U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE
OFFICE OF SYSTEMS DEVELOPMENT
TECHNIQUES DEVELOPMENT LABORATORY

TDL OFFICE NOTE 94-2

REVISED RADAP II ARCHIVE DATA USER'S GUIDE

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April 1994

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1. INTRODUCTION

In 1971, the National Weather Service (NWS) began the Digitized RADar EXperiment (D/RADEX) to improve the operational use of radar data through computer processing (McGrew, 1972). The primary purpose of D/RADEX was to demonstrate the utility of digital reflectivity data in weather forecasting operations; D/RADEX was programmed for automatic preparation of low level reflectivity and rainfall accumulation products. The early stages of D/RADEX involved four sites: Kansas City, Missouri (August 1971); Oklahoma City, Oklahoma (October 1971); Fort Worth, Texas (December 1971); and Monett, Missouri (February 1972), as shown in Fig. 1. Through its lifetime, many advanced meteorological and hydrological products were developed under D/RADEX including echo tops, vertically integrated liquid water content (Green 1971), severe weather probability (Saffle 1976), storm structure, and rainfall accumulation.

In 1983, positive evaluation of the results of D/RADEX resulted in transferring the system to quasi-operational status and renaming it RAdar DAta Processor, version II (RADAP II). The RADAP II network consisted of the twelve sites shown in Fig. 2. The sites were Amarillo, Texas (AMA); Binghamton, New York (BGM); Nashville, Tennessee (BNA); Charleston, West Virginia (CRW); Garden City, Kansas (GCK); Wichita, Kansas (ICT); Jackson, Kentucky (JKL); Limon, Colorado (LIC); Oklahoma City, Oklahoma (OKC); Pittsburgh, Pennsylvania (PIT); Tampa Bay, Florida (TBW); and Monett, Missouri (UMN).

Most RADAP II sites collected extensive archives of digital volumetric reflectivity data. Three years (1985 through 1987) of RADAP II data archives were documented by McDonald and Saffle (1989). This Office Note updates the previous document and contains a detailed listing of the data available from March 3, 1985, until the conclusion of the data collection on September 30, 1992. These archives have been used to document the statistical relationship between VIL and severe local storm occurrence (McGovern et al. 1992; Breidenbach et al. 1992, 1993a, and 1993b), and between VIL and large hail (Winston and Ruthi 1986; Kitzmiller and Breidenbach 1993). The Severe Weather Potential (SWP) algorithm currently operational within the WSR-88D system was developed with RADAP II VIL data (Kitzmiller et al. 1992 and 1994). Through further development and testing, a new second generation SWP algorithm was developed to extend the operational range of the present WSR-88D SWP algorithm (Breidenbach et al. 1994). Operational applications of precipitation estimates have been described by Saffle (1988) and by Davis (1993).

2. DATA QUALITY CONTROL

Based on the strength of the signal returned from a target, the current NWS weather radar receivers estimate the equivalent reflectivity factor (in

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mm^6m^{-3}) that would be representative of such a signal. This reflectivity factor quantity is called "Z" and can range from about $5x10^1$ mm^6m^{-3} to about $5x10^5$ mm^6m^{-3}. The receiver then calculates the logarithm of each estimated value of Z; the dynamic range of Log Z is about 1.7 to 5.7. To simplify further processing of the data, the Log Z values are scaled upwards by a factor of 10 (10 Log Z); these values are commonly referred to as dBZ values. The RADAP II system utilizes dBZ values for calculations and archiving.

The RADAP II system performed several quality control procedures on each scan of radar reflectivity data before that scan was passed to any other task, including archiving. The first of these procedures combined a range normalization ($1/R^2$) with a correction of the data for attenuation due to absorption by atmospheric gases. This correction is a linear function that increases with distance and reaches a maximum corrective value of +3 dBZ for data at a range of 126 n mi.

Next, in order to mitigate the effects of normal ground clutter, a hybrid base-level scan was generated by merging higher elevation angle scan data out to a given range with 0.5 degree elevation angle scan data from that range out to 126 n mi. Both the higher elevation angle and the range of its use are site-adaptable and vary from site to site. These values are included in the header data for each scan, as shown in Section 4.

Finally, each scan was processed to remove isolated point targets by requiring a given nonzero data value to be adjacent to at least two other nonzero data values. During this filtering procedure, a further check was made to determine whether a given data value exceeded the maximum of its adjacent neighbors by more than about 16 dBZ. If so, the data value was changed to that of the neighborhood maximum.

3. DATA COLLECTION

Although two types of radars (WSR-57 or WSR-74S) were used in the RADAP II network, they shared the common characteristics of a 2.2 deg beam width and a 10 cm wavelength. The RADAP II sites scheduled base-level and tilt-sequence (volumetric) observations of reflectivity every 10 or 12 min. These observations were built from input scans of data consisting of 180 radials covering 360 deg of azimuth under the radar umbrella. The radials are centered on even azimuths, cover a range from 10 to 126 n mi, and contain a data value for each nautical mile of range (Fig. 3). The data values range from 0 to 15 with each nonzero value representing a RADAP II category of radar reflectivity. The nominal reflectivity thresholds for the categories and the latitudes and longitudes are given in Table 1 and Table 6, respectively. As previously noted in Section 2, a base-level observation is a hybrid of a scan taken at an elevation angle of 0.5 deg for data at farther ranges and one taken at a site-adaptable higher elevation angle for data near the radar site. In contrast, a volumetric observation consists of a series of single elevation angle scans starting at 0.5 deg elevation and extending, in vertical steps of two degrees, to the top of the existing echoes or to 22.0 deg, whichever comes first. Within the volumetric observation, the 0.5 deg scan does not contain any data taken at a higher elevation angle.

In 1984, the NWS began archiving RADAP II data to support the development of reflectivity-based operational algorithms that could be tested at RADAP II sites and later implemented on future NWS radar systems. The data were first

written to floppy diskettes at each RADAP II site and later transferred to a central location for final archiving to IBM compatible 9-track magnetic tapes. The RADAP II data for the period April 1985 through March 1987 were archived to tape under contract. In April 1987, the diskettes were transferred to NWS Headquarters for sorting, decoding, coding and final archiving to tape.

In order to increase the utility of the RADAP II archive for snowfall research, the cool season base-level data have been coded since 1986 according to category thresholds that cover, in 2-dBZ steps, the reflectivity range 18-46 dBZ (Table 1). Nominally, the cool season is November 1 through March 1, but individual sites will vary somewhat. Volumetric observations taken during the cool season were coded according to the warm season category thresholds in Table 1. Thus, the cool season archive will enable research both on frozen precipitation and on severe convective events that might occur during that season.

4. ARCHIVE DATA TAPES

The data tapes are 9-track, nonlabeled (NL), high density (6250 bpi) magnetic tapes. They are written with an unformatted FORTRAN write statement using a variable spanned (VS) record format and a maximum record length of 32,756 bytes. Each tape contains one file of data for one RADAP II site. Each record has two logical parts representing one scan of data. Part 1 contains thirty-four 16-bit words of header parameters which describe the station and data characteristics for the scan (Table 2). Part 2 has a variable number of 16-bit words and contains the radial reflectivity category data for each scan in the form shown in Table 3.

The RADAP II archive tapes can be read with a FAST FORTRAN I/O (FFIO) package subroutine called FFGET(BUF,N,L,&END,&ERR), where FFGET reads a record from FORTRAN unit "N" into contiguous locations starting at "BUF." The length of the record in bytes is returned in "L." At end-of-file (EOF), transfer will be made to statement number "END" and errors to statement number "ERR." The FFIO package is available at the NOAA Computer Center to HDS 9000 users and will automatically be included in programs executed under the NFORV procedure. For non-FFIO users, the data tapes can be read with basic FORTRAN unformatted read statements or with any other compatible utility.

5. DECODING ARCHIVED DATA

Table 4 represents a sample formatted display of the alphanumeric value of each byte of one record. Note that each record corresponds to one 360° observational scan of data. A graphical display of all of the scan data in this record is presented in Fig. 4. Table 2 contains the information that allows line 1 of this record to be decoded to reveal the following information:

ISTAT	= OKC
IYR	= 87
IJUL	= 123
IMMDD	= May 3
ITIME	= 1000 GMT
IELEV	= 0.5 deg
IRINT	= 1.00 n mi
IMERGR	= 60 km
IMERGA	= 2.9 deg

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IALT        = 1300 ft above msl
IOBFLG      = 0 (base elevation observation)
IDRFLG      = 0 (clockwise rotation)
IAPFLG      = 0 (no AP present)
ISNFLG      = 0 (no snow)
NVAL        = 5248
NONZIP      = 3222
IMEAN       = 5
ISTDEV      = 99 (standard deviation not calculated)
ITRESH(15)  = 18,25,30,36,39,41,43,44,46,48,49,51,53,55 & 57
                  (warm season threshold values)
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Lines 2 through the end-of-record (EOR) are coded reflectivity category values listed by azimuth. The coding method records (1) the azimuth of the radial with nonzero values, (2) the number of runs at that azimuth, and, for each run at the azimuth, (3) the number of range bins in the run and (4) the reflectivity category value of the run. Azimuths that contain only zeros as reflectivity category values are not coded in an observational record. The user should assume zeros for any noncoded azimuths. A run is defined as a group of range bins with identical reflectivity category values along an azimuth, i.e., a new run starts when the reflectivity category value changes. The total sum of all range bins per radial (10-126 n mi) will always be equal to 116. For example, if a series of 8 range bins along a radial contained the reflectivity values 22221144, there would be 3 runs detected with reflectivity category values of 2, 1, and 4, respectively. This series of 3 runs would then be coded as 42, 21, and 24; where the first number indicates the number of range bins in the run (the run length) and the second the reflectivity category value of the run. As a further example, a portion of Table 4 has been decoded according to the format shown in Table 3 to reveal the following information:

Azimuth	Number of runs	Run	Range Bins	Reflectivity Category value
0	53	1	32	0
		2	1	1
		3	1	0
		4	2	1
		5	1	0
		6	1	1
		7	1	2
		8	1	4
		9	1	2
		10	1	4
		11	1	13
		12	4	15
		13	1	13
		.	.	.
		.	.	.
		.	.	.
		48	2	9
		49	1	3
		50	1	4
		51	2	6
		52	3	1
		53	1	0

6. AVAILABLE ARCHIVED DATA

The RADAP II data archive contains data from March 1985 through September 1992 for twelve RADAP II sites, as indicated in Appendix A. In 1985, the RADAP II network consisted of nine sites and gradually increased to 12 sites by 1988, as shown in Table 5. During the early development stages of D/RADEX, the National Weather Service Headquarters archived and saved 1983 OKC data for experimental purposes. After the initiation of the RADAP II archive system in 1984, these data were added to OKC's data archive. Appendix A contains individual listings of archived RADAP II data collected for each site. The sites are listed alphabetically by their call letters (AMA, BGM, ... , UMN). Appendix B contains a monthly/daily display of all RADAP II sites. In Appendix B, the sites are displayed vertically and the days are displayed horizontally for the years 1985 through 1992.

7. WHERE TO REQUEST DATA

The National Climatic Data Center (NCDC) will maintain and handle all requests for the RADAP II data archive. To receive RADAP II data, interested parties should contact NCDC. When requesting copies of archive RADAP II data tapes, address all correspondence to:

National Climatic Data Center (NCDC)
Attn: User Services Branch
Federal Building
Asheville, NC 28801-2696

or call the Customer Service Section on (704) 271-4800.

8. ACKNOWLEDGEMENTS

The authors extend special thanks to all the RADAP II sites for their cooperation in providing the reflectivity data, to personnel in the Office of Systems Operations for administering the RADAP II program, and to Karen Yip for typing the manuscript.

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Table 1. Nominal values of reflectivity thresholds for archived RADAP II data for base-level scans for warm and cool seasons. The actual values used for a given archive scan are included in the header data for that scan. All tilt-sequence scans are archived with warm season category thresholds regardless of the season.

RADAP II category	Warm Season threshold (dBZ)	Cool Season threshold (dBZ)
1	18.5	18
2	24.5	20
3	30.0	22
4	35.5	24
5	38.5	26
6	41.0	28
7	43.0	30
8	44.0	32
9	46.0	34
10	47.5	36
11	49.0	38
12	51.0	40
13	53.0	42
14	55.0	44
15	57.0	46

Table 2. Header information (Part 1) of a RADAP II archive data record.

Bytes	Parameter	Description
1-4	ISTAT	Station identifier. 3 characters + a blank. Two 16-bit words (ISTAT(2)) (left-justified).
5-6	IYR	Last two digits of the year.
7-8	IJUL	Julian date.
9-10	IMMDD	Calendar date (MM=month & DD=day).
11-12	ITIME	Hour and minute (HHMM). GMT
13-14	IELEV	Elevation angle (scaled by 10). Deg
15-16	IRINT	Range interval (scaled by 100). n mi
17-18	IMERGR	Ending range for merging higher elevation data with base elevation data. Km
19-20	IMERGA	Elevation angle of the higher elevation data used for merging with base elevation data. (scaled by 10). Deg
21-22	IALT	Station elevation above msl. Ft
23-24	IOBFLG	Type of observation scan. 0=base Level 1=volumetric
25-26	IDRFLG	Rotational direction of antenna during data collection. 0=clockwise 1=counter clockwise
27-28	IAPFLG	Operator indication of Anomalous Propagation (AP). 0=None 1=Some
29-30	ISNFLG	Operator indication of snow. 0=none 1=some
31-32	NVAL	Number of 16-bit words in the input record. Contains the header information (1-34) + coded reflectivity values (35-NVAL).
33-34	NONZIP	Number of nonzero reflectivity values.
35-36	IMEAN	Mean of the nonzero reflectivity values.
37-38		Reserved for future use.
39-68	ITRESH	Threshold reflectivity values. dBZ Fifteen 16-bit words (ITRESH(15)).

Table 3. Specification of coded reflectivity data (Part 2) of a RADAP II archive data record.

Element	Parameter	Description
1	IRADAZ(1)	Azimuth of first radial with nonzero data
2	NGROUP(1)	Number of groups (runs) at this azimuth
3	NBIN(1,1)	Number of bins (run length) in the first run
4	IDVIP(1,1)	RADAP II category value of the first run
5	NBIN(2,1)	Number of bins in the second run
6	IDVIP(2,1)	RADAP II category value of the second run
.	.	.
.	.	.
.	.	.
1+(NGROUP(1)*2)	NBIN(NGROUP(1),1)	Number of bins in the last run
2+(NGROUP(1)*2)	IDVIP(NGROUP(1),1)	RADAP II category value of the last run
3+(NGROUP(1)*2)	IRADAZ(2)	Azimuth of the second nonzero azimuth
4+(NGROUP(1)*2	NGROUP(2)	Number of runs at this azimuth
5+(NGROUP(1)*2)	NBIN(1,2)	Number of bins in the first run
6+(NGROUP(1)*2)	IDVIP(1,2)	RADAP II category value of the first run
.	.	.
.	.	.
.	.	.
NVAL-1	NBIN(NGROUP(n),n)	Run length of last run of last radial
NVAL	IDVIP(NGROUP(n),n)	Run value of the last run of last radial

Table 4. A portion of a sample scan of coded reflectivity data for Oklahoma City, Okl

OKC	87123	5031000	5100	60 29	13000000	5298	3222	599	18 25	30 36	39 41	43 44	46 48	49 51	53 55	57
053	32 0	1 1	1 0	2 1	1 0	1 1	1 2	1 4	1 2	1 4	113	415	113	111	515	
1 6	1 5	1 8	515	111	1 5	1 6	1 5	111	114	815	113	114	115	111	113	
214	1 6	1 5	2 3	1 4	1 9	1 6	110	1 6	1 3	1 7	4 9	311	113	111	3 6	
2 9	1 3	1 4	2 6	3 1	1 0	243	41 0	1 1	1 2	1 6	3 9	2 3	1 9	1 6	215	
1 8	2 3	1 5	214	515	113	114	715	112	115	213	114	113	111	113	112	
1 9	2 1	1 3	1 1	5 3	1 2	1 4	2 6	2 5	3 6	1 4	1 3	3 2	2 3	2 2	2 4	
1 1	3 0	447	40 0	2 1	2 0	3 1	2 0	1 1	1 0	1 3	1 4	2 0	2 1	1 4	1 9	
315	1 8	815	110	112	1 9	115	112	115	110	1 8	1 6	1 5	1 4	1 3	2 1	
1 5	1 3	1 5	1 2	1 3	2 1	1 2	2 3	2 9	1 3	1 2	3 1	1 4	1 3	1 4	1 2	
3 1	7 0	633	40 0	2 3	1 1	8 0	2 1	4 0	2 2	2 3	2 2	111	115	114	1015	
113	110	1 8	1 7	3 6	1 5	210	2 6	1 4	1 5	3 4	2 6	210	1 2	1 1	3 0	
1 7	3 3	2 1	8 0	828	40 0	2 1	9 0	2 1	10 0	1 2	1 4	1 3	1 7	111	915	
214	211	214	1 9	211	1 9	1 6	2 5	1 3	1 6	1 4	2 5	2 3	6 0	1 1	1 3	
11 0	1031	44 0	3 1	4 0	1 1	1 3	15 0	1 2	1 4	1 6	2 8	1 6	1 8	112	110	
1 5	111	1 5	210	1 9	1 6	3 3	1 2	1 3	1 2	1 3	1 4	1 5	2 1	9 0	1 1	
11 0	1223	44 0	3 1	4 0	1 2	1 4	22 0	3 1	2 3	2 7	2 5	2 4	1 1	1 3	1 0	
1 4	1 3	1 2	1 3	2 1	9 0	1 2	1 1	10 0	14 3	105 0	1 2	10 0	26 3	0 0	2 1	
114 0	28 5	0 0	2 3	69 0	3 1	42 0	30 5	0 0	2 2	69 0	3 1	42 0	44 3	29 0	3 3	
84 0	46 5	29 0	3 1	76 0	2 1	6 0	48 3	108 0	215	6 0	52 3	106 0	2 1	8 0	54 5	
106 0	2 1	8 0	76 3	0 [illegible]	1 1	115 0	146 3	3 0	2 2	111 0	148 3	3 0	2 1	111 0	150 5	
89 0	3 1	1 2	1 1	22 0	16216	35 0	2 1	1 3	1 4	1 6	1 7	111	110	1 9	1 5	
1 4	1 2	2 1	6 0	1 1	10 0	16421	4 0	1 1	1 2	78 0	1 1	1 3	1 2	1 6	110	
113	114	115	314	113	1 6	1 4	1 3	4 4	3 3	3 2	7 0	16629	4 0	2 1	73 0	
1 1	1 2	1 1	1 3	1 4	1 6	1 9	1 7	1 9	1 9	1 8	2 6	1 5	110	113	112	
114	115	110	2 9	1 5	2 3	1 1	2 0	3 1	1 0	16831	2 0	2 1	41 0	1 4	1 3	
1 4	1 3	1 5	37 0	1 1	2 2	4 1	1 2	2 3	1 4	1 7	111	1 9	112	110	1 8	
1 7	1 8	112	213	1 9	1 3	2 2	1 1	1 2	1 0	17020	2 0	2 1	41 0	1 2	1 1	
1 2	1 1	1 2	42 0	5 1	4 3	2 4	2 6	110	314	312	110	1 9	1 7	1 0	17223	
45 0	1 3	1 1	1 3	1 2	1 1	3 0	3 1	7 0	1 2	33 0	4 1	1 2	1 3	1 5	1 6	
1 9	113	214	313	212	1 9	1 0	17428	1 0	2 2	41 0	1 1	3 2	1 4	1 1	2 0	
1 1	2 4	1 3	1 1	4 0	1 2	1 1	1 3	2 1	35 0	1 1	1 2	2 3	1 4	1 5	1 7	
2 9	210	3 8	1 0	17641	1 0	2 2	36 0	2 2	1 1	2 3	1 4	1 5	1 3	1 5	1 6	
1 5	1 2	1 3	1 4	1 9	3 4	1 0	4 1	2 0	1 1	12 0	3 1	7 0	3 1	1 2	4 1	
2 0	1 1	3 2	1 1	2 2	1 3	2 2	1 3	1 4	2 5	1 6	2 8	1 6	1 0	17838	0 0	
3 2	35 0	1 2	1 1	2 3	1 9	212	1 6	1 2	113	215	112	113	2 5	2 4	1 1	
1 0	3 3	2 0	1 2	1 1	12 0	2 1	1 2	7 0	1 1	1 2	4 3	1 2	1 1	2 0	7 1	
1 2	2 3	5 1	3 2	1 0	18028	0 0	1 1	2 2	32 0	3 1	1 3	1 2	2 3	1 5	2 3	
1 7	1 1	315	213	1 2	3 3	7 0	2 1	6 0	2 2	1 1	10 0	2 1	26 0	1 1	1 0	
1 1	1 0	18232	0 0	2 1	32 0	1 3	2 1	1 2	1 5	3 8	1 6	2 8	112	1 2	2 15	
113	1 9	1 2	1 0	2 2	14 0	5 1	5 0	2 2	2 1	3 3	1 2	2 3	2 1	1 0	5	
1 0	2 1	15 0	18447	0 0	1 1	31 0	1 6	1 3	112	1 8	1 5	113	415	113	1	
1 6	115	110	215	110	1 2	1 1	12 0	1 2	1 1	2 0	1 2	5 4	1 2	1 5	1	
1 3	1 5	2 1	2 3	2 6	1 8	1 6	1 8	1 4	1 5	1 2	1 1	1 7	212	2 8	1 5	
1 3	2 4	15 0	18653	31 0	1 2	114	1 8	114	1 9	114	115	114	415	1 9	1 5	
311	115	1 5	1 3	2 1	1 0	5 1	1 3	1 1	1 3	1 1	1 4	1 7	1 2	2 3	1 4	
1 6	1 8	212	111	1 5	1 9	1 6	1 8	110	3 3	1 4	3 7	1 5	1 6	2 5	1 3	
1 2	1 3	211	110	1 9	1 5	3 4	1 2	14 0	19850	30 0	1 1	1 3	115	1 7	115	
1 8	212	1 9	1 8	211	110	1 8	1 7	111	1 6	1 4	1 2	1 0	2 4	1 3	2 5	
1 2	8 3	2 6	2 7	1 8	210	1 7	1 6	1 8	1 7	1 8	111	110	2 3	1 5	3 3	
1 7	1 1	2 2	1 1	1 4	2 5	1 3	2 4	1 3	1 2	1 3	14 0	19054	28 0	1 3	2 4	
114	515	110	1 3	2 6	1 4	4 6	1 5	1 1	1 8	1 6	1 5	1 3	1 2	2 5	2 4	
2 5	1 6	1 5	1 6	1 5	1 3	1 2	1 5	1 6	1 5	2 6	210	2 6	1 4	1 3	2 5	
1 7	113	111	110	211	110	211	1 8	112	1 6	2 1	1 0	1 1	3 5	2 6	1 2	
1 1	1 2	14 0	19255	28 0	2 6	1 7	113	115	114	115	1 6	1 4	3 3	1 2	1 3	
4 4	1 1	1 0	1 4	1 9	112	111	1 4	2 9	214	2 8	2 6	1 9	1 3	1 5	1 3	
2 6	1 4	1 2	1 3	3 4	1 2	1 7	3 1	1 3	1 5	1 4	1 3	2 6	2 4	1 2	1 3	
1 4	1 8	1 1	1 2	1 0	1 1	2 4	1 1	2 2	1 1	15 0	19439	23 0	3 3	5 4	2 3	
1 5	2 4	1 5	2 7	212	1 9	1 1	1 8	115	113	110	1 5	2 8	2 7	3 4	4 3	
1 1	1 2	1 4	1 3	1 1	3 3	2 1	4 0	1 3	6 0	4 1	1 2	2 1	1 0	1 2	1 1	
1 0	2 1	18 0	19625	31 0	1 1	1 4	1 3	2 4	1 2	4 3	1 2	2 3	2 5	1 4	2 3	
1 5	1 3	1 8	1 1	1 3	2 4	2 3	1 1	30 0	1 1	3 0	2 1	21 0	19811	31 0	1 3	
1 6	1 4	2 7	3 1	1 3	2 5	6 3	4 2	64 0	20020	27 0	1 2	2 3	1 1	1 3	1 7	
1 6	110	1 5	1 3	1 2	1 3	2 4	1 3	1 2	2 3	1 2	1 1	2 2	57 0	20218	26 0	
1 1	1 3	2 5	1 0	1 1	1 2	1 1	1 2	1 1	1 0	1 1	1 2	1 1	3 3	3 2	3 1	
67 0	20415	27 0	3 3	1 0	3 1	4 0	1 3	1 2	2 5	2 3	4 4	1 5	1 4	1 3	1 1	
64 0	20618	26 0	1 1	2 3	3 2	1 1	7 0	3 3	1 0	1 1	3 3	1 4	1 3	1 2	1 1	
2 0	3 3	1 2	58 0	20818	27 0	3 3	4 2	2 1	1 3	3 0	2 1	2 0	1 1	1 3	2 2	
1 3	2 5	2 4	2 2	2 4	2 3	58 0	21022	29 0	2 2	1 3	1 5	1 3	1 9	1 6	1 3	
1 1	5 0	1 1	1 3	112	1 3	113	114	1 7	2 5	3 3	1 2	2 1	58 0	21223	29 0	
2 1	1 8	111	1 8	211	1 0	3 1	1 2	2 1	1 4	110	114	1 9	114	112	113	
1 4	1 5	1 2	2 4	1 3	60 0	21424	26 0	2 2	3 0	1 3	111	1 3	211	3 0	1 1	
1 0	3 1	1 3	1 7	1 8	1 7	1 8	1 6	1 4	1 1	1 2	4 1	4 2	1 1	55 0	21631	
26 0	2 3	2 2	1 0	1 1	1 5	1 3	1 5	1 6	7 0	1 3	1 5	112	1 9	112	1 5	
1 3	1 1	1 4	2 0	1 2	3 5	3 7	1 3	1 4	1 2	1 3	1 1	2 3	1 1	47 0	21821	
26 0	1 2	4 3	3 0	1 2	1 3	9 0	1 2	1 1	1 2	2 1	5 0	2 2	2 6	3 3	110	
2 1	1 2	2 5	3 1	45 0	22015	26 0	1 1	2 5	2 2	3 0	1 1	1 3	1 3	25 0	1 1	
3 0	3 1	1 0	2 1	44 0	22212	26 0	1 2	2 7	1 1	5 0	1 1	1 4	29 0	3 1	2 0	

Table 4. Continued.

Table 5. Number of months of data available in the RADAP II seasonal archives. The warm season is defined as March through August and the cool season as September through February.

RADAP II sites	Start date Mo/Yr	1985		1986		1987		1988		1989		1990		1991		1992	
		Warm	Cool	Warm	Cool	Warm	Cool	Warm	Cool	Warm	Cool	Warm	Cool	Warm	Cool	Warm	Cool
AMA	4/85	4	4	3	0	6	6	6	6	6	6	6	5	5	5	6	1
BGM	6/88							3	6	6	6	6	6	6	6	6	1
BNA	4/86			5	5	6	6	6	6	6	6	6	6	6	6	6	1
CRW	3/85	6	5	6	6	6	6	6	6	6	6	6	6	6	6	6	1
GCK	4/85	4	0	4	5	6	6	6	4	3	2	2	0	0	0	0	0
ICT	4/85	5	3	0	2	5	6	6	6	6	6	6	6	6	6	6	1
JKL	5/86			4	6	5	6	6	6	5	1	6	6	4	4	0	1
LIC	4/85	5	6	6	1	2	4	5	6	6	6	6	6	6	6	5	1
OKC	4/85	5	4	5	5	6	6	6	6	6	6	6	6	6	6	6	1
PIT	6/85	3	3	6	5	6	6	6	4	6	6	6	6	6	6	6	1
TBW	4/85	3	5	4	2	5	6	6	6	6	6	5	6	6	6	6	1
UMN	4/85	3	4	5	2	2	6	6	5	6	6	6	6	6	3	4	0

Table 6. The latitudes and longitudes for the RADAP II sites.

RADAP II SITE	LATITUDE (DEG N)	LONGITUDE (DEG W)	ELEVATION (FT MSL)
Amarillo, Texas	35° 14′	101° 42′	3604
Binghamton, New York	42° 13′	75° 59′	1638
Charleston, West Virginia	38° 22′	81° 36′	982
Garden City, Kansas	37° 56′	100° 43′	2882
Jackson, Kentucky	37° 36′	83° 19′	1357
Limon, Colorado	39° 11′	103° 42′	5562
Monett, Missouri	36° 53′	93° 54′	1435
Nashville, Tennessee	36° 15′	86° 34′	585
Oklahoma City, Oklahoma	35° 24′	97° 36′	1304
Pittsburgh, Pennsylvania	40° 32′	80° 14′	1183
Tampa Bay, Florida	27° 42′	82° 24′	43
Wichita, Kansas	37° 39′	97° 27′	1339

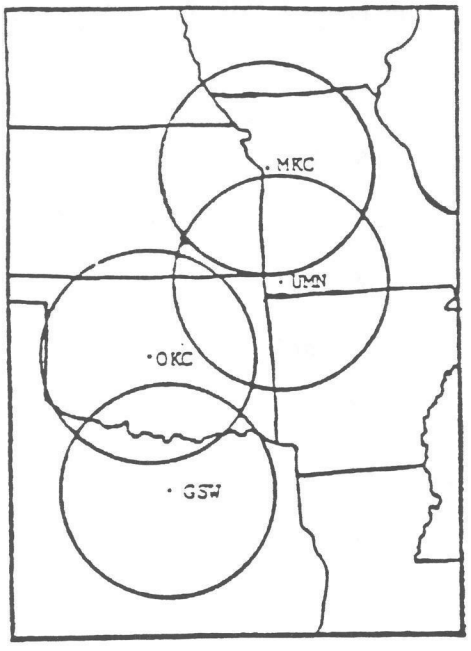

Fig. 1. D/RADEX Test Bed.

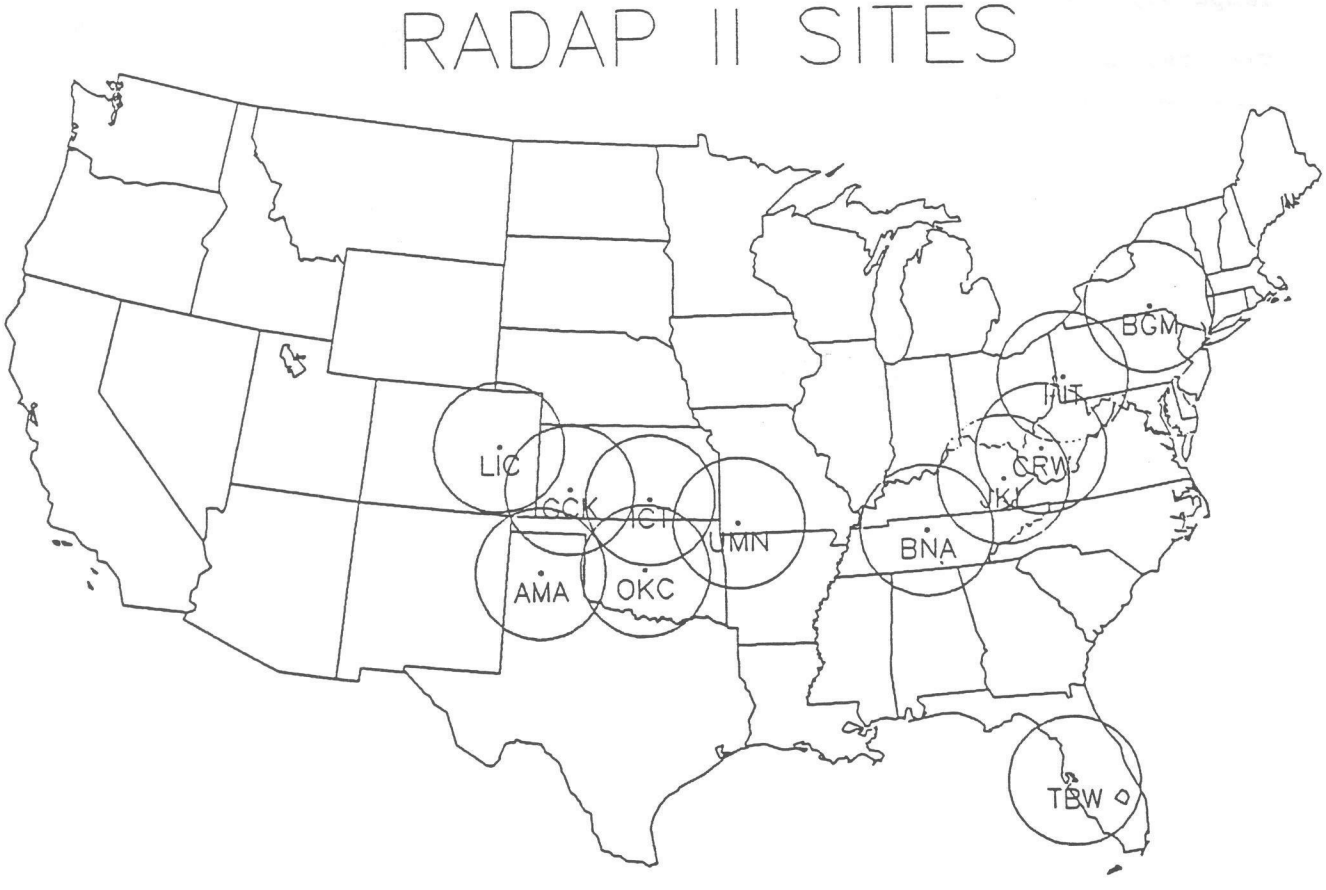

Fig. 2. RADAP II network. Circles represent 125 n.m. surveillance region.

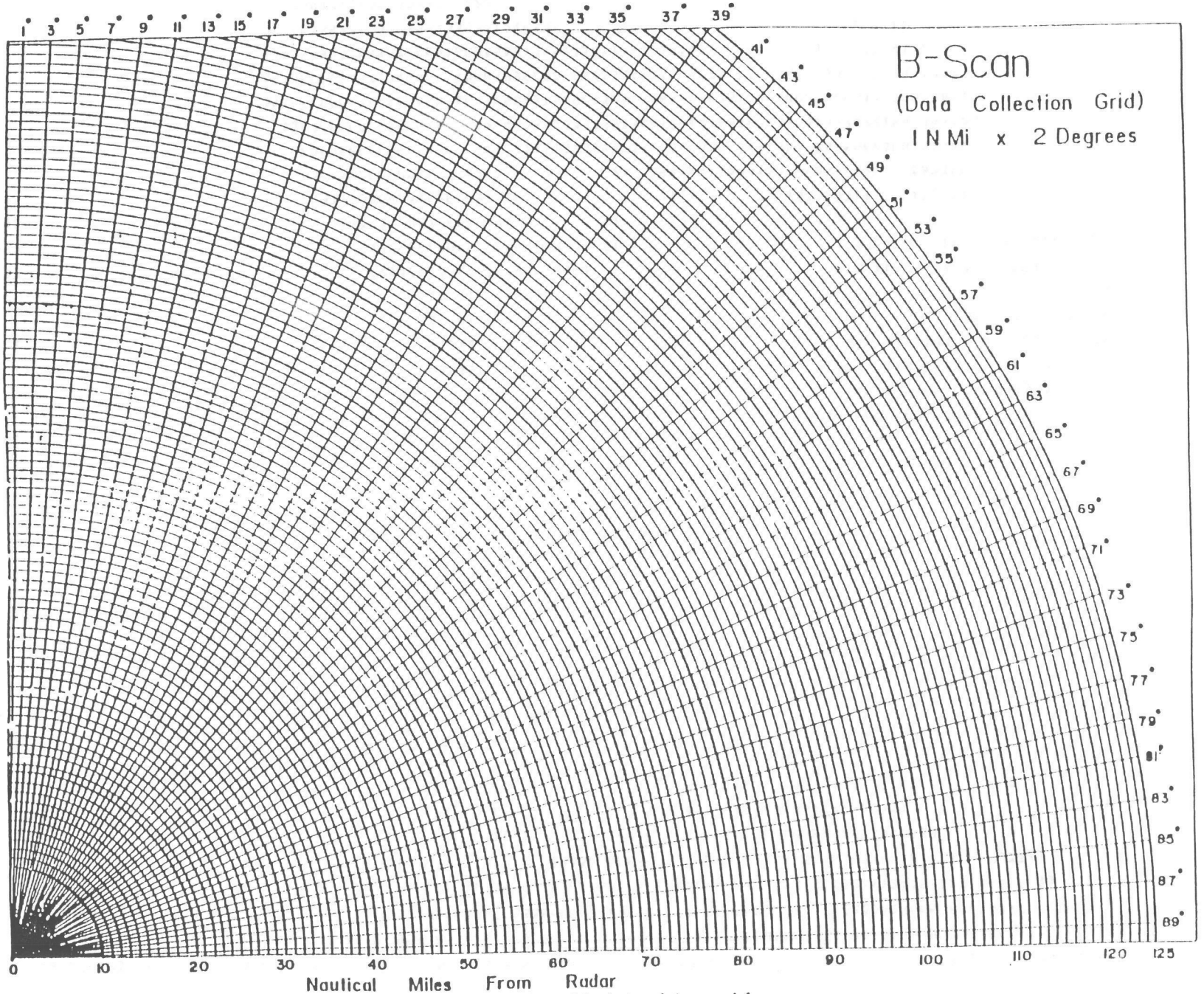

Fig. 3. Diagram illustrating geometry of RADAP II data bin grid.

Fi . Radial display of reflectivity categories.

```
202:                    1355 12121 121333222111
204:                     333 111    326633444445931
206:                    1332221        333 13334321  3332
208:                     3332222113    11  1323554422433
210:                       223539631      13C3DC755333211
212:                       116B8B8 1112114AEBECD452443
214:                    22   3B9BP  1 111370706412111122221
216:                    3322 15356        35C9C6314  25557773423133 1
218:                    23333   23          21211     2266333A11255111
220:                    15822   123                            1   111 11
222:                    2771     14                             111  1
224:                 112377443
226:                37554CCEE6            11          11
228:                2A31249FFE1 132       333       2344
230:                266 2560BA65321     246622     12
232:                24  44446CCC1 21  BBFF9551    21
234:                     3316AEE5215  38ADDCC191    221
236:                     555AA884845  4789AA94D8     11 11
238:                     22332223543  2334555149       133
240:                    221 11223335 33833222 25        33
242:                    443 11221243 133221333 23       33
244:                    111       12  112211111 3
246:                     22           11 11
248:                     11           11277
250:                                    233
262:                                     2211
264:                        221          1222
266:                12      1441          144                    11
268:                16      14432          122                   22
270:                381      3333          122
272:                252      1221
274:                 1
276:                  1244                 1221
278:                   13311               23332
280:                    2211      1 121  12333  1211
282:                      11  1 112643355111124333233   1 1          111
284:                      122C2C  143DDC511  12134AAA5113234   13311333311
286:                   11 3088F3F52   5A045541   333355446631   11221122131
288:                B421322885B2BC1      2488534323421443344421  11455
290:                33A34FFAAA99A51       33111194 211 11 2133      22
292:                22666DDADDDD431             1
294:                1224669ADDC9321 21
296:                 134996AA2244111111
298:                  14CDD556666666AA77442331
```

Fig. 4. Continued.

```
300:                    15DDA68DDB7AABBBBB75442        1
302:                    326644588856657356654313 8 1211
304:                    11221222222 123 111222 26 334122
306:                    1122112231311 1              1 111
308:                     121221142433 211   11         11
310:                     1366333434454444311111
312:                      2664433331332332123 33 2
314:                      2355423332312113323333421
316:                      1255333332532 33344626322
318:                      2333344423421 22211313 11
320:                     1233447A0AA733 73312211 111331133111
322:                    1334424FFFFFF6509DB55333 1344431333441
324:                  124366327FFFFFD9FFFFF97545354421   11111
326:                  11879923AEFFFDEEFFEEEA64464632222211
328:                    38A54447CBC4B875543444323532 11111
330:                     466666544212221 22 22221131
332:                    145555553312122122   23231      111311
334:                    1366663311122643332237763432224433555
336:                  1123883223333AD7444455AA8B555FB333355533 1
338:                  12244222338 58CFFEB9879988 5CAC9443335522111
340:                    35522335D6FFFEFB9877585 8AB8445553442211
342:                    3543334454 5DFE955558 8648A464445533322 11
344:                  34888769DEEC6FFF7655886366359553321     1
346:                  658DAADDA8A64FFFA7734473793375355321   111111
348:                  336BAFFF8888BFFF68B665555C749B533222213334321111
350:                   3369FFFBEEBFFEBDCC556664586D64422355522323322221
352:                  13234442 8B55DBDFFFFF98FE05A394331332424    24223331111 11      111
354:                   211 11138589C9BFFFFFFFFB433669511 33333    2223445554733331 11 111    1
356:                       11353568CFCFFFFFFFC579BC651248884111311333325254A507993213 31111   111111 211121111
358:                         1111738888FFFFFFCFFFFA337CEFFC323266EEEDEDFFCDFFFFFE774387983 3A0554B0FA675DD5511
```

```
ISTA= OKC
IMMDD=  503                                   IYR= 87
IRINT= 100                                    ITIME= 1000                                    IJUL= 123
IALT=  1300                                   IMERGR=  60                                    IELEV=   5
IAPLG= 0                                      IOBFLG= 0                                      IMERGA=  29
NONZIP=  3222                                 ISNFLG= 0                                      IDBFLG= 0
ITRESH=  10 25 30 36 39 41 43 44 46 48 49 51 53 55 57   IMCAN=  5                            NVAL=  5248
                                                                                             IFLAG= 99
```

Fig. 4. Continued.

APPENDIX A

Amarillo, Texas (AMA)

Apr/15-30/85
May/1-31/85
Jun/1-5, 9-12, 14-16, 18-25/85
Aug/9, 25-31/85
Sep/1-14, 16-30/85
Oct/1-31/85
Nov/1, 13-18/85

Feb/5-20/86
Mar/10-11, 20-29/86
Apr/1-12, 17-19/86
Jun/2-15/86

Apr/10, 12-22/87
May/3-20, 22-28/87
Jun/4-5, 8-12, 18-19, 29-30/87
Jul/1-17, 25, 28-31/87
Aug/1-7, 10-12/87
Sep/15/87
Oct/23-26/87
Nov/5-19, 21, 23-30/87
Dec/1-2, 6-7, 10-19, 21-31/87

Jan/1-29/88
Feb/2-6, 14-15/88
Mar/19,31/88
Apr/1-24/88
May/16-21, 24-31/88
Jun/1-2/88
Jul/18-31/88
Aug/1-31/88
Sep/1-30/88
Oct/1-7, 9-17, 20-25/88
Nov/4-6, 8-12, 14-30/88
Dec/1-13, 16-19, 22-31/88

Jan/1, 6-7, 9-10, 18-19, 24-28, 30-31/89
Feb/5, 8, 11-19, 22-26/89
Mar/1-10, 12-17, 21, 23, 25-31/89
Apr/1-29/89
May/1-6, 8, 10-13, 15-20, 22-31/89
Jun/1-30/89
Jul/1-31/89
Aug/1-31/89
Sep/1-30/89
Oct/1-31/89
Nov/1-12, 14-20, 23-30/89
Dec/1-24/89

APPENDIX A

AMA

Jan/3-12, 16-21, 23-31/90
Feb/1-10/90
Mar/2-31/90
Apr/1, 3-14, 17-25, 27-30/90
May/1-6, 9-31/90
Jun/1-3, 5-9, 11-18, 21-22/90
Jul/9-11, 16-19, 21-29, 31/90
Aug/1-24, 31/90
Sep/2-8/90
Nov/5-21, 23, 25-30/90
Dec/1-8, 10-21, 24-29, 31/90

Jan/1-12, 14-17, 22-26, 29-31/91
Feb/1-28/91
Mar/1-24, 26-31/91
Apr/1-30/91
May/1-7, 9-14, 16-30/91
Jun/6-30/91
Jul/1-5, 8-13, 17-19, 21-30/91
Oct/24-31/91
Nov/1-30/91
Dec/1-6, 17-28, 30-31/91

Jan/1-30/92
Feb/4-19, 21-29/92
Mar/1-22, 24-29, 31/92
Apr/1-26, 30/92
May/1-4, 8-31/92
Jun/1-12, 19-27, 30/92
Jul/1, 3-31/92
Aug/1-10, 14-31/92
Sep/1-30/92

APPENDIX A

Binghamton, N.Y. (BGM)

Jun/21-26/88
Jul/18-31/88
Aug/1-7, 10-18, 21-31/88
Sep/1-10, 12-30/88
Oct/1-5, 7-10, 17-25, 27-31/88
Nov/1-21, 23-28/88
Dec/6-27/88

Jan/9-31/89
Feb/2-28/89
Mar/1-21, 27-29, 31/89
Apr/1-17, 21-30/89
May/1, 3, 9-31/89
Jun/1-3, 5-30/89
Jul/1-16, 31/89
Aug/1-31/89
Sep/1-22/89
Oct/14-18/89
Nov/25, 27-29/89
Dec/12-31/89

Jan/1, 3-21, 24-31/90
Feb/1-22, 24-28/90
Mar/10-12, 14-31/90
Apr/1-10, 17-30/90
May/3-5/90
Jun/28-30/90
Jul/1, 3-10, 12-18, 20-31/90
Aug/1-11, 13-27/90
Sep/7-19, 21-22, 26-30/90
Oct/1-19, 23-28/90
Nov/29/90
Dec/21, 23-29/90

Jan/1-3, 7-9, 14-15, 22-30/91
Feb/10-14, 17-22, 25-27/91
Mar/1-16, 18-23, 25-30/91
Apr/1, 11-13, 15-22, 24-29/91
May/14-31/91
Jun/1, 3-17, 19-23, 25-28/91
Jul/5-14, 16-31/91
Aug/1-4, 6, 13-19, 22-25, 30-31/91
Sep/1-25, 30/91
Oct/1-6, 17-31/91
Nov/1-30/91
Dec/1-14, 18, 21, 27-29, 31/91

APPENDIX A

BGM

Jan/2-9, 11-31/92
Feb/3-9, 12-19, 21, 27-29/92
Mar/1-3, 6-31/92
Apr/1-27, 29-30/92
May/1-18/92
Jun/5-30/92
Jul/1-15, 20-26, 28-31/92
Aug/1-25, 28-31/92
Sep/1-12, 15-16, 18-22/92

APPENDIX A

Nashville, Tenn (BNA)

Apr/5-10, 20-22, 25-28, 30/86
May/1-15, 18, 21-28, 30-31/86
Jun/1, 3-5, 13-15, 26-27/86
Jul/1, 13-31/86
Aug/1-4, 7-8, 13-28/86
Sep/3-14, 16-20, 23-30/86
Oct/1, 6-31/86
Nov/1-14, 18-24, 28-30/86
Dec/1-2, 4-9, 19-31/86

Feb/1-24, 26-28/87
Mar/30-31/87
Apr/1-30/87
May/1-30/87
Jun/1-2, 7-30/87
Jul/1-16/87
Sep/7-13/87
Oct/12-31/87
Nov/1-28, 30/87
Dec/1-31/87

Jan/1-3, 6-12, 15-25, 28-31/88
Feb/1-15/88
Mar/9-18, 22-28, 30-31/88
Apr/1-8, 11-15, 17-27, 30/88
May/1-31/88
Jun/1-30/88
Jul/21-31/88
Aug/1-31/88
Sep/1-30/88
Oct/1-2, 4-14, 16-31/88
Nov/1, 3-30/88
Dec/1-6, 8-11, 14-31/88

Jan/1-9, 11-31/89
Feb/1-18, 20-21/89
Mar/7-8, 11-31/89
Apr/1-30/89
May/1-5, 17-31/89
Jun/1-24, 29-30/89
Jul/1-8, 10-31/89
Aug/1-31/89
Sep/1-4, 7-30/89
Oct/1-31/89
Nov/1-8, 10-30/89
Dec/1-15, 18-31/89

APPENDIX A

BNA

Jan/1-21, 23-29, 31/90
Feb/1-16/90
Mar/2-31/90
Apr/1-17, 19-30/90
May/1-6, 9-21, 24-31/90
Jun/1-15, 18-30/90
Jul/1-7, 9-14, 17-23, 28, 30-31/90
Aug/2-31/90
Sep/1-2, 5-30/90
Oct/1-16, 18-23, 25/90
Nov/9-28/90
Dec/1-23, 26-31/90

Jan/1-31/91
Feb/1-8, 10-28/91
Mar/1-9, 11-31/91
Apr/1-30/91
May/1-31/91
Jun/1-8, 10-26, 29-30/91
Jul/1-26, 29-31/91
Aug/1-30/91
Sep/19-30/91
Oct/1-16, 19-31/91
Nov/1, 3-7, 12-22, 26-30/91
Dec/1-16, 19-29, 31/91

Jan/1-3, 25, 27-31/92
Feb/1-27, 29/92
Mar/1-25, 27-31/92
Apr/1-10, 12-25/92
May/12-31/92
Jun/1-30/92
Jul/1-31/92
Aug/1-17, 20-31/92
Sep/1-4, 8-22, 26-30/92

APPENDIX A

Charleston, W. Va. (CRW)

Mar/3, 31/85
Apr/1-14/85
May/1-3, 6-7, 11-12, 16-21, 23-24/85
Jun/2-15, 18-26, 30/85
Jul/1-10, 25-31/85
Aug/1-2, 5-11, 15-20, 24-26, 30/85
Sep/7-12, 23-24, 26-27, 30/85
Oct/1-2, 11-13, 15-16, 18-25/85
Nov/2-4, 12-17, 22-28/85
Dec/1-2, 10, 17, 19-24/85

Feb/1-5/86
Mar/14-15, 18-20, 22/86
Apr/1-13, 15-23, 25-30/86
May/1, 7-9, 11-19, 25-31/86
Jun/1/86
Jul/1-3, 7-9, 11-24, 26-27, 29/86
Aug/1-3, 5-12, 17-19/86
Sep/2-5, 7-8, 11-12, 18-21, 23-27/86
Oct/22/86
Nov/3-9, 11-15, 17-18, 20/86
Dec/1, 3, 8/86

Jan/1-2, 17-31/87
Feb/1-2, 4, 6-8, 12-14, 25-28/87
Mar/1, 3-4/87
Apr/23-25, 27-30/87
May/1-4, 11-16, 18-31/87
Jun/1, 3-4, 11-26, 30/87
Jul/1-7, 27-31/87
Aug/1-9, 27-30/87
Sep/3, 5-15, 29-30/87
Oct/1-4, 6-12, 19-21, 23-30/87
Nov/1-3, 5, 7-11, 18-21, 23-30/87
Dec/1-14, 16-18, 24-31/87

Jan/1-2, 4-5, 7-9, 13-15, 17-26, 31/88
Feb/1-13, 15-19, 21-29/88
Mar/2-3, 26-28, 31/88
Apr/2-4, 7-8, 29-30/88
May/1-5/88
Jun/6, 9, 16-26, 29-30/88
Jul/1, 3-4, 7, 11-15, 17-23, 25-28, 30-31/88
Aug/1-4, 9, 11-21, 23-30/88
Sep/2-5, 8-14, 16-20, 22-24, 26, 29-30/88
Oct/1-13, 15-16, 18-26, 28-31/88
Nov/1-5, 7-8, 10-21, 26-30/88
Dec/1-2, 4-9, 13-22, 24-31/88

APPENDIX A

CRW

Jan/1-17, 19-21, 24-31/89
Feb/1-3, 6-11, 13-28/89
Mar/2-6, 8-9, 13-25, 27-31/89
Apr/1-9, 12-19, 21-30/89
May/1-2, 4-27, 29-31/89
Jun/1-10, 12-29/89
Jul/1-7, 13-26/89
Aug/1-2, 4-6, 11-31/89
Sep/1-2, 4-16, 18-27, 29-30/89
Oct/1-13, 16-20, 22, 24, 31/89
Nov/1-3, 6-8, 14-18, 21-24, 26-30/89
Dec/1, 3-25, 27-31/89

Jan/1-7, 17-31/90
Feb/1-28/90
Mar/3-24, 27-31/90
Apr/1-7, 9-23, 25-30/90
May/1-22, 24-31/90
Jun/1-30/90
Jul/1-3, 5-6, 8-31/90
Aug/1-31/90
Sep/1-13, 19, 21-24, 26-30/90
Oct/1-5, 7-19, 22-23/90
Nov/9-10, 13-30/90
Dec/1-18, 20-31/90

Jan/2-11, 13, 15-30/91
Feb/1-15, 17-19, 21-28/91
Mar/1-14, 18-23, 25-31/91
Apr/1-10, 12-16, 18-21, 23-27, 29-30/91
May/1-7, 9-31/91
Jun/1-3, 5, 10-14, 17-30/91
Jul/1-10, 12-31/91
Aug/1-5, 7-31/91
Sep/1-7, 9-20, 22-28/91
Oct/1-14, 17-19, 23-31/91
Nov/1, 3, 5-23 25-30/91
Dec/1-10, 13-19, 23-24, 26-31/91

Jan/1-7, 9-31/92
Feb/1-2, 4-9, 11-15, 18-29/92
Mar/3-4, 6-15, 17-25/92
Apr/1-5, 7-9, 11-16, 18-24, 26-30/92
May/1-6/92
Jun/5-11, 13-21, 23-27, 29-30/92
Jul/1, 3-31/92
Aug/3-29, 31/92
Sep/2-12, 14-19, 21, 25-28/92

APPENDIX A

Garden City, Kans. (GCK)

Apr/15-30/85
May/1-10, 13-14, 17-20, 22-29, 31/85
Jun/1, 3-4, 11-30/85
Aug/14-25/85

Mar/15-18, 20, 26, 31/86
Apr/1, 7-14, 17-18, 22-27/86
Jul/19-28/86
Aug/2-4, 6-26, 29-31/86
Sep/3-12, 14-29/86
Oct/21-23/86
Dec/3-4, 6-9, 14, 21, 23-31/86

Jan/1-3, 8-17, 21-31/87
Feb/1-2, 10-13, 15/87
Apr/16/87
May/11-31/87
Jun/1-8/87
Jul/7-31/87
Aug/1-31/87
Sep/1-30/87
Oct/1-18, 20-31/87
Nov/1-4, 6-28/87
Dec/2, 5-6, 16-19, 21-31/87

Jan/1-3, 6-7, 10/88
Mar/12-15, 22-31/88
Apr/1-9, 12-22, 24-27, 29-30/88
May/2-4, 6-7, 9-14, 16-26, 28-31/88
Jun/2/88
Jul/23-24, 26-30/88
Aug/3-6, 8-18, 21-22, 24-25/88
Sep/1-2, 15-16/88
Nov/10, 13-17, 19-22/88

Jan/10, 13-14, 16-29/89
Feb/3, 9-10, 21-28/89
Mar/1-31/89
Apr/1-15, 17-24, 26-29/89
May/15-18/89

Jan/17-20, 23/90
Feb/3-16, 19-21, 28/90
Mar/2, 4-10, 14, 22-23, 26-28, 30-31/90
Apr/5-6, 8-9, 11-12, 16-17, 20-27/90

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Jul/1-5, 7-11, 14-15, 17-23, 29-31/85
Aug/10-15, 17-19, 23-24, 27-29/85
Sep/4, 7-13, 19-23, 28-29/85
Oct/4, 9-14, 17-18, 29/85
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Feb/5-7, 10-13/87
Mar/16-23, 25, 28/87
Jul/24-28/87
Aug/2-8, 10-13, 16-31/87
Sep/1-4, 8-10, 12-14, 17-18, 23-28/87
Oct/8-11, 14-17, 28-31/87
Nov/2-4, 15, 17-20, 22-30/87
Dec/1-3, 9, 11, 13-14, 16-19, 21-25, 27-31/87

Jan/1-3, 5-31/88
Feb/1-29/88
Mar/1-4, 31/88
Apr/12-30/88
May/1-12, 23-31/88
Jun/1-2, 4-30/88
Jul/1, 19-31/88
Aug/1-10, 12-19, 23-31/88
Sep/1-5, 9-25, 30/88
Oct/1, 5-16, 18-23, 25-28, 31/88
Nov/1-6, 8-15, 23-30/88
Dec/1-7, 9-10, 12-13, 16, 19-28, 31/88

Jan/1-14, 16-18, 20-22, 25-31/89
Feb/1-20, 23-28/89
Mar/3-5, 7, 10-12, 14-17, 19-21, 23-31/89
Apr/1-15, 17, 19-20, 22-30/89
May/1-4, 8-18, 20-22, 24-27, 30-31/89
Jun/1-30/89
Jul/1-31/89
Aug/1-7, 9-27, 29/89
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Oct/2-6, 8-12, 15-27/89
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Jul/2-5, 8-9, 11-21, 23-31/90
Aug/1-11, 13-15, 17-31/90
Sep/1, 3-5, 7, 9-14, 16-30/90
Oct/1-5/90
Nov/17, 20-30/90
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Apr/1-10, 12-30/91
May/1, 14-27/91
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Jul/1-4, 6-16, 18-31/91
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Sep/1-5, 14-18/91
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Nov/3, 7-14, 16-18, 20-24/91
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Jan/1-6, 27-31/92
Feb/1-28/92
Mar/4-17, 19-31/92
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May/1-31/92
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Sep/1, 4, 7-8, 11-12, 18-20, 24, 26-30/86
Oct/1-3, 17, 23-26/86
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Jan/3, 9-10, 18-19, 22-25/87
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May/2-4, 12, 14-15, 17-20, 25-27, 30-31/87
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Jul/1, 3-5, 8-31/88
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Dec/1-7, 9-14, 16-31/88

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Feb/1-10, 12-28/89
Mar/1-2, 5-6, 11-18, 27-31/89
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May/1-2, 8-10, 12-27, 29-31/89
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Mar/1-2, 5-17, 20, 22-26, 28-29, 31/90
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Oct/1-3/90
Nov/14-27, 29-30/90
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Feb/1, 4-7, 22-24/91
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Oct/1-31/88
Nov/1-4, 7-19, 22-30/88
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Jan/1-27/89
Feb/27-28/89
Mar/1-2, 6-7, 9-11, 13-31/89
Apr/1-4, 9-17, 24-27/89
May/10-26/89
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Aug/1-29, 31/90
Sep/1-3, 5-15, 17-30/90
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Jul/1-5, 9-11, 15-29/85
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Oct/1-4, 15-16, 18-31/86
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Mar/2/87
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Oct/1-3, 5, 7-11, 13-31/87
Nov/3-10, 15-16, 18, 20-30/87
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Feb/1-8, 10-27/89
Mar/2-6, 12, 16-19, 24-31/89
Apr/6-30/89
May/1-10, 12-19, 22, 25-31/89
Jun/1-13, 15-17, 19, 21-27/89
Jul/3-4, 7-8, 10, 12-19, 21-27/89
Aug/4-7, 10-31/89
Sep/1, 4-17, 19-20, 26-28/89
Oct/2, 6, 9-10, 12-14, 16-18, 27-28/89
Nov/6, 8-11, 20-24, 29-30/89
Dec/1-7, 12-16, 19, 22-26, 28-31/89

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Feb/1-5, 7-11, 13-18, 20-23, 26-28/90
Mar/1-17, 19-31/90
Apr/1, 3-30/90
May/1-7, 10-27, 29-31/90
Jun/1, 16-17, 19-30/90
Jul/1-5, 8-12, 15-31/90
Aug/1-22, 27, 29-31/90
Sep/2-4, 6-8, 10-11, 13, 16-21, 24-30/90
Oct/1-9, 14-22, 25-28/90
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Aug/1-6, 8-13, 16-21, 23-31/91
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Mar/1-2, 5-10/86
Apr/4-6, 16-20, 25-29/86
May/1, 9-16/86
Jun/1-2, 6-7, 10-11, 15-16/86
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Aug/7-8, 10-11, 18-23/86
Sep/16-19, 22-24, 27-28, 30/86
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Mar/1-3, 9-11. 15-18, 20-25, 27-31/87
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Oct/7-31/87
Nov/1-10, 16-20, 22-29/87
Dec/1-16, 18-20, 22-31/87

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Apr/3-4, 20-22, 28/88
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Jun/1-9, 18-19, 26-29/88
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Aug/1-6, 8-21/88
Sep/18-19, 29-30/88
Oct/1-8, 11-31/88
Nov/1-5, 7-10, 13-22, 24-30/88
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May/2-5, 11, 14-16, 19-20, 23, 25-30/89
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Feb/3-4/90
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Jul/1-6, 8-11, 15-16, 18-26, 29-31/90
Aug/1-8, 12-13, 18-26, 29/90
Sep/8-9, 12-15, 19-30/90
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Aug/1-14, 16-24, 30-31/85
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Apr/1-30/86
Jul/1-26, 30-31/86
Aug/4-9, 11-15, 18-21, 25-31/86
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Jul/3-21/87
Sep/12-30/87
Oct/11-31/87
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Aug/1-30/88
Sep/1-30/88
Oct/1-7, 11-23, 25-28/88
Nov/1-5, 8-23, 26-28/88
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Jan/1-12, 18-22, 24-28, 30-31/89
Feb/3, 5-8, 10-14, 23-29/89
Mar/1-8, 10-24, 27-31/89
Apr/1-11, 13-19, 21-22, 24-25, 29-30/89
May/1-3, 8, 10-11, 15-16, 18-19, 22-26, 29/89
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Feb/1-5, 7-23, 26-28/90
Mar/1-6, 8-9/90
May/21-31/90
Jun/1-5, 11-13, 15-19, 26-28/90
Jul/1-11, 18-29, 31/90
Aug/3-15, 29-31/90
Sep/1-2, 5-30/90
Oct/1-31/90
Nov/1-2, 5-24, 26-28, 30/90
Dec/1, 4-12, 23-24, 27-31/90

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Jul/1-31/89
Aug/1-2, 17-31/89
Sep/1-9/89
Oct/31/89
Nov/1-13, 16-30/89
Dec/1-15, 19-31/89

APPENDIX A

UMN

Jan/1-31/90
Feb/1/90
Mar/3-13, 24-30/90
Apr/1-3, 9-10, 13-26/90
May/8-16, 21-22, 29-31/90
Jun/1-26/90
Jul/5, 10-31/90
Aug/1, 5-31/90
Sep/1, 13-19, 21-30/90
Oct/1-31/90
Nov/1-10, 14-24, 26-28, 30/90
Dec/1-3, 5-30/90

Jan/12-25, 28-29/91
Feb/1-6, 8-16, 24-28/91
Mar/1-3, 6-10, 12-17, 20-23, 25-27, 29/91
Apr/3-4, 6-9, 11-30/91
May/1-5, 7-8, 10-31/91
Jun/1-14 17-18, 20, 22-23, 28-29/91
Jul/1-5, 10-14, 16-25, 27-29, 31/91
Aug/1-2, 4-14, 16-21, 23-31/91
Sep/1-8 10-13/91

Jan/21-22, 27-28/92
Feb/1-14, 16-29/92
Mar/1-31/92
Apr/1-4, 6-30/92
May/1-29, 31/92
Jun/1-19/92

APPENDIX B

Appendix B contains a monthly / daily display of all RADAP II sites. The sites are displayed vertically and the days are displayed horizontally for the years 1985 through 1992, as shown below.

MONTH & YEAR

SITES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM																															
BNA																															
CRW																															
GCK																															
ICT																															
JKL																															
LIC																															
OKC																															
PIT																															
TBW																															
UMN																															

DAYS

APPENDIX B

Since OKC is the only RADAP II site with data for 1983, the entire year has been displayed on one chart. The months are displayed vertically and the days are displayed horizontally.

MONTHLY DISPLAY OF 1983 DATA FOR OKLAHOMA CITY (OKC)***

MAR																									X	X	X	X	X		
APR	X	X	X	X								X				X	X					X	X				X	X	X	X	
MAY	X	X					X			X		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
JUN	X	X	X	X	X	X	X			X	X				X	X	X					X	X					X	X		
JUL																															
AUG							X	X												X								X			
SEP																															
OCT						X	X	X		X	X																				
NOV	X	X																													
DEC																															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

*** - During the early developmental stages of D/RADEX, this data was saved by Headquarters for experimental purposes. After the initiation of the RADAP II archive system, this data was added to OKC's archive.

APPENDIX B

MARCH 1985

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM																															
BNA																															
CRW			*																												X
GCK																															
ICT																															
JKL																															
LIC																															
OKC																															
PIT																															
TBW																															
UMN																															

* - Represents the initial staring date.

APRIL 1985

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA															*	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BGM																															
BNA																															
CRW	X	X	X	X	X	X	X	X	X	X	X	X	X	X																	
GCK															*	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICT															*	X	X		X	X	X	X									
JKL																															
LIC												*	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
OKC			*		X	X				X	X	X	X	X							X	X	X		X	X	X				
PIT																															
TBW																												*	X	X	
UMN	*	X																	X			X									

* - Represents the initial starting date.

APPENDIX B

MAY 1985

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGM																															
BNA																															
CRW	X	X	X			X	X				X	X				X	X	X	X	X	X		X	X							
GCK	X	X	X	X	X	X	X	X	X	X			X	X			X	X	X	X		X	X	X	X	X	X	X	X		X
ICT									X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
JKL																															
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OKC	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X					X	X	X	X
PIT																															
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X			X	X
UMN									X	X	X		X				X	X	X	X	X	X		X	X		X	X	X	X	X

JUNE 1985

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X				X	X	X	X		X	X	X		X	X	X	X	X	X	X	X						
BGM																															
BNA																															
CRW		X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X				X	
GCK	X		X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICT	X	X	X	X		X	X	X	X	X	X			X	X	X	X	X		X	X		X	X	X	X	X				
JKL																															
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
OKC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PIT											*	X					X	X			X	X	X	X	X	X	X	X	X	X	
TBW																															
UMN	X	X	X	X	X	X	X	X	X	X																					

* - Represents the initial starting date.

APPENDIX B

JULY 1985

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM																															
BNA																															
CRW	x	x	x	x	x	x	x	x	x	x															x	x	x	x	x	x	x
GCK																															
ICT	x	x	x	x	x		x	x	x	x	x			x	x		x	x	x	x	x	x							x	x	x
JKL																															
LIC	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
OKC	x	x	x	x	x				x	x	x				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
PIT	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x
TBW	x	x	x		x			x	x	x	x	x	x	x	x	x	x	x	x		x	x		x				x	x	x
UMN																															

AUGUST 1985

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA									x																x	x	x	x	x	x	x
BGM																															
BNA																															
CRW	x	x			x	x	x	x	x	x	x				x	x	x	x	x	x				x	x	x				x	
GCK														x	x	x	x	x	x	x	x	x	x	x	x						
ICT										x	x	x	x	x	x		x	x	x				x	x			x	x	x		
JKL																															
LIC	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			
OKC	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	
PIT	x	x	x	x	x																										
TBW	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x						x	x
UMN																															

APPENDIX B

SEPTEMBER 1985

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BGM																															
BNA																															
CRW							X	X	X	X	X	X											X	X		X	X			X	
GCK																															
ICT				X			X	X	X	X	X	X	X						X	X	X	X	X					X	X		
JKL																															
LIC				X	X														X	X	X						X	X	X		
OKC	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X	X	X		
PIT																															
TBW	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	
UMN																															

OCTOBER 1985

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGM																															
BNA																															
CRW	X	X									X	X	X		X	X		X	X	X	X	X	X	X	X						
GCK																															
ICT				X					X	X	X	X	X	X			X	X											X		
JKL																															
LIC																X	X	X	X	X	X	X			X	X	X	X	X	X	
OKC	X	X	X	X		X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X		X	X	X	X	
PIT																		X	X	X	X	X	X	X	X	X	X	X	X	X	X
TBW	X						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
UMN																							X	X	X	X	X	X	X	X	X

APPENDIX B

NOVEMBER 1985

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X												X	X	X	X	X	X													
BGM																															
BNA																															
CRW		X	X	X								X	X	X	X	X	X					X	X	X	X	X	X	X			
GCK																															
ICT													X	X																	
JKL																															
LIC								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
OKC			X	X	X		X	X	X	X	X	X	X	X	X		X	X	X							X	X	X	X	X	
PIT									X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

DECEMBER 1985

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM																															
BNA																															
CRW	X	X								X							X		X	X	X	X	X	X							
GCK																															
ICT																															
JKL																															
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X
OKC	X	X	X	X	X	X			X	X	X	X	X																		
PIT																															
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

APPENDIX B

JANUARY 1986

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM																															
BNA																															
CRW																															
GCK																															
ICT																															
JKL																															
LIC			X	X	X	X	X	X								X	X												X		
OKC																															
PIT																															
TBW				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X	
UMN	X																														

FEBRUARY 1986

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
BGM																															
BNA																															
CRW	X	X	X	X	X																										
GCK																															
ICT																															
JKL																															
LIC																					X	X	X	X	X	X	X	X			
OKC																															
PIT			X	X	X	X	X						X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			
TBW																															
UMN																															

APPENDIX B

MARCH 1986

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA										X	X									X	X	X	X	X	X	X	X	X	X		
BGM																															
BNA																															
CRW														X	X			X	X	X		X									
GCK															X	X	X	X		X						X					X
ICT																															
JKL																															
LIC	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X													
OKC	X	X	X		X	X	X	X		X	X	X			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
PIT	X	X			X	X	X	X	X	X																					
TBW	X	X	X	X	X	X	X	X				X	X													X	X	X	X	X	X
UMN																															

APRIL 1986

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X					X	X	X												
BGM																															
BNA					*	X	X	X	X	X										X	X	X			X	X	X	X		X	
CRW	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	
GCK	X						X	X	X	X	X	X	X	X			X	X				X	X	X	X	X	X				
ICT																															
JKL																															
LIC		X							X						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
OKC	X	X	X	X																X	X	X	X	X		X			X	X	
PIT				X	X	X										X	X	X	X	X					X	X	X	X	X		
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
UMN											X	X	X	X	X	X	X	X	X	X	X						X	X	X	X	

* - Represents the initial starting date.

APPENDIX B

MAY 1986

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM																															
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X			X	X	X	X	X	X	X	X		X	X
CRW	X						X	X	X		X	X	X	X	X	X	X	X	X						X	X	X	X	X	X	X
GCK																															
ICT																															
JKL																												*	X	X	X
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OKC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X														
PIT	X								X	X	X	X	X	X	X	X															
TBW																															
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

* - Represents the initial starting date.

JUNE 1986

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA		X	X	X	X	X	X	X	X	X	X	X	X	X	X																
BGM																															
BNA	X		X	X	X								X	X	X											X	X				
CRW	X																														
GCK																															
ICT																															
JKL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X			
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
OKC																															
PIT	X	X				X	X			X	X				X	X															
TBW																															
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X												

APPENDIX B

JULY 1986

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM																															
BNA	X												X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X	X	X				X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X		
GCK																			X	X	X	X	X	X	X	X	X	X			
ICT																															
JKL								X	X	X														X	X	X	X	X	X	X	X
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						X		X
OKC								X	X	X	X	X	X							X	X										
PIT																								X	X						
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
UMN				X	X	X	X	X	X	X	X	X	X	X	X	X	X								X	X	X	X	X	X	X

AUGUST 1986

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM																															
BNA	X	X	X	X			X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRW	X	X	X		X	X	X	X	X	X	X	X					X	X	X												
GCK		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X
ICT																															
JKL	X				X	X	X							X	X	X		X	X	X	X	X	X	X		X	X	X			X
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OKC							X	X	X						X													X	X		
PIT							X	X		X	X							X	X	X	X	X	X								
TBW				X	X	X	X	X	X		X	X	X	X	X			X	X	X	X				X	X	X	X	X	X	X
UMN	X	X					X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X

APPENDIX B

SEPTEMBER 1986

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM																															
BNA			X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X			X	X	X	X	X	X	X	X	
CRW		X	X	X	X		X	X			X	X						X	X	X	X		X	X	X	X	X				
GCK			X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ICT																															
JKL	X			X			X	X			X	X						X	X	X				X		X	X	X	X	X	
LIC																															
OKC				X	X	X	X	X	X	X	X	X	X	X	X	X	X									X	X		X		
PIT																X	X	X	X			X	X	X			X	X		X	
TBW																															
UMN	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X									

OCTOBER 1986

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM																															
BNA	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW																						X									
GCK																					X	X	X								
ICT																															
JKL	X	X	X														X						X	X	X	X					
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											
OKC	X	X	X	X											X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
PIT	X	X	X	X	X																										
TBW	X	X	X	X	X	X	X	X	X	X	X																				
UMN																															

APPENDIX B

NOVEMBER 1986

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM																															
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X				X	X	X	
CRW			X	X	X	X	X	X	X		X	X	X	X	X		X	X		X											
GCK																															
ICT																															
JKL							X	X	X		X				X			X	X				X	X	X	X					
LIC																															
OKC	X	X	X	X	X	X	X	X	X	X	X						X	X	X		X	X	X		X	X	X	X	X	X	
PIT							X	X	X	X	X						X	X		X	X	X	X	X	X	X	X	X	X	X	
TBW							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	
UMN																															

DECEMBER 1986

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM																															
BNA	X	X		X	X	X	X	X	X										X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X		X					X																							
GCK			X	X		X	X	X	X					X							X		X	X	X	X	X	X	X	X	X
ICT																															
JKL	X	X	X					X			X													X	X	X					
LIC																															
OKC	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X				
PIT		X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X									
TBW																															
UMN																															

APPENDIX B

JANUARY 1987

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM																															
BNA																															
CRW	X	X															X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
GCK	X	X	X					X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X
ICT																															
JKL			X						X	X								X	X			X	X	X	X						
LIC																															
OKC	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X														
PIT																															
TBW																															
UMN													X	X		X	X	X	X												

FEBRUARY 1987

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM																															
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			
CRW	X	X		X		X	X	X				X	X	X											X	X	X	X			
GCK	X	X								X	X	X	X		X																
ICT					X	X	X			X	X	X	X																		
JKL																X												X			
LIC																															
OKC																															
PIT							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X			
TBW																															
UMN																															

APPENDIX B

MARCH 1987

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM																															
BNA																														X	X
CRW	X		X	X																											
GCK																															
ICT																X	X	X	X	X	X	X	X		X			X			
JKL																															
LIC																															
OKC		X																													
PIT	X	X	X						X	X	X				X	X	X	X		X	X	X	X	X	X		X	X	X	X	X
TBW																												X	X	X	X
UMN																															

APRIL 1987

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA										X		X	X	X	X	X	X	X	X	X	X	X									
BGM																															
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CRW																							X	X	X		X	X	X	X	
GCK																X															
ICT																															
JKL															X	X	X						X	X							
LIC																															
OKC														X	X	X	X														
PIT		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							X	X	X	X				
TBW		X	X	X	X	X	X	X	X	X	X	X	X	X																	
UMN																															

APPENDIX B

MAY 1987

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X			
BGM																															
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CRW	X	X	X	X							X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
GCK											X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICT																															
JKL		X	X	X								X		X	X		X	X	X	X					X	X	X			X	X
LIC																															
OKC			X	X														X	X		X	X	X	X	X	X	X	X	X	X	X
PIT																									X						
TBW				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										X
UMW																															

JUNE 1987

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA				X	X			X	X	X	X	X						X	X										X	X	
BGM																															
BNA	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CRW	X		X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	
GCK	X	X	X	X	X	X	X	X																							
ICT																															
JKL	X	X	X	X						X	X	X	X	X					X	X	X	X	X		X	X					
LIC	X	X	X	X	X	X	X	X	X	X	X			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	
OKC	X	X	X	X	X	X	X	X	X	X	X	X	X									X	X		X	X				X	
PIT								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	
TBW	X	X	X	X														X	X	X							X	X			
UMW														X									X								

APPENDIX B

JULY 1987

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								X			X	X	X	X
BGM																															
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X															
CRW	X	X	X	X	X	X	X																				X	X	X	X	X
GCK							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICT																								X	X	X	X	X			
JKL			X	X	X	X	X																		X	X					
LIC	X	X	X	X	X	X	X	X	X	X		X																			X
OKC	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X			X	X	X				X	X
PIT							X	X	X	X	X	X	X																		
TBW			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
UMN																															

AUGUST 1987

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X			X	X	X																			
BGM																															
BNA																															
CRW	X	X	X	X	X	X	X	X	X																		X	X	X	X	
GCK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICT		X	X	X	X	X	X	X		X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
JKL					X	X	X	X	X	X				X	X	X	X						X	X	X	X	X	X	X	X	X
LIC																															
OKC																										X	X	X	X	X	X
PIT																										X	X	X	X	X	X
TBW																															
UMN			X	X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

APPENDIX B

SEPTEMBER 1987

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA															X																
BGM																															
BNA							X	X	X	X	X	X	X																		
CRW			X		X	X	X	X	X	X	X	X	X	X	X														X	X	
GCK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICT	X	X	X	X				X	X	X		X	X	X			X	X					X	X	X	X	X	X			
JKL				X	X	X	X	X		X	X	X	X			X	X	X	X						X	X					
LIC																															
OKC	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
PIT	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X	X					
TBW												X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					

OCTOBER 1987

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																							X	X	X	X					
BGM																															
BNA												X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X	X	X	X		X	X	X	X	X	X	X							X	X	X		X	X	X	X	X	X	X	X	
GCK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
ICT								X	X	X	X			X	X	X	X											X	X	X	X
JKL						X				X	X								X	X						X	X				
LIC																															
OKC	X	X	X		X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PIT							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TBW											X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UMN																				X	X		X	X	X	X	X	X			X

APPENDIX B

NOVEMBER 1987

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X	
BGM																															
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	
CRW	X	X	X		X		X	X	X	X	X							X	X	X	X		X	X	X	X	X	X	X	X	
GCK	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICT		X	X	X											X		X	X	X	X		X	X	X	X	X	X	X	X	X	
JKL									X	X													X	X				X	X		
LIC																	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
OKC			X	X	X	X	X	X	X	X					X	X		X		X	X	X	X	X	X	X	X	X	X	X	
PIT	X	X	X	X	X	X	X	X	X	X						X	X	X	X	X		X	X	X	X	X	X	X	X		
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	
UMN	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

DECEMBER 1987

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X				X	X			X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
BGM																															
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X						X	X	X	X	X	X	X	X
GCK		X			X	X										X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
ICT	X	X	X						X		X		X	X		X	X	X	X		X	X	X	X	X		X	X	X	X	X
JKL						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
LIC	X	X	X		X	X	X	X	X	X	X	X	X	X			X	X	X			X	X	X	X	X				X	X
OKC	X	X	X	X		X						X	X	X		X	X	X	X	X		X			X	X	X	X			X
PIT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X	X	X	X	X	X
TBW	X		X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
UMN																X	X	X	X		X			X	X				X	X	X

APPENDIX B

JANUARY 1988

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
BGM																															
BNA	X	X	X			X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X			X	X	X	X
CRW	X	X		X	X		X	X	X				X	X	X		X	X	X	X	X	X	X	X	X	X					X
GCK	X	X	X			X	X			X																					
ICT	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
JKL	X	X		X					X	X		X		X	X	X	X	X	X	X	X			X	X						
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X
OKC	X	X	X	X		X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X		X			X	X	X	X
PIT	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TBW				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										
UMN	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X

FEBRUARY 1988

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA		X	X	X	X	X								X	X																
BGM																															
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																
CRW	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X		
GCK																															
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
JKL		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X						
LIC	X	X	X																												
OKC	X	X	X	X					X	X	X	X																			
PIT	X	X																													
TBW																															
UMN	X											X	X	X	X	X	X														

APPENDIX B

MARCH 1988

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																			x												x
BGM																															
BNA									x	x	x	x	x	x	x	x	x	x				x	x	x	x	x	x	x		x	x
CRW		x	x																							x	x	x			x
GCK												x	x	x	x							x	x	x	x	x	x	x	x	x	x
ICT	x	x	x	x																											x
JKL	x																														
LIC																															
OKC																														x	x
PIT	x	x	x	x	x	x	x	x	x	x		x	x		x	x	x	x	x	x		x	x	x							
TBW									x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
UMN			x	x	x	x	x	x		x	x	x					x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

APRIL 1988

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x							
BGM																															
BNA	x	x	x	x	x	x	x	x			x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x			x	
CRW		x	x	x			x	x																					x	x	
GCK	x	x	x	x	x	x	x	x	x			x	x	x	x	x	x	x	x	x	x	x		x	x	x	x		x	x	
ICT												x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
JKL	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x			x	x	x	x	x	x	x	x	x	x	
LIC		x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	
OKC	x			x	x	x		x	x	x				x	x	x	x		x	x		x	x	x	x	x		x	x		
PIT			x	x																x	x	x						x			
TBW	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
UMN	x	x	x	x	x	x	x	x	x	x	x	x									x	x	x	x			x	x	x		

APPENDIX B

MAY 1988

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA															x	x	x	x	x	x			x	x	x	x	x	x	x	x	
BGM																															
BNA	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
CRW	x	x	x	x	x																										
GCK		x	x	x		x	x		x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x		x	x	x	x	
ICT	x	x	x	x	x	x	x	x	x	x	x	x											x	x	x	x	x	x	x	x	x
JKL	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
LIC	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
OKC		x		x		x	x	x				x	x		x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x
PIT	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				x	x	x
TBW	x	x																													
UMN	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

JUNE 1988

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	x	x																													
BGM																					*	x	x	x	x	x					
BNA	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
CRW						x			x							x	x	x	x	x	x	x	x	x	x	x			x	x	
GCK		x																													
ICT	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
JKL	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x				x	x	
LIC	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
OKC	x	x	x	x						x	x				x	x								x	x	x	x			x	
PIT	x	x	x	x	x	x	x	x	x									x	x							x	x	x	x		
TBW																										x					
UMN	x																														

* - Represents the initial starting date.

APPENDIX B

JULY 1988

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																		X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGM																		X	X	X	X	X	X	X	X	X	X	X	X	X	X
BNA																					X	X	X	X	X	X	X	X	X	X	X
CRW	X		X	X			X				X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X		X	X
GCK																							X	X		X	X	X	X	X	
ICT	X																		X	X	X	X	X	X	X	X	X	X	X	X	X
JKL	X		X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LIC																			X	X	X			X	X	X	X	X	X	X	X
OKC	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
PIT		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
TBW									X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UMN										X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

AUGUST 1988

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGM	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X	X	X	X					X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	
GCK			X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X		X	X						
ICT	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X
JKL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OKC		X	X		X	X		X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PIT	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X										
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
UMN	X	X	X	X	X			X	X	X	X	X							X			X	X	X	X	X	X	X	X	X	X

APPENDIX B

SEPTEMBER 1988

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BGM	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CRW		X	X	X	X			X	X	X	X	X	X	X		X	X	X	X	X		X	X	X		X			X	X	
GCK	X	X													X	X															
ICT	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X	
JKL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
LIC	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
OKC	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PIT																		X	X										X	X	
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
UMN																X	X	X	X	X	X	X	X	X		X	X	X	X	X	

OCTOBER 1988

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X			X	X	X	X	X	X						
BGM	X	X	X	X	X		X	X	X	X							X	X	X	X	X	X	X	X	X		X	X	X	X	X
BNA	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X		X	X	X	X
GCK																															
ICT	X				X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X			X
JKL		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OKC	X		X	X	X	X	X	X	X	X	X			X	X			X	X	X			X	X	X	X	X	X	X	X	X
PIT	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TBW	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			
UMN	X	X	X	X																											

APPENDIX B

NOVEMBER 1988

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA				X	X	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BGM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X			
BNA	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CRW	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X	X					X	X	X	X	X	
GCK										X			X	X	X	X	X		X	X	X	X									
ICT	X	X	X	X	X	X		X	X	X	X	X	X	X	X								X	X	X	X	X	X	X	X	
JKL	X	X	X	X					X	X														X	X	X	X	X	X	X	
LIC	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	
OKC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
PIT	X	X	X	X	X		X	X	X	X			X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	
TBW	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X			
UMN																															

DECEMBER 1988

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X			X	X	X	X	X	X	X	X	X	X
BGM						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
BNA	X	X	X	X	X	X		X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X	X		X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
GCK																															
ICT	X	X	X	X	X	X	X		X	X		X	X			X			X	X	X	X	X	X	X	X	X	X			X
JKL	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OKC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PIT	X	X				X	X	X	X	X	X	X	X	X					X	X	X		X	X							
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X
UMN							X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

APPENDIX B

JANUARY 1989

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X					X	X		X	X								X	X					X	X	X	X	X		X	X
BGM									X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BNA	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X
GCK										X			X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X			X	X	X	X	X	X	X
JKL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X			X	X	X	X	X	X	X
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
OKC	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PIT																															
TBW	X	X	X	X	X	X	X	X	X	X	X	X						X	X	X	X	X		X	X	X	X	X		X	X
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

FEBRUARY 1989

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA					X			X			X	X	X	X	X	X	X	X	X			X	X	X	X	X					
BGM		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X										
CRW	X	X	X			X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
GCK			X						X	X											X	X	X	X	X	X	X	X			
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X			
JKL	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LIC																											X	X			
OKC	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
PIT																															
TBW			X		X	X	X	X		X	X	X	X	X									X	X	X	X	X	X	X		
UMN		X	X																									X			

APPENDIX B

MARCH 1989

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X				X		X		X	X	X	X	X	X	X
BGM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						X	X	X		X
BNA							X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW		X	X	X	X	X		X	X				X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
GCK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ICT			X	X	X		X			X	X	X		X	X	X	X		X	X	X		X	X	X	X	X	X	X	X	X
JKL	X	X			X	X					X	X	X	X	X	X	X	X									X	X	X	X	X
LIC	X	X				X	X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OKC		X	X	X	X	X						X				X	X	X	X					X	X	X	X	X	X	X	X
PIT												X	X	X	X		X	X	X	X					X	X	X	X	X	X	X
TBW	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

APRIL 1989

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
BGM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CRW	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	
GCK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X	X		
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X		X	X	X	X	X	X	X	X	X	
JKL	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
LIC	X	X	X	X					X	X	X	X	X	X	X	X	X							X	X	X	X				
OKC						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PIT		X	X	X	X	X		X	X	X	X				X	X	X	X	X												
TBW	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X		X	X		X	X				X	X	
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	

APPENDIX B

MAY 1989

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X		X		X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
BGM	X		X						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BNA	X	X	X	X	X												X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
GCK															X	X	X	X													
ICT	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			X	X
JKL	X	X						X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
LIC										X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
OKC	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X			X			X	X	X	X	X	X	X
PIT		X	X	X	X						X			X	X	X			X	X			X		X	X	X	X	X	X	
TBW	X	X	X					X		X	X				X	X		X	X			X	X	X	X	X			X		
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		

JUNE 1989

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BGM	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X	X	
CRW	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
GCK																															
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
JKL	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	
LIC		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
OKC	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X		X	X	X	X	X	X	X				
PIT									X					X	X	X	X	X			X	X	X	X		X	X	X			
TBW						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	

APPENDIX B

JULY 1989

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X															X
BNA	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X	X	X	X	X	X	X						X	X	X	X	X	X	X	X	X	X	X	X	X	X					
GCK																															
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
JKL			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
OKC			X	X			X	X		X		X	X	X	X	X	X	X	X		X	X	X	X	X	X	X				
PIT		X	X	X	X		X	X																X	X			X	X	X	X
TBW				X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

AUGUST 1989

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X	X		X	X	X					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
GCK																															
ICT	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		
JKL																															
LIC	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
OKC				X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PIT				X	X																										
TBW									X									X	X	X	X	X	X	X	X	X	X			X	X
UMN	X	X															X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

APPENDIX B

SEPTEMBER 1989

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BGM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
BNA	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CRW	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		X	X	
GCK																															
ICT									X	X		X	X		X	X	X			X	X	X	X	X	X	X	X	X	X	X	
JKL																															
LIC	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
OKC	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X						X	X	X			
PIT					X	X	X	X	X	X	X	X		X	X	X	X	X		X			X	X	X	X					
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	
UMN	X	X	X	X	X	X	X	X	X																						

OCTOBER 1989

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGM														X	X	X	X	X													
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X		X		X							X
GCK																															
ICT		X	X	X	X	X		X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X				
JKL																															
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OKC		X				X			X	X		X	X	X		X	X	X									X	X			
PIT		X				X	X	X		X	X			X		X	X	X	X												
TBW	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
UMN																															X

APPENDIX B

NOVEMBER 1989

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	
BGM																									X		X	X	X		
BNA	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CRW	X	X	X			X	X	X						X	X	X	X	X			X	X	X	X		X	X	X	X	X	
GCK																															
ICT														X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
JKL																															
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
OKC						X		X	X	X	X									X	X	X	X	X					X	X	
PIT														X	X	X	X	X						X	X	X	X	X			
TBW		X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

DECEMBER 1989

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
BGM												X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
GCK																															
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X						X	X	X	X
JKL																															
LIC	X	X	X	X			X							X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
OKC	X	X	X	X	X	X	X					X	X	X	X	X			X			X	X	X	X	X		X	X	X	X
PIT				X	X	X	X	X			X	X	X	X	X					X	X	X	X	X	X	X	X	X	X	X	X
TBW	X	X	X	X	X	X	X	X	X												X	X	X	X	X	X	X	X	X	X	X
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X

APPENDIX B

JANUARY 1990

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA			X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
BGM	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X		X
CRW	X	X	X	X	X	X	X										X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
GCK																	X	X	X	X			X								
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	X
JKL																															
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OKC	X	X	X	X	X	X	X	X						X	X	X	X	X	X										X		X
PIT	X	X	X	X	X	X		X											X												
TBW	X	X	X	X					X		X	X	X		X	X	X	X				X	X	X	X	X			X	X	X
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

FEBRUARY 1990

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X																					
BGM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X			
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X															
CRW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
GCK			X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X							X			
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
JKL										X		X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X			
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
OKC	X	X	X	X	X		X	X	X	X	X		X	X	X	X	X	X		X	X	X	X			X	X	X			
PIT			X	X																											
TBW	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X			
UMN	X																														

APPENDIX B

MARCH 1990

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGM										X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BNA		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X
GCK		X		X	X	X	X	X	X	X				X								X	X			X	X	X		X	X
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						X	X	X	X	X	X	X	X	X
JKL	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X		X
LIC	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X
OKC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
PIT																	X	X	X	X	X					X	X		X	X	
TBW	X	X	X	X	X	X		X	X																						
UMN			X	X	X	X	X	X	X	X	X	X	X											X	X	X	X	X	X	X	

APRIL 1990

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X		X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X		X	X	X	X	
BGM	X	X	X	X	X	X	X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	
CRW	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	
GCK					X	X		X	X		X	X				X	X			X	X	X	X	X	X	X	X				
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
JKL		X	X	X	X	X	X	X	X	X	X	X	X	X	X						X	X	X	X			X	X	X	X	
LIC	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
OKC	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PIT	X			X	X	X	X	X		X	X	X	X	X	X		X	X		X	X	X						X	X	X	
TBW																															
UMN	X	X	X						X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X					

APPENDIX B

MAY 1990

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGM			X	X	X																										
BNA	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X
CRW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
GCK																															
ICT	X	X	X	X	X																			X	X	X	X	X	X	X	X
JKL		X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
LIC	X	X	X	X	X	X	X	X	X								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OKC	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X
PIT															X	X									X	X	X	X	X		X
TBW																					X	X	X	X	X	X	X	X	X	X	X
UMN								X	X	X	X	X	X	X	X	X					X	X							X	X	X

JUNE 1990

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X	X			X	X									
BGM																												X	X	X	
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	
CRW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
GCK																															
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
JKL	X	X	X	X	X	X	X	X																				X	X	X	
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
OKC	X															X	X		X	X	X	X	X	X	X	X	X	X	X	X	
PIT	X		X	X	X	X		X	X						X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	
TBW	X	X	X	X	X						X	X	X		X	X	X	X	X							X	X	X			
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					

APPENDIX B

JULY 1990

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA									X	X	X					X	X	X	X		X	X	X	X	X	X	X	X	X		X
BGM	X		X	X	X	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
BNA	X	X	X	X	X	X	X		X	X	X	X	X	X			X	X	X	X	X	X	X					X		X	X
CRW	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
GCK																															
ICT		X	X	X	X			X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
JKL	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X		X
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OKC	X	X	X	X	X			X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PIT	X	X	X	X	X	X		X	X	X	X				X	X		X	X	X	X	X	X	X	X	X			X	X	X
TBW	X	X	X	X	X	X	X	X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X		X
UMN					X					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

AUGUST 1990

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							X
BGM	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
BNA		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
GCK																															
ICT	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
JKL	X	X	X		X	X		X	X														X	X	X	X	X	X	X		
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
OKC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X		X	X	X
PIT	X	X	X	X	X	X	X	X				X	X					X	X	X	X	X	X	X	X	X			X		
TBW			X	X	X	X	X	X	X	X	X	X	X	X	X														X	X	X
UMN	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

APPENDIX B

SEPTEMBER 1990

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA		X	X	X	X	X	X	X																							
BGM							X	X	X	X	X	X	X	X	X	X	X	X	X		X	X				X	X	X	X	X	
BNA	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CRW	X	X	X	X	X	X	X	X	X	X	X	X	X						X		X	X	X	X		X	X	X	X	X	
GCK																															
ICT	X		X	X	X		X		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
JKL							X	X	X	X	X	X	X								X	X		X	X		X	X	X		
LIC	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	
OKC		X	X	X		X	X	X		X	X		X			X	X	X	X	X	X			X	X	X	X	X	X	X	
PIT								X	X			X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	
TBW	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
UMN	X												X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	

OCTOBER 1990

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X			
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X						
CRW	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X			X	X								
GCK																															
ICT	X	X	X	X	X																										
JKL	X	X	X																												
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
OKC	X	X	X	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X			X	X	X	X			
PIT				X			X	X		X	X	X		X	X	X	X	X	X	X	X	X	X			X	X	X			
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

APPENDIX B

NOVEMBER 1990

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	
BGM																													X		
BNA									X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRW									X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
GCK																															
ICT																	X			X	X	X	X	X	X	X	X	X	X	X	
JKL														X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	
LIC																								X	X	X	X	X	X	X	
OKC		X	X	X	X	X	X	X	X	X	X	X	X					X	X	X	X	X	X			X	X	X		X	
PIT			X	X	X	X	X	X	X	X	X	X					X	X	X		X	X					X		X	X	
TBW	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	
UMN	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	

DECEMBER 1990

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X		X
BGM																					X		X	X	X	X	X	X	X		
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X
CRW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
GCK																															
ICT		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	
JKL	X		X	X	X	X	X	X	X	X	X	X	X	X						X	X	X	X			X	X	X	X		
LIC	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OKC	X	X		X	X	X	X					X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	
PIT			X			X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TBW	X			X	X	X	X	X	X	X	X	X											X	X			X	X	X	X	X
UMN	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

APPENDIX B

JANUARY 1991

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X					X	X	X	X	X			X	X	X
BGM	X	X	X				X	X	X					X	X							X	X	X	X	X	X	X	X	X	
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW		X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
GCK																															
ICT																							X	X	X	X	X	X	X	X	X
JKL				X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X					X	X	X	X	X	X
LIC	X	X	X	X	X		X	X	X	X	X	X	X	X	X			X	X	X		X	X	X	X	X				X	X
OKC		X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X										
PIT	X	X	X	X	X	X		X	X	X	X	X	X			X	X		X	X	X			X	X	X	X	X	X	X	X
TBW	X	X		X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		X
UMN												X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X		

FEBRUARY 1991

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
BGM										X	X	X	X	X			X	X	X	X	X	X			X	X	X				
BNA	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X	X	X	X			
GCK																															
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
JKL	X			X	X	X	X															X	X	X							
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
OKC	X	X	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X	X	X			X			
PIT	X	X	X		X	X	X	X		X	X	X	X	X	X			X	X	X	X	X		X	X	X	X	X			
TBW			X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
UMN	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X								X	X	X	X	X			

APPENDIX B

MARCH 1991

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
BGM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X	
BNA	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X		X	X	X	X	X	X	X
GCK																															
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
JKL					X	X	X						X		X	X	X				X	X	X					X	X	X	X
LIC																											X	X			
OKC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
PIT	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X						X	X			
TBW	X	X	X	X	X	X	X	X																							
UMN	X	X	X			X	X	X	X	X		X	X	X	X	X	X			X	X	X	X		X	X	X		X		

APRIL 1991

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BGM	X										X	X	X		X	X	X	X	X	X	X	X		X	X	X	X	X	X		
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CRW	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X		X	X	X	X	X		X	X	
GCK																															
ICT	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
JKL				X	X	X	X	X	X							X	X	X	X			X	X		X	X	X	X	X	X	
LIC				X	X	X	X	X	X	X	X	X																		X	
OKC	X	X	X		X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	
PIT	X	X	X																X	X											
TBW					X	X	X	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	
UMN			X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

APPENDIX B

MAY 1991

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BGM														X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
GCK																															
ICT	X													X	X	X	X	X	X	X	X	X	X	X	X	X	X				
JKL	X	X	X	X	X	X	X		X																						
LIC	X	X	X	X	X		X	X	X		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X		X
OKC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
PIT					X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TBW	X	X	X	X	X	X		X	X	X		X	X	X	X	X	X	X	X	X	X			X		X	X	X	X	X	X
UMN	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

JUNE 1991

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BGM	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X			
BNA	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	
CRW	X	X	X		X					X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	
GCK																															
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
JKL																															
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
OKC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PIT	X	X							X	X																				X	
TBW	X	X	X	X	X	X	X	X	X	X	X		X	X			X	X	X				X	X	X	X	X	X	X	X	
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X		X		X	X					X	X		

APPENDIX B

JULY 1991

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X			X	X	X	X	X	X				X	X	X		X	X	X	X	X	X	X	X	X	X	
BGM					X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X
CRW	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
GCK																															
ICT	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
JKL																															
LIC	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OKC	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PIT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X
UMN	X	X	X	X	X					X	X	X	X	X		X	X	X	X	X	X	X	X	X	X		X	X	X		X

AUGUST 1991

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM	X	X	X	X		X							X	X	X	X	X	X	X			X	X	X	X					X	X
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CRW	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
GCK																															
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
JKL									X	X	X				X				X		X	X	X	X	X	X	X	X	X	X	
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OKC	X	X	X	X	X	X		X	X	X	X	X	X			X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
PIT	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UMN	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X

APPENDIX B

SEPTEMBER 1991

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																															
BGM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X	
BNA																			X	X	X	X	X	X	X	X	X	X	X	X	
CRW	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		
GCK																															
ICT	X	X	X	X	X									X	X	X	X	X													
JKL			X	X	X	X	X	X	X	X		X	X					X	X	X	X	X	X	X	X		X	X	X	X	
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	
OKC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
PIT		X	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X		X		X	X					
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
UMN	X	X	X	X	X	X	X	X		X	X	X	X																		

OCTOBER 1991

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA																								X	X	X	X	X	X	X	X
BGM	X	X	X	X	X	X											X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X				X	X	X	X	X	X	X	X	X
GCK																															
ICT				X	X	X	X	X	X	X	X		X	X	X	X							X	X	X	X	X	X			X
JKL	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
LIC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						X	X		X	X	X	X	X	X	X	X
OKC	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X		X	X	X	
PIT										X	X			X	X	X															
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UMN																															

APPENDIX B

NOVEMBER 1991

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BGM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BNA	X		X	X	X	X	X					X	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	
CRW	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	
GCK																															
ICT			X				X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X							
JKL	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
LIC	X	X			X	X	X			X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
OKC					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PIT	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
TBW	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	
UMN																															

DECEMBER 1991

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X											X	X	X	X	X	X	X	X	X	X	X	X		X	X
BGM	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X			X						X	X	X		X
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X		X
CRW	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X				X	X		X	X	X	X	X	X
GCK																															
ICT			X								X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X
JKL	X	X	X	X								X	X	X	X																
LIC	X	X	X					X			X	X	X					X	X	X		X	X			X	X				X
OKC	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X	X	X	X	X	X	X	X	X	X			X
PIT		X	X	X		X	X	X	X	X		X	X	X		X	X						X		X	X	X	X	X	X	X
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UMN																															

APPENDIX B

JANUARY 1992

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BGM		X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BNA	X	X	X																						X		X	X	X	X	X
CRW	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
GCK																															
ICT	X	X	X	X	X	X																					X	X	X	X	X
JKL																															
LIC	X	X		X	X		X	X				X	X	X	X		X	X													
OKC	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X			X
PIT			X				X	X	X	X			X	X	X	X	X	X	X	X											
TBW	X	X	X	X	X	X	X	X	X	X	X		X	X					X	X	X	X	X	X			X	X	X	X	X
UMN																					X	X					X	X			

FEBRUARY 1992

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		
BGM			X	X	X	X	X	X	X			X	X	X	X	X	X	X	X		X						X	X	X		
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		
CRW	X	X		X	X	X	X	X	X		X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X		
GCK																															
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
JKL																															
LIC									X		X	X	X	X		X	X				X		X	X	X						
OKC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
PIT											X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		

APPENDIX B

MARCH 1992

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x		x
BGM	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
BNA	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x
CRW			x	x		x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x						
GCK																															
ICT				x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x
JKL																															
LIC				x	x																										
OKC	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
PIT						x	x	x	x	x	x	x	x	x			x	x	x	x			x	x			x	x	x	x	x
TBW	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
UMN	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

APRIL 1992

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				x	
BGM	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	x	
BNA	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x						
CRW	x	x	x	x	x		x	x	x		x	x	x	x	x	x		x	x	x	x	x	x	x		x	x	x	x	x	
GCK																															
ICT	x	x	x	x	x	x	x	x	x	x	x	x			x	x			x	x	x	x	x	x	x	x	x	x	x	x	
JKL																															
LIC										x	x	x	x	x	x	x	x	x	x	x	x	x	x								
OKC	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
PIT							x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
TBW	x		x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
UMN	x	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	

APPENDIX B

MAY 1992

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X													
BNA												X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X	X	X	X	X	X																									
GCK																															
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
JKL																															
LIC		X																													
OKC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X
PIT	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X

JUNE 1992

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X							X	X	X	X	X	X	X	X	X			X	
BGM					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CRW					X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	
GCK																															
ICT	X	X	X	X	X	X	X	X		X											X	X	X	X	X	X	X	X	X	X	
JKL																															
LIC																															
OKC	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PIT										X	X	X	X	X									X	X			X	X	X	X	
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
UMN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X												

APPENDIX B

JULY 1992

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					X	X	X	X	X	X	X		X	X	X	X
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRW	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
GCK																															
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X															X	X
JKL																															
LIC																X	X					X	X	X	X	X	X	X	X	X	X
OKC		X	X	X	X	X	X	X																							
PIT	X		X	X	X	X		X	X	X	X	X	X	X	X						X	X	X								
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UMN																															

AUGUST 1992

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BGM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X
BNA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
CRW			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
GCK																															
ICT	X	X	X	X	X		X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
JKL																															
LIC	X	X	X	X	X	X			X	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	
OKC					X						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X
PIT				X	X	X	X																				X	X	X	X	X
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
UMN																															

APPENDIX B

SEPTEMBER 1992

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
AMA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
BGM	X	X	X	X	X	X	X	X	X	X	X	X			X	X		X	X	X	X	X									
BNA	X	X	X	X				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X	X	X	X	X	
CRW		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X				X	X	X	X			
GCK																															
ICT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X									
JKL																		X	X	X	X	X	X		X	X	X	X	X	X	
LIC	X			X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
OKC	X	X	X	X	X	X	X	X	X	X							X	X	X	X	X	X	X	X	X	X	X			X	
PIT	X	X	X	X	X	X	X	X	X																						
TBW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X									
UMN																															