

## Station use Analysis during the Reprocessing Test Period

An important outcome of the IGS 2006 WS was the idea of some IGS recommendations with respect to station use for the reprocessing campaign. During the IGS WS results were presented on the availability of the stations over time which is of course not constant since many of the stations do not go back so many years.

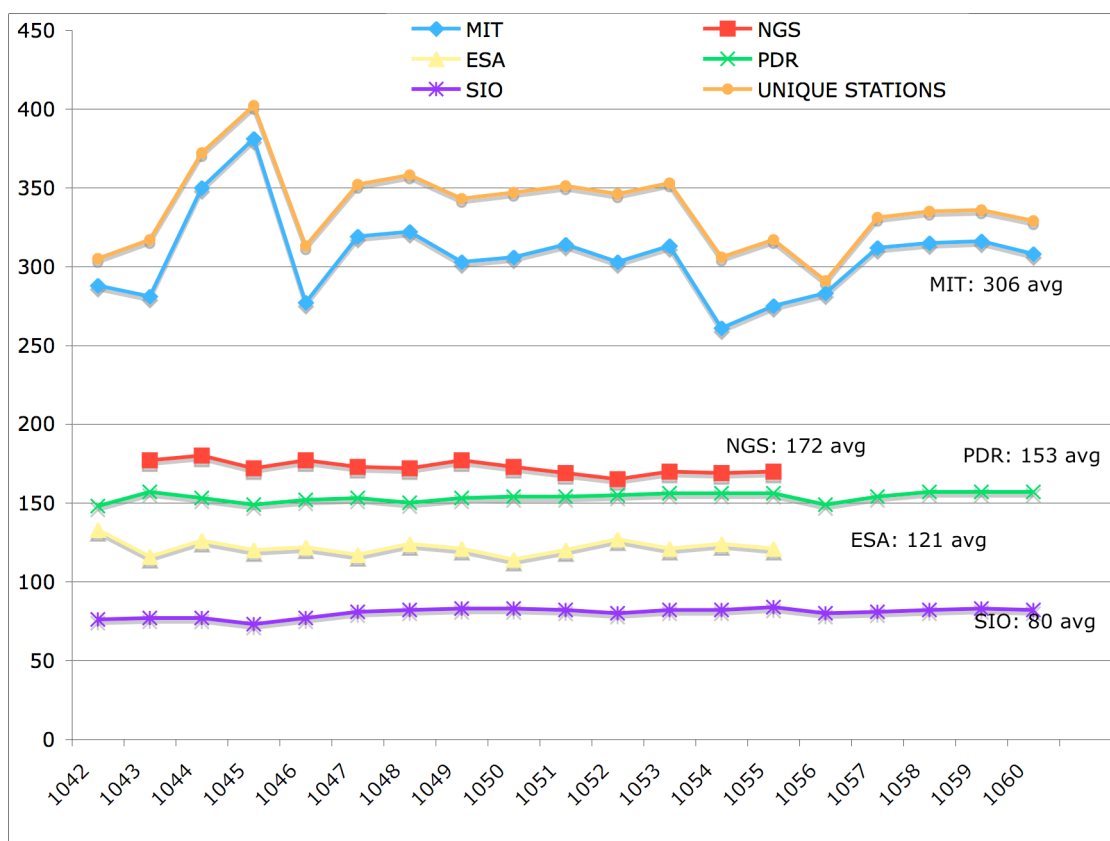
In this document I concentrate on analyzing the stations actually used by each of the contributing ACs to the reprocessing Test Period.

### AC Station use

The number of stations used in the reprocessing test period has been as follows by each of the participating ACs (I have only found 1 week of GFZ products during this period so it is not included). Also plotted below are the number of unique stations used among all the ACs, each of the submitted weeks, this gives an idea of the station repetitions amongst ACs, analyzed further below.

The products have been found at: [ftp://ftp.gfz-potsdam.de/igacc/reproc\\_subm](ftp://ftp.gfz-potsdam.de/igacc/reproc_subm) the lists of stations come from the SNX and/or the AC summary files if provided.

**Numbers of Stations in the AC Reprocessing (per week)**



The variability of stations used between ACs is very large due to operational constraints (software, disk space, etc) but also due to the fact that this is a test period, some ACs may not be using the total number of stations that they could handle in the final effort.

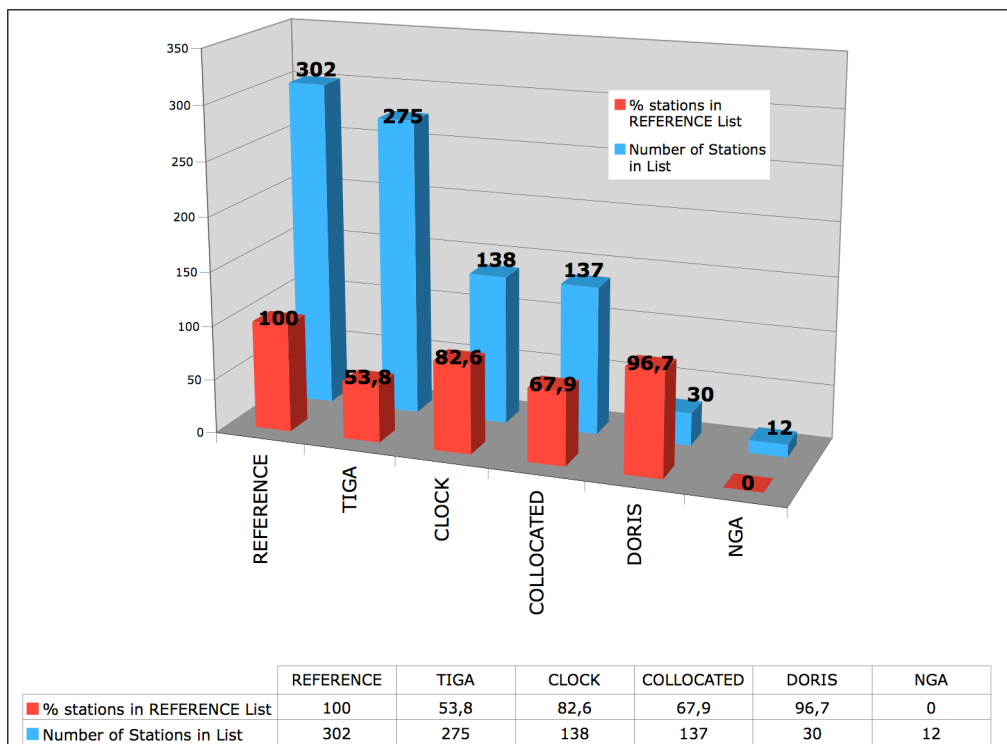
# Station use Analysis during the Reprocessing Test Period

## Interest Groups

We need to develop certain tools and derive statistics about the station usage now so as to try to achieve the intended goal of the IGS 2006 Workshop of covering as many as possible *Interest Group Stations*. The Interest Groups identified have lists of stations that they expect to be used in the Reprocessing by as many ACs as possible. (Thanks to Peng Fang for the list provided at <ftp://garner.ucsd.edu/pub/gamit/rinexArchived/> and to Ken Senior for the list of important Timing sites via email)

Some the Interest Groups can be satisfied by post-processing results such as PPP, but I assume herein that all the stations need to be part of a full estimation process and that 3 or more ACs have to be using a station for combination results to be available from the IGS, this can be relaxed later on as needed. An initial look at these lists is presented in the graph below by simply analyzing how many stations each list consists of (overall number of stations) and how much repetition there is with the largest list (the itrf2005 REFERENCE list).

### Numbers and Repetition of Stations in Interest Groups' Lists



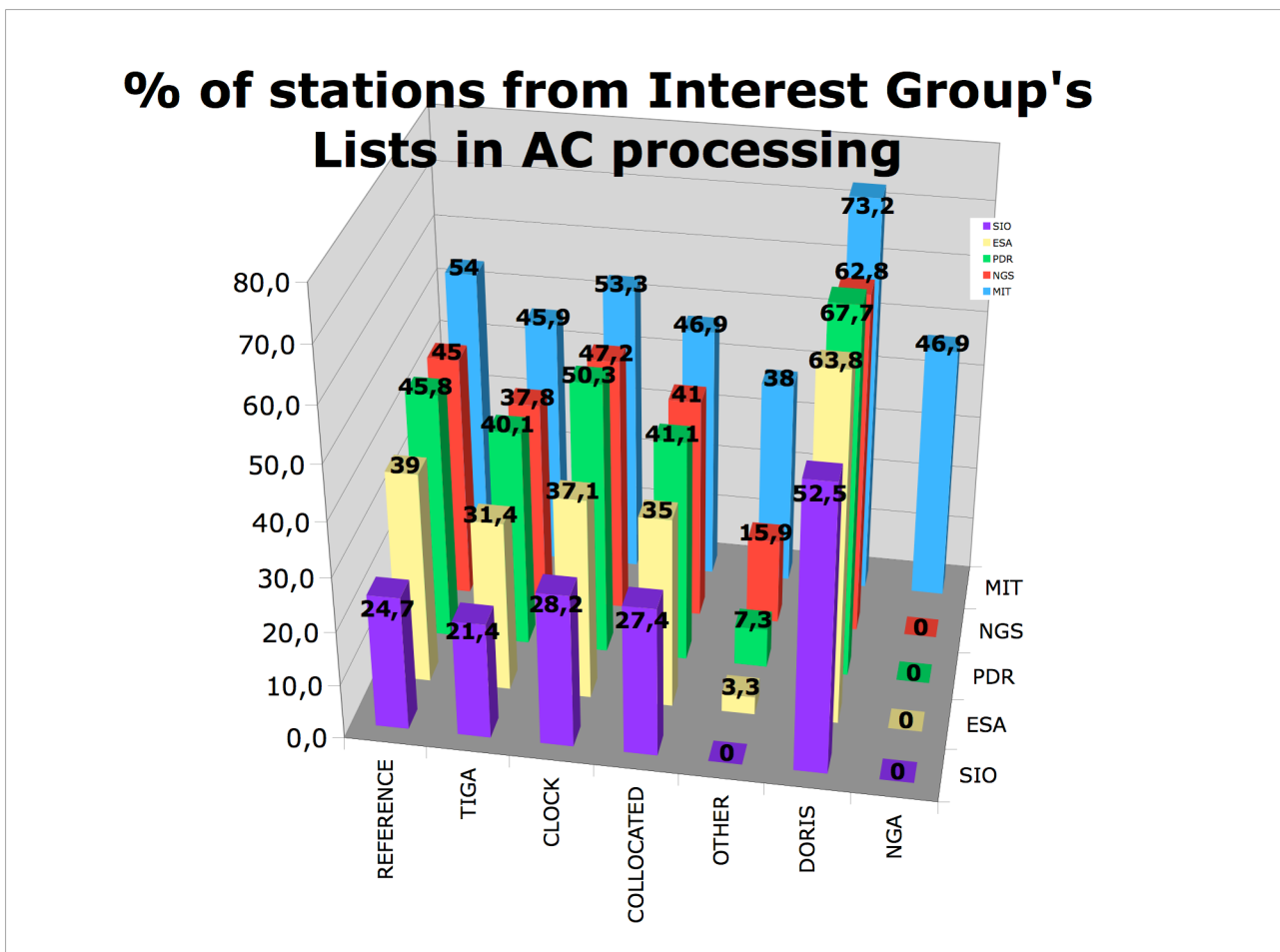
The number of stations from each of the Interest Groups is very varied (**blue bars**), and an analysis of the REFERENCE Station list reveals (**red bars**) that it already contains most of the Doris and Clock Stations, a majority of the TIGA and Collocated stations and none of the NGA stations, as expected.

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There are **495 original stations** specified by the Interest Groups, of which **234 are in more than one list**, see **Appendix A** for all the details.

Therefore it appears “easy” to avoid having so many Interest Groups since they repeat so many of the same stations in their Lists. We **could therefore collapse all the lists into two or three lists** for simplicity of analysis. By adding the missing Doris and Clock stations into a new REFERENCE List, the Tiga and Collocated stations not already present in the REFERENCE List into a second list as “support to other projects” PROJECTS List, and the NGA List would remain separate as it is a separate agency that we are trying to support but which is optional. This way trying to reach 100% coverage would be easier to check by each AC and priorities would be easier to understand.

Additionally, in this first set of reprocessing results it is interesting to analyze how the Interest Group’s station Lists are covered in the AC processing. The graphic below answers the question; how many of the Interest Group’s stations are in each of the AC reprocessing results?:



Therefore, over the reprocessing test period MIT is using about 50% of the NGA stations, 73% of the DORIS stations, ESA 37% of the Clock stations, etc.

Clearly the ACs use stations not in any of the Interest Groups’ Lists, labeled as ‘OTHER’ in the graphic. This use of other stations by the ACs, together with the

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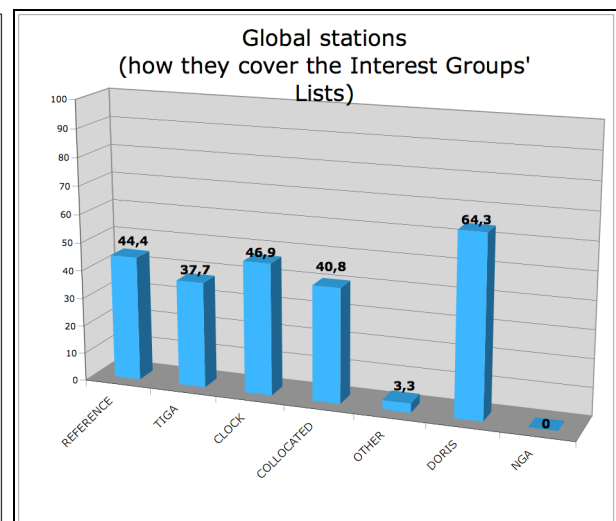
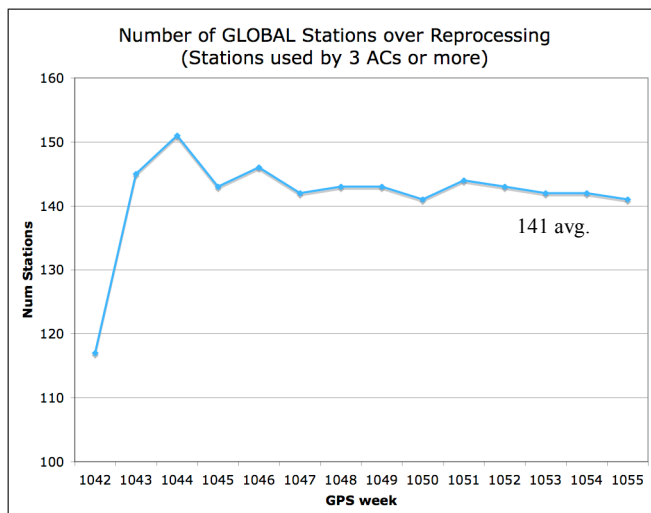
limitation of stations to use at each of the ACs (due to software constraints) means that there are only a limited number of slots for new stations, if any!

We need to provide a limited number of easy to understand station lists for all ACs, as suggested above. So that each AC can cover possible open station slots in their processing with the simplified lists.

### Global stations

In the reprocessing effort so far it is of interest to analyze the number of stations that are being covered by 3 ACs or more, the so-called GLOBAL stations. Looking at the first plot above it is clear that we have solutions from 5 ACs for a certain number of weeks; from 1042 to 1055, beyond that date only 3 ACs contributed, so a GLOBAL station analysis is not useful. A detailed station-by-station look into **one** of the 14 weeks analyzed week is in **Appendix B**.

The graphics below tell the story so far, we have about **140 stations covered by 3 or more ACs per week**, which is between 40/45 % of the total number of unique stations used each week by all ACs. The “3 AC” coverage of each of the Interest Groups’ Lists in the current test runs are shown in the bar graph:



It is worth noting that the stations covered by only 2 ACs are between 40 to 50 each week, these could become GLOBAL with a little coordination, they generally include; AIRA AIS1 BUCU CAGS CAT1 CFAG CHA1 CHUM CIC1 COYQ DRAO EBRE ENG1 EPRT FALE GENO HILO HNLC ISTA JAMA KEN1 KOD1 KOUC KYW1 LBCH LHAS LHAZ LKHU MANZ MAR6 MEDI MONP PALM PARC PVEP QUIN RIGA STR1 SUVA THU2 TOUL UZHL WILL ZWEN.

This task seems feasible considering also that **each week about 50 stations are processed by all ACs!**, including; ALGO AMC2 ASC1 BAHR BAKO BJFS BRAZ BRMU CHUR CRO1 DAEJ DGAR EISL FAIR GALA GOUG HARK KERG KIT3 KOKB KSTU KUNM LPGS MALI MAS1 MCM4 MDO1 NLIB NOUM NRC1 NTUS OHIG PERT PIE1 RIOG SANT SCH2 SCUB STJO SUTH SYOG THTI TSKB URUM USNO VESL WSRT WUHN YELL.

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## **Conclusions**

Due to the large number of overlap of stations within each Interest Groups' station lists ACs and Interest Groups need to **agree on only 2 or 3 station lists** as proposed herein, one REFERENCE list , one PROJECT list and the NGA list. These lists should be used by the ACs to cover as many stations as possible from the lists (REF, PROJ, NGA), in their processing, if possible. There are **495 original stations of interest from the Interest Groups**.

The analysis of stations covered by the ACs during the reprocessing test period shows **300+ original stations have been used** and that about **140 are Global**; more than 3 ACs processing them. There are also between **40 to 50 stations which are “on the verge”** of being properly covered by at least 3 ACs. This needs to be pursued further with cooperating ACs to increase the number of Global stations “easily” with one more AC adding the stations to its list, or when possible substituting them for the 50 or so stations always used by all the ACs.

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## Appendix A

Interest Groups Stations Analysis, where REF are itr2005 stations, CLK are timing stations, COL are collocated stations, DOR are Doris stations, TIG are TIGA project stations and NGA stations that belong to the NGA.

TOTAL NUMBER OF ORIGINAL STATIONS; 495  
 TOTAL NUMBER OF REPEATED STATIONS; 234 ( 47.3 %)

STATION	REF	CLK	COL	DOR	TIG	NGA
ABER					X	
ACOR					X	
AIRA		X	X			
AJAC			X		X	
ALAC					X	
ALBH	X	X			X	
ALEX					X	
ALGO	X	X	X		X	
ALIC	X				X	
ALME					X	
ALRT	X				X	
AMC2	X	X				
AMMN	X					
ANKR	X					
AOML	X				X	
ARE2			X			
AREQ	X	X	X	X	X	
ARP3	X					
ARTU	X				X	
ASC1	X		X	X	X	
ASPA	X					
ATWC	X					
AUCK	X				X	
AZRY					X	
BAHR	X	X			X	
BAKE	X					
BAKO	X		X	X		
BAN2	X	X				
BAR1					X	
BARB	X				X	
BARH	X				X	
BBRY					X	
BILI	X				X	
BINT					X	
BJFS	X		X			
BOGO	X					
BOGT	X					
BOR1	X	X	X		X	
BORG			X			
BORK					X	
BRAZ	X					
BREW	X	X	X			
BRFT		X	X			
BRMU	X				X	
BRST	X				X	
BRUS	X	X			X	
BUCU	X					
BUDP					X	
CAGL	X				X	
CAGS	X					
CAGZ	X		X			
CANT					X	
CART					X	
CAS1	X	X			X	
CASC	X				X	
CCJM		X	X			
CEDU	X	X			X	
CEUT					X	
CHA1					X	

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CHAN			X		
CHAT	X		X		X
CHIZ					X
CHPI	X		X	X	
CHUM	X				
CHUR	X	X			X
CIC1	X		X		
CICE			X		
CKIS					X
COCO	X	X			X
CONT		X			
CONZ	X		X		
CORD	X				
CRAO			X		
CRAR	X				
CRO1	X	X	X		X
DAEJ	X	X			
DAKA	X		X	X	X
DARW	X	X			X
DAV1	X	X			X
DGAR	X				X
DRAG	X				
DRAO	X	X			X
DUBO	X				X
DUBR					X
DUCK					X
DUM1					X
DUNT					X
DWH1	X	X			
EISL	X				X
ELAT	X				
ELEN	X				
ELRO	X				
EPRT	X				X
ESTI	X				
EURK	X				
FAIR	X	X	X	X	X
FLIN	X				X
FLIU			X		
FORT	X		X		X
FREE					X
FTNA			X		
FTS1					X
GAL1					X
GALA	X				X
GENO	X				X
GETI					X
GLPS	X		X		X
GLPT					X
GLSV	X		X		X
GMAS	X	X			
GMSD		X			
GODE	X	X			X
GODZ		X			
GOL2		X	X		
GOLD	X	X	X		X
GOPE	X				
Goug	X				X
GRAB			X		
GRAC			X		
GRAS	X		X		X
GRAZ	X	X	X		X
GUAM	X		X	X	X
GUAO	X		X		
GUAT	X				
GUUG			X		
HARB	X	X			
HARK	X				
HARV	X				X
HELG					X
HERP			X		
HERS	X		X		
HERT	X		X		
HFLK	X				
HILO	X				
HLFX	X	X			X
HNLC	X				X

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HNPT	X				X
HOB1			X		
HOB2	X	X	X		X
HOFN	X	X			X
HOLB	X	X			X
HOLM	X				X
HRAO	X	X		X	X
HYDE	X				
IBIZ					X
IENG	X	X			
IISC	X				X
INEG	X	X			
INVK	X				
IRKJ	X	X			
IRKM		X			
IRKT	X	X			X
ISPA	X			X	
ISTA	X				
JAB1	X				X
JAMA	X				
JOZ2	X	X			
JOZE	X	X			X
JPLM	X	X			
KABR	X				
KARR	X				X
KATZ	X				
KELS					X
KELY	X				X
KEN1					X
KERG	X	X	X		X
KGNO	X				
KHAJ	X	X			
KHAR		X			
KIRI					X
KIRU	X	X			
KIT3	X		X	X	X
KLPD					X
KODK	X				
KOKB	X	X	X	X	X
KOSG	X	X	X		
KOU1	X		X		
KOUR	X	X	X	X	X
KR0G	X				
KSTU	X			X	X
KUNM	X		X		
KWJ1	X		X		X
KYW1	X				X
LAE1	X	X			X
LAGO					X
LAMA	X	X			X
LAMP	X				X
LAUT					X
LHAS	X				X
LHAZ	X				
LHUE	X				
LPAL	X				
LPGS	X	X			X
LROC	X				X
LYTT					X
MAC1	X				X
MAD2		X	X		
MADR	X	X	X		
MAG0	X				
MALD	X		X	X	X
MALI	X				X
MALL					X
MANA	X	X			X
MANZ					X
MAR6	X	X			X
MARS					X
MAS1	X	X			X
MAT1	X	X	X		
MATE	X	X	X		X
MAUI	X		X		
MAW1	X				X
MBAR	X				
MCIL			X		



# Station use Analysis during the Reprocessing Test Period

MCM4	X	X			X
MDO1	X		X		X
MDVJ	X	X	X		
MDVO	X	X	X		
MEDI	X	X	X		
METS	X	X		X	X
METZ	X				
MIZU	X	X	X		
MKEA	X		X		X
MOB1					X
MOBN	X				
MOBS	X				
MONP	X		X	X	
MORP	X				X
MPLA					X
MQZG					X
MSKU	X				
MTKA	X				
NAIN	X				X
NANO	X	X			X
NAUR					X
NEAH					X
NEIA					X
NEWL					X
NEWP					X
NICO	X				X
NISU		X			
NKLG	X		X	X	X
NLIB	X	X	X		X
NNOR	X	X			
NOT1	X	X	X		
NOTO	X				
NOUM	X		X	X	X
NOVJ	X	X			
NPLD	X	X			
NPRI					X
NRC1	X	X		X	X
NRIL	X				
NRL1		X			
NSSP	X				
NSTG					X
NTUS	X				X
NVSK	X				
NYA1	X	X	X		X
NYAL	X	X	X		X
OBE2	X	X			
OBER	X				
OBET	X				
OHI2	X		X		X
OHI3	X		X		
OHIG	X		X		X
OHIZ			X		
ONSA	X	X	X		X
OPMT	X	X			
ORRO			X		
OS0G			X		
OUS2	X	X			X
OUSD					X
P101					X
P102					X
P103					X
P104					X
P105					X
P106					X
P107					X
P108					X
P109					X
P110					X
P111					X
P112					X
P113					X
P114					X
P115					X
P116					X
P117					X
P118					X
P119					X

# Station use Analysis during the Reprocessing Test Period

P120						X	
P121						X	
P122						X	
P123						X	
P124						X	
P201						X	
P202						X	
P203						X	
P204						X	
P205						X	
P206						X	
P207						X	
P208						X	
P209						X	
P210						X	
P211						X	
P212						X	
P213						X	
PADO	X						
PAMA	X						
PAPE						X	
PARC						X	
PDEL	X		X	X	X	X	
PDES						X	
PENC	X	X					
PERT	X	X				X	
PETP	X					X	
PETS	X						
PGC5						X	
PIE1	X	X	X			X	
PIMO	X					X	
PLUZ						X	
PNGM						X	
POHN						X	
POL2	X					X	
POLV	X						
POTS	X		X			X	
PRDS	X	X					
PTBB	X	X					
PUR3	X						
QAQ1	X	X				X	
QIKI						X	
QUIN	X	X	X				
RABT	X						
RAMO	X						
RBAY	X					X	
RCM2			X				
RCM3			X				
RCM4			X				
RCM6	X						
REDU	X						
RESO	X						
REUN	X		X			X	
REYK	X		X	X	X	X	
REYZ	X		X				
RIGA			X			X	
RIOG	X	X	X	X	X	X	
RIOZ			X				
RWSN						X	
S011							X
S021							X
S031							X
S041							X
S051							X
S061							X
S071							X
S101							X
S111							X
S121							X
S131							X
S141							X
SACH	X						
SAMO						X	
SANG			X				
SANT	X	X	X	X	X	X	
SASS						X	
SCH2	X	X				X	

# Station use Analysis during the Reprocessing Test Period

SCOA					X
SCOR		X			
SCUB	X				
SEAT					X
SELD					X
SELE	X				
SEY1	X		X	X	X
SFER	X	X	X		X
SHAO	X		X		X
SHEE					X
SIMO	X				X
SIO3	X				X
SJDV	X				
SKE0					X
SNI1	X				
SOFI	X				
SOL1	X				X
SOLA	X				
SPT0	X	X			
SSIA	X	X			
STAS					X
STJO	X	X		X	X
STK2		X	X		
STR1	X	X	X	X	
STR2	X		X		
STRR			X		
SULP			X		
SUTH	X				
SUTM	X	X			
SUUR					X
SUVA					X
SUWN	X	X			
SVTL			X		
SYDN		X			
SYOG	X	X	X		X
TAEJ	X				
TAHI	X		X		
TAKL					X
TCMS	X				
TELA	X				
TGCV			X	X	X
THTI	X	X	X	X	X
THU1	X		X		X
THU2		X	X		
THU3	X	X	X		X
TID1		X	X		
TID2		X	X		
TIDB	X	X	X		X
TI XI	X				X
TLSE	X	X	X	X	
TNML	X	X			
TOLI					X
TONG					X
TORS					X
TOUL	X				
TOW2	X	X			X
TRAB	X				X
TRDS					X
TRO1	X				X
TROM	X	X			X
TSK2		X	X		
TSKA			X		
TSKB	X	X	X		X
TSUK			X		
TUKT					X
TUVA					X
TWTF	X	X			
UBAT					X
UCLU	X	X			X
ULAB	X				
UNB1	X				
UNSA	X				X
UPAD	X				
UPO1	X				
URUM	X		X		X
USN1	X				
USN3	X	X			

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USNA	X				X
USNO	X	X			
USUD	X	X			
UZHL	X				
VAAS					X
VALE					X
VALP					X
VANU					X
VARS					X
VBCA					X
VE NE	X				X
VESL	X				X
VILL	X	X			X
VISO					X
VNDP	X		X		
VTIS					X
WAB2		X			
WARN					X
WES2	X	X	X		X
WETT			X		
WG TN					X
WG TT					X
WHIT	X	X			
WILL	X	X			
WROC	X	X			
WSLR		X			
WSRT	X	X			X
WTZA		X			
WTZG			X		
WTZJ			X		
WTZR	X	X	X		X
WTZS		X			
WTZT			X		
WTZZ	X		X		
WUHN	X	X	X		
XIAN	X				
YAKA	X				
YAKT	X	X			X
YAR1	X		X		X
YAR2		X	X		
YARR	X		X		
YE BE	X	X	X		
YELL	X	X	X		X
YIBL	X				
YSSK	X		X	X	
ZAMB	X				
ZECK	X	X	X		
ZIMJ	X		X		
ZIMM	X		X		X
ZIMZ	X		X		
ZWEN	X				X

TOTAL NUMBER OF ORIGINAL STATIONS; 495

TOTAL NUMBER OF SHARED STATIONS; 114 ( 23.0303030303 %)

# Station use Analysis during the Reprocessing Test Period

## APPENDIX B

Analyzing the contributions of the 5 ACs for a specific week gives the list below, which is characteristic of the entire reprocessing test period.

TOTAL NUMBER OF ORIGINAL STATIONS FOR WEEK 1055; 317  
 TOTAL NUMBER OF GLOBAL STATIONS; 141 ( 44.4794952681 %)

STATION	mit	sio	esa	pdr	ngs
ACOR	X				
AIRA		X			X
AIS1				X	X
ALAC	X				
ALBH	X		X	X	
ALGO	X	X	X	X	X
ALIC	X		X	X	X
AMC2	X	X	X	X	X
AMMN	X		X		X
AMUN	X				
ANTO	X				
AOML	X		X	X	X
AQUI	X				
AREQ	X	X	X	X	X
ARP3	X				
ARTU	X		X	X	X
ASC1	X	X	X	X	X
ASHV					X
AUCK	X		X	X	X
AUS5	X				
AUTF	X				
AZCN	X				
BAHR	X	X	X	X	X
BAKO	X	X	X	X	X
BARH					X
BAY2	X				
BEA5	X				
BELL	X				
BILI	X		X	X	X
BJFS	X	X	X	X	X
BLYT					X
BOR1	X		X	X	X
BRAZ	X	X	X	X	X
BRMU	X	X	X	X	X
BRUS	X			X	X
BSHM	X				
BUCU	X				X
CAGL	X			X	X
CAGS		X			
CAS1	X		X	X	X
CASA					X
CASC	X				
CAT1	X				X
CAYA	X				
CCJM		X			
CCV3	X				
CEDU	X			X	X
CFAG	X		X		
CHA1	X			X	
CHAT	X		X	X	X
CHB1				X	
CHUM	X		X		
CHUR	X	X	X	X	X
CIC1	X				X
CIT1					X
CMP9					X
CNCL	X				
COCO	X		X	X	X
CODE			X	X	X
COLA	X				
CORC	X				

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CORD	X	X	X		
COSO					X
COT1	X				
COYQ	X				X
CREU	X				
CRO1	X	X	X	X	X
CRRS	X				
DAEJ	X	X	X	X	X
DARW	X		X	X	X
DAV1	X		X	X	X
DGAR	X	X	X	X	X
DLFT					X
DRAG	X				
DRAO	X			X	
DUBO	X		X	X	X
DUCK	X				
EBRE	X		X		X
EISL	X	X	X		X
EKY1	X				
ENG1	X			X	
EPRT			X		X
ESCO	X				
FAIR	X	X	X	X	X
FALE	X				X
FARB	X				
FLIN	X		X	X	X
FORT	X	X	X	X	X
FREI	X				
FVPK	X				
GAL1	X				
GALA	X	X	X	X	X
GENO	X			X	
GILB	X				
GLPT	X				
GLSV	X		X	X	X
GODE	X	X	X	X	X
GOL2	X			X	X
GOPE				X	
GOUG	X	X	X	X	X
GRAS	X			X	X
GRAZ	X			X	
GUAM	X	X	X	X	
HARK	X	X	X	X	X
HARV	X	X	X		X
HERS	X		X	X	X
HILO	X		X		X
HNLC	X				X
HNPT		X		X	
HOB2	X		X	X	X
HOFN	X		X	X	X
HRAO	X	X	X	X	X
IISC	X	X			
IRKT	X	X	X	X	X
ISTA	X				X
IVCO	X				
JAB1	X			X	
JAMA	X		X		
JOEN				X	
JOZE	X		X	X	X
JPLM	X			X	X
KABR	X				
KARA	X				
KARR	X		X	X	X
KAYT	X				
KELY	X	X	X	X	X
KEN1	X			X	
KERG	X	X	X	X	X
KIRU	X		X	X	
KIT3	X	X	X	X	X
KOD1	X			X	
KODK	X	X	X		X
KOKB	X	X	X	X	X
KOSG				X	
KOUC	X				X
KOUR	X	X	X	X	X
KSTU	X	X	X	X	X
KUMT	X				

# Station use Analysis during the Reprocessing Test Period

KUNM	X	X		X	
KYW1	X				X
LAMA	X			X	
LAMP	X				
LBCH	X				X
LHAS	X	X		X	
LHAZ		X			X
LHCL	X				
LHUE	X				
LKHU	X				X
LLIV	X				
LPGS	X	X	X	X	X
MAC1	X		X	X	X
MAD2	X	X			X
MAG0	X		X	X	
MALD	X		X	X	X
MALI	X	X		X	
MANZ	X				X
MAR6	X			X	
MAS1	X	X	X	X	X
MATE	X		X	X	X
MATH					X
MAUI	X				
MAW1	X		X	X	X
MCM4	X	X	X	X	X
MCN1					X
MDO1	X	X	X	X	X
MDVO	X		X		X
MEDI	X			X	
MEM2				X	
METS	X		X	X	X
MIA3	X				
MKEA	X	X	X	X	X
MLF1					X
MOB1	X				
MONP	X			X	
MORP	X	X			X
MUSD	X				
MVFD	X				
NAGA	X				
NANO				X	
NDBC	X				
NETT	X				
NICO	X		X	X	X
NKLG	X	X	X	X	X
NLIB	X	X	X	X	X
NOTO	X		X	X	X
NOUM	X	X	X	X	X
NRC1	X	X	X	X	X
NTUS	X	X	X	X	X
NYA1	X		X	X	
NYAL	X		X	X	X
ODS5	X				
OGHS	X				
OHIG	X	X	X	X	X
ONSA	X		X	X	X
ORES	X				
OUSD	X				
OVLS	X				
PALM	X			X	
PARA	X				
PARC	X				X
PASO	X				
PATT	X				
PENC				X	X
PERT	X	X	X	X	X
PETP	X		X	X	X
PIE1	X	X		X	X
PIMO	X	X		X	
PIN1					X
PLO3	X				
POL2	X			X	X
POTS	X			X	X
PPT1	X				
PRAT	X				
PRDS	X	X	X		X
PTBB	X				

# Station use Analysis during the Reprocessing Test Period

PUR3	X				
PVEP	X				X
PVHS	X				
PVRS	X				
QUAR	X				
QUIN				X	X
RAMO	X		X	X	X
REYK	X			X	X
RIGA	X	X			
RIOG	X	X	X	X	X
RIOP	X			X	
S051	X				
S061	X				
S071	X				
S111	X				
S121	X				
S131	X				
SAG1					X
SAMP	X				
SANT	X	X		X	X
SAV1	X				
SBCC	X				
SCH2	X	X	X	X	X
SCMS	X				
SCUB	X	X	X	X	X
SELE	X		X		X
SFER	X			X	X
SHAO	X	X	X	X	
SHAS	X				
SIO3	X			X	X
SNI1	X				
SOFI	X			X	X
SOL1		X		X	X
SPMX	X				
STJO	X	X	X	X	X
STR1	X		X		
SUMK	X				
SUTB					X
SUTH	X	X	X	X	X
SUVA	X				X
SUWN	X	X		X	X
SVTL					X
SYOG	X	X	X	X	X
TALA	X				
TELA	X				
THTI	X	X	X	X	X
THU1	X	X	X	X	
THU2	X				X
TID1	X				
TID2	X	X		X	X
TIXI	X		X	X	X
TORI	X				
TORP	X				
TOUL	X			X	
TOW2	X		X	X	X
TRAB	X			X	X
TRO1	X		X	X	X
TSEA	X				
TSKB	X	X	X	X	X
TUBI	X		X		X
TUCU	X				
UCLU					X
UCSB	X				
UEPP	X				
UNPG	X				
UNSA	X	X	X	X	X
UPO1	X				
URUM	X	X	X	X	X
USNA		X		X	
USNO	X	X	X	X	X
USUD	X	X		X	
UZHL			X		X
VAAS	X				
VAN1	X				
VCIO					X
VENE				X	
VESL	X	X	X	X	X



## Station use Analysis during the Reprocessing Test Period

VIL0				X	
VILL	X		X	X	X
VLUC	X				
VNDP	X				
VTIS	X				
WES2	X	X		X	X
WHIT	X		X	X	X
WILL				X	X
WLSN					X
WNFL	X				
WSLR			X		
WSRT	X	X	X	X	X
WTZA	X				
WTZR	X			X	X
WTZT		X			
WUHN	X	X	X	X	X
YAIG	X				
YAKZ	X			X	X
YAR1	X		X	X	X
YAR2	X				
YELL	X	X	X	X	X
YSSK	X		X	X	X
ZECK	X		X	X	X
ZIMM	X		X	X	X
ZWEN			X		X

TOTAL NUMBER OF ORIGINAL STATIONS; 317

TOTAL NUMBER OF GLOBAL STATIONS; 141 ( 44.4794952681 %)