863	6.345	7.428	1.854	0.186	0.16	0.102
15_20131124_160242	-1.739481	-1.221231	65.824216	467789.321	6694064.194	1702.471	6.748	9.725	1.643	0.234	0.168	0.1
15_20131124_160250	-1.186453	-1.32481	65.270342	467424.91	6694268.697	1701.233	17.636	6.923	1.9	0.286	0.347	0.102
15_20131124_160258	-0.784344	-1.907661	64.04593	467063.293	6694477.062	1703.409	6.206	4.874	1.169	0.132	0.142	0.08
15_20131124_160305	-0.181562	-1.656892	64.766881	466701.372	6694681.9	1701.293	4.747	4.179	0.918	0.104	0.115	0.071
15_20131124_160313	-0.053524	-1.370654	65.798694	466335.28	6694883.38	1705.373	3.97	4.077	0.81	0.095	0.102	0.066
15_20131124_160320	-1.147027	-1.699175	65.353992	465968.557	6695085.835	1706.187	3.946	4.121	0.759	0.098	0.1	0.062



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
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15_20131124_160335	-0.269742	-1.792841	64.330526	465237.702	6695491.677	1700.999	4.017	3.826	0.75	0.094	0.1	0.054
15_20131124_160343	-0.985121	-1.075211	64.638592	464870.446	6695695.03	1701.553	4.268	3.959	0.827	0.099	0.104	0.051
15_20131124_160350	-1.093093	-1.210061	65.544092	464507.89	6695897.01	1704.801	4.303	4.016	0.849	0.102	0.104	0.05
15_20131124_160358	-0.62843	-2.353212	65.071107	464141.388	6696099.004	1703.386	4.715	3.948	0.881	0.104	0.11	0.051
15_20131124_160405	-0.491979	-1.850004	64.179612	463776.295	6696300.502	1704.549	4.339	3.868	0.857	0.099	0.104	0.054
15_20131124_160413	-0.010978	-2.161081	64.82373	463409.797	6696501.674	1705.793	4.398	4.24	0.946	0.11	0.103	0.058
15_20131124_160428	-0.431669	-2.435265	64.016779	462878.959	6696896.372	1707.275	5.232	5.186	1.155	0.136	0.117	0.07
15_20131124_160435	-1.179408	-1.406926	63.673969	462308.337	6697094.823	1708.953	6.635	6.065	1.37	0.172	0.136	0.083
15_20131124_160443	-1.299147	-1.725022	64.350188	461937.108	6697292.747	1710.206	6.964	10.209	1.65	0.251	0.161	0.088
15_20131124_160451	-1.546622	-1.802057	64.23427	461560.507	6697493.605	1711.016	8.034	9.287	2.025	0.218	0.202	0.101
15_20131124_160458	-1.715676	-1.632997	64.562384	461201.106	6697689.344	1709.41	7.55	9.587	2.283	0.232	0.182	0.121
15_20131124_160506	-1.234592	-1.789398	64.157446	460830.141	6697891.397	1706.413	10.783	14.544	3.063	0.337	0.271	0.169
15_20131124_160513	-0.615692	-1.951295	64.225242	460463.804	6698093.933	1707.195	12.158	14.271	3.6	0.341	0.297	0.198
15_20131124_160520	-1.286476	-1.544624	63.361008	460101.801	6698294.689	1706.286	15.04	14.616	4.116	0.379	0.342	0.245
15_20131124_160924	1.513709	0.298391	-130.116218	461158.044	6695024.572	1710.444	17.071	18.994	6.033	0.511	0.355	0.311
15_20131124_160931	0.911575	0.292478	-130.723199	461518.461	6694807.407	1710.506	9.855	8.403	2.963	0.228	0.212	0.163
15_20131124_160938	0.708509	0.572592	-130.22055	461875.955	6694588.674	1709.632	6.503	7.572	1.996	0.185	0.153	0.133
15_20131124_160945	-2.315359	1.427124	-132.069983	462230.551	6694368.757	1707.847	5.934	7.344	1.633	0.177	0.138	0.111
15_20131124_160953	0.667314	0.088888	-129.547702	462590.395	6694150.158	1709.011	5.992	6.69	1.468	0.165	0.138	0.094
15_20131124_161000	1.242365	-0.013135	-130.322245	462948.509	6693937.577	1709.331	5.993	6.207	1.314	0.145	0.136	0.079
15_20131124_161007	0.753006	0.593244	-128.690121	463310.454	6693723.355	1710.298	5.949	6.057	1.213	0.148	0.138	0.068
15_20131124_161015	0.031082	0.943576	-129.442894	463675.245	6693514.113	1709.47	6.52	6.499	1.315	0.161	0.145	0.065
15_20131124_161022	-0.203094	0.858101	-127.502317	464041.047	6693306.649	1707.383	5.254	7.298	1.289	0.178	0.149	0.062
15_20131124_161037	-1.243077	1.164142	-128.763335	464407.381	6693098.364	1706.725	5.299	5.631	1.121	0.136	0.122	0.065
15_20131124_161039	0.577399	0.692072	-128.919238	464770.938	6692893.375	1709.059	4.559	5.024	1.001	0.114	0.115	0.065
15_20131124_161044	-0.54203	1.636403	-130.08962	465131.47	6692684.161	1709.766	4.541	4.484	0.868	0.102	0.115	0.067
15_20131124_161052	2.155524	-0.08088	-130.939023	465493.738	6692474.079	1707.923	4.15	4.584	0.915	0.109	0.111	0.072
15_20131124_161059	1.196553	0.82636	-131.184634	465857.161	6692265.541	1707.319	4.497	4.687	0.881	0.111	0.112	0.072
15_20131124_161107	-1.077685	1.693356	-129.908131	466222.948	6692057.78	1705.998	4.399	4.624	0.896	0.106	0.11	0.071
15_20131124_161114	-0.3121	0.755477	-130.387031	466586.243	6691855.69	1707.443	3.923	4.519	0.818	0.1	0.104	0.068
15_20131124_161121	-0.451992	1.47404	-129.824369	466950.397	6691651.7	1710.012	3.657	4.386	0.742	0.095	0.1	0.066
15_20131124_161128	0.589252	1.5148	-129.672601	467316.241	6691446.33	1710.91	3.582	4.315	0.73	0.091	0.101	0.065
15_20131124_161136	1.343027	1.287032	-130.360512	467685.203	6691241.84	1710.19	3.684	4.228	0.743	0.09	0.103	0.066
15_20131124_161143	-0.16397	1.922983	-131.568649	468049.949	6691039.493	1710.643	4.093	4.426	0.786	0.098	0.112	0.068
15_20131124_161150	2.962143	0.470891	-130.765556	468416.955	6690837.233	1707.924	4.021	4.408	0.781	0.095	0.112	0.068
15_20131124_161157	-1.633449	2.731612	-131.349088	468780.139	6690632.403	1703.015	4.183	4.673	0.835	0.102	0.116	0.071
15_20131124_161204	-0.177103	0.967954	-131.098159	469144.526	6690429.204	1699.61	4.771	5.118	0.939	0.119	0.122	0.076
15_20131124_161219	0.161627	-0.573194	-131.870253	469517.543	6690224.565	1701.702	25.44	22.604	4.321	0.761	0.351	0.11
15_20131124_161226	1.433662	0.261104	-127.51627	470227.613	6689813.941	1701.329	4.516	5.287	0.933	0.106	0.129	0.083
15_20131124_161233	-0.450581	1.808405	-130.169838	469866.974	6689610.872	1700.893	4.394	5.059	0.907	0.1	0.129	0.082
15_20131124_161240	0.2022743	1.49815	-129.940673	470948.28	6689409.586	1699.354	4.2	5.16	0.928	0.1	0.125	0.081
15_20131124_161247	0.573951	-0.1562	-128.550196	471310.014	6689211.536	1695.543	4.38	5.332	0.963	0.107	0.126	0.078
15_20131124_161254	-2.348238	1.055594	-130.177589	471672.394	6689008.051	1695.022	4.431	5.273	1.013	0.107	0.127	0.076
15_20131124_161301	0.546838	-0.369264	-128.120839	472031.266	6688806.347	1693.552	4.875	5.373	1.111	0.111	0.133	0.076
15_20131124_161309	-0.954523	-0.002917	-128.793767	472393.614	6688601.012	1695.116	5.219	5.773	1.262	0.124	0.138	0.081
15_20131124_161316	0.272832	-0.192683	-129.61501	472752.599	6688401.701	1697.96	5.889	5.956	1.469	0.137	0.146	0.092



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131124_161323	1.139765	-1.128976	-129.049045	473109.335	6688209.759	1700.347	11.355	7.099	1.934	0.223	0.222	0.116
15_20131124_161331	-0.892435	-0.223847	-129.065707	473469.096	6688011.098	1704.075	12.814	15.144	2.882	0.375	0.275	0.17
15_20131124_161338	-0.572629	0.836713	-128.810733	473846.657	6687784.427	1710.179	16.241	10.91	2.842	0.323	0.32	0.247
15_20131124_161345	-0.026597	0.882469	-129.615128	474209.981	6687582.979	1706.513	16.045	10.249	2.529	0.304	0.323	0.307
15_20131124_161352	-0.028888	0.486727	-129.846655	474574.2	6687381.087	1702.062	16.026	10.328	2.742	0.305	0.325	0.378
15_20131124_161400	0.733186	0.040115	-129.671856	474939.794	6687180.804	1696.206	16.556	10.698	3.089	0.318	0.335	0.455
15_20131124_161407	1.321872	-0.28779	-128.667516	475305.09	6686979.662	1691.656	17.563	11.578	3.873	0.346	0.344	0.536
15_20131124_161829	-2.539205	-1.535392	65.326171	475433.838	6688499.799	1704.229	27.98	21.066	7.409	0.625	0.549	0.417
15_20131124_161837	-2.128757	-3.02804	64.225546	475051.317	6688689.486	1707.632	17.951	15.11	5.42	0.363	0.431	0.318
15_20131124_161844	-2.10449	-3.029163	67.368938	474678.366	6688889.616	1706.735	10.977	8.77	3.946	0.249	0.241	0.219
15_20131124_161852	-1.949633	-2.903661	67.010587	474307.131	6689083.696	1703.966	9.595	8.102	3.136	0.218	0.214	0.176
15_20131124_161907	-2.607299	-2.240032	67.243779	473939.823	6689276.551	1703.972	7.854	6.872	2.628	0.19	0.17	0.141
15_20131124_161907	-3.276409	-1.970274	67.546963	473573.234	6689472.237	1706.6	6.687	6.504	2.135	0.17	0.152	0.115
15_20131124_161915	-2.062705	-3.052434	67.52707	473206.169	6689667.249	1708.717	5.587	5.932	1.74	0.148	0.135	0.097
15_20131124_161923	-2.160045	-2.993824	67.240156	472836.077	6689861.991	1706.172	5.12	5.636	1.484	0.133	0.131	0.082
15_20131124_161930	-4.746224	-1.231489	67.332116	472470.508	6690055.568	1702.199	4.493	5.56	1.317	0.128	0.12	0.082
15_20131124_161938	-0.962923	-3.518698	66.435477	472108.954	6690260.962	1702.6	3.826	4.8	1.083	0.11	0.105	0.079
15_20131124_161945	-1.697236	-2.855183	65.196373	471747.487	6690466.754	1705.488	3.731	4.625	0.978	0.106	0.104	0.08
15_20131124_161953	-2.376082	-3.174054	67.935561	471383.354	6690671.64	1710.615	3.667	4.302	0.892	0.096	0.104	0.082
15_20131124_162000	-3.247821	-3.364195	66.73297	471015.519	6690874.527	1713.132	3.732	4.312	0.872	0.098	0.105	0.085
15_20131124_162007	-2.495875	-4.003347	67.321029	470647.398	6691078.627	1714.774	3.849	4.137	0.863	0.094	0.108	0.086
15_20131124_162015	-2.296935	-2.90655	66.179801	470279.555	6691283.23	1714.183	3.919	4.034	0.86	0.093	0.109	0.086
15_20131124_162022	-1.845919	-1.495262	67.866569	469912.832	6691487.632	1712.449	4.231	4.138	0.861	0.09	0.113	0.086
15_20131124_162029	-1.032615	-1.540837	67.633858	469548.635	6691690.84	1710.175	3.798	3.963	0.831	0.09	0.106	0.084
15_20131124_162036	-0.811625	-0.830938	66.982753	469184.173	6691892.672	1710.322	3.652	4.057	0.801	0.09	0.105	0.082
15_20131124_162043	-1.064286	-0.700665	66.408033	468820.103	6692096.24	1711.309	3.615	3.948	0.806	0.087	0.104	0.081
15_20131124_162050	-1.97346	-0.437227	67.514005	468456.624	6692301.47	1713.186	3.613	3.878	0.853	0.094	0.104	0.081
15_20131124_162057	-0.482681	-1.217024	68.055283	468091.914	6692509.66	1712.419	3.878	4.309	0.858	0.094	0.11	0.08
15_20131124_162104	-0.029464	-1.614027	67.465957	467729.654	6692717.738	1712.012	3.97	4.486	0.954	0.1	0.11	0.08
15_20131124_162111	-0.678188	-1.056225	66.732747	467366.546	6692926.247	1712.974	4.596	4.551	1.079	0.104	0.122	0.081
15_20131124_162118	-0.889547	-1.185973	67.159238	467001.366	6693135.88	1714.442	5.733	5.846	1.395	0.141	0.144	0.08
15_20131124_162125	-0.563208	-1.504185	66.6633.728	466633.728	6693341.872	1715.81	4.694	6.016	1.083	0.142	0.122	0.072
15_20131124_162132	-0.218086	-1.385605	68.329954	466261.612	6693541.083	1715.101	4.5	5.344	0.971	0.126	0.116	0.069
15_20131124_162139	-1.575226	-0.648778	67.832611	465889.505	6693737.411	1714.339	4.619	4.698	0.896	0.107	0.121	0.067
15_20131124_162146	-1.218285	0.114452	67.909854	465522.608	6693937.686	1712.049	4.332	4.493	0.837	0.104	0.111	0.064
15_20131124_162154	-0.516171	0.321132	67.315361	465155.589	6694144.062	1710.491	4.758	4.165	0.831	0.098	0.119	0.061
15_20131124_162201	-1.004091	-0.074866	67.507649	464794.552	6694351.065	1709.91	4.059	4.106	0.812	0.097	0.102	0.056
15_20131124_162208	0.895384	-1.01163	66.653952	464433.198	6694561.596	1708.172	4.855	4.277	0.915	0.106	0.117	0.053
15_20131124_162222	-0.016907	-0.495411	68.509122	464071.927	6694766.765	1708.454	4.245	4.014	0.862	0.102	0.098	0.048
15_20131124_162222	-0.749495	-0.056026	69.010725	463706.071	6694969.226	1706.877	4.434	4.034	0.908	0.104	0.101	0.048
15_20131124_163027	-0.096241	0.557336	-127.684679	460750.59	6694082.603	1696.771	12.249	13.718	4.708	0.255	0.235	0.208
15_20131124_163035	-0.612474	1.471501	-127.479594	461114.884	6693883.379	1694.183	8.959	10.736	3.244	0.203	0.212	0.177
15_20131124_163042	-0.106011	0.949365	-126.412485	461472.391	6693683.36	1689.25	7.234	8.906	2.411	0.203	0.176	0.153
15_20131124_163050	0.777456	-0.086032	-129.604631	461826.38	6693476.511	1687.728	7.76	8.228	1.897	0.198	0.178	0.137
15_20131124_163058	0.074151	0.377352	-129.666851	462178.909	6693259.022	1690.871	6.767	8.454	1.752	0.206	0.15	0.119
15_20131124_163106	-0.283311	0.62123	-127.830358	462531.073	6693043.629	1694.253	7.072	7.194	1.688	0.182	0.152	0.106
15_20131124_163113	0.540693	0.706028	-128.699936	462886.931	6692830.82	1696.891	7.962	8.044	1.655	0.216	0.152	0.098
15_20131124_163121	-0.010816	-1.386675	-128.519494	463241.427	6692619.216	1700.073	6.441	7.189	1.499	0.179	0.14	0.089
15_20131124_163129	0.506838	1.538998	-128.518493	463600.142	6692410.894	1703.411	6.386	5.891	1.438	0.15	0.14	0.086



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131124_163137	1.241406	1.433365	-127.644727	463964.365	6692202.869	1703.141	6.145	5.04	1.237	0.128	0.136	0.085
15_20131124_163144	0.615936	1.513793	-131.475415	464325.526	6691996.031	1701.307	5.427	4.796	1.14	0.118	0.129	0.086
15_20131124_163152	2.213413	0.451796	-130.376551	464684.509	6691790.565	1698.19	4.834	4.975	1.147	0.117	0.12	0.088
15_20131124_163159	1.189116	0.697344	-130.946542	465042.394	6691581.027	1695.594	4.563	5.041	1.118	0.115	0.117	0.089
15_20131124_163207	1.194081	0.766045	-130.837395	465398.232	6691371.654	1694.21	5.196	5.104	1.154	0.118	0.129	0.09
15_20131124_163214	1.134006	0.477437	-132.154828	465754.426	6691165.794	1692.49	4.65	4.779	1.05	0.107	0.121	0.087
15_20131124_163222	0.048133	0.951273	-131.615466	466110.624	6690960.464	1693.102	4.423	5.336	1.075	0.117	0.118	0.086
15_20131124_163229	1.158037	0.404748	-131.715949	466471.686	6690755.555	1692.266	4.195	4.492	0.908	0.098	0.112	0.083
15_20131124_163237	0.985781	0.412743	-132.375891	466828.2	6690550.935	1690.498	4.149	4.593	0.927	0.099	0.112	0.083
15_20131124_163244	1.559095	-0.317436	-132.827272	467185.724	6690345.004	1687.372	3.967	4.612	0.89	0.102	0.108	0.082
15_20131124_163252	0.811115	-0.249776	-133.975776	467539.982	6690133.652	1686.328	4.356	4.828	0.919	0.102	0.114	0.085
15_20131124_163259	0.359041	0.155905	-133.235771	467891.165	6689921.934	1688.689	4.255	4.555	0.899	0.102	0.115	0.088
15_20131124_163307	0.564295	0.377106	-134.597724	468247.031	6689708.978	1692.89	4.48	4.625	0.92	0.108	0.119	0.092
15_20131124_163314	0.287871	1.251771	-133.490475	468606.826	6689499.094	1696.415	4.402	5.154	0.927	0.117	0.12	0.097
15_20131124_163322	1.057782	1.204647	-133.582977	468968.151	6689298.545	1695.277	4.543	4.96	0.939	0.113	0.123	0.102
15_20131124_163329	1.530429	0.76269	-132.821774	469333.634	6689099.242	1693.205	4.89	4.991	0.975	0.111	0.131	0.108
15_20131124_163337	1.268273	0.657737	-135.894578	469694.981	6688902.844	1692.68	5.452	5.032	0.995	0.119	0.141	0.112
15_20131124_163344	0.883858	1.06852	-135.468875	470059.355	6688702.446	1694.254	5.496	5.436	1.076	0.126	0.144	0.115
15_20131124_163352	1.818012	0.817053	-135.262822	470423.888	6688503.405	1696.236	4.893	5.451	1.072	0.124	0.134	0.115
15_20131124_163359	1.515359	1.161381	-135.960459	470788.4	6688300.86	1697.695	4.744	5.633	1.102	0.125	0.135	0.114
15_20131124_163407	0.853854	1.740229	-134.516793	471149.249	6688100.363	1701.123	4.781	5.188	1.118	0.111	0.136	0.113
15_20131124_163414	0.440514	1.961629	-136.86219	471512.627	6687901.207	1701.903	5.064	5.085	1.138	0.112	0.141	0.113
15_20131124_163422	2.545912	1.079403	-136.399513	471879.673	6687701.505	1699.757	5.372	5.34	1.307	0.122	0.145	0.118
15_20131124_163429	0.346202	1.828386	-136.782753	472240.788	6687501.877	1697.849	6.468	5.848	1.732	0.148	0.159	0.131
15_20131124_163436	2.362565	1.528873	-138.030111	472619.169	6687282.742	1708.207	13.9	10.168	2.435	0.312	0.283	0.157
15_20131124_163443	1.052478	1.757438	-136.967565	472976.221	6687084.121	1702.773	14.526	9.152	2.025	0.291	0.294	0.197
15_20131124_163451	1.842686	1.273572	-137.902647	473337.225	6686886.165	1699.396	14.446	8.978	2.014	0.29	0.29	0.252
15_20131124_163458	1.251855	1.714638	-136.535513	473696.735	6686687.434	1694.078	14.626	9.223	2.205	0.295	0.291	0.323
15_20131124_163505	1.653373	1.131359	-138.197572	474056.347	6686486.241	1692.098	14.56	9.39	2.335	0.3	0.292	0.396
15_20131124_163513	3.178677	0.735277	-139.638761	474413.588	6686281.41	1691.725	14.71	9.636	2.529	0.308	0.299	0.475
15_20131124_163520	0.909731	2.15769	-140.049438	474769.358	6686072.085	1688.586	15.125	9.957	2.902	0.319	0.31	0.556
15_20131124_163529	-2.48022	-0.989639	63.410644	474483.219	6684972.051	1683.07	18.186	11.548	3.776	0.385	0.354	0.666
15_20131124_163537	-0.462276	-2.400425	65.177404	474145.541	6685211.805	1683.092	16.17	10.502	3.134	0.335	0.32	0.581
15_20131124_163545	0.268797	-2.463289	67.241316	473802.906	6685443.169	1685.881	15.524	9.996	2.911	0.319	0.3	0.5
15_20131124_163552	-0.910859	-1.889808	66.134619	473451.224	6685660.023	1691.398	15.153	9.984	2.646	0.316	0.294	0.424
15_20131124_163593	0.949167	-3.176314	67.695955	473093.815	6685870.853	1695.326	15.004	9.594	2.506	0.308	0.286	0.352
15_20131124_163951	-2.1668	-1.257493	64.825724	472728.764	6686071.782	1699.988	14.624	9.198	2.384	0.302	0.284	0.287
15_20131124_164000	-2.226231	-1.561749	65.149961	472369.365	6686275.228	1703.531	14.748	9.129	2.161	0.301	0.288	0.235
15_20131124_164008	-1.093675	-2.324074	65.471322	472007.27	6686482.824	1704.831	14.435	8.705	1.823	0.289	0.284	0.204
15_20131124_164016	-2.172004	-1.776582	65.152906	471647.86	6686703.374	1697.105	8.628	8.335	1.84	0.214	0.197	0.184
15_20131124_164025	-1.379303	-2.129594	65.507947	471288.916	6686909.312	1694.541	6.848	7.674	1.48	0.175	0.175	0.174
15_20131124_164033	-1.155413	-2.026035	66.507883	470931.376	6687110.408	1694.072	5.693	6.891	1.554	0.142	0.166	0.17
15_20131124_164041	-1.163336	-2.034898	64.739563	470568.186	6687310.209	1695.593	6.241	6.319	1.518	0.128	0.178	0.17
15_20131124_164050	-2.413236	-1.493665	64.748163	470206.651	6687506.882	1698.316	5.735	6.103	1.562	0.13	0.164	0.169
15_20131124_164058	-2.062293	-1.958677	65.078904	469845.525	6687706.593	1699.155	5.631	6.208	1.535	0.135	0.16	0.166
15_20131124_164107	-1.541756	-2.402957	65.236597	469482.068	6687906.92	1696.721	5.625	6	1.553	0.131	0.159	0.162
15_20131124_164115	-2.703746	-1.39709	65.52743	469121.33	6688103.86	1694.352	5.424	6.09	1.452	0.13	0.157	0.159
15_20131124_164123	-0.158641	-2.826203	63.584667	468765.114	6688308.989	1693.113	5.275	5.828	1.323	0.12	0.157	0.155
15_20131124_164132	-2.199043	-1.169014	64.669895	468406.53	6688511.316	1693.478	5.373	6.01	1.381	0.124	0.158	0.151



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
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15_20131124_164148	-1.721712	-2.145759	63.551969	467663.876	6688897.082	1675.159	86.187	30.546	38.565	1.153	2.119	0.328
15_20131124_164157	-0.998429	-1.452222	64.005093	467320.113	6689117.203	1696.693	6.625	6.739	1.573	0.141	0.183	0.137
15_20131124_164205	-1.042302	-1.239541	63.887372	466956.68	6689317.856	1700.122	6.204	6.462	1.337	0.129	0.178	0.132
15_20131124_164214	-1.028445	-1.405801	63.804516	466591.563	6689514.339	1701.385	5.859	6.399	1.284	0.128	0.172	0.131
15_20131124_164222	-1.059284	-1.452228	63.965123	466223.583	6689706.299	1698.936	5.41	6.668	1.398	0.131	0.166	0.131
15_20131124_164230	-2.610822	0.191952	60.831431	465858.136	6689900.976	1695.09	5.452	6.544	1.472	0.134	0.165	0.134
15_20131124_164247	-0.821931	-0.025111	60.759367	465152.19	6690321.244	1687.003	6.209	6.544	1.961	0.141	0.176	0.133
15_20131124_164255	0.49158	-0.616444	62.608463	464797.377	6690532.384	1687.206	7.602	7.238	2.249	0.164	0.201	0.135
15_20131124_164303	-0.094846	-0.382582	62.29286	464438.732	6690733.337	1691.242	7.978	7.414	2.476	0.175	0.209	0.132
15_20131124_164312	-0.621664	-0.455414	62.464413	464078.466	6690932.942	1693.986	8.34	8.695	2.572	0.213	0.21	0.13
15_20131124_164320	-0.736059	-0.545916	62.021877	463716.761	6691133.985	1694.1	8.759	8.666	2.548	0.221	0.208	0.124
15_20131124_164328	-1.712625	0.105571	63.158023	463355.202	6691331.577	1692.592	8.409	8.269	2.272	0.203	0.202	0.118
15_20131124_164336	-0.407671	-0.502488	62.89683	462992.626	6691530.768	1689.574	8.422	8.427	2.342	0.205	0.201	0.122
15_20131124_164345	-0.916032	0.122458	63.209594	462629.17	6691730.599	1687.73	8.711	8.499	2.588	0.21	0.207	0.128
15_20131124_164353	-1.120108	0.615534	61.142291	462267.261	6691931.628	1687.65	9.984	12.185	2.955	0.309	0.232	0.145
15_20131124_164401	-1.028056	0.411224	61.092322	461905.265	6692134.236	1689.176	10.013	11.89	3.103	0.273	0.266	0.17
15_20131124_164409	-0.119773	-0.356312	61.883379	461543.347	6692335.235	1689.819	8.754	13.307	3.508	0.303	0.249	0.186
15_20131124_164417	-0.888048	-0.290358	62.597161	461177.679	6692529.672	1690.687	10.52	14.924	3.823	0.336	0.294	0.217
15_20131124_164425	-1.399292	-0.225779	63.190068	460812.895	6692720.614	1691.132	13.194	14.95	5.334	0.334	0.371	0.249
15_20131124_165913	1.912036	0.124889	-133.558611	461099.129	6696280.081	1697.206	16.16	12.561	3.942	0.395	0.266	0.211
15_20131124_165921	-0.281718	1.397001	-131.784083	461455.191	6696070.852	1696.126	7.813	10.664	2.748	0.295	0.184	0.15
15_20131124_165936	-0.105923	1.08099	-130.406683	461815.236	6695868.231	1696.26	7.813	8.4	2.051	0.22	0.156	0.116
15_20131124_165936	-0.779721	1.460375	-130.688849	462176.645	6695665.269	1696.772	5.814	5.774	1.481	0.154	0.12	0.093
15_20131124_165944	0.929006	0.72051	-131.783738	462539.919	6695462.181	1694.375	5.305	5.294	1.211	0.139	0.114	0.075
15_20131124_165951	1.613744	0.076602	-131.590374	462898.269	6695258.882	1692.966	4.235	4.657	1.041	0.119	0.094	0.062
15_20131124_165959	1.041293	0.135728	-132.059142	463255.174	6695055.722	1693.207	4.336	4.02	0.952	0.103	0.099	0.053
15_20131124_170007	0.266194	0.669562	-131.581087	463618.047	6694852.427	1694.9	4.406	4.166	0.918	0.107	0.099	0.048
15_20131124_170014	1.01918	0.651057	-132.495429	463981.222	6694651.326	1696.996	4.527	4.106	0.908	0.105	0.103	0.048
15_20131124_170022	0.550847	1.086547	-133.203019	464344.863	6694449.176	1698.53	4.634	4.184	0.96	0.102	0.113	0.053
15_20131125_154329	-1.599352	-2.133796	-191.845731	464540.915	6719143.893	1646.148	4.402	5.289	1.2	0.142	0.121	0.12
15_20131125_154336	-1.735096	-2.185819	-189.461285	464605.286	6718740.686	1655.109	4.86	5.449	1.271	0.147	0.132	0.129
15_20131125_154343	-0.824584	-2.491643	-190.034518	464669.39	6718337.785	1659.471	5.287	5.62	1.495	0.154	0.141	0.142
15_20131125_154350	-1.564461	0.144403	-191.000145	464725.785	6717936.507	1659.699	6.59	5.915	1.876	0.164	0.174	0.159
15_20131125_154357	-0.514393	-1.315228	-191.441822	464786.281	6717534.796	1664.586	7.692	6.417	3.314	0.177	0.199	0.18
15_20131125_154404	-0.860488	2.029613	-189.15787	464843.816	6717131.67	1664.415	10.115	8.14	3.109	0.218	0.262	0.203
15_20131125_154411	-0.595157	2.424709	-191.011985	464902.419	6716726.674	1663.195	15.003	8.417	3.857	0.236	0.384	0.233
15_20131125_154418	-0.666501	-0.971877	-189.482987	464961.47	6716323.926	1660.154	19.488	10.939	5.484	0.316	0.482	0.291
15_20131125_155303	3.929121	0.113806	-179.241705	457691.798	6723095.48	1692.615	21.463	10.909	4.321	0.335	0.548	0.244
15_20131125_155309	3.141427	2.255586	-177.177152	457853.357	6722711.878	1691.753	14.58	9.108	2.869	0.254	0.38	0.176
15_20131125_155316	3.157729	1.650383	-172.544233	458021.945	6722330.967	1689.053	12.031	8.297	2.489	0.232	0.31	0.131
15_20131125_155322	3.749484	0.375151	-172.683795	458194.379	6721958.091	1687.339	7.85	6.949	1.694	0.191	0.199	0.104
15_20131125_155328	3.43672	1.022541	-172.488305	458369.158	6721586.499	1685.758	6.081	6.59	1.319	0.181	0.154	0.083
15_20131125_155335	3.437477	1.102453	-171.487221	458546.33	6721217.045	1685.587	5.603	6.258	1.067	0.169	0.146	0.074
15_20131125_155341	3.572403	-0.126648	-172.095936	458722.323	6720846.324	1684.715	4.988	5.696	0.893	0.154	0.13	0.066
15_20131125_155348	3.015782	0.580801	-173.86427	458895.753	6720471.732	1680.548	5.718	5.134	0.941	0.14	0.15	0.059
15_20131125_155354	2.909322	0.530427	-173.171887	459068.282	6720098.72	1680.268	4.721	4.422	0.909	0.122	0.124	0.047
15_20131125_155401	3.458976	-0.116163	-172.948861	459242.39	6719724.041	1681.229	4.414	4.251	0.857	0.116	0.118	0.046



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131125_155407	3.343449	0.283494	-173.544456	459412.382	6719354.619	1682.196	4.607	4.429	1.04	0.121	0.125	0.053
15_20131125_155414	2.959716	1.006327	-173.415515	459583.648	6718980.422	1681.412	4.822	5.971	1.101	0.154	0.136	0.073
15_20131125_155420	3.182331	0.463457	-171.890961	459758.99	6718607.281	1680.817	6.031	6.274	1.294	0.156	0.174	0.077
15_20131125_155427	3.236097	0.577567	-172.589041	459935.951	6718233.366	1680.752	5.807	5.839	1.308	0.148	0.166	0.078
15_20131125_155433	3.160954	0.309859	-172.509733	460112.643	6717858.116	1680.473	4.986	5.105	0.943	0.131	0.14	0.068
15_20131125_155440	3.11681	0.911566	-172.765768	460288.861	6717483.358	1681.401	4.945	4.554	0.837	0.122	0.133	0.062
15_20131125_155447	4.794144	-1.429862	-171.536783	460466.836	6717108.056	1683.226	4.382	4.048	0.702	0.107	0.118	0.06
15_20131125_155453	4.900159	-1.580171	-174.03329	460631.171	6716734.026	1686.35	3.936	3.866	0.652	0.104	0.106	0.059
15_20131125_155500	4.544311	-0.09662	-172.805232	460786.478	6716345.454	1683.609	4.208	4.211	0.713	0.116	0.109	0.062
15_20131125_155506	3.288738	0.92012	-176.062826	460934.395	6715968.385	1675.384	4.418	4.319	0.78	0.12	0.115	0.069
15_20131125_155512	2.405203	1.329438	-174.987754	461087.261	6715591.381	1670.607	4.97	4.293	0.841	0.116	0.134	0.074
15_20131125_155519	2.143564	0.363004	-173.723707	461251.945	6715213.815	1666.469	4.096	4.172	0.839	0.114	0.109	0.078
15_20131125_155525	1.726514	1.096176	-170.277873	461425.593	6714846.681	1668.792	4.239	4.342	0.934	0.119	0.109	0.084
15_20131125_155532	3.012597	-0.781294	-170.945076	461606.8	6714480.684	1671.432	4.747	4.097	1.034	0.111	0.126	0.092
15_20131125_155538	3.025601	0.011608	-170.647539	461783.804	6714110.641	1672.974	4.867	4.307	1.142	0.114	0.129	0.101
15_20131125_155545	1.94158	0.975957	-170.068416	461957.476	6713740.089	1673.482	5.004	4.95	1.424	0.127	0.134	0.105
15_20131125_155552	2.363239	0.952218	-172.160952	462129.795	6713371.374	1673.067	4.259	4.731	1.116	0.129	0.111	0.104
15_20131125_155559	2.632565	0.515573	-172.931254	462301.07	6713000.41	1674.875	4.483	4.755	1.162	0.132	0.116	0.108
15_20131125_155605	3.460618	-1.172578	-172.672201	462470.455	6712628.594	1674.526	4.063	4.406	1.186	0.119	0.112	0.111
15_20131125_155612	1.891116	1.272266	-173.489031	462635.339	6712254.601	1675.44	3.74	4.26	1.074	0.114	0.107	0.114
15_20131125_155619	2.637284	1.134864	-173.108508	462801.73	6711881	1670.152	4.121	4.25	1.132	0.115	0.115	0.118
15_20131125_155625	2.971508	-0.546243	-172.267226	462969.874	6711510.06	1669.248	3.945	4.126	1.121	0.11	0.113	0.115
15_20131125_155632	3.170296	0.60323	-173.066665	463137.085	6711137.806	1672.166	3.926	4.056	1.072	0.108	0.11	0.111
15_20131125_155639	4.144291	-1.439922	-173.293405	463306.334	6710765.732	1670.327	3.845	3.975	1.048	0.105	0.109	0.104
15_20131125_155645	2.418599	0.287898	-172.379032	463475.87	6710390.816	1671.402	3.772	3.951	0.974	0.105	0.107	0.096
15_20131125_155652	2.806626	1.132204	-173.392812	463644.128	6710015.616	1675.43	4.172	3.939	1.088	0.108	0.116	0.086
15_20131125_155659	3.085062	1.031532	-173.612606	463807.19	6709636.771	1674.147	3.971	3.911	0.984	0.105	0.111	0.077
15_20131125_155705	3.157628	-0.711994	-174.86155	463966.977	6709260.458	1673.451	3.86	3.892	1.017	0.105	0.108	0.07
15_20131125_155712	3.342646	-0.055666	-173.37292	464278.231	6708500.789	1672.954	3.671	3.919	0.941	0.106	0.105	0.069
15_20131125_155719	2.9523	2.010729	-173.048231	464435.176	6708125.692	1668.917	3.491	3.861	0.856	0.106	0.097	0.073
15_20131125_155725	3.343692	-0.047248	-172.489368	464595.794	6707745.708	1669.706	3.716	3.995	0.783	0.113	0.1	0.077
15_20131125_155732	2.866954	0.753287	-173.461694	464752.539	6707371.92	1672.213	3.76	3.819	0.754	0.107	0.102	0.08
15_20131125_155738	3.526115	-0.088459	-173.066315	464910.293	6706992.303	1669.08	3.352	3.705	0.705	0.103	0.093	0.08
15_20131125_155745	3.74337	-0.991003	-172.954527	465065.249	6706616.442	1662.435	3.566	3.883	0.705	0.109	0.094	0.084
15_20131125_155751	2.222576	2.057014	-173.865175	465229.972	6706239.482	1659.276	3.552	3.77	0.703	0.104	0.096	0.088
15_20131125_155758	1.71436	1.712563	-172.401493	465401.101	6705874.893	1658.38	3.539	3.927	0.707	0.107	0.098	0.093
15_20131125_155804	2.284378	0.028009	-173.143611	465579.957	6705510.885	1661.015	3.899	4.383	0.804	0.122	0.103	0.1
15_20131125_155811	2.539265	-0.802117	-170.520635	465762.405	6705146.029	1665.663	4.291	4.444	0.898	0.125	0.115	0.108
15_20131125_155817	2.242417	0.979085	-172.735598	465949.373	6704779.361	1670.946	5.103	4.983	1.004	0.143	0.132	0.116
15_20131125_155824	3.442715	-0.430121	-172.04204	466132.771	6704414.357	1672.114	8.108	6.38	1.251	0.183	0.21	0.128
15_20131125_155831	2.716458	1.540894	-173.236407	466317.891	6704041.916	1672.752	7.278	7.116	1.109	0.158	0.195	0.128
15_20131125_155838	3.93706	-0.545653	-172.585855	466494.298	6703672.679	1668.691	8.837	7.116	1.39	0.197	0.237	0.138
15_20131125_155844	3.058888	0.748293	-173.459201	466666.414	6703303.743	1666.251	6.308	6.362	1.178	0.175	0.171	0.134
15_20131125_155851	2.947883	0.264089	-175.659956	466839.815	6702930.952	1665.565	5.869	6.346	1.069	0.175	0.163	0.132
15_20131125_155857	2.496024	1.111061	-175.251021	467014.068	6702561.666	1666.549	5.559	5.743	1.03	0.152	0.155	0.126
15_20131125_155904	2.140706	0.232666	-174.705723	467187.014	6702187.812	1668.104	5.824	5.881	1.053	0.158	0.161	0.122
15_20131125_155911	2.640144	0.50085	-177.086301	467355.952	6701815.569	1669.259	5.45	5.686	1.026	0.158	0.156	0.113
15_20131125_155917	3.282426	-1.654981	-178.991941	467519.355	6701442.276	1669.992	5.45	5.679	1.011	0.149	0.147	0.105
15_20131125_155924	3.404781	-1.001761	-174.347615	467519.355	6701442.276	1669.992	5.262	5.679	1.011	0.149	0.147	0.105



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131125_159931	2.188226	0.277395	-172.859306	467682.429	6701066.533	1668.462	5.27	5.735	0.988	0.147	0.15	0.096
15_20131125_159938	2.554563	0.242682	-175.423349	467843.153	6700688.337	1668.72	5.015	5.379	0.93	0.138	0.143	0.089
15_20131125_159945	2.718275	0.040005	-175.082403	468000.85	6700308.037	1670.31	5.076	5.546	0.929	0.143	0.142	0.084
15_20131125_159951	2.941665	0.739889	-172.851696	468156.16	6699933.539	1673.411	4.868	5.438	0.907	0.139	0.137	0.082
15_20131125_159958	3.46148	0.826868	-173.855257	468312.749	6699556.755	1676.006	5.021	5.623	0.95	0.147	0.14	0.086
15_20131125_160005	4.259502	-0.516658	-172.468048	468470.031	6699175.824	1678.1	4.961	5.556	0.997	0.146	0.139	0.096
15_20131125_160012	4.202085	-0.377136	-172.09569	468622.412	6698793.143	1676.567	5.069	6.05	1.115	0.162	0.137	0.111
15_20131125_160018	4.153575	-0.863146	-174.379882	468767.442	6698406.788	1671.584	5.312	6.302	1.269	0.17	0.145	0.128
15_20131125_160025	1.906342	3.510357	-175.869263	468904.936	6698023.155	1684.751	5.571	6.803	1.486	0.182	0.154	0.143
15_20131125_160031	3.253225	0.076907	-172.0166	469050.693	6697646.282	1662.867	5.79	7.034	1.827	0.188	0.158	0.154
15_20131125_160038	1.789804	1.661912	-171.624024	469200.666	6697269.269	1663.434	6.266	8.006	2.032	0.213	0.173	0.167
15_20131125_160045	2.764132	0.160745	-173.433467	469352.906	6696889.823	1669.303	7.059	8.35	2.503	0.228	0.199	0.179
15_20131125_160051	3.177482	1.335023	-172.764839	469503.198	6696510.482	1673.471	9.21	9.224	3.461	0.264	0.252	0.201
15_20131125_162330	2.980877	1.979717	-171.558847	456668.514	6722278.074	1683.093	21.458	15.239	3.881	0.473	0.494	0.246
15_20131125_162336	3.876805	-0.751961	-171.674033	456840.711	6722358.278	1680.338	12.858	8.929	2.75	0.259	0.324	0.184
15_20131125_162342	3.213392	0.155376	-173.089392	457009.25	6721984.168	1681.146	9.879	7.971	2.11	0.221	0.256	0.151
15_20131125_162348	3.670748	-0.01931	-173.293582	457176.454	6721609.782	1682.237	7.362	6.277	1.65	0.167	0.196	0.122
15_20131125_162355	2.865098	1.425092	-173.493834	457342.988	6721230.82	1680.857	5.76	5.47	1.189	0.145	0.154	0.101
15_20131125_162401	3.090893	0.895611	-173.277028	457511.719	6720855.684	1679.87	4.97	5.665	1.008	0.156	0.127	0.087
15_20131125_162408	3.180186	0.387064	-173.371977	457683.202	6720481.12	1677.458	4.419	4.415	0.801	0.119	0.118	0.072
15_20131125_162414	2.87112	0.867337	-173.186988	457853.425	6720110.137	1676.975	4.12	4.479	0.711	0.119	0.112	0.061
15_20131125_162420	2.9045	1.043986	-173.064305	458024.94	6719741.558	1677.574	3.952	4.207	0.667	0.112	0.107	0.051
15_20131125_162427	3.382016	0.429862	-172.321161	458201.037	6719367.864	1678.682	3.813	4.45	0.651	0.121	0.099	0.044
15_20131125_162433	3.530512	0.28871	-173.182041	458376.081	6718993.82	1680.152	3.732	4.419	0.662	0.122	0.097	0.043
15_20131125_162440	2.899357	1.542271	-173.324505	458550.112	6718616.084	1680.189	3.974	4.493	0.691	0.121	0.107	0.045
15_20131125_162446	3.82864	0.211331	-172.915167	458722.396	6718247.47	1677.829	4.04	4.405	0.725	0.12	0.109	0.043
15_20131125_162453	3.284994	0.319101	-173.065882	458894.487	6717875.455	1671.222	4.274	4.571	0.785	0.125	0.113	0.047
15_20131125_162459	1.943807	0.18867	-173.415912	459064.995	6717503.567	1663.922	4.674	4.676	0.736	0.129	0.121	0.052
15_20131125_162506	1.561581	-0.541456	-172.797803	459235.211	6717135.398	1661.149	4.491	4.393	0.74	0.118	0.119	0.058
15_20131125_162512	0.768893	0.363758	-173.08029	459403.25	6716769.217	1662.119	4.961	4.446	0.826	0.115	0.135	0.062
15_20131125_162519	1.296933	-0.540771	-173.393837	459574.114	6716398.036	1666.983	4.462	4.683	0.909	0.122	0.124	0.067
15_20131125_162526	2.709737	-1.773172	-173.344311	459746.931	6716023.484	1672.447	4.463	4.694	0.863	0.126	0.12	0.068
15_20131125_162532	2.13707	-0.192009	-173.195295	459912.272	6715648.26	1670.761	4.483	5.026	0.76	0.14	0.113	0.066
15_20131125_162539	1.741301	-0.515086	-173.224946	460073.344	6715275.068	1666.425	4.223	4.558	0.736	0.126	0.108	0.067
15_20131125_162546	1.224829	-0.142472	-173.373297	460232.41	6714903.21	1663.958	3.837	4.093	0.658	0.111	0.102	0.065
15_20131125_162553	1.696656	-1.687615	-174.332095	460394.218	6714527.256	1658.766	4.168	4.227	0.718	0.117	0.108	0.066
15_20131125_162559	0.396337	0.620265	-172.518598	460554.588	6714156.737	1655.758	3.758	4.151	0.671	0.113	0.098	0.062
15_20131125_162606	0.480819	-0.407043	-173.406145	460720.818	6713790.342	1654.404	3.533	4.136	0.636	0.112	0.091	0.06
15_20131125_162613	0.677656	-0.407434	-172.919493	460890.204	6713292.191	1659.914	3.887	4.43	0.725	0.122	0.098	0.064
15_20131125_162620	2.157749	-1.442649	-170.902952	461062.849	6713050.281	1668.12	3.87	3.778	0.675	0.102	0.104	0.067
15_20131125_162627	0.668907	3.052751	-173.703749	461226.114	6712678.866	1662.857	3.882	3.748	0.665	0.1	0.105	0.074
15_20131125_162634	1.80917	-1.562799	-173.522993	461392.566	6712310.151	1659.347	3.405	3.615	0.614	0.096	0.094	0.08
15_20131125_162641	0.637877	0.751204	-175.924211	461553.862	6711938.552	1655.44	3.435	3.506	0.693	0.093	0.095	0.086
15_20131125_162647	0.624097	-0.805089	-173.868877	461719.951	6711572.49	1653.379	3.796	3.763	0.67	0.101	0.103	0.094
15_20131125_162654	-0.082085	0.39722	-171.89636	461892.597	6711204.226	1654.972	3.87	3.557	0.651	0.092	0.108	0.094
15_20131125_162701	0.326529	-1.901522	-174.814537	462071.086	6710836.98	1659.142	4.029	3.675	0.674	0.095	0.112	0.095
15_20131125_162708	1.566562	-0.940283	-174.134685	462247.64	6710468.387	1666.302	3.753	3.538	0.667	0.093	0.106	0.088
15_20131125_162715	2.844201	-3.548738	-174.067476	462419.655	6710100.049	1669.679	3.73	3.687	0.709	0.097	0.106	0.083
15_20131125_162722	2.832986	-2.29714	-174.297607	462582.002	6709722.174	1672.719	3.818	3.925	0.765	0.106	0.106	0.078



photoID	omega[grd]	phi[grd]	kappa[grd]	X	Y	Z	std.ome[mgrd]	std.phi[mgrd]	std.kappa[mgrd]	std.X	std.Y	std.Z
15_20131125_162729	2.977434	-2.606698	-172.235958	462738.52	6709341.627	1672.496	3.628	3.77	0.725	0.1	0.1	0.07
15_20131125_162736	2.883987	-1.443597	-172.006136	462892.816	6708962.611	1663.868	3.787	3.826	0.69	0.103	0.102	0.064
15_20131125_162743	0.635037	0.980233	-173.587316	463047.918	6708586.538	1653.253	3.704	3.796	0.632	0.102	0.099	0.061
15_20131125_162749	0.561165	-1.234889	-173.89711	463209.832	6708216.88	1648.819	3.479	3.824	0.64	0.103	0.094	0.062
15_20131125_162756	1.081125	-2.15157	-171.965552	463379.526	6707853.824	1651.229	3.027	3.683	0.582	0.1	0.081	0.061
15_20131125_162803	1.1952	-1.88881	-173.628121	463551.796	6707488.996	1656.615	3.168	3.888	0.613	0.108	0.083	0.064
15_20131125_162810	0.824637	-0.517014	-175.500348	463716.351	6707119.559	1661.727	3.425	3.965	0.596	0.111	0.09	0.066
15_20131125_162818	1.362862	-1.345291	-174.986937	463880.178	6706745.725	1661.834	3.041	3.566	0.541	0.098	0.084	0.067
15_20131125_162825	0.649686	1.585473	-173.593993	464038.5	6706374.576	1660.603	3.633	3.674	0.567	0.098	0.1	0.071
15_20131125_162832	0.578837	-0.447253	-172.071865	464192.789	6706002.759	1657.848	3.739	3.886	0.711	0.106	0.099	0.076
15_20131125_162839	1.444185	-0.408796	-170.047838	464345.25	6705282.335	1656.264	3.753	4.273	0.929	0.117	0.101	0.08
15_20131125_162846	0.408887	2.036018	-173.011496	464497.812	6705251.803	1654.442	4.344	5.177	0.905	0.141	0.112	0.087
15_20131125_162853	0.896087	-0.45344	-176.338135	464648.997	6704879.812	1648.067	5.108	5.296	0.9	0.144	0.134	0.08
15_20131125_162859	0.320902	-1.065396	-173.446508	464799.683	6704510.204	1645.613	5.13	5.605	0.845	0.155	0.128	0.076
15_20131125_162907	-0.474711	0.445607	-174.495718	464953.717	6704135.443	1646.286	7.67	6.977	1.038	0.199	0.185	0.08
15_20131125_162914	0.445753	-2.093693	-173.99438	465112.554	6703763.176	1648.499	7.466	7.459	1.216	0.19	0.204	0.082
15_20131125_162921	-0.01264	-0.448151	-173.510469	465268.374	6703391.781	1651.046	6.005	6.821	0.903	0.177	0.163	0.088
15_20131125_162928	0.361522	-0.670311	-173.986237	465424.225	6703021.058	1653.068	8.103	7.235	1.064	0.191	0.211	0.097
15_20131125_162935	0.823983	-0.808327	-174.296918	465579.61	6702648.22	1653.75	6.374	6.784	0.905	0.175	0.173	0.097
15_20131125_162943	0.988546	-1.447407	-174.362524	465735.755	6702272.638	1654.694	6.097	6.824	0.894	0.175	0.168	0.098
15_20131125_162950	0.827512	-0.362973	-173.215488	465889.077	6701896.72	1654.448	6.141	6.937	0.992	0.182	0.165	0.1
15_20131125_162957	0.349582	0.611108	-173.855975	466037.691	6701523.463	1652.89	6.081	7.054	0.971	0.186	0.164	0.096
15_20131125_163004	0.623223	-0.775487	-174.041074	466187.445	6701150.145	1651.397	6.72	7.101	0.996	0.179	0.186	0.09
15_20131125_163011	0.256586	-0.044419	-173.997078	466338.412	6700778.023	1650.537	6.293	7.524	1.103	0.193	0.173	0.094
15_20131125_163018	0.146965	-0.632942	-173.237718	466493.796	6700409.16	1648.817	6.085	7.435	1.172	0.189	0.17	0.091
15_20131125_163025	0.417718	-0.786307	-171.480451	466653.218	6700039.974	1644.633	5.396	6.062	0.924	0.162	0.14	0.091
15_20131125_163033	-0.869488	-0.051796	-171.89025	466815.174	6699674.274	1643.654	4.842	5.718	0.817	0.151	0.128	0.094
15_20131125_163040	-0.343888	-0.104202	-173.704313	466976.199	6699305.87	1651.27	5.15	5.55	0.792	0.147	0.137	0.099
15_20131125_163047	1.024233	-1.564609	-173.252306	467139.257	6698933.904	1661.479	5.152	5.77	0.856	0.154	0.138	0.108
15_20131125_163055	2.431303	-0.306687	-173.055214	467299.538	6698562.186	1666.527	5.063	5.654	0.831	0.151	0.136	0.115
15_20131125_163102	2.452478	-1.892969	-171.071522	467460.082	6698184.34	1666.816	5.102	6.128	0.905	0.165	0.134	0.124
15_20131125_163109	1.57942	0.8598	-171.759358	467612.241	6697808.492	1660.154	5.167	5.761	0.902	0.155	0.135	0.129
15_20131125_163116	0.20986	1.049516	-173.534917	467763.042	6697433.328	1649.433	5.131	5.864	0.913	0.156	0.136	0.134
15_20131125_163123	-0.287839	0.059309	-173.052451	467916.021	6697062.43	1644.77	5.862	6.108	1.057	0.162	0.155	0.14
15_20131125_163130	0.512616	-1.778818	-171.869304	468075.169	6696692.867	1647.697	6.002	6.644	1.153	0.178	0.157	0.142
15_20131125_163138	0.397783	-1.226458	-171.322111	468236.05	6696321.341	1654.384	6.244	7.047	1.314	0.192	0.159	0.148
15_20131125_163145	-0.082421	2.053872	-171.62957	468395.895	6695948.817	1660.473	7.358	7.008	1.567	0.197	0.184	0.162
15_20131125_163153	0.907218	0.523078	-171.892832	468560.208	6695574.891	1662.813	11.248	7.809	2.307	0.229	0.274	0.196