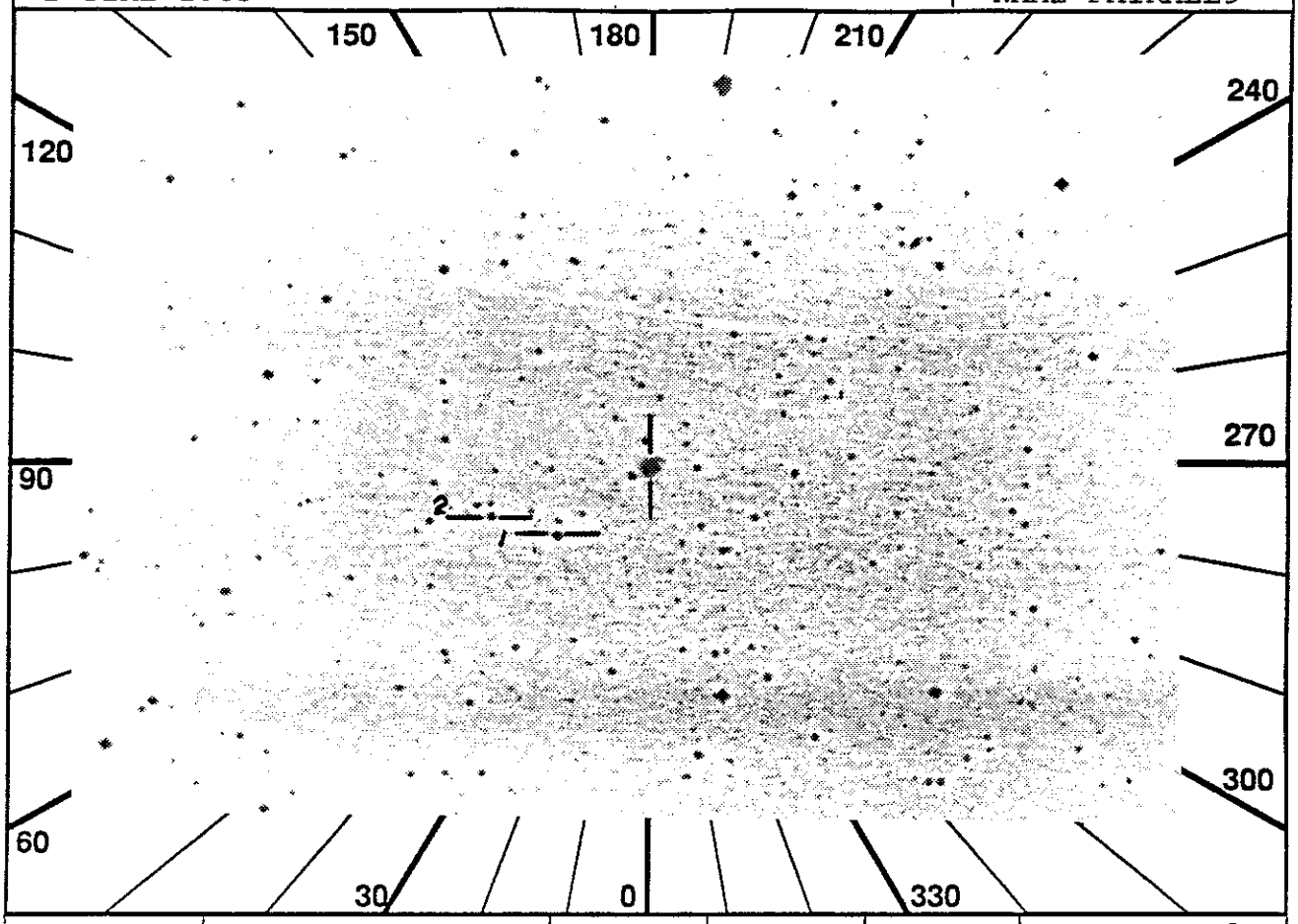
1 RA 20.4634 DEC -59.0664 ROLL 107.03	ID 8102-11
2 TIME 1863	NAME FAIRALL9



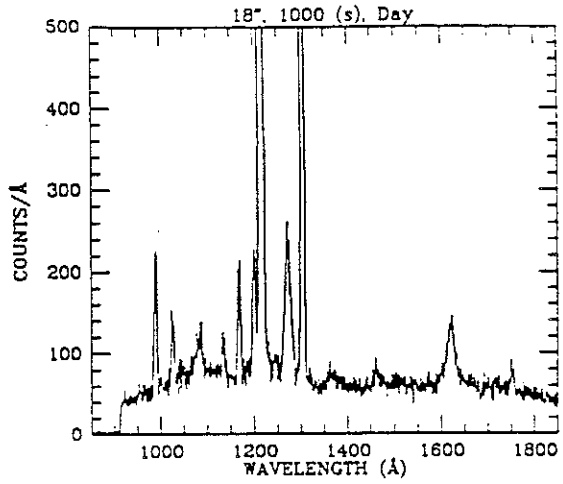
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 76	src sim 14 15 3.4 5	7 4 ---	- - ---	- - ---	
4	W 256	ncn ngd 13 11 1.0	2 2 60	2 2 ---	-- - ---	FNTLOC BKG1
5	U 246	DT - T F 31 a5 31 b5	- - - - - -			

```
 6    JAC ITEM 16_0                    20        All BEGIN
 7        Config H W U                 21 W      *IF WUP Deconfig
 8        ------------------------     22 W      *  WUP ITEM 11_F_+1
 9    JAC All SETUP                    23 W      *  Cur/ITEM 6 in fld, zm
10 W      Chk Stat  -LOC -CUR RDY      24 W      * WUP ITEM 4  (Cur off)
11        IMC BEGIN                    25 W      * WUP ITEM 7  (Begin)
12        HUT ITEM 5                   26 W      * Config with WUP
13 W      WUP tgt= HUT faint star      27 W      NOTE: WUP 1st seq = BKG
14 W      *IF WUP target visible       28    JOB Observe
15 W      * WUP PFK cur to target      29    JAC All PREVIEW
16 W      * WUP ITEM 6  (Cntr)         30        All QUIT
17 W      * WUP ITEM 4  (Cur off)      31        ------------------------
18 W      *ELSE                        32    JAC ITEM 16_1
19 W      * Config without WUP
```

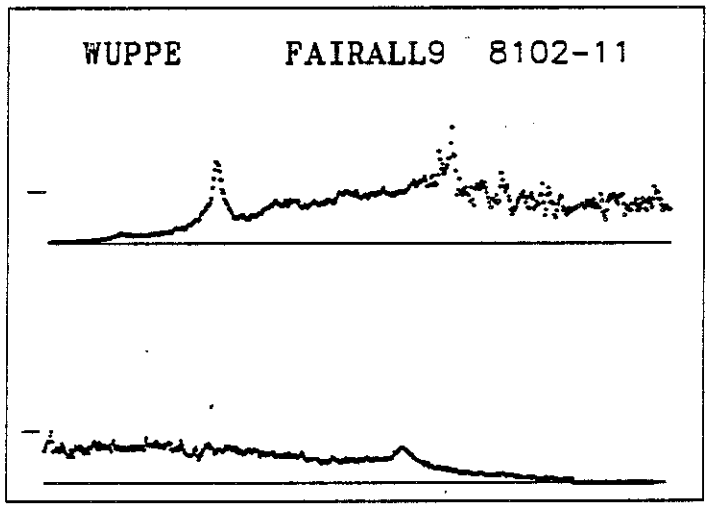
Seyfert nuc.

1

OBJECT: FAIRALL 9
KEYWORDS: Seyfert 1
COMMENTS:
Z = 0.0461

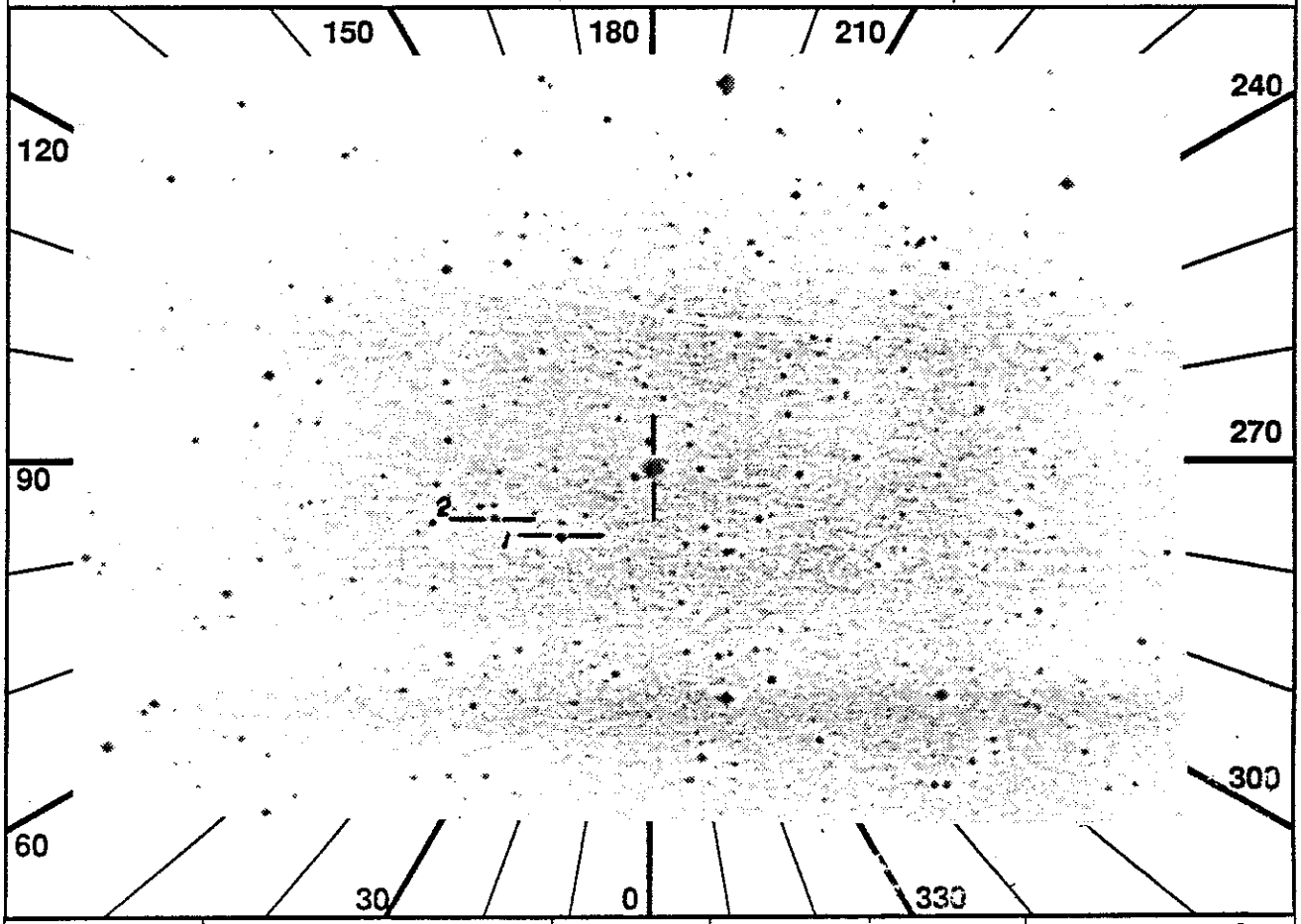


ID: 8102-11
Names: FAIRALL9
Type: Seyfert
% Pol: 0.40
Pol Var:
Pos Ang: 2.4
Mechanism: foreground dust?
Comments: little known about polarization; may be too faint for WUPPE; first seq is offset to obtain bkgd. Co-pointing with BBXRT.



UIT
Observation Description

1 RA 20.4634 DEC -59.0664 ROLL 107.03	ID 8102-12
2 TIME 1367	NAME FAIRALL9



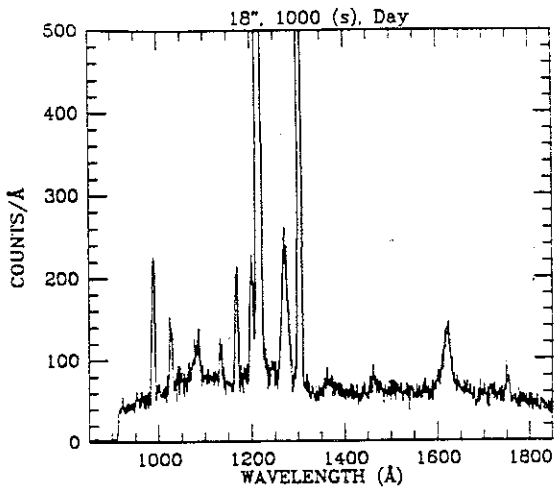
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 215	src sim 14 15 3.4 5	7 4 ---	- - ---	- - ---	SAA AC
4	W 256	ncn ngd 13 11 1.0	2 2 60	2 2 ---	-- - ---	FNTLOC BKG1
5	U 247	DT - T F 31 a2 31 a4	- - - - - -			

```
 6 H -   VIP ON until SAA exit
 7   JAC Config H W U
 8       ------------------------
 9 H -   Note: Acquisition in SAA
10   JAC All SETUP
11 J     Chk  Stat -    -CUR RDY
12 H TV  Verify HUT acq on TV
13   JAC IMC BEGIN
14       HUT ITEM 5
15 W     WUP tgt= HUT faint star
16 W     *IF WUP target visible
17 W     * WUP PFK cur to target
18 W     * WUP ITEM 6  (Cntr)
19 W     * WUP ITEM 4  (Cur off)
20 W     *ELSE
21 W     * Config without WUP
22 H -   After SAA exit
23 H JAC ITEM 16_0
24 H     HUT SETUP
25 H     Chk HUT Stat -LOC
26       All BEGIN
27 W     *IF WUP Deconfig
28 W     *  WUP ITEM 11 F +1
29 W     *  Cur/ITEM 6 In fld, zm
30 W     * WUP ITEM 4  (Cur off)
31 W     * WUP ITEM 7  (Begin)
32 W     * Config with WUP
33 W     NOTE: WUP 1st seq = BKG
34   JOB Observe
35   JAC All PREVIEW
36       All QUIT
37       ------------------------
38   JAC ITEM 16_1
```

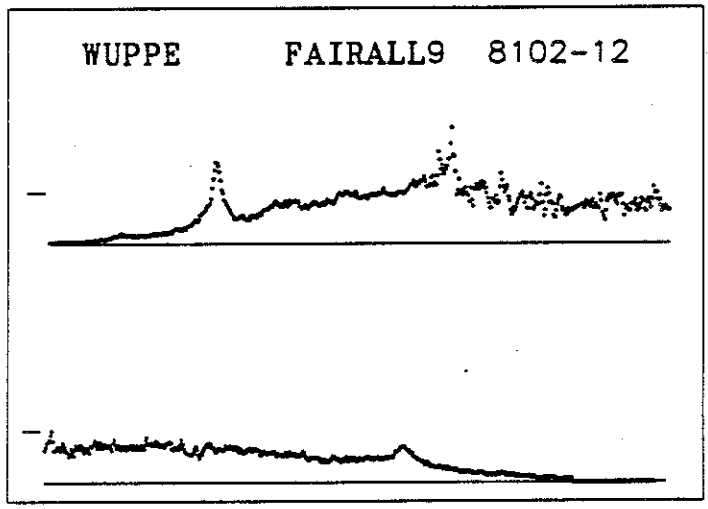
Seyfert nuc.

1

OBJECT: FAIRALL 9
KEYWORDS: Seyfert 1
COMMENTS:
Z = 0.0461



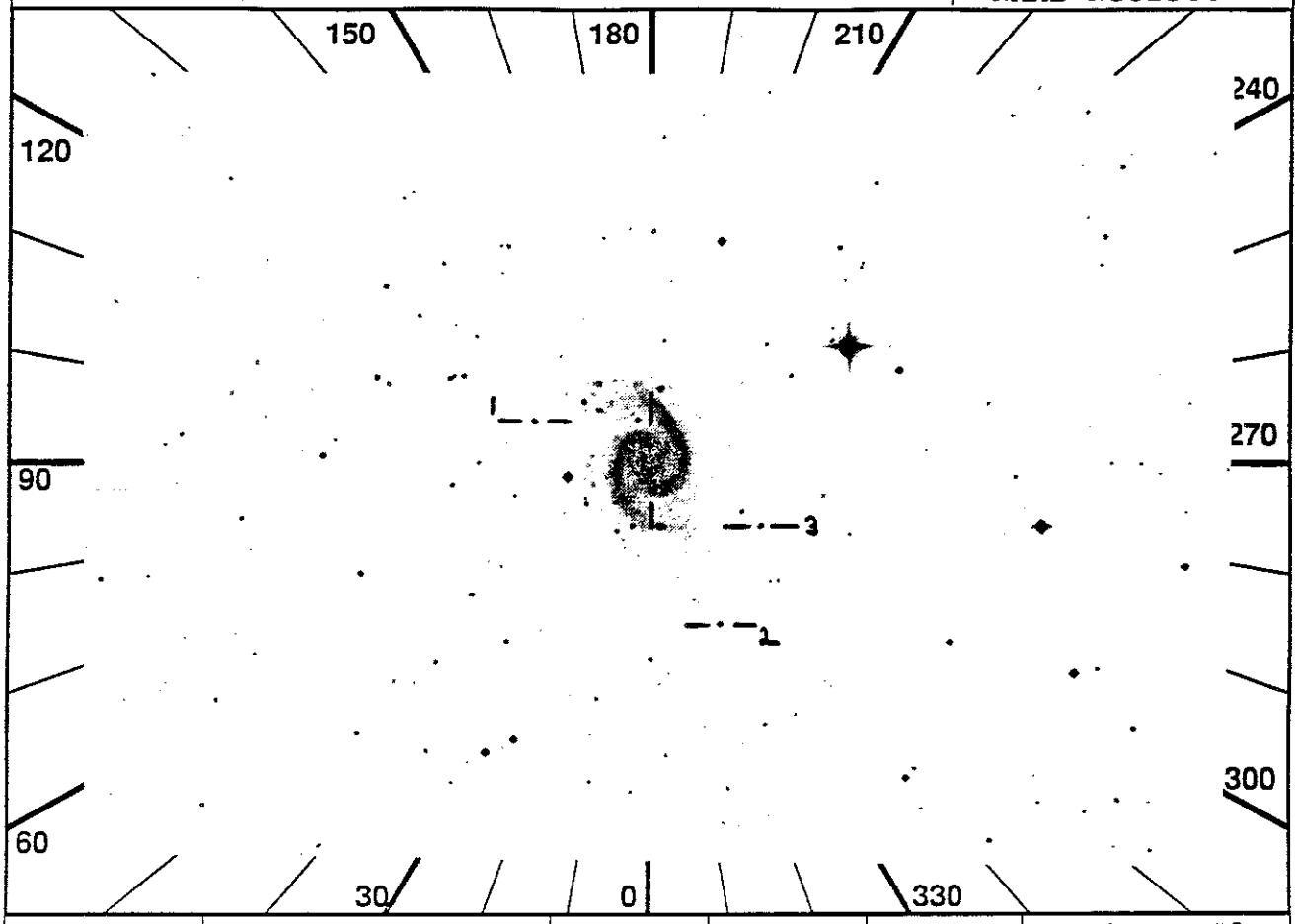
ID: 8102-12
Names: FAIRALL9
Type: Seyfert
% Pol: 0.40
Pol Var:
Pos Ang: 2.4
Mechanism: foreground dust?
Comments: little known about polarization; may be too faint for WUPPE; first seq is offset to obtain bkgd. Co-pointing with BBXRT.



UIT
Observation Description

1 RA 64.7221 DEC -55.0564 ROLL 121.43 | ID 8106-10

2 TIME 1235 | NAME NGC1566



	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	H 217	src sim 14 14 3.2 5	7 4 ---	- - ---	- - ---	SAA AC
4	W 257	ncn ngd 13 15 1.0	2 2 60	2 2 ---	-- - ---	FNTLOC BKG1
5	P U 213	DT - T F 31 a2 31 a5 31 b5		- - - -		AST4SC

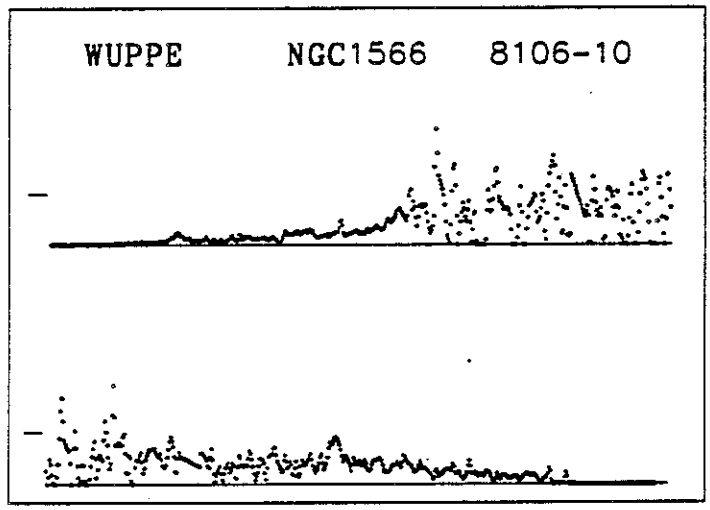
6	I		CMD WRI 3900	25	H	-	After SAA exit
7	I		F007F0010FA0 (4s upd)	26	H	JAC	ITEM 16 0
8	I	IMC	Chk AST WAC incr once/4s	27	H		HUT SETUP
9	H	-	VIP ON until SAA exit	28	H		Chk HUT Stat -LOC
10		JAC	Config H W U	29			All BEGIN
11			----------	30	W		*IF WUP Deconfig
12	H	-	Note: Acquisition in SAA	31	W		* WUP ITEM 11 F +1
13		JAC	All SETUP	32	W		* Cur/ITEM 6 In fld, zm
14	J		Chk Stat - -CUR RDY	33	W		* WUP ITEM 4 (Cur off)
15	H	TV	Verify HUT acq on TV	34	W		* WUP ITEM 7 (Begin)
16		JAC	IMC BEGIN	35	W		* Config with WUP
17			HUT ITEM 5	36	W		NOTE: WUP 1st seq = BKG
18	W		WUP tgt= HUT faint star	37		JOB	Observe
19	W		*IF WUP target visible	38		JAC	All PREVIEW
20	W		* WUP PFK cur to target	39			All QUIT
21	W		* WUP ITEM 6 (Cntr)	40			----------
22	W		* WUP ITEM 4 (Cur off)	41		JAC	ITEM 16 1
23	W		*ELSE	42	I		CMD ISS 3908 (1s upd)
24	W		* Config without WUP				

nucleus (faint Seyfert)
2

Spectrum Not Available

HUT
Spectrum and Observation Description

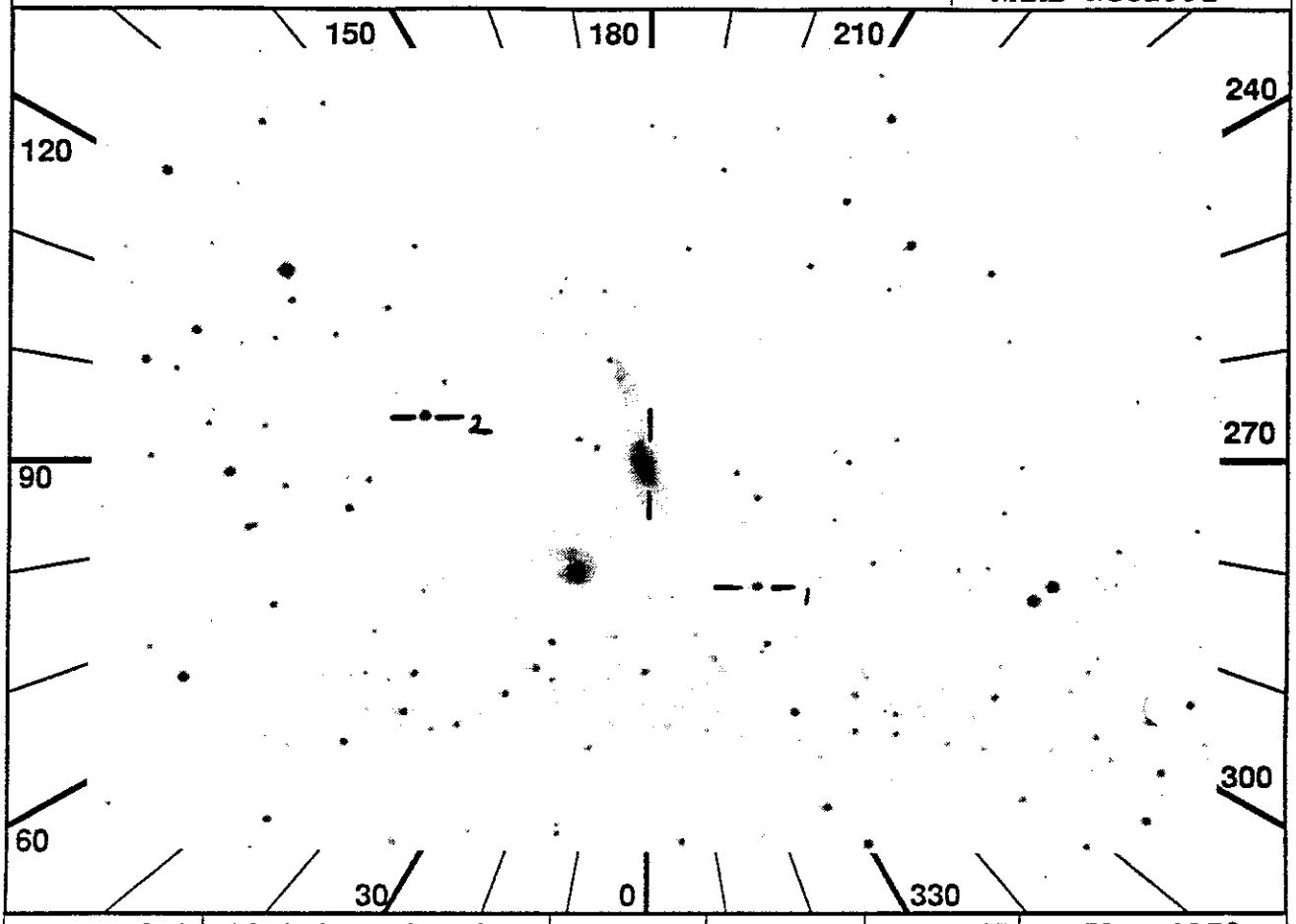
ID: 8106-10
Names: NGC1566
Type: Seyfert
% Pol: 0.60
Pol Var:
Pos Ang: 52.6
Mechanism: foreground dust?
Comments: little known about pol; may be too faint for WUPPE; first seq is offset to obtain bkgd.



UIT
Observation Description

1 RA 145.8208 DEC -14.0967 ROLL 200.42 | ID 8113-11

2 TIME 1054 | NAME NGC2992



	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	H 123	src sim 14 14 3.2 5	7 4 ---	- - ---	- - ---	SAA AC
4	W 258	ncn ngd 14 15 1.0	2 2 60	2 2 ---	-- - ---	FNTLOC BKG1
5	S U 246	DT - T F 31 a5 31 b5		- - - - - -		

```
 6 H -   VIP ON until SAA exit
 7   JAC Config H W U
 8       ------------------------
 9 H -   Note: Acquisition in SAA
10   JAC All SETUP
11 J     Chk  Stat -    -CUR RDY
12 H TV  Verify HUT acq on TV
13   JAC IMC BEGIN
14       HUT ITEM 5
15 W     WUP tgt= HUT faint star
16 W     *IF WUP target visible
17 W     * WUP PFK cur to target
18 W     * WUP ITEM 6  (Cntr)
19 W     * WUP ITEM 4  (Cur off)
20 W     *ELSE
21 W     * Config without WUP
22 H -   After SAA exit
23 H JAC ITEM 16_0
24 H     HUT SETUP
25 H     Chk HUT Stat -LOC
26       All BEGIN
27 W     *IF WUP Deconfig
28 W     *  WUP ITEM 11_F_+1
29 W     *  Cur/ITEM 6 in fld, zm
30 W     * WUP ITEM 4  (Cur off)
31 W     * WUP ITEM 7  (Begin)
32 W     * Config with WUP
33 W     NOTE: WUP 1st seq = BKG
34   JOB Observe
35   JAC All PREVIEW
36       All QUIT
37       ------------------------
38   JAC ITEM 16_1
```

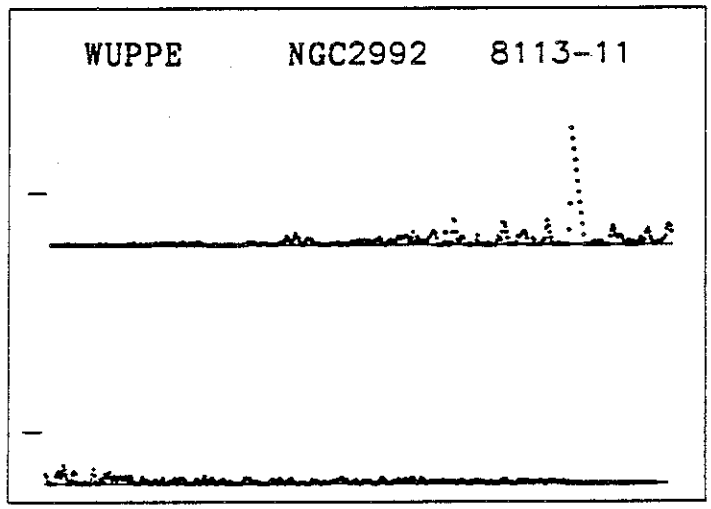
large extinction Seyfert - not centered on nucleus

3

Spectrum Not Available

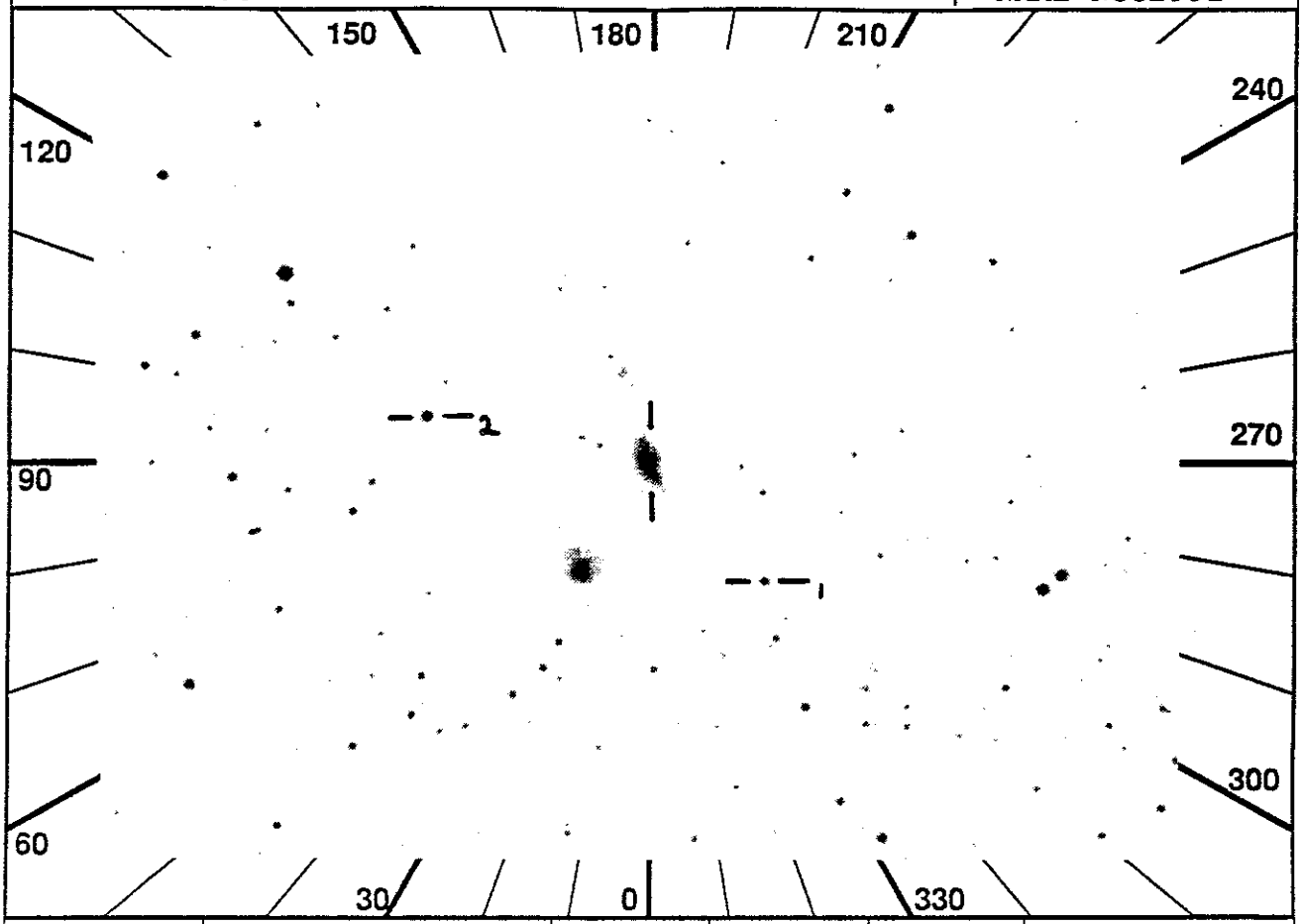
HUT
Spectrum and Observation Description

ID: 8113-11
Names: NGC2992 A245
Type: Seyfert
% Pol: 3.32
Pol Var:
Pos Ang: 33.3
Mechanism: foreground dust?
Comments: little known about pol; may be too faint for WUPPE; first seq is offset to obtain bkgd.



UIT
Observation Description

1 RA 145.8208 DEC -14.0967 ROLL 200.42	ID 8113-12
2 TIME 666	NAME NGC2992



	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	H 134	src sim 14 14 3.2 5	7 4 ---	- - ---	- - ---	
4	W 258	ncn ngd 14 15 1.0	2 2 60	2 2 ---	-- - ---	FNTLOC BKG1
5	P U 247	DT - T F 31 a2 31 a4	- -	- -	- -	

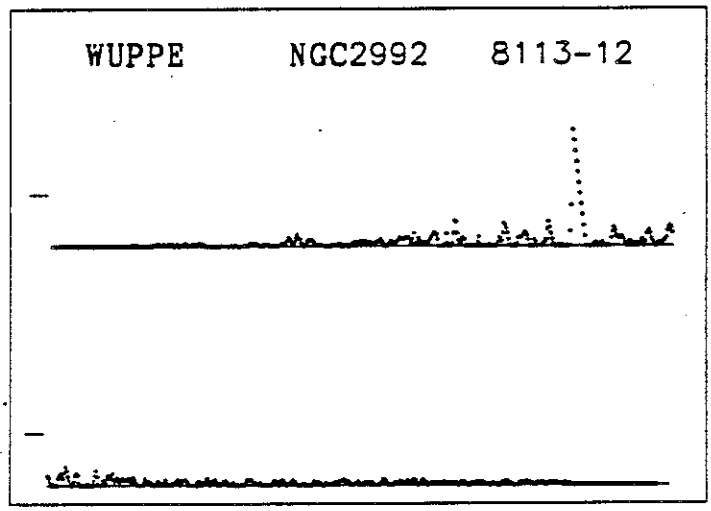
```
 6    JAC ITEM 16_0                    20        All BEGIN
 7        Config H W U                 21 W      *IF WUP Deconfig
 8        ------------------------     22 W      *  WUP ITEM 11_F_+1
 9    JAC All SETUP                    23 W      *  Cur/ITEM 6 in fld, zm
10 W      Chk Stat  -LOC -CUR RDY      24 W      * WUP ITEM 4  (Cur off)
11        IMC BEGIN                    25 W      * WUP ITEM 7  (Begin)
12        HUT ITEM 5                   26 W      * Config with WUP
13 W      WUP tgt= HUT faint star      27 W      NOTE: WUP 1st seq = BKG
14 W      *IF WUP target visible       28    JOB Observe
15 W      * WUP PFK cur to target      29    JAC All PREVIEW
16 W      * WUP ITEM 6  (Cntr)         30        All QUIT
17 W      * WUP ITEM 4  (Cur off)      31        ------------------------
18 W      *ELSE                        32    JAC ITEM 16_1
19 W      * Config without WUP
```

3

Spectrum Not Available

HUT
Spectrum and Observation Description

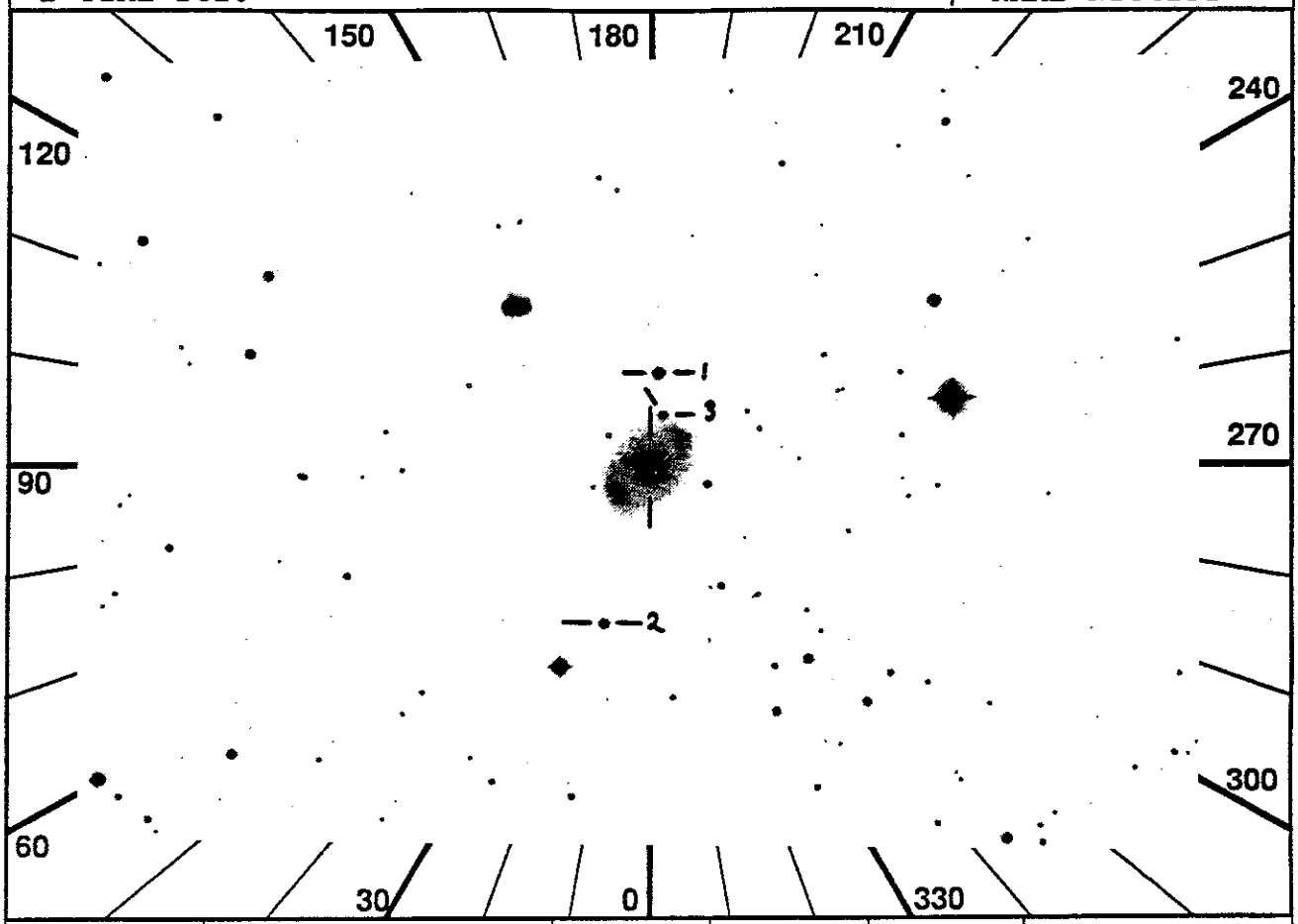
ID: 8113-12
Names: NGC2992 A245
Type: Seyfert
% Pol: 3.32
Pol Var:
Pos Ang: 33.3
Mechanism: foreground dust?
Comments: little known about pol; may be too faint for WUPPE; first seq is offset to obtain bkgd.



UIT
Observation Description

1 RA 182.0044 DEC 39.6839 ROLL 277.00 | ID 8116-11

2 TIME 2620 | NAME NGC4151

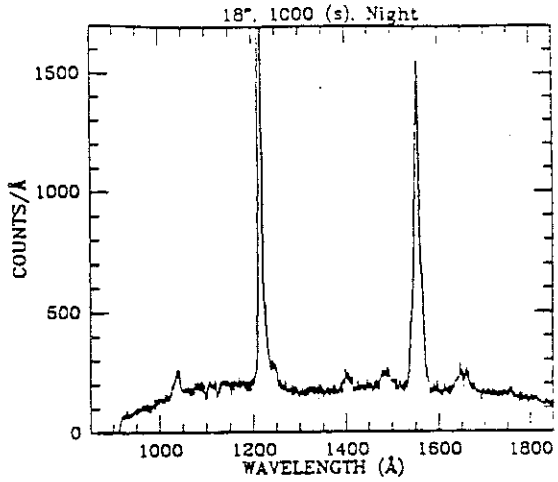


	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 67	src sim 12 14 3.5 5	7 4 ---	- - ---	- - ---	
4	W 259	aut ngd 11 10 1.0	7 4 120	2 6 ---	-- - ---	BKG1 DFLD
5	U 231	DT -	T F 156 b5 156 a1 156 b1 16 b6 - -			LTSTRT

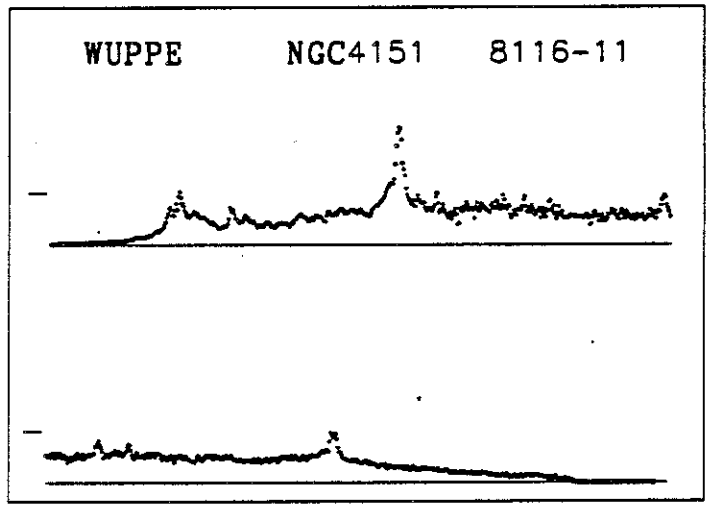
6		JAC ITEM 16_0	16			All BEGIN
7		Config H W U	17	W		NOTE: WUP 1st seq = BKG
8		----------	18	U	JOB	Wait for TIME AVAIL 2184
9		JAC All SETUP	19	U		UIT BEGIN
10		Chk Stat -LOC -LOC RDY	20	U	JAC	Config with UIT
11		IMC BEGIN	21		JOB	Observe
12		HUT ITEM 5	22		JAC	All PREVIEW
13	W	WUP ITEM 11_DF	23			All QUIT
14	W	WUP wait CAM MODE ZOOM	24			----------
15	U	Config without UIT	25		JAC	ITEM 16_1

Seyfert nucleus

OBJECT: NGC4151
KEYWORDS: Seyfert 1.5
COMMENTS:
Z = 0.0033

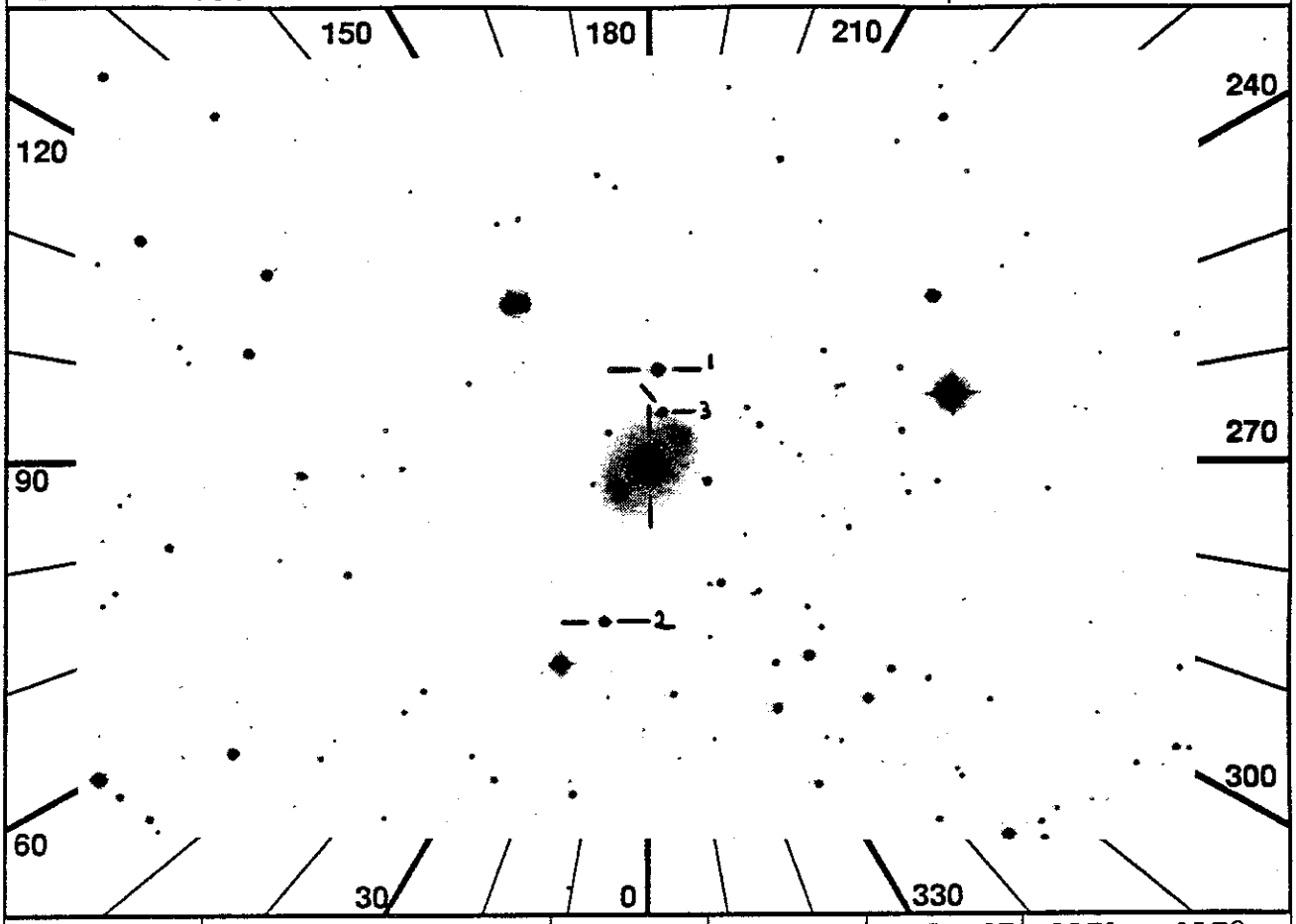


ID: 8116-11
Names: NGC4151
Type: Seyfert I
% Pol: 0.26
Pol Var: yes
Pos Ang: 63.0
Mechanism: non-thermal?
Comments: well-studied pol; strong em line at ~1700; try half-wave obs; first ptg - should obtain DFLD; first seq is offset to obtain bkgd; continuum pol rises toward blue. Co-pointing with BBXRT.



UIT
Observation Description

1 RA 182.0044 DEC 39.6839 ROLL 277.00	ID 8116-12
2 TIME 1056	NAME NGC4151



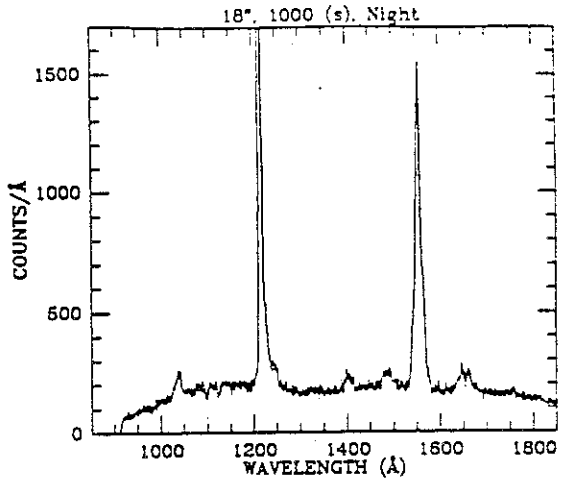
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 83	src sim 12 14 3.5 5	7 4 ---	- - ---	- - ---	
4	W 259	aut ngd 11 10 1.0	7 4 120	2 6 ---	-- - ---	BKG1
5	U 247	DT - T F 31 a2 31 a4	- - - - - -			

```
 6   JAC ITEM 16_0                    13       All BEGIN
 7       Config H W U                 14 W     NOTE: WUP 1st seq = BKG
 8       ------------------------     15   JOB Observe
 9   JAC All SETUP                    16   JAC All PREVIEW
10       Chk Stat  -LOC -LOC RDY      17       All QUIT
11       IMC BEGIN                    18       ------------------------
12       HUT ITEM 5                   19   JAC ITEM 16_1
```

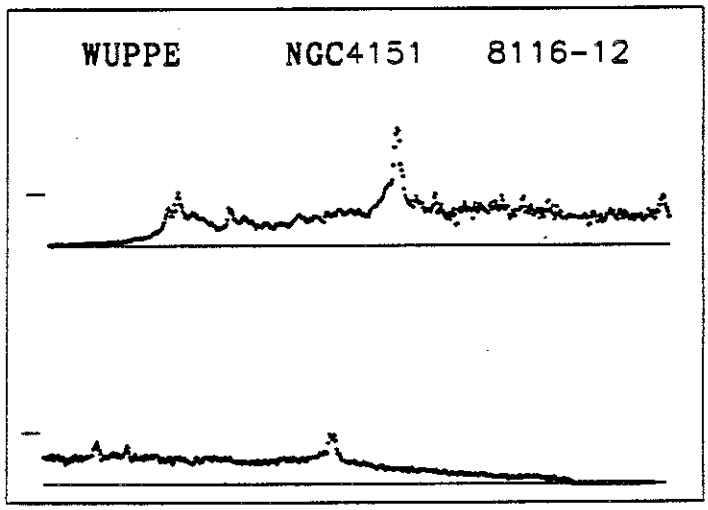
Seyfert nuc

1

OBJECT: NGC4151
KEYWORDS: Seyfert 1.5
COMMENTS:
Z = 0.0033

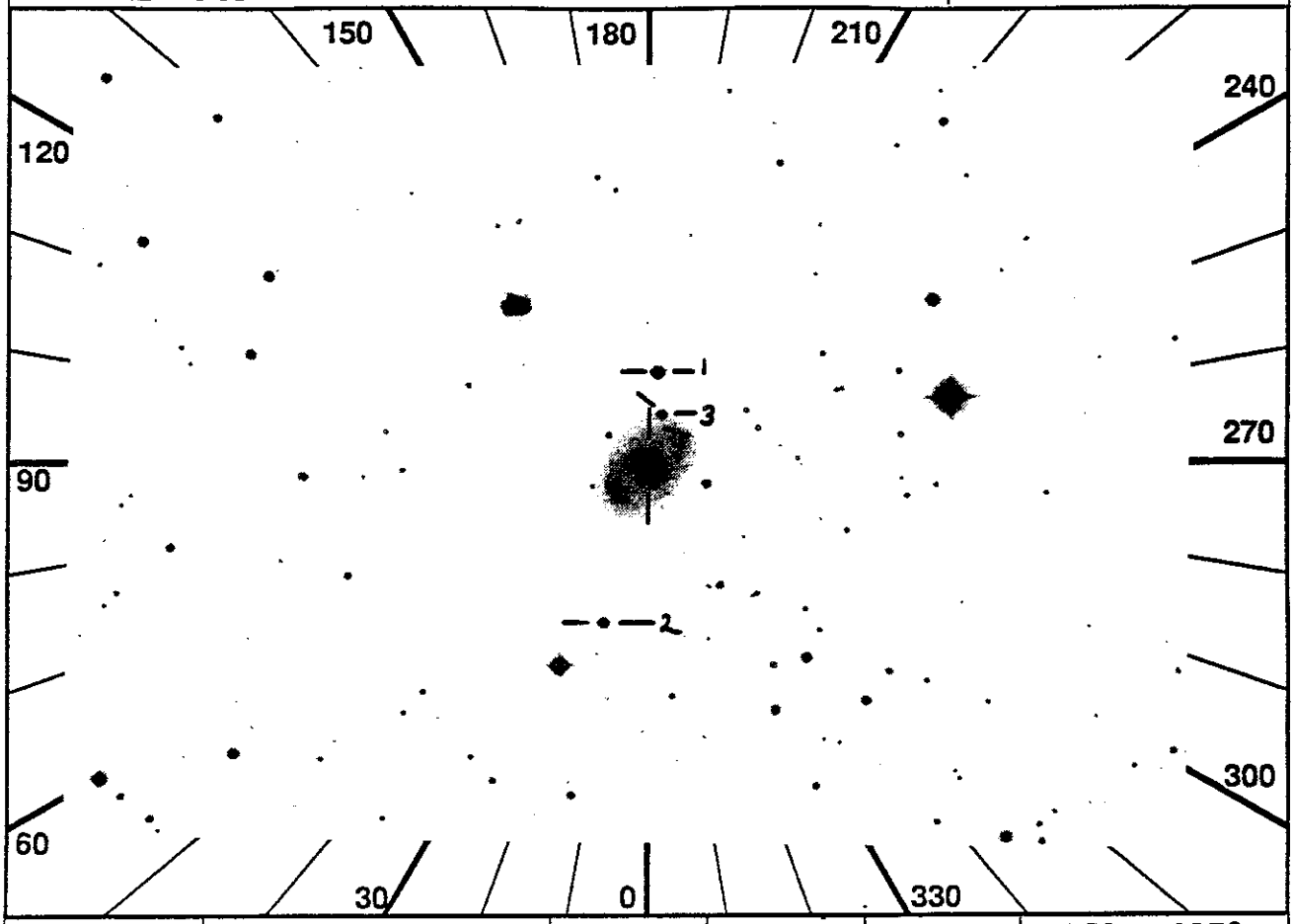


ID: 8116-12
Names: NGC4151
Type: Seyfert I
% Pol: 0.26
Pol Var: yes
Pos Ang: 63.0
Mechanism: non-thermal?
Comments: well-studied pol; strong em line at ~1700; try half-wave obs; second ptg - obtain DFLD if not done on first pointing; first seq is offset to obtain bkgd; continuum pol rises toward blue. Co-pointing with BBXRT.



UIT
Observation Description

1 RA 182.0044 DEC 39.6839 ROLL 114.36	ID 8116-30
2 TIME 945	NAME NGC4151



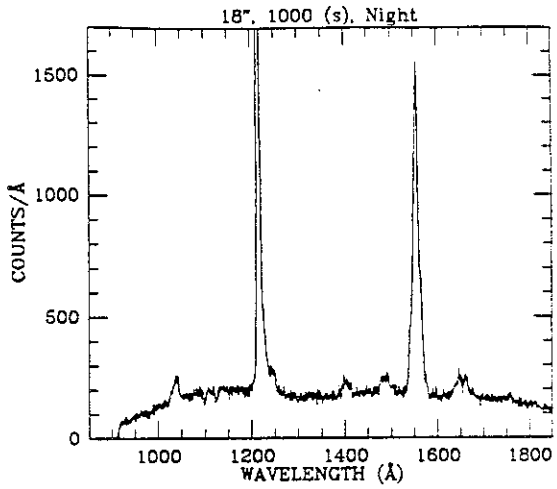
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 310	src sim 12 14 3.5 5	7 4 ---	- - ---	- - ---	
4	W 259	aut ngd 11 10 1.0	7 4 120	2 6 ---	-- - ---	BKG1
5	U 246	DT - T F 31 a5 31 b5	- - - - - -			

```
 6   JAC ITEM 16_0                    13       All BEGIN
 7       Config H W U                 14 W     NOTE: WUP 1st seq = BKG
 8       ------------------------     15   JOB Observe
 9   JAC All SETUP                    16   JAC All PREVIEW
10       Chk Stat  -LOC -LOC RDY      17       All QUIT
11       IMC BEGIN                    18       ----------------------
12       HUT ITEM 5                   19   JAC ITEM 16_1
```

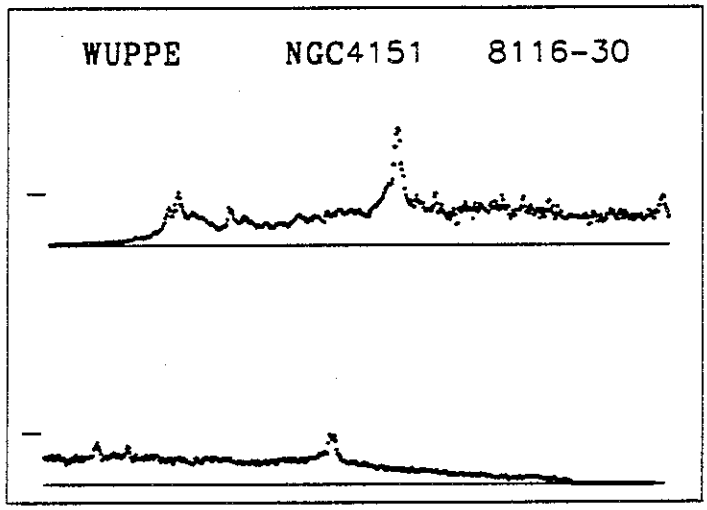
Seyfert nuc

1

OBJECT: NGC4151
KEYWORDS: Seyfert 1.5
COMMENTS:
Z = 0.0033



ID: 8116-30
Names: NGC4151
Type: Seyfert I
% Pol: 0.26
Pol Var: yes
Pos Ang: 63.0
Mechanism: non-thermal?
Comments: well-studied pol; strong em line at ~1700; try half-wave obs; third ptg - obtain DFLD if not previously done; first seq is offset to obtain bkgd; continuum pol rises toward blue. Co-pointing with BBXRT.



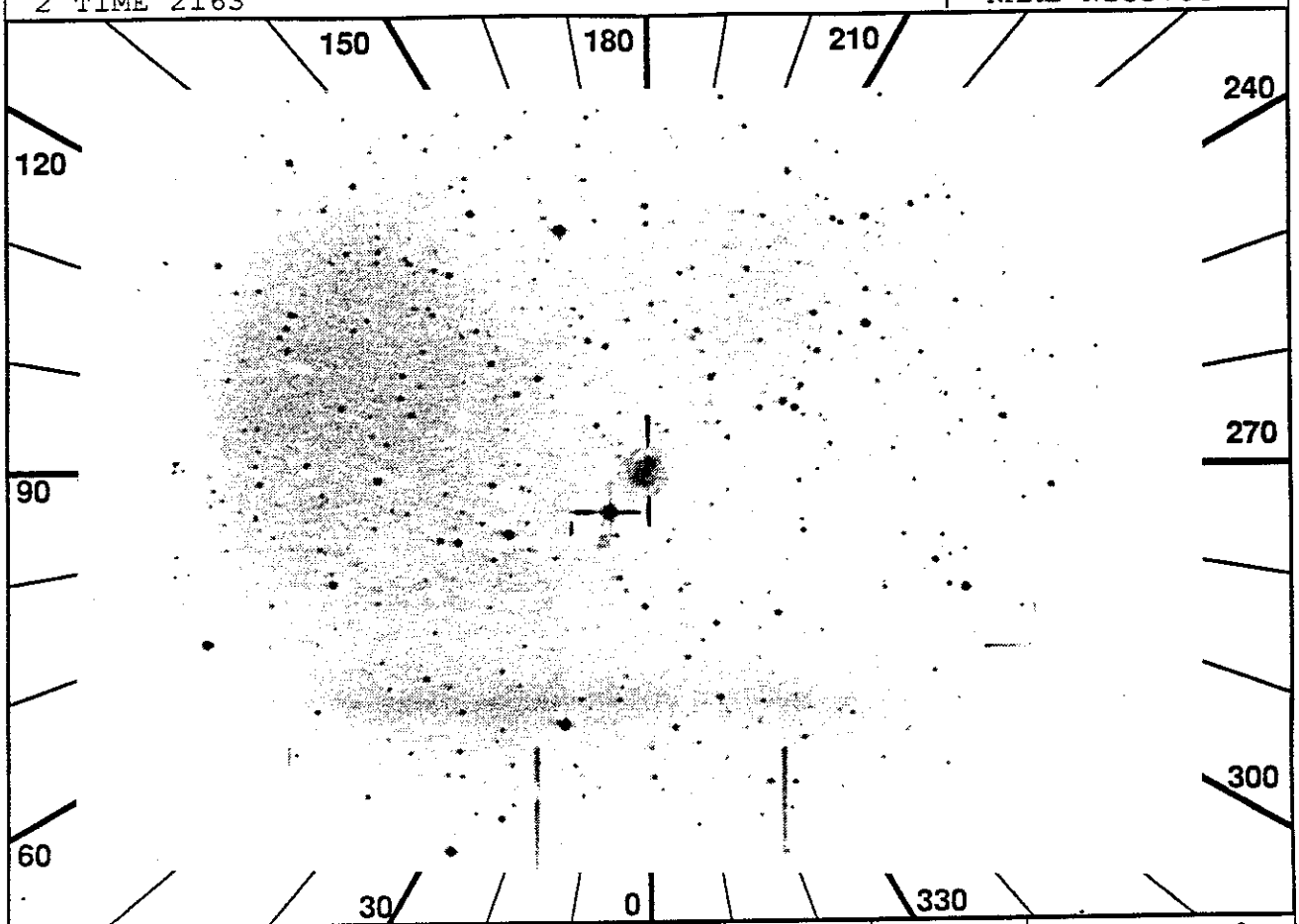
UIT
Observation Description

1 RA 174.1375 DEC -37.4614 ROLL 192.80

2 TIME 2163

ID 8118-11

NAME NGC3783

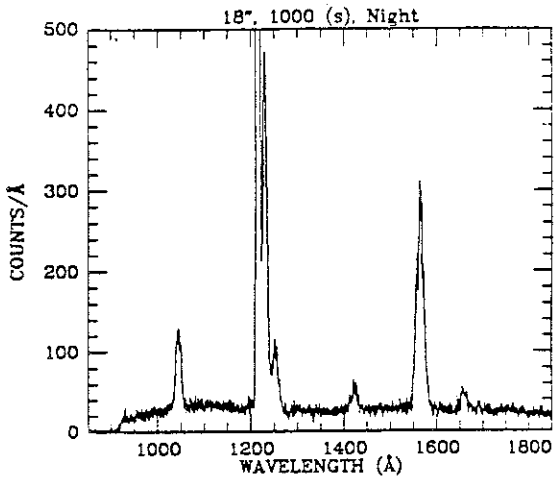


	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 216	Src ~~cde~~ sim 14 10 3.3 5	7 4 ---	- - ---	- - ---	
4	W 260	ncn ngd 13 15 1.0	2 2 60	2 2 ---	-- - ---	FNTLOC BKG1
5	U 232	DT - T F 31 a2 62 a1	- - - - - -			

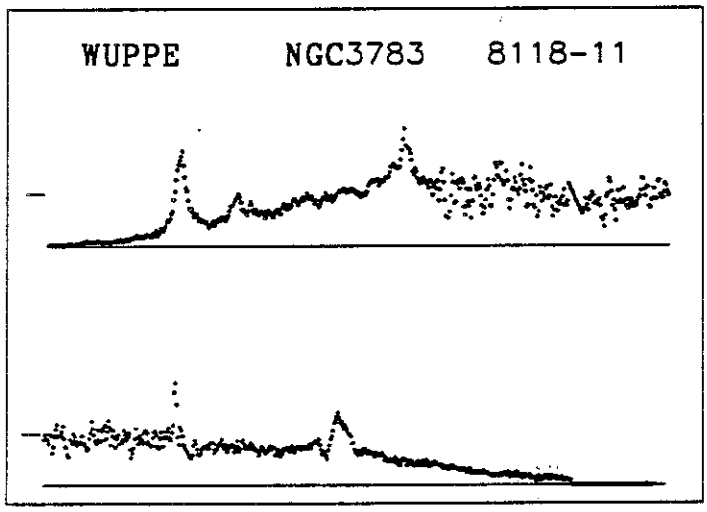
```
 6    JAC ITEM 16_0
 7        Config H W U
 8        ------------------------
 9    JAC All SETUP
10 W      Chk Stat  -LOC -CUR RDY
11        IMC BEGIN
12        HUT ITEM 5
13 W      WUP tgt= HUT faint star
14 W      *IF WUP target visible
15 W      * WUP PFK cur to target
16 W      * WUP ITEM 6  (Cntr)
17 W      * WUP ITEM 4  (Cur off)
18 W      *ELSE
19 W      * Config without WUP
20        All BEGIN
21 W      *IF WUP Deconfig
22 W      *  WUP ITEM 11_F_+1
23 W      *  Cur/ITEM 6 In fld, zm
24 W      * WUP ITEM 4  (Cur off)
25 W      * WUP ITEM 7  (Begin)
26 W      * Config with WUP
27 W      NOTE: WUP 1st seq = BKG
28    JOB Observe
29    JAC All PREVIEW
30        All QUIT
31        ------------------------
32    JAC ITEM 16_1
```

Seyfert nuc.

OBJECT: NGC 3783
KEYWORDS: Seyfert 1
COMMENTS:
Z = 0.00913



ID: 8118-11
Names: NGC3783
Type: Seyfert I
% Pol: 0.46
Pol Var: yes
Pos Ang: 112.2
Mechanism: foreground dust?
Comments: little known about pol; may be too faint for WUPPE; first seq is offset to obtain bkgd.
Co-pointing with BBXRT.



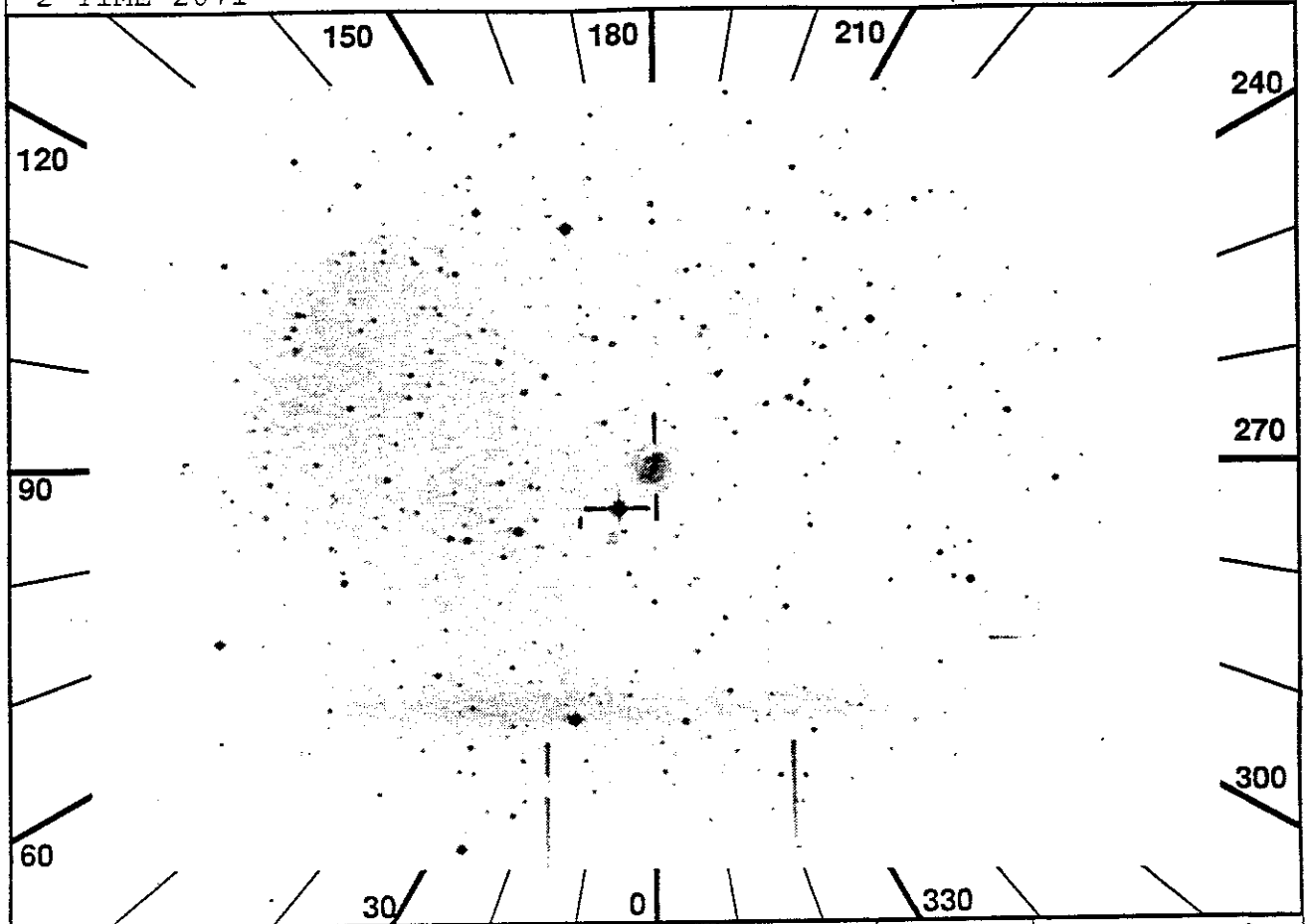
UIT
Observation Description

1 RA 174.1375 DEC -37.4614 ROLL 192.80

2 TIME 2071

ID 8118-12

NAME NGC3783



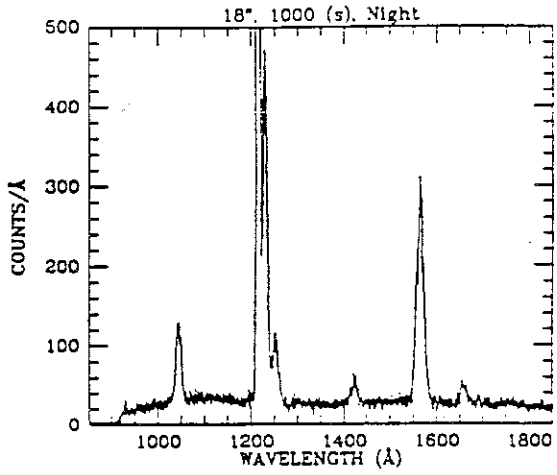
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 218	src ~~cdc~~ sim 14 10 3.3 5	7 4 ---	- - ---	- - ---	
4	W 260	ncn ngd 13 15 1.0	2 2 60	2 2 ---	-- - ---	FNTLOC BKG1
5	U 233	DT - T F 31 a5 93 b1	- - - - - -			

```
 6    JAC ITEM 16_0
 7        Config H W U
 8        ------------------------
 9    JAC All SETUP
10 W      Chk Stat  -LOC -CUR RDY
11        IMC BEGIN
12        HUT ITEM 5
13 W      WUP tgt= HUT faint star
14 W      *IF WUP target visible
15 W      * WUP PFK cur to target
16 W      * WUP ITEM 6  (Cntr)
17 W      * WUP ITEM 4  (Cur off)
18 W      *ELSE
19 W      * Config without WUP
20        All BEGIN
21 W      *IF WUP Deconfig
22 W      *  WUP ITEM 11 F +1
23 W      *  Cur/ITEM 6 in fld, zm
24 W      * WUP ITEM 4  (Cur off)
25 W      * WUP ITEM 7  (Begin)
26 W      * Config with WUP
27 W      NOTE: WUP 1st seq = BKG
28    JOB Observe
29    JAC All PREVIEW
30        All QUIT
31        ------------------------
32    JAC ITEM 16_1
```

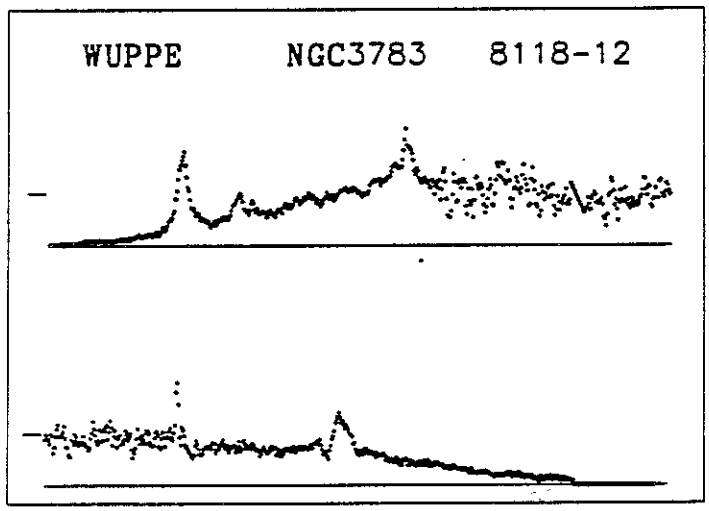
Seyfert nuc.

1

OBJECT: NGC 3783
KEYWORDS: Seyfert 1
COMMENTS:
Z = 0.00913



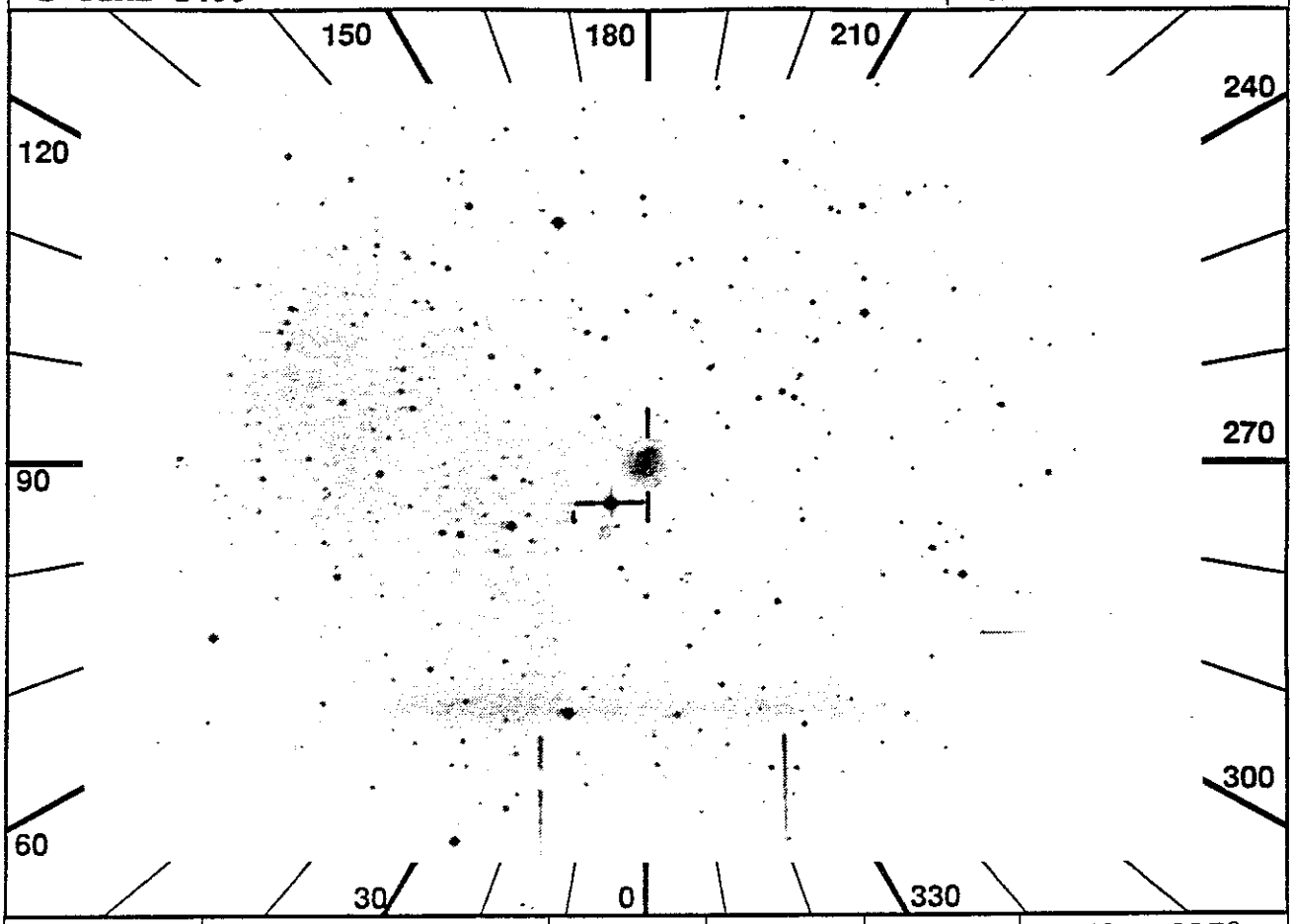
ID: 8118-12
Names: NGC3783
Type: Seyfert I
% Pol: 0.46
Pol Var: yes
Pos Ang: 112.2
Mechanism: foreground dust?
Comments: little known about pol; may be too faint for WUPPE; first seq is offset to obtain bkgd.
Co-pointing with BBXRT.



UIT
Observation Description

1 RA 174.1375 DEC -37.4614 ROLL 192.80 | ID 8118-13

2 TIME 1499 | NAME NGC3783



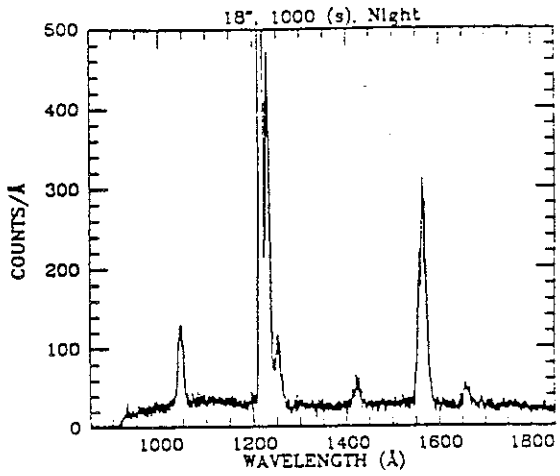
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	S H 275	src ~~ede~~ sim 14 10 2.8 5	7 4 ---	- - ---	- - ---	
4	W 260	ncn ngd 13 15 1.0	2 2 60	2 2 ---	-- - ---	FNTLOC BKG1
5	U 234	DT - T F 125 b5 6 b6	- - - - - -			

```
 6    JAC ITEM 16_0                    20        All BEGIN
 7        Config H W U                 21 W      *IF WUP Deconfig
 8        ------------------------     22 W      *  WUP ITEM 11_F_+1
 9    JAC All SETUP                    23 W      *  Cur/ITEM 6 in fld, zm
10 W      Chk Stat  -LOC -CUR RDY      24 W      * WUP ITEM 4  (Cur off)
11        IMC BEGIN                    25 W      * WUP ITEM 7  (Begin)
12        HUT ITEM 5                   26 W      * Config with WUP
13 W      WUP tgt= HUT faint star      27 W      NOTE: WUP 1st seq = BKG
14 W      *IF WUP target visible       28    JOB Observe
15 W      * WUP PFK cur to target      29    JAC All PREVIEW
16 W      * WUP ITEM 6  (Cntr)         30        All QUIT
17 W      * WUP ITEM 4  (Cur off)      31        ------------------------
18 W      *ELSE                        32    JAC ITEM 16_1
19 W      * Config without WUP
```

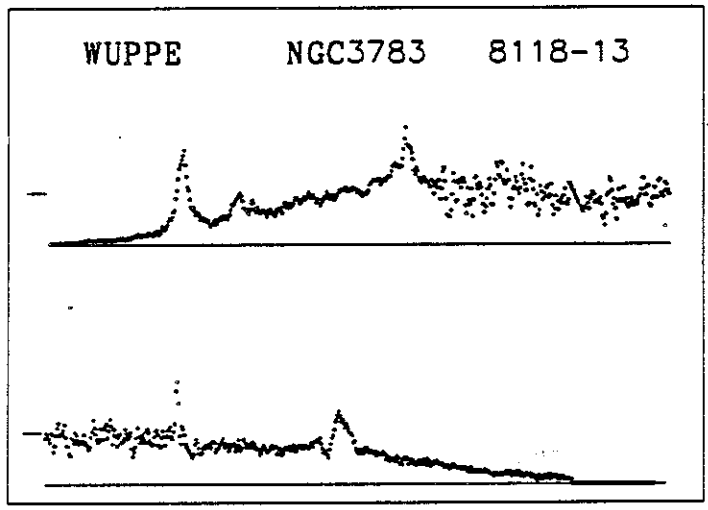
Seyfert nuc

1

OBJECT: NGC 3783
KEYWORDS: Seyfert 1
COMMENTS:
Z = 0.00913



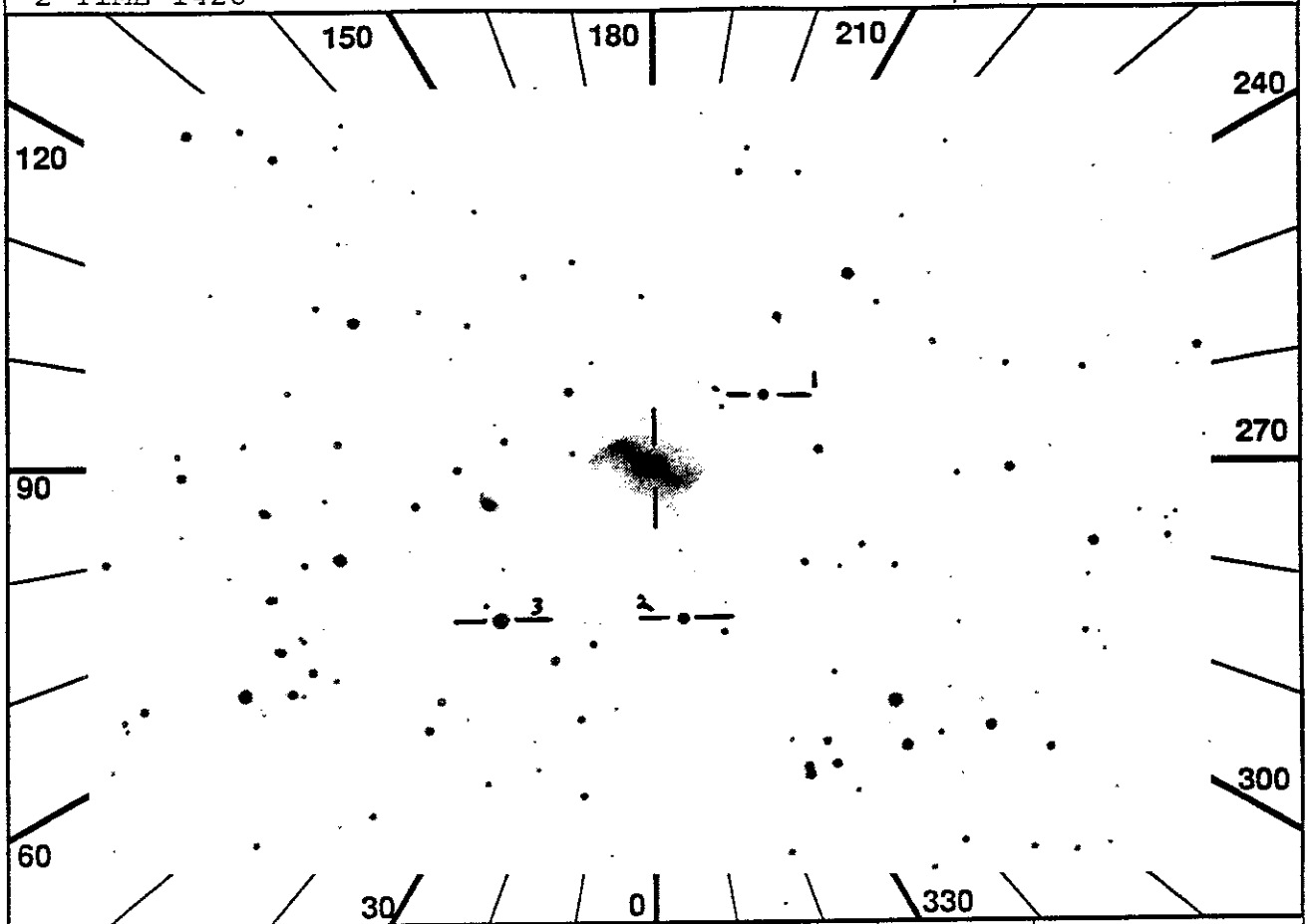
ID: 8118-13
Names: NGC3783
Type: Seyfert I
% Pol: 0.46
Pol Var: yes
Pos Ang: 112.2
Mechanism: foreground dust?
Comments: little known about pol; may be too faint for WUPPE; first seq is offset to obtain bkgd.



UIT
Observation Description

1 RA 189.2667 DEC -5.0697 ROLL 25.00 | ID 8119-11

2 TIME 1428 | NAME NGC4593



	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 329	src sim 15 ~~13~~ 15 3.2 5	7 4 ---	- - ---	- - ---	
4	W 154	ncn ngd 13 13 1.0	2 2 60	2 2 ---	-- - ---	FNTLOC BKG1
5	U 193	DT - T F 62 a2 62 a4 31 a1 31 b1 - -				

```
 6    JAC ITEM 16_0
 7        Config H W U
 8        ------------------------
 9    JAC All SETUP
10 W      Chk Stat  -LOC -CUR RDY
11        IMC BEGIN
12        HUT ITEM 5
13 W      WUP tgt= HUT faint star
14 W      *IF WUP target visible
15 W      * WUP PFK cur to target
16 W      * WUP ITEM 6  (Cntr)
17 W      * WUP ITEM 4  (Cur off)
18 W      *ELSE
19 W      * Config without WUP
20        All BEGIN
21 W      *IF WUP Deconfig
22 W      *  WUP ITEM 11_F_+1
23 W      *  Cur/ITEM 6 in fld, zm
24 W      * WUP ITEM 4  (Cur off)
25 W      * WUP ITEM 7  (Begin)
26 W      * Config with WUP
27 W      NOTE: WUP 1st seq = BKG
28    JOB Observe
29    JAC All PREVIEW
30        All QUIT
31        ------------------------
32    JAC ITEM 16_1
```

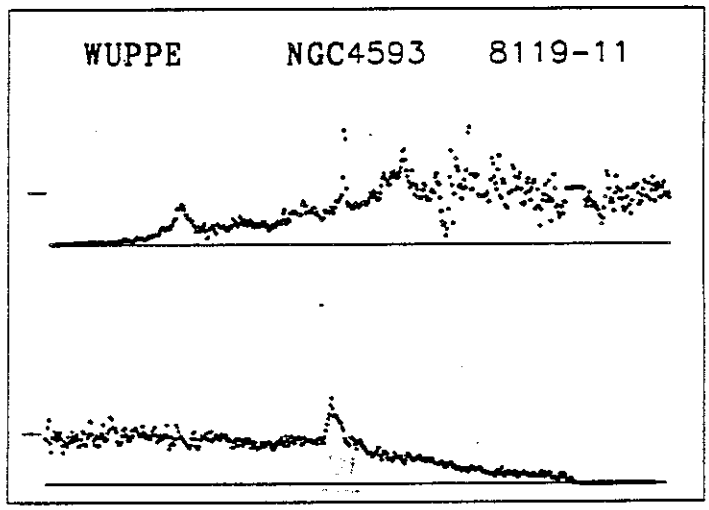
Seyfert one

1

Spectrum Not Available

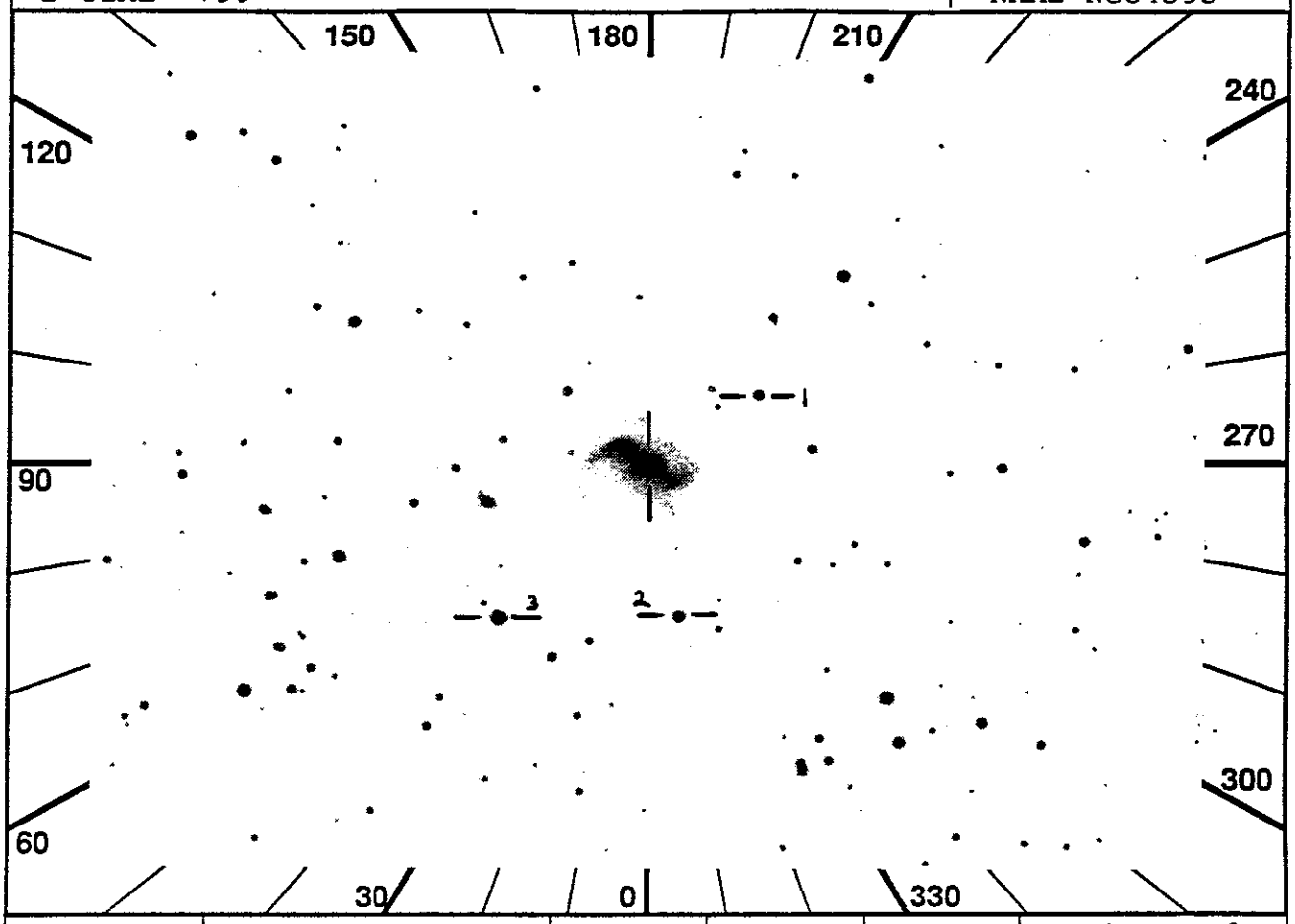
HUT
Spectrum and Observation Description

ID: 8119-11
Names: NGC4593
Type: Seyfert
% Pol: 0.52
Pol Var:
Pos Ang: 39.6
Mechanism: foreground dust?
Comments: little known about pol; may be too faint for WUPPE; first seq is offset to obtain bkgd.
Co-pointing with BBXRT.



UIT
Observation Description

1 RA 189.2667 DEC -5.0697 ROLL 25.00	ID 8119-12
2 TIME 790	NAME NGC4593



	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 365	src sim 15 ~~13~~ 15 3.2 5	7 4 ---	- - ---	- - ---	
4	W 154	ncn ngd 13 13 1.0	2 2 60	2 2 ---	-- - ---	FNTLOC BKG1
5	U 246	DT - T F 31 a5 31 b5	- - -	- - -		

```
 6    JAC ITEM 16_0                    20        All BEGIN
 7        Config H W U                 21 W      *IF WUP Deconfig
 8        ------------------------     22 W      *  WUP ITEM 11_F_+1
 9    JAC All SETUP                    23 W      *  Cur/ITEM 6 in fld, zm
10 W      Chk Stat  -LOC -CUR RDY      24 W      * WUP ITEM 4  (Cur off)
11        IMC BEGIN                    25 W      * WUP ITEM 7  (Begin)
12        HUT ITEM 5                   26 W      * Config with WUP
13 W      WUP tgt= HUT faint star      27 W      NOTE: WUP 1st seq = BKG
14 W      *IF WUP target visible       28    JOB Observe
15 W      * WUP PFK cur to target      29    JAC All PREVIEW
16 W      * WUP ITEM 6  (Cntr)         30        All QUIT
17 W      * WUP ITEM 4  (Cur off)      31        ------------------------
18 W      *ELSE                        32    JAC ITEM 16_1
19 W      * Config without WUP
```

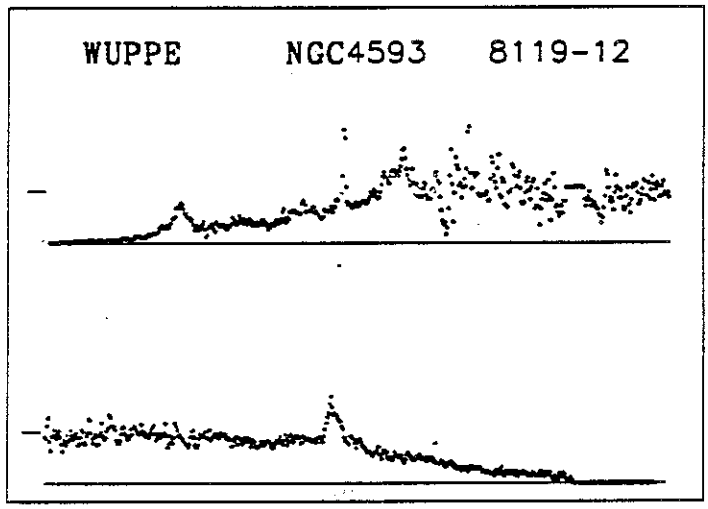
Seyfert nuc.

1

Spectrum Not Available

HUT
Spectrum and Observation Description

ID: 8119-12
Names: NGC4593
Type: Seyfert
% Pol: 0.52
Pol Var:
Pos Ang: 39.6
Mechanism: foreground dust?
Comments: little known about pol; may be too faint for WUPPE; first seq is offset to obtain bkgd.
Co-pointing with BBXRT.



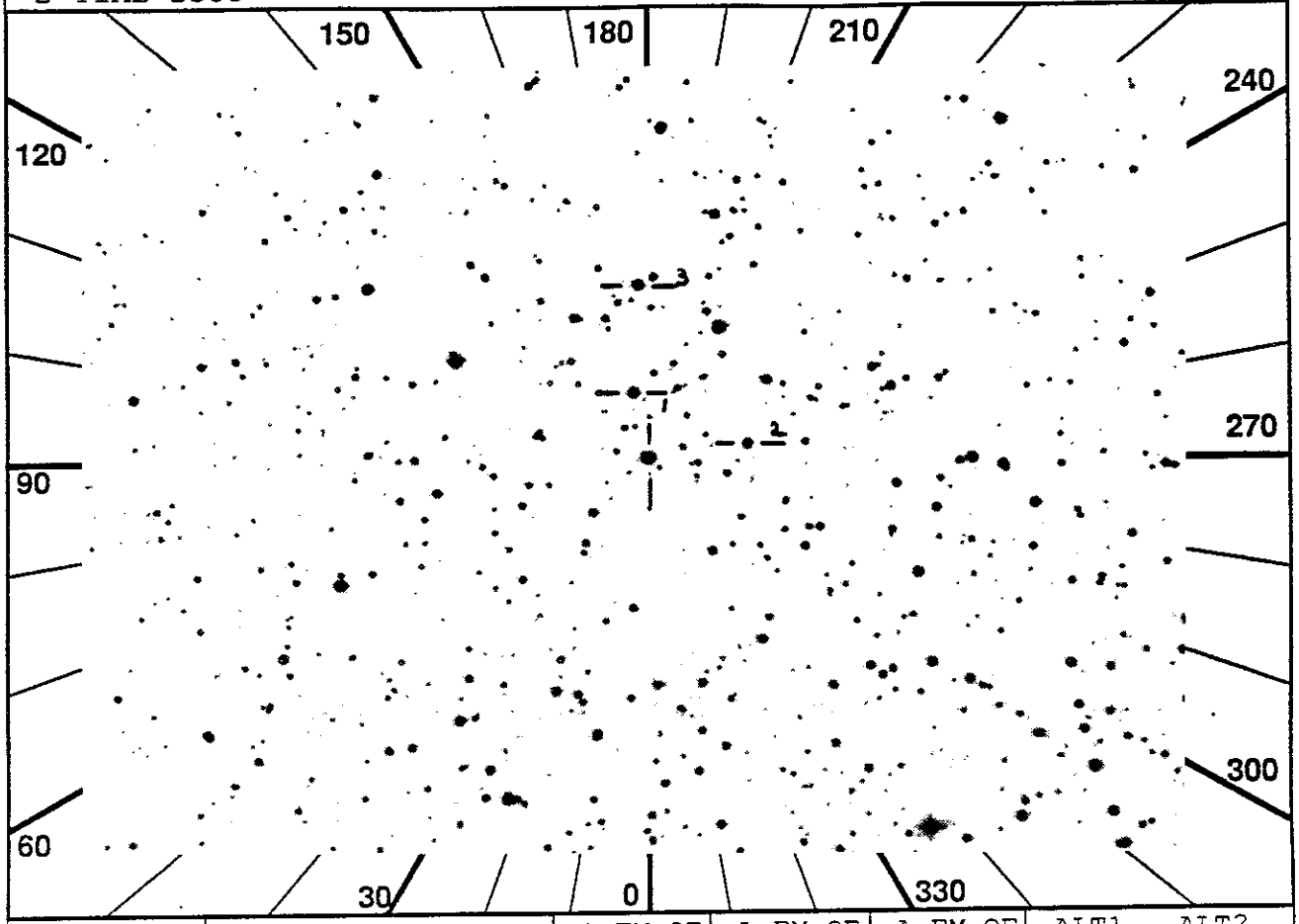
UIT
Observation Description

1 RA 310.3594 DEC -10.9050 ROLL 358.49

2 TIME 2353

ID 8126-11

NAME MKN509



	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 311	src sim 14 14 2.8 5	7 4 ---	- - ---	- - ---	
4	W 261	ncn ngd 13 11 2.6	2 2 ---	2 2 60	-- - ---	FNTLOC BKG2
5	U 241	DT 169 T F 62 a1	31 a2	31 a5	- - - -	

```
 6    JAC ITEM 16_0
 7        Config H W U
 8        ------------------------
 9    JAC All SETUP
10 W      Chk Stat  -LOC -CUR RDY
11        IMC BEGIN
12        HUT ITEM 5
13 W      WUP tgt= HUT faint star
14 W      *IF WUP target visible
15 W      * WUP PFK cur to target
16 W      * WUP ITEM 6  (Cntr)
17 W      * WUP ITEM 4  (Cur off)
18 W      *ELSE
19 W      * Config without WUP
20        All BEGIN
21 W      *IF WUP Deconfig
22 W      *  WUP ITEM 11_F_+1
23 W      *  Cur/ITEM 6 in fld, zm
24 W      * WUP ITEM 4  (Cur off)
25 W      * WUP ITEM 7  (Begin)
26 W      * Config with WUP
27 W      NOTE: WUP last seq = BKG
28    JOB Observe
29    JAC All PREVIEW
30        All QUIT
31        ------------------------
32    JAC ITEM 16_1
```

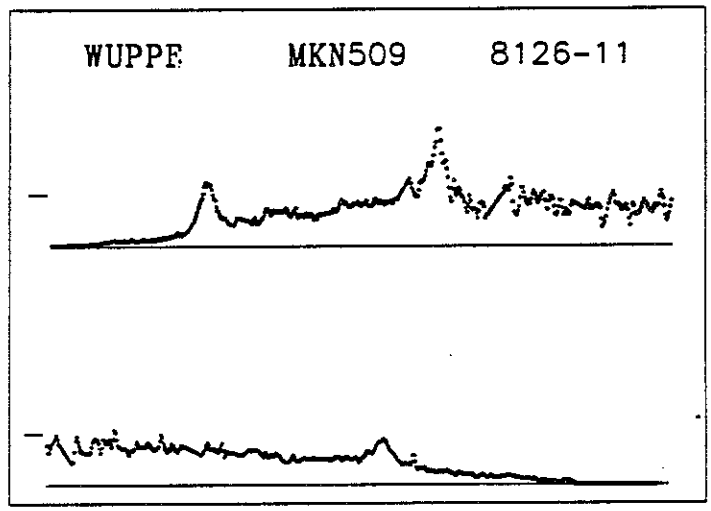
Seyfert nuc.

1

Spectrum Not Available

HUT
Spectrum and Observation Description

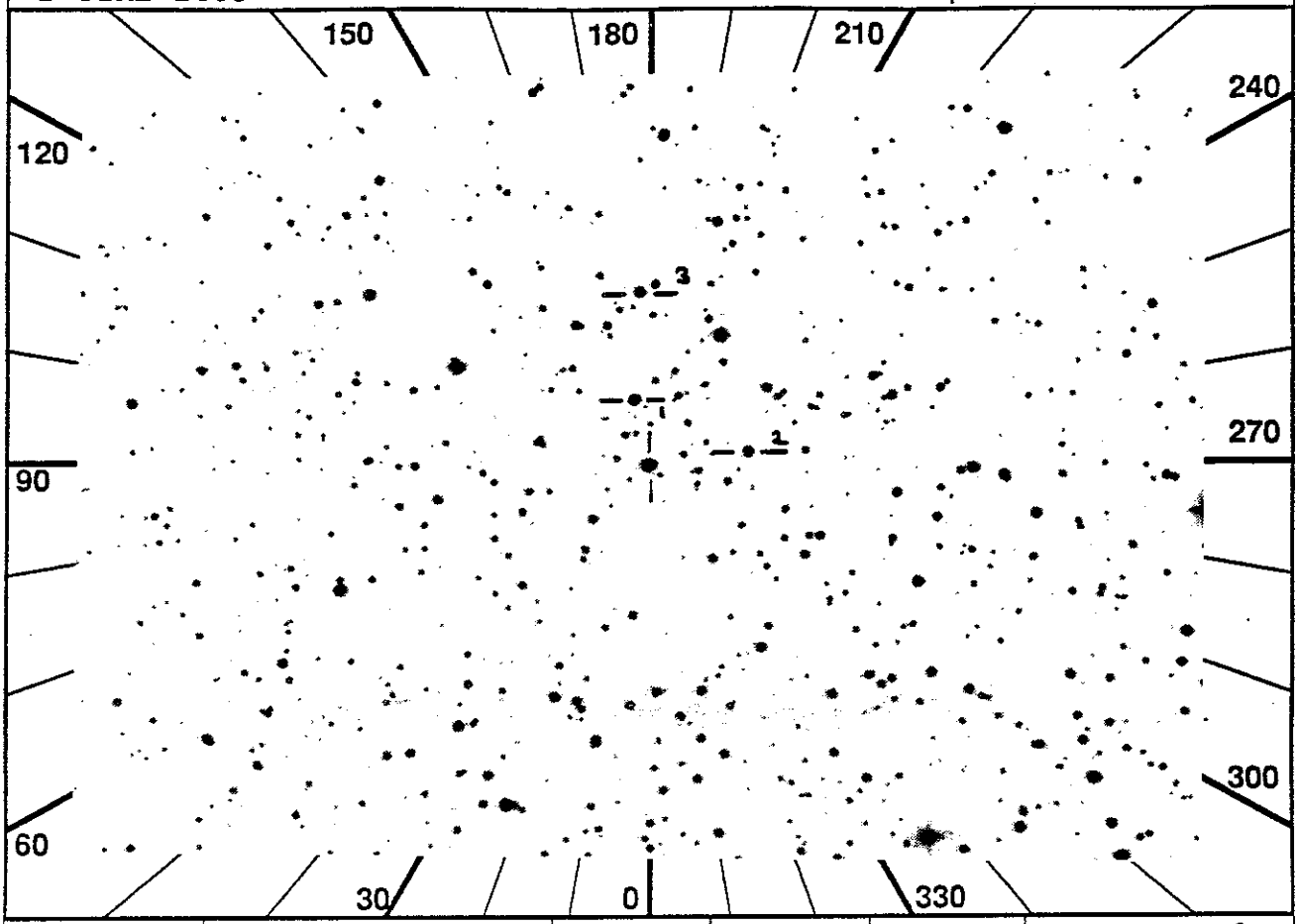
ID: 8126-11
Names: MKN509
Type: QSO/SY
% Pol: 1.18
Pol Var: yes
Pos Ang: 152.6
Mechanism: non-thermal?
Comments: variation similar to that seen in NGC 4151; well-studied pol; second seq is offset to obtain bkgd. HUT prime target - is in WUPPE PTL. Co-pointing with BBXRT.



UIT
Observation Description

1 RA 310.3594 DEC -10.9050 ROLL 358.49 | ID 8126-12

2 TIME 2609 | NAME MKN509



	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 313	src sim 14 14 2.8 5	7 4 ---	- - ---	- - ---	
4	W 261	ncn ngd 13 11 2.6	2 2 ---	2 2 60	-- - ---	FNTLOC BKG2
5	U 186	DT - T F 62 b1 93 b5		- - - - - -		LTSTRT

```
 6    JAC ITEM 16_0
 7        Config H W U
 8        ------------------------
 9    JAC All SETUP
10 W      Chk Stat  -LOC -CUR RDY
11        IMC BEGIN
12        HUT ITEM 5
13 W      WUP tgt= HUT faint star
14 W      *IF WUP target visible
15 W      * WUP PFK cur to target
16 W      * WUP ITEM 6  (Cntr)
17 W      * WUP ITEM 4  (Cur off)
18 W      *ELSE
19 W      * Config without WUP
20 U      Config without UIT
21        All BEGIN
```

```
22 W      *IF WUP Deconfig
23 W      *  WUP ITEM 11_F_+1
24 W      *  Cur/ITEM 6 In fld, zm
25 W      * WUP ITEM 4  (Cur off)
26 W      * WUP ITEM 7  (Begin)
27 W      * Config with WUP
28 W      NOTE: WUP last seq = BKG
29 U JOB  Wait for TIME AVAIL 2184
30 U      UIT BEGIN
31 U JAC  Config with UIT
32   JOB  Observe
33   JAC  All PREVIEW
34        All QUIT
35        ------------------------
36   JAC  ITEM 16_1
```

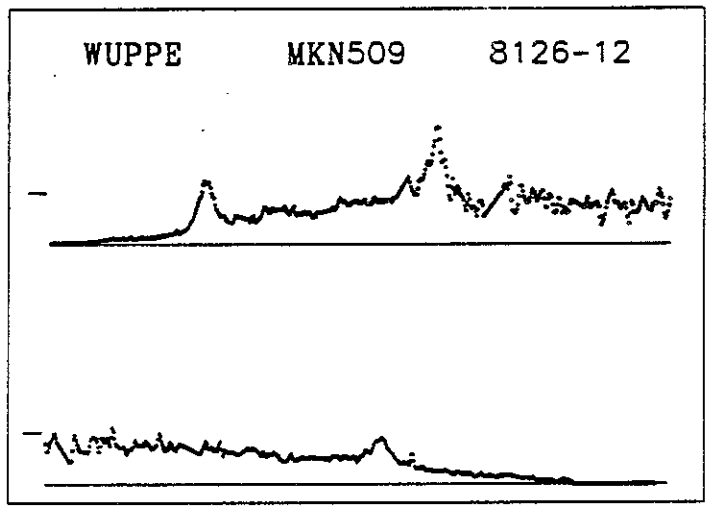
Seyfert mrc.

1

Spectrum Not Available

HUT
Spectrum and Observation Description

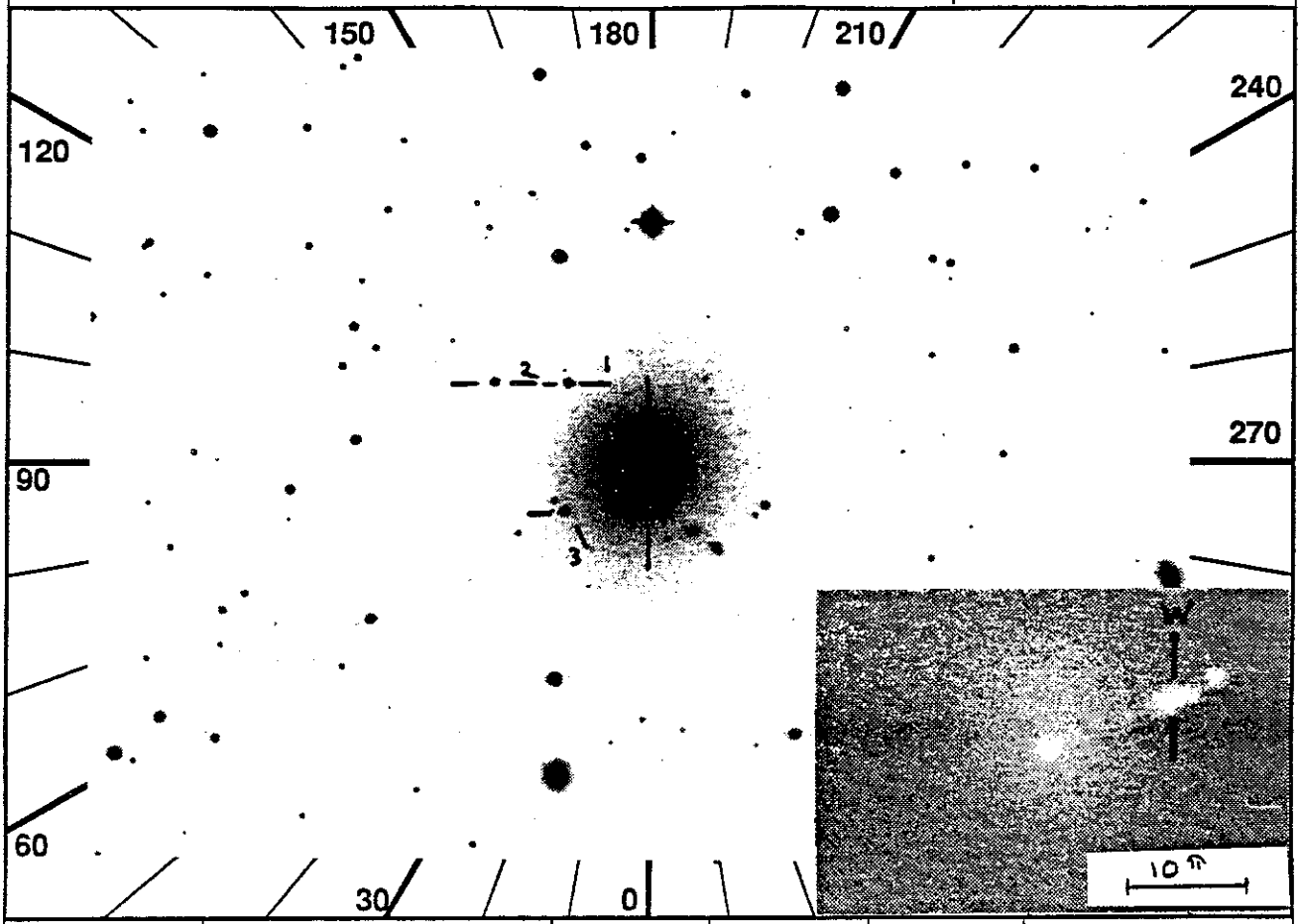
ID: 8126-12
Names: MKN509
Type: QSO/SY
% Pol: 1.18
Pol Var: yes
Pos Ang: 152.6
Mechanism: non-thermal?
Comments: variation similar to that seen in NGC 4151; well-studied pol; second seq is offset to obtain bkgd. HUT prime target - is in WUPPE PTL. Co-pointing with BBXRT.



UIT
Observation Description

1 RA 187.0731 DEC 12.6672 ROLL 254.59 | ID 8307-10

2 TIME 1524 | NAME M87



	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	H 45	src sim ~~14~~ 16 ~~14~~ 16 3.2 5	6 1 ---	- - ---	- - ---	W DARK
4	W 263	ncn ngd 15 15 1.4	6 4 12	-- - ---	-- - ---	NUCLOC DFLD
5	P U 203	DT -	T F 31 a1	31 b1	31 b5 - - - -	AST4SC

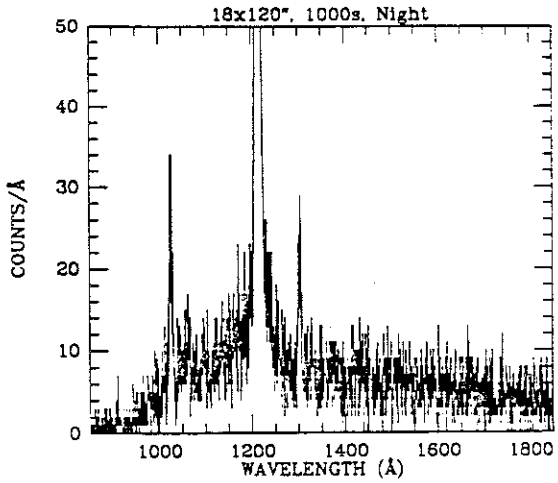
```
 6 I      CMD WRI 3900
 7 I        F007F0010FA0  (4s upd)
 8 I IMC  Chk AST WAC incr once/4s
 9   JAC  ITEM 16 0
10        Config H W U
11        ------------------------
12   JAC  All SETUP
13 H -    Note:  faint target--if
14 H      necessary wait until
15 H      night to acquire.
16 W JAC  Chk Stat  -LOC -CUR RDY
17        IMC BEGIN
18        HUT ITEM 5
19 W      WUP tgt is gal nucleus ?
20 W      *IF WUP target visible
21 W      * WUP PFK cur to target
22 W      * WUP ITEM 6  (Cntr)
23 W      * WUP ITEM 4  (Cur off)
24 W      *ELSE
25 W      * Config without WUP
26 W      WUP ITEM 11 DF
27 W      WUP wait CAM MODE ZOOM
28        All BEGIN
29 W      *IF WUP Deconfig
30 W      *  WUP ITEM 11 F +1
31 W      *  Cur/ITEM 6 in fld, zm
32 W      * WUP ITEM 4  (Cur off)
33 W      * WUP ITEM 7  (Begin)
34 W      * Config with WUP
35   JOB  Observe
36   JAC  All PREVIEW
37        All QUIT
38        ------------------------
39   JAC  ITEM 16 1
40 I      CMD ISS 3908  (1s upd)
```

WUPPE INCONSISTENCY

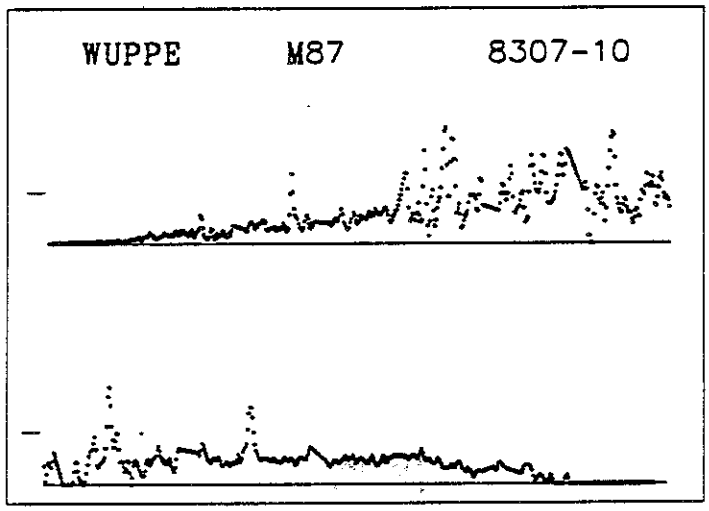
OBJECT: 8307 M87 (NGC4486)
KEYWORDS: Elliptical Galaxy
COMMENTS:
Pointing at nucleus

Simulation assumes B3V star spectrum
(Matches slope of IUE continuum)
Scaled for expected HUT flux

Look for emission lines



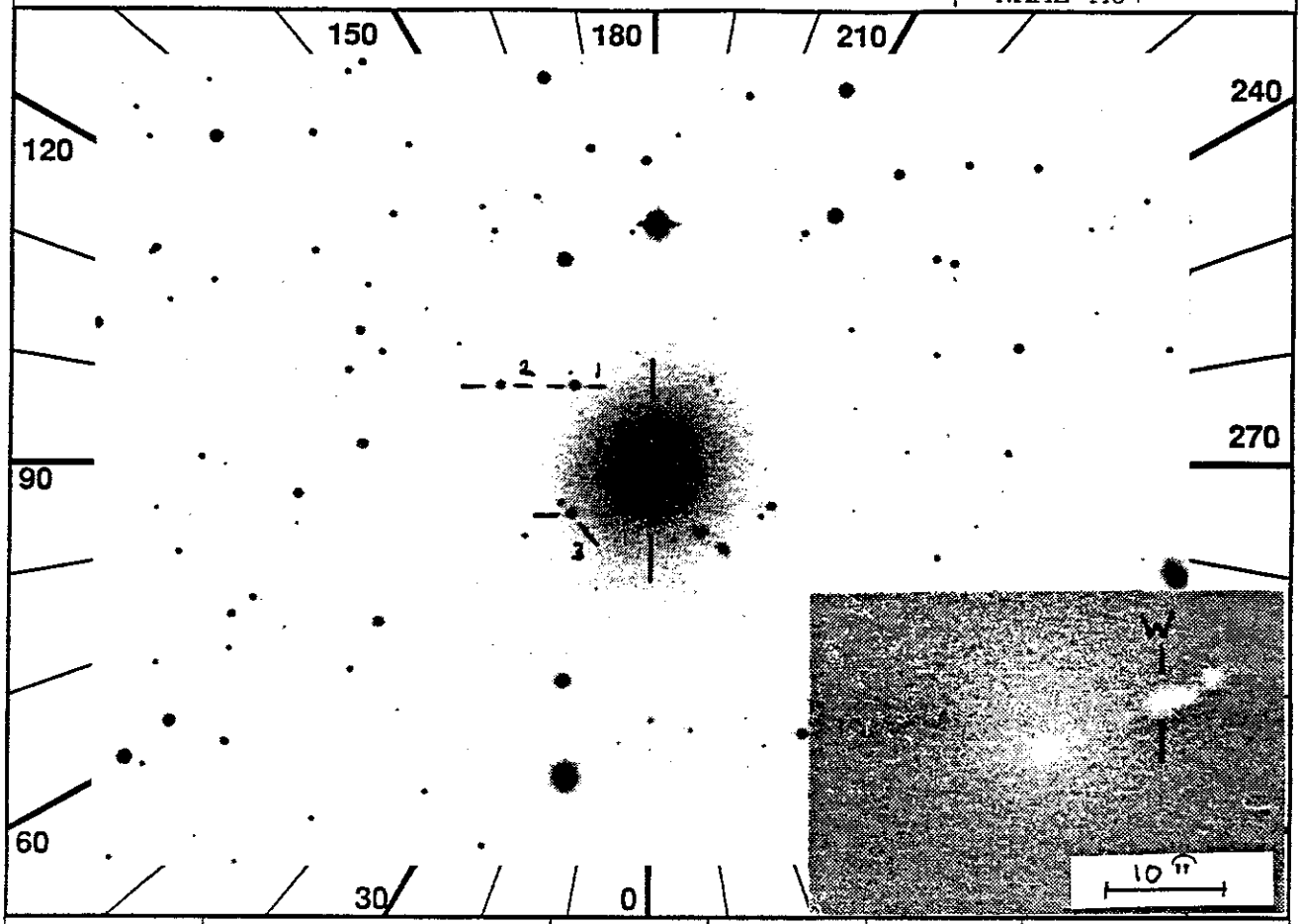
ID: 8307-10
Names: M87 NGC4486
Type:
% Pol: ~30
Pol Var:
Pos Ang:
Mechanism: synchrotron
Comments: Offset to brightest knot (A) in M87 jet; jet is at PA=290deg; slit almost perpendicular to jet. Co-pointing with BBXRT.



UIT
Observation Description

1 RA 187.0731 DEC 12.6672 ROLL 254.59 | ID 8307-20

2 TIME 1857 | NAME M87



	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	H 75	src sim ~~14~~ 16 ~~14~~ 16 3.2 5	6 1 ---	- - ---	- - ---	W DARK
4	W 214	ncn ngd 15 15 1.4	6 4 12	-- - ---	-- - ---	NUCLOC
5	P U 208	DT - T F 62 a2 62 a5 62 b3 6 b6 - -				AST4SC

```
 6 I      CMD WRI 3900                    23 W      * WUP ITEM 4  (Cur off)
 7 I        F007F0010FA0  (4s upd)        24 W      *ELSE
 8 I IMC  Chk AST WAC incr once/4s        25 W      * Config without WUP
 9   JAC  ITEM 16 0                       26        All BEGIN
10        Config H W U                    27 W      *IF WUP Deconfig
11        ------------------------        28 W      *  WUP ITEM 11 F +1
12   JAC  All SETUP                       29 W      *  Cur/ITEM 6 in fld, zm
13 H -    Note:  faint target--if         30 W      * WUP ITEM 4  (Cur off)
14 H      necessary wait until            31 W      * WUP ITEM 7  (Begin)
15 H      night to acquire.               32 W      * Config with WUP
16 W JAC  Chk Stat  -LOC -CUR RDY         33   JOB  Observe
17        IMC BEGIN                       34   JAC  All PREVIEW
18        HUT ITEM 5                      35        All QUIT
19 W      WUP tgt is gal nucleus          36        ------------------------
20 W      *IF WUP target visible          37   JAC  ITEM 16 1
21 W      * WUP PFK cur to target         38 I      CMD ISS 3908  (1s upd)
22 W      * WUP ITEM 6  (Cntr)
```

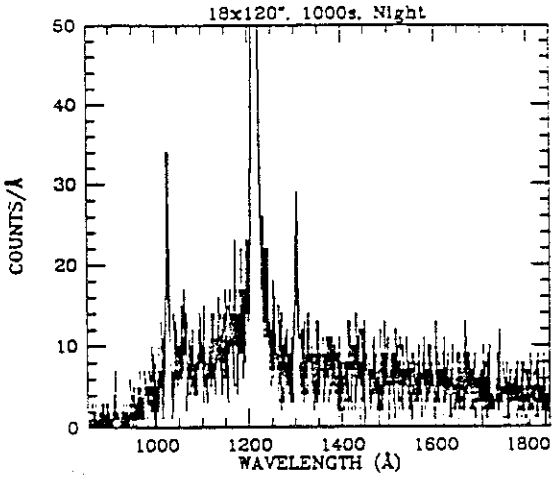
elliptical galaxy

1

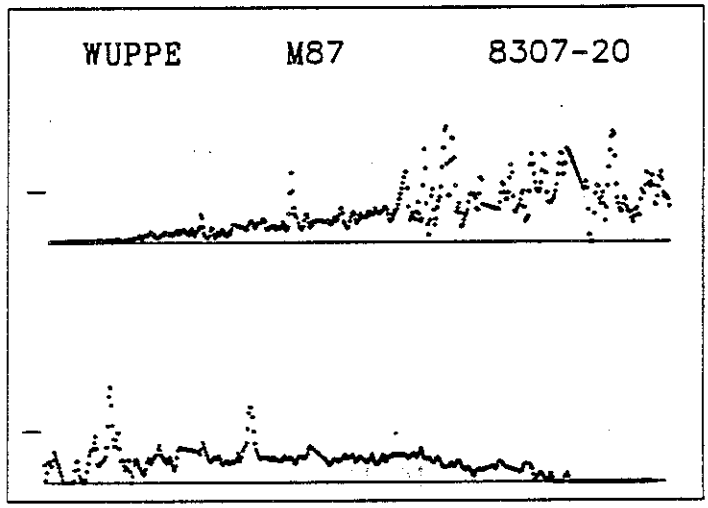
OBJECT: 8307 M87 (NGC4486)
KEYWORDS: Elliptical Galaxy
COMMENTS:
Pointing at nucleus

Simulation assumes B3V star spectrum
(Matches slope of IUE continuum)
Scaled for expected HUT flux

Look for emission lines



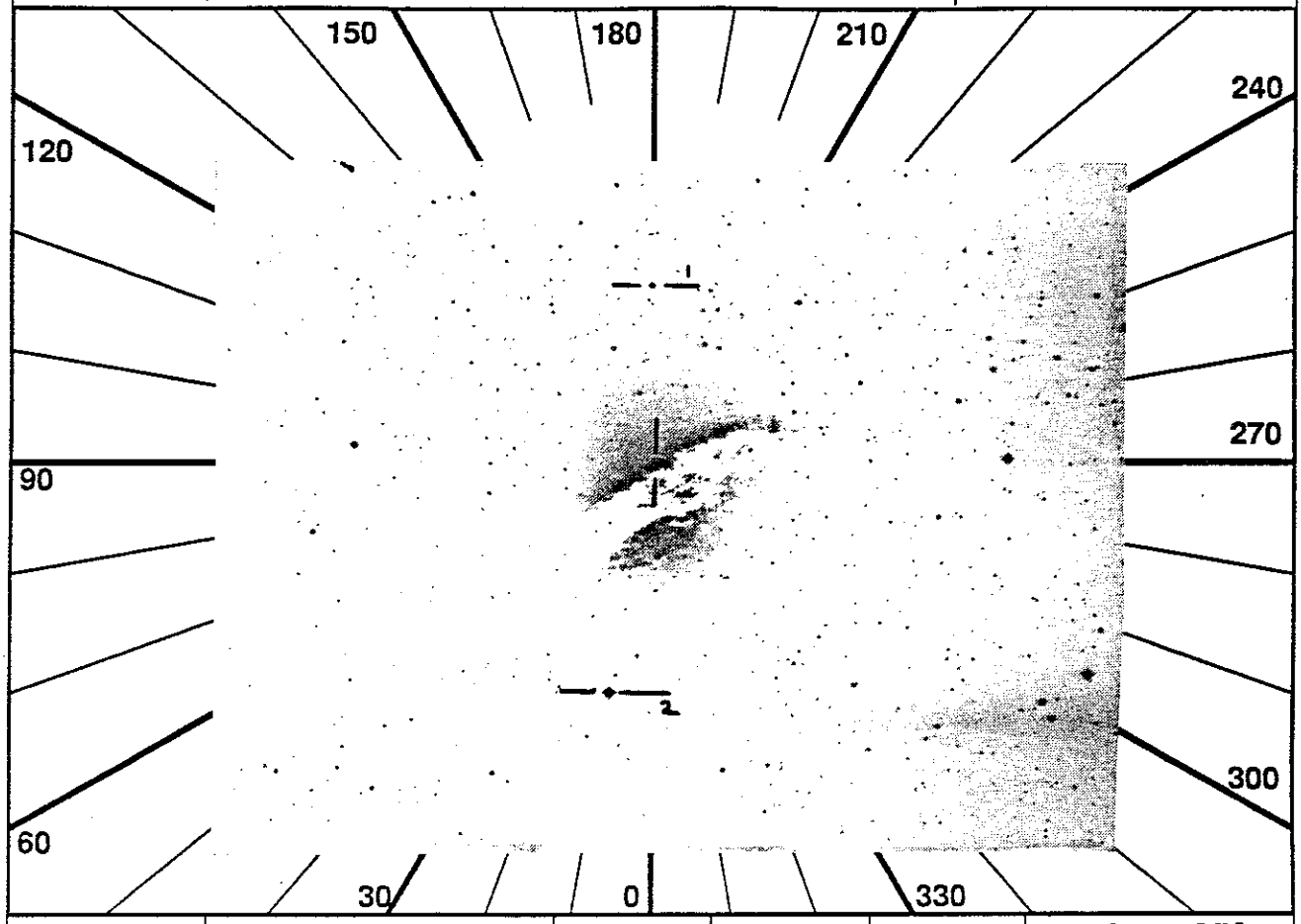
ID: 8307-20
Names: M87 NGC4486
Type:
% Pol: ~30
Pol Var:
Pos Ang:
Mechanism: synchrotron
Comments: Offset to brightest knot (A) in M87 jet; jet is at PA=290deg; slit almost perpendicular to jet. Co-pointing with BBXRT.



UIT
Observation Description

1 RA 200.6340 DEC -42.7444 ROLL 330.00 | ID 8310-10

2 TIME 1670 | NAME CEN-A



	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	H 148	gde sim 13 12 3.2 5	6 1 ---	- - ---	- - ---	LCDATA
4	W 264	ncn ngd 15 15 1.8	7 4 71	-- - ---	-- - ---	NUCLOC DFLD
5	P U 101	DT - T F 31 a1 31 b1		- - - - - -		

```
 6    JAC ITEM 16_0                    20 W     WUP ITEM 11_DF
 7        Config H W U                 21 W     WUP wait CAM MODE ZOOM
 8        ------------------------     22       All BEGIN
 9    JAC All SETUP                    23 W     *IF WUP Deconfig
10 W      Chk Stat  -LOC -CUR RDY      24 W     *  WUP ITEM 11_F_+1
11        IMC BEGIN                    25 W     *  Cur/ITEM 6 In_fld, zm
12        HUT ITEM 5                   26 W     * WUP ITEM 4  (Cur off)
13 W      WUP tgt is gal nucleus       27 W     * WUP ITEM 7  (Begin)
14 W      *IF WUP target visible       28 W     * Config with WUP
15 W      * WUP PFK cur to target      29   JOB Observe
16 W      * WUP ITEM 6  (Cntr)        30   JAC All PREVIEW
17 W      * WUP ITEM 4  (Cur off)     31       All QUIT
18 W      *ELSE                        32       ------------------------
19 W      * Config without WUP         33   JAC ITEM 16_1
```

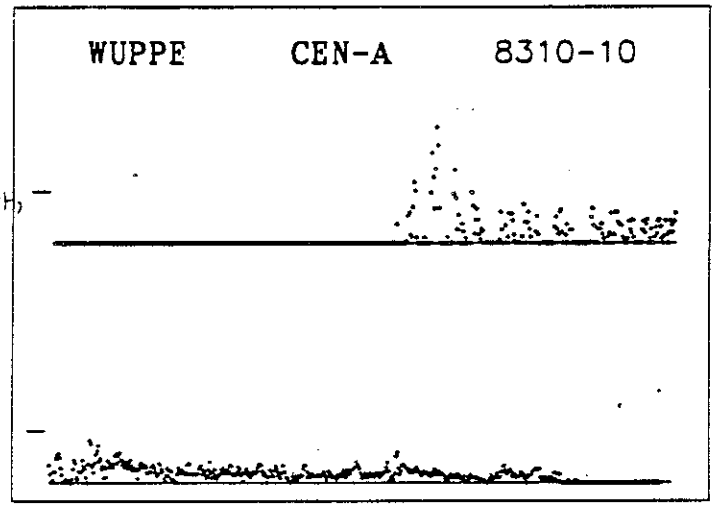
Set 11 to dust lane, just above

2

Spectrum Not Available

HUT
Spectrum and Observation Description

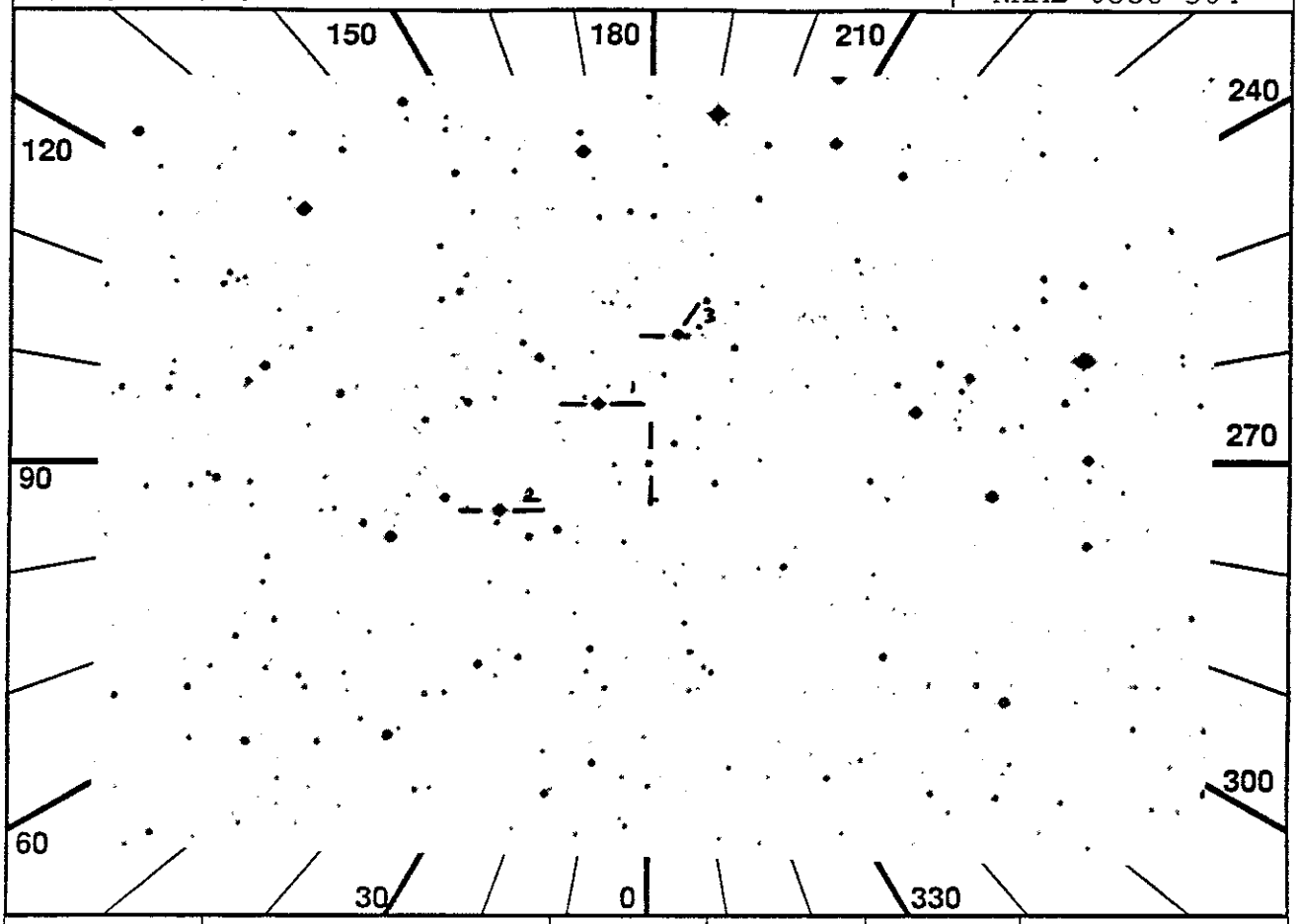
ID: 8310-10
Names: CEN-A NGC5128
Type:
% Pol:
Pol Var:
Pos Ang:
Mechanism: dust scattering?
Comments: long slit displaced N-S, parallel to the dark lane.
Co-pointing with BBXRT.
Observing same position as HUT



UIT
Observation Description

1 RA 89.6442 DEC -50.4486 ROLL 230.50 | ID 8407-11

2 TIME 1976 | NAME 0558-504



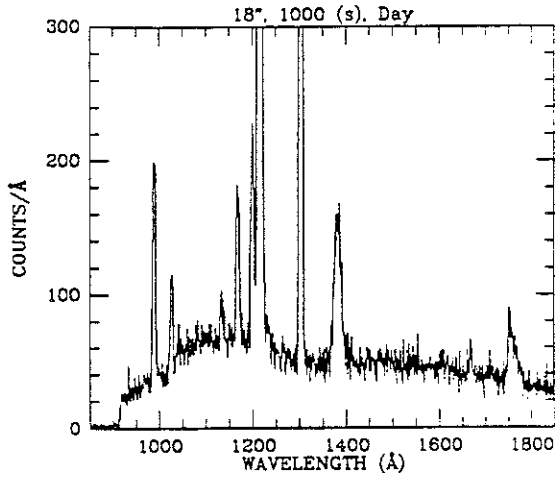
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	S H 147	src sim 15 13 3.2 5	7 4 ---	- - ---	- - ---	SAA AC
4	W 265	ncn ngd 15 13 2.0	2 2 ---	2 2 60	-- - ---	FNTLOC BKG2
5	U 219	DT - T F 156 a2 156 a4	- -	- -	- -	

```
 6 H -   VIP ON until SAA exit
 7   JAC Config H W U
 8       ------------------------
 9 H -   Note: Acquisition in SAA
10   JAC All SETUP
11 J     Chk  Stat -    -CUR RDY
12 H TV  Verify HUT acq on TV
13   JAC IMC BEGIN
14       HUT ITEM 5
15 W     WUP tgt= HUT faint star
16 W     *IF WUP target visible
17 W     * WUP PFK cur to target
18 W     * WUP ITEM 6  (Cntr)
19 W     * WUP ITEM 4  (Cur off)
20 W     *ELSE
21 W     * Config without WUP
22 H -   After SAA exit
```

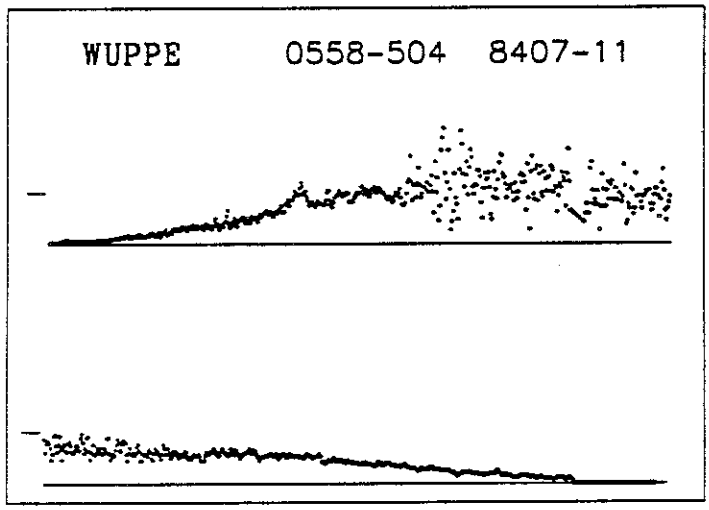
low z QSO BBB

```
23 H JAC ITEM 16_0
24 H     HUT SETUP
25 H     Chk HUT Stat -LOC
26       All BEGIN
27 W     *IF WUP Deconfig
28 W     *  WUP ITEM 11_F_+1
29 W     *  Cur/ITEM 6 in fld, zm
30 W     * WUP ITEM 4  (Cur off)
31 W     * WUP ITEM 7  (Begin)
32 W     * Config with WUP
33 W     NOTE: WUP last seq = BKG
34   JOB Observe
35   JAC All PREVIEW
36       All QUIT
37       ------------------------
38   JAC ITEM 16_1
```

OBJECT: PKS 0558-504
KEYWORDS: Quasar
COMMENTS:
Z = 0.137



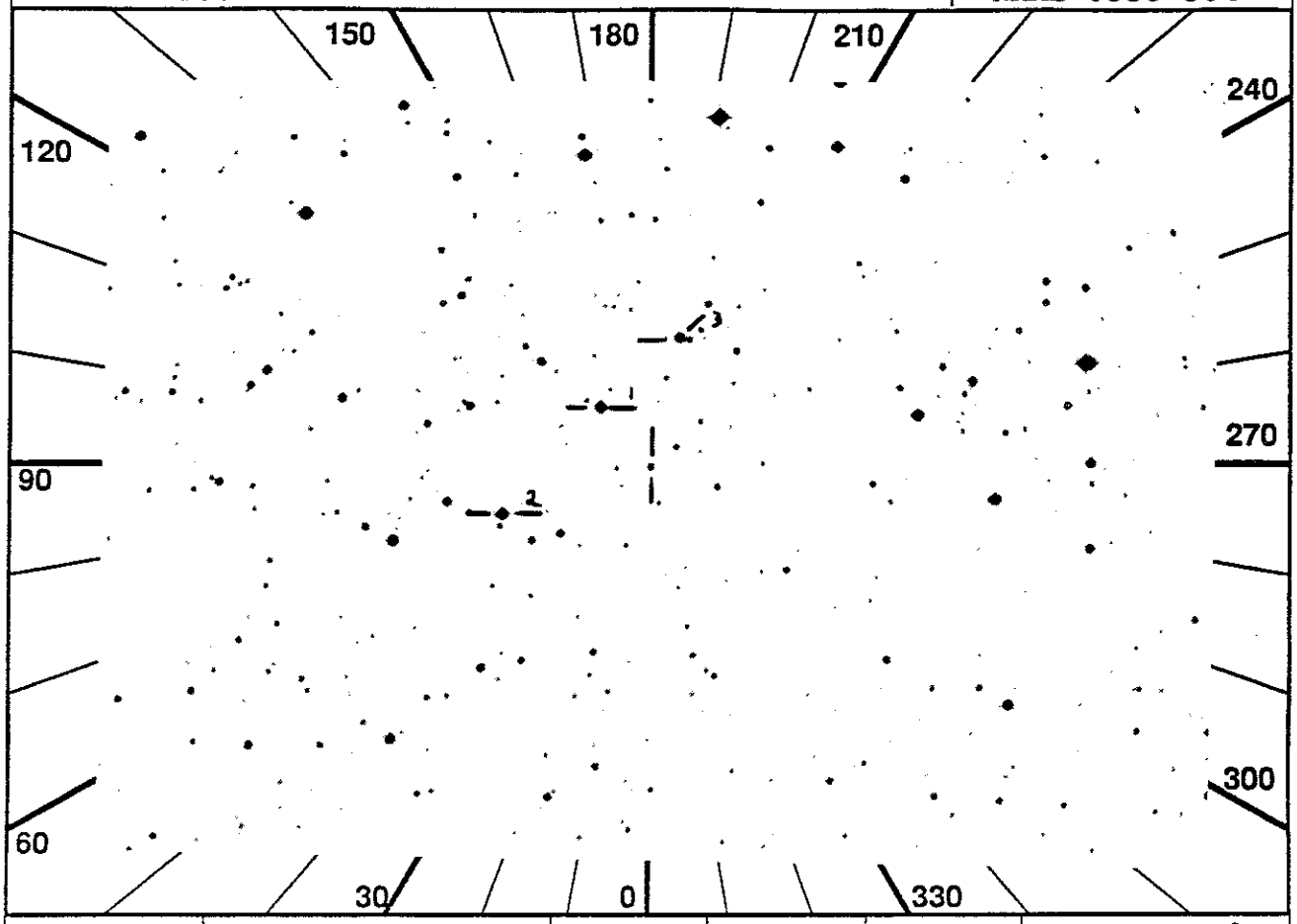
ID: 8407-11
Names: 0558-504 PKS
Type: Quasar
% Pol:
Pol Var:
Pos Ang:
Mechanism:
Comments: Obs ends with an offset and integration on the background.



UIT
Observation Description

1 RA 89.6442 DEC -50.4486 ROLL 230.50 | ID 8407-12

2 TIME 2008 | NAME 0558-504



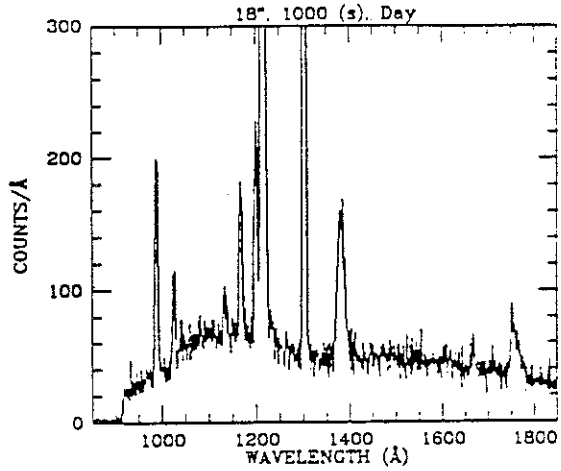
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 251	src sim 15 13 3.2 5	7 4 ---	- - ---	- - ---	SAA AC
4	W 265	ncn ngd 15 13 2.0	2 2 ---	2 2 60	-- - ---	FNTLOC BKG2
5	U 223	DT - T F 156 b5	- - - - - - - -			

```
 6 H -   VIP ON until SAA exit
 7   JAC Config H W U
 8       ------------------------
 9 H -   Note: Acquisition in SAA
10   JAC All SETUP
11 J     Chk  Stat -    -CUR RDY
12 H TV  Verify HUT acq on TV
13   JAC IMC BEGIN
14       HUT ITEM 5
15 W     WUP tgt= HUT faint star
16 W     *IF WUP target visible
17 W     * WUP PFK cur to target
18 W     * WUP ITEM 6  (Cntr)
19 W     * WUP ITEM 4  (Cur off)
20 W     *ELSE
21 W     * Config without WUP
22 H -   After SAA exit
23 H JAC ITEM 16_0
24 H     HUT SETUP
25 H     Chk HUT Stat -LOC
26       All BEGIN
27 W     *IF WUP Deconfig
28 W     *  WUP ITEM 11_F_+1
29 W     *  Cur/ITEM 6 in_fld, zm
30 W     * WUP ITEM 4  (Cur off)
31 W     * WUP ITEM 7  (Begin)
32 W     * Config with WUP
33 W     NOTE: WUP last seq = BKG
34   JOB Observe
35   JAC All PREVIEW
36       All QUIT
37       ------------------------
38   JAC ITEM 16_1
```

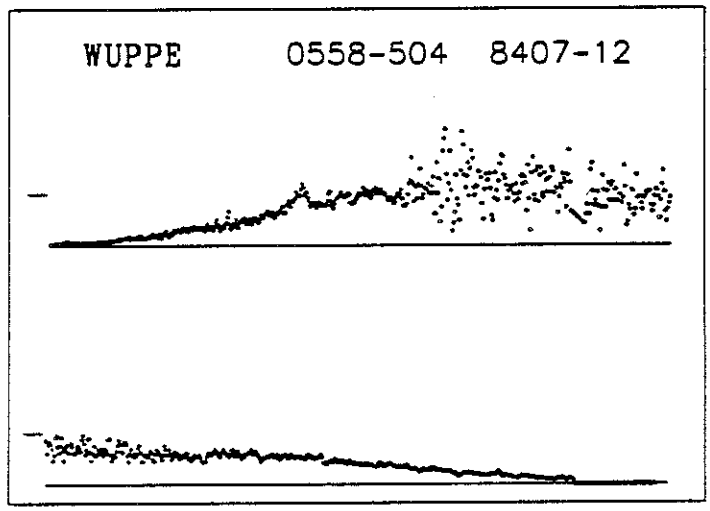
low z QSO BBB

1

OBJECT: PKS 0558-504
KEYWORDS: Quasar
COMMENTS:
Z = 0.137



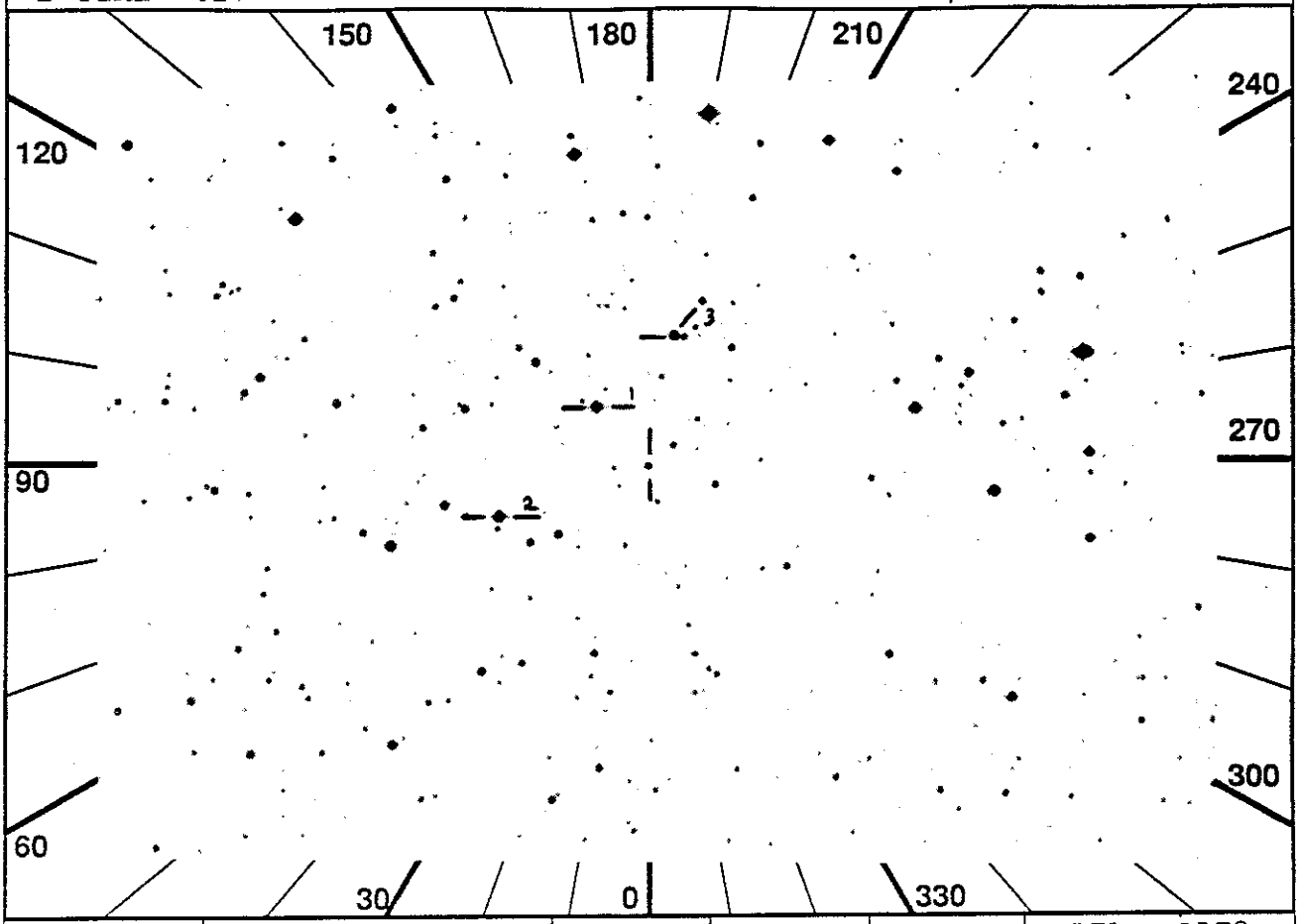
ID: 8407-12
Names: 0558-504 PKS
Type: Quasar
% Pol:
Pol Var:
Pos Ang:
Mechanism:
Comments: Obs ends with an offset and integration on the background. Co-pointing with BBXRT.



UIT
Observation Description

1 RA 89.6442 DEC -50.4486 ROLL 230.50 | ID 8407-13

2 TIME 417 | NAME 0558-504



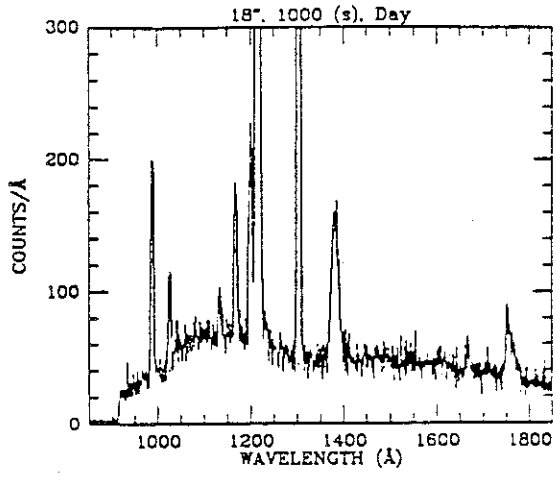
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	S H 289	src sim 15 13 3.2 5	7 4 ---	- - ---	- - ---	
4	W 265	ncn ngd 15 13 2.0	2 2 ---	2 2 60	-- - ---	FNTLOC BKG2
5	U 16	DT - T F 31 a5	- - - -	- - - -		

```
 6    JAC ITEM 16_0
 7        Config H W U
 8        ------------------------
 9    JAC All SETUP
10 W      Chk Stat  -LOC -CUR RDY
11        IMC BEGIN
12        HUT ITEM 5
13 W      WUP tgt= HUT faint star
14 W      *IF WUP target visible
15 W      * WUP PFK cur to target
16 W      * WUP ITEM 6  (Cntr)
17 W      * WUP ITEM 4  (Cur off)
18 W      *ELSE
19 W      * Config without WUP
20        All BEGIN
21 W      *IF WUP Deconfig
22 W      *  WUP ITEM 11_F_+1
23 W      *  Cur/ITEM 6 in fld, zm
24 W      * WUP ITEM 4  (Cur off)
25 W      * WUP ITEM 7  (Begin)
26 W      * Config with WUP
27 W      NOTE: WUP last seq = BKG
28    JOB Observe
29    JAC All PREVIEW
30        All QUIT
31        ------------------------
32    JAC ITEM 16_1
```

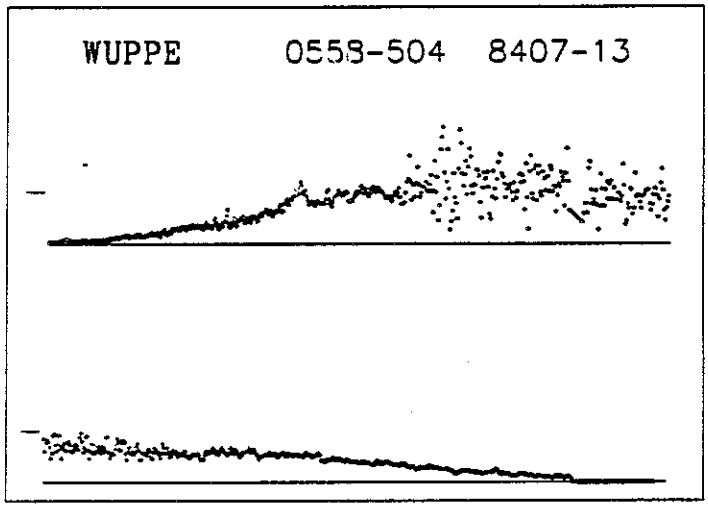
low Z Q50 BBB

1

OBJECT: PKS 0558-504
KEYWORDS: Quasar
COMMENTS:
Z = 0.137



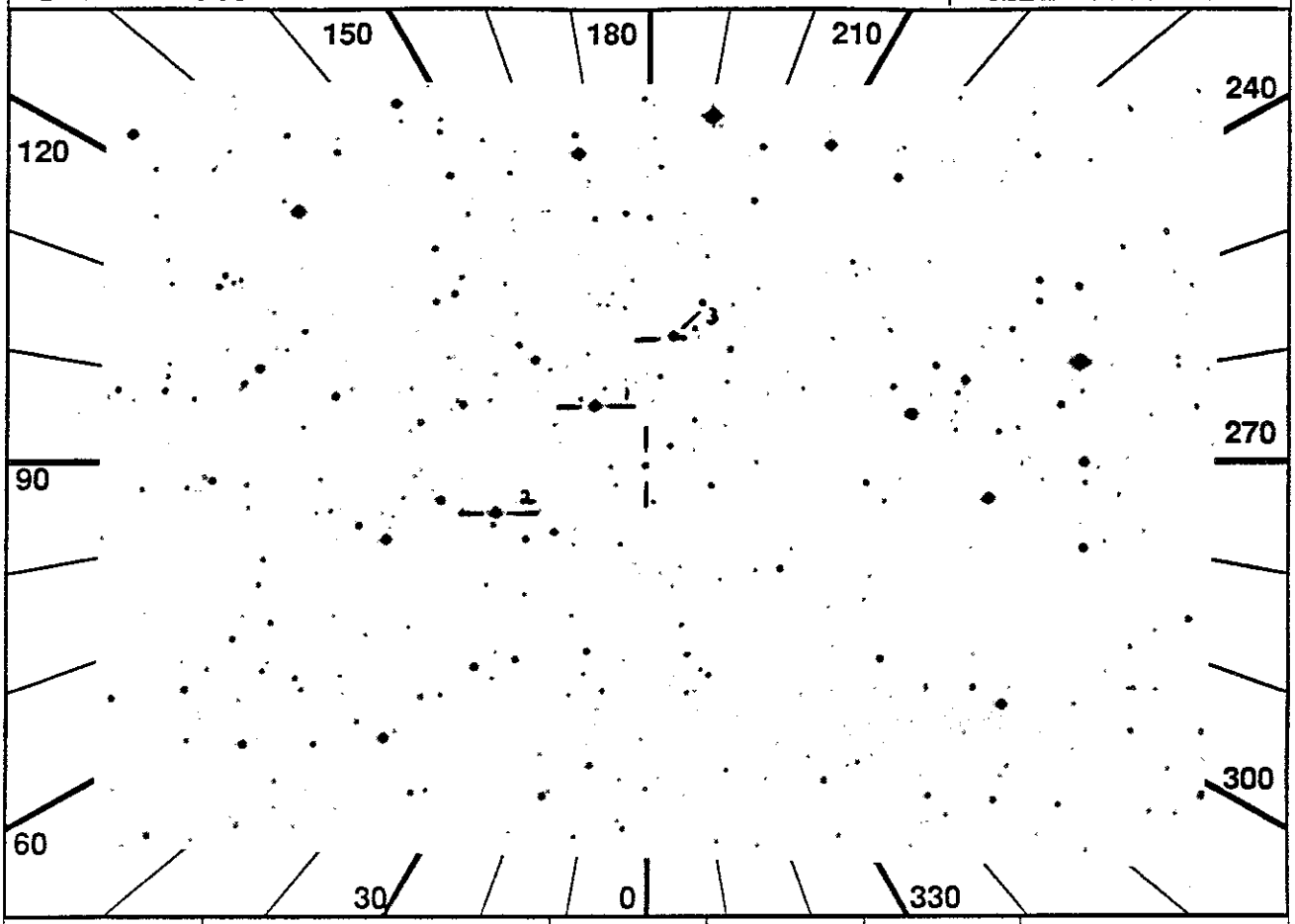
ID: 8407-13
Names: 0558-504 PKS
Type: Quasar
% Pol:
Pol Var:
Pos Ang:
Mechanism:
Comments: Obs ends with an offset and integration on the background.



UIT
Observation Description

1 RA 89.6442 DEC -50.4486 ROLL 230.50 | ID 8407-14

2 TIME 863 | NAME 0558-504



	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 323	src sim 15 13 3.2 5	7 4 ---	- - ---	- - ---	SAA AC
4	W 265	ncn ngd 15 13 2.0	2 2 ---	2 2 60	-- - ---	FNTLOC BKG2
5	U 102	DT - T F 156 a1 156 b1		- - - - - -		

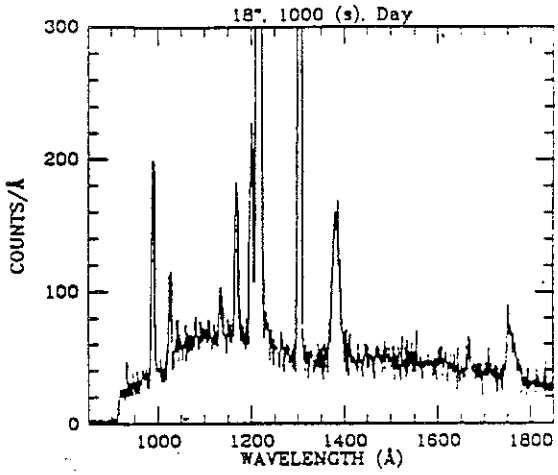
```
 6 H -   VIP ON until SAA exit
 7   JAC Config H W U
 8       ------------------------
 9 H -   Note: Acquisition in SAA
10   JAC All SETUP
11 J     Chk  Stat -    -CUR RDY
12 H TV  Verify HUT acq on TV
13   JAC IMC BEGIN
14       HUT ITEM 5
15 W     WUP tgt= HUT faint star
16 W     *IF WUP target visible
17 W     * WUP PFK cur to target
18 W     * WUP ITEM 6  (Cntr)
19 W     * WUP ITEM 4  (Cur off)
20 W     *ELSE
21 W     * Config without WUP
22 H -   After SAA exit
```

low z QSO BBB

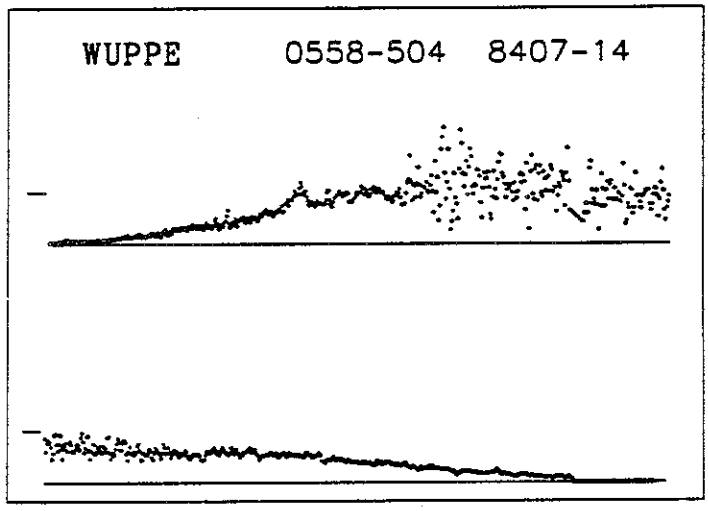
1

```
23 H JAC ITEM 16_0
24 H     HUT SETUP
25 H     Chk HUT Stat -LOC
26       All BEGIN
27 W     *IF WUP Deconfig
28 W     *  WUP ITEM 11_F_+1
29 W     *  Cur/ITEM 6 In fld, zm
30 W     * WUP ITEM 4  (Cur off)
31 W     * WUP ITEM 7  (Begin)
32 W     * Config with WUP
33 W     NOTE: WUP last seq = BKG
34   JOB Observe
35   JAC All PREVIEW
36       All QUIT
37       ------------------------
38   JAC ITEM 16_1
```

OBJECT: PKS 0558-504
KEYWORDS: Quasar
COMMENTS:
Z = 0.137

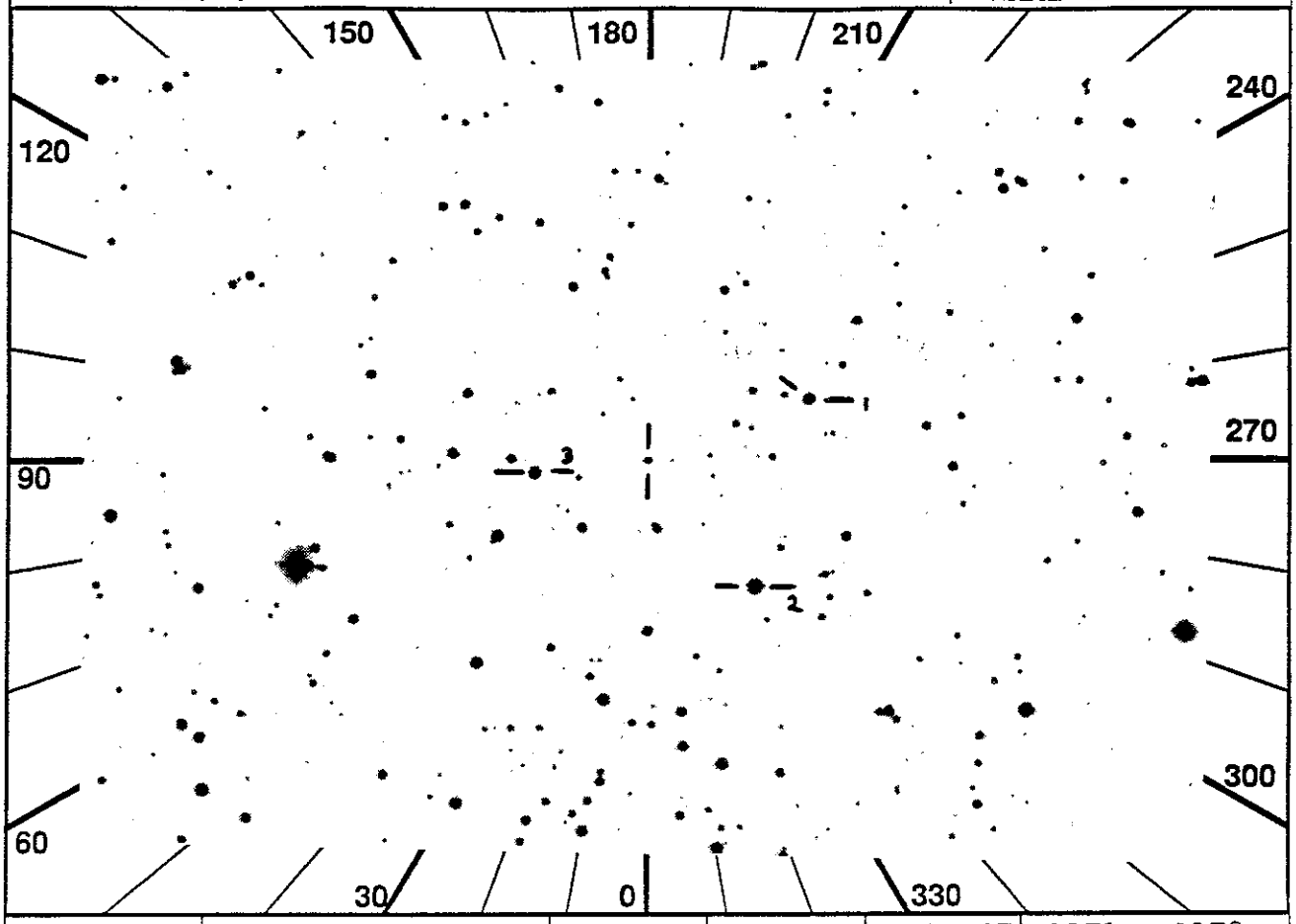


ID: 8407-14
Names: 0558-504 PKS
Type: Quasar
% Pol:
Pol Var:
Pos Ang:
Mechanism:
Comments: Obs ends with
an offset and integration
on the background.
Co-pointing with BBXRT.



UIT
Observation Description

1 RA 255.1686 DEC 64.2736 ROLL 246.31	ID 8415-11
2 TIME 2078	NAME 1700+64



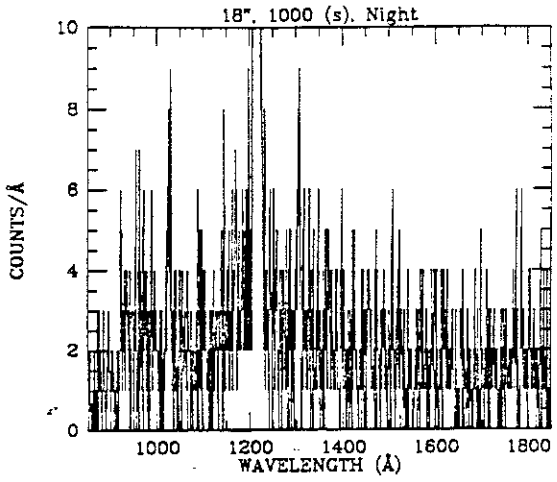
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 112	src sim 17 14 2.3 5	7 4 ---	- - ---	- - ---	W DARK
4	W 266	ncn ngd 16 14 1.0	2 2 ---	-- - ---	-- - ---	FNTLOC
5	U 195	DT - T F 156 a1 31 b5		- - - - - -		

```
 6    JAC ITEM 16_0
 7        Config H W U
 8        ------------------------
 9    JAC All SETUP
10  H -   Note:  faint target--if
11  H      necessary wait until
12  H      night to acquire.
13  W JAC Chk Stat  -LOC -CUR RDY
14        IMC BEGIN
15        HUT ITEM 5
16  W     WUP tgt= HUT faint star
17  W     *IF WUP target visible
18  W     * WUP PFK cur to target
19  W     * WUP ITEM 6  (Cntr)
20  W     * WUP ITEM 4  (Cur off)
21  W     *ELSE
22  W     * Config without WUP
23        All BEGIN
24  W     *IF WUP Deconfig
25  W     *  WUP ITEM 11_F_+1
26  W     *  Cur/ITEM 6 in fld, zm
27  W     * WUP ITEM 4  (Cur off)
28  W     * WUP ITEM 7  (Begin)
29  W     * Config with WUP
30    JOB Observe
31    JAC All PREVIEW
32        All QUIT
33        ------------------------
34    JAC ITEM 16_1
```

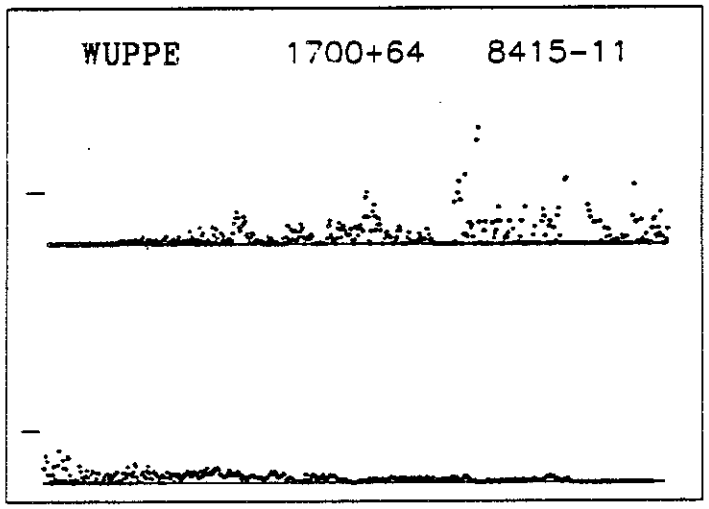
Hc II

1

OBJECT: HS1700+64
KEYWORDS: High Z Quasar
COMMENTS:
Z = 2.72
Please count each photon individually.
We don't want to lose any.
Five observations planned.

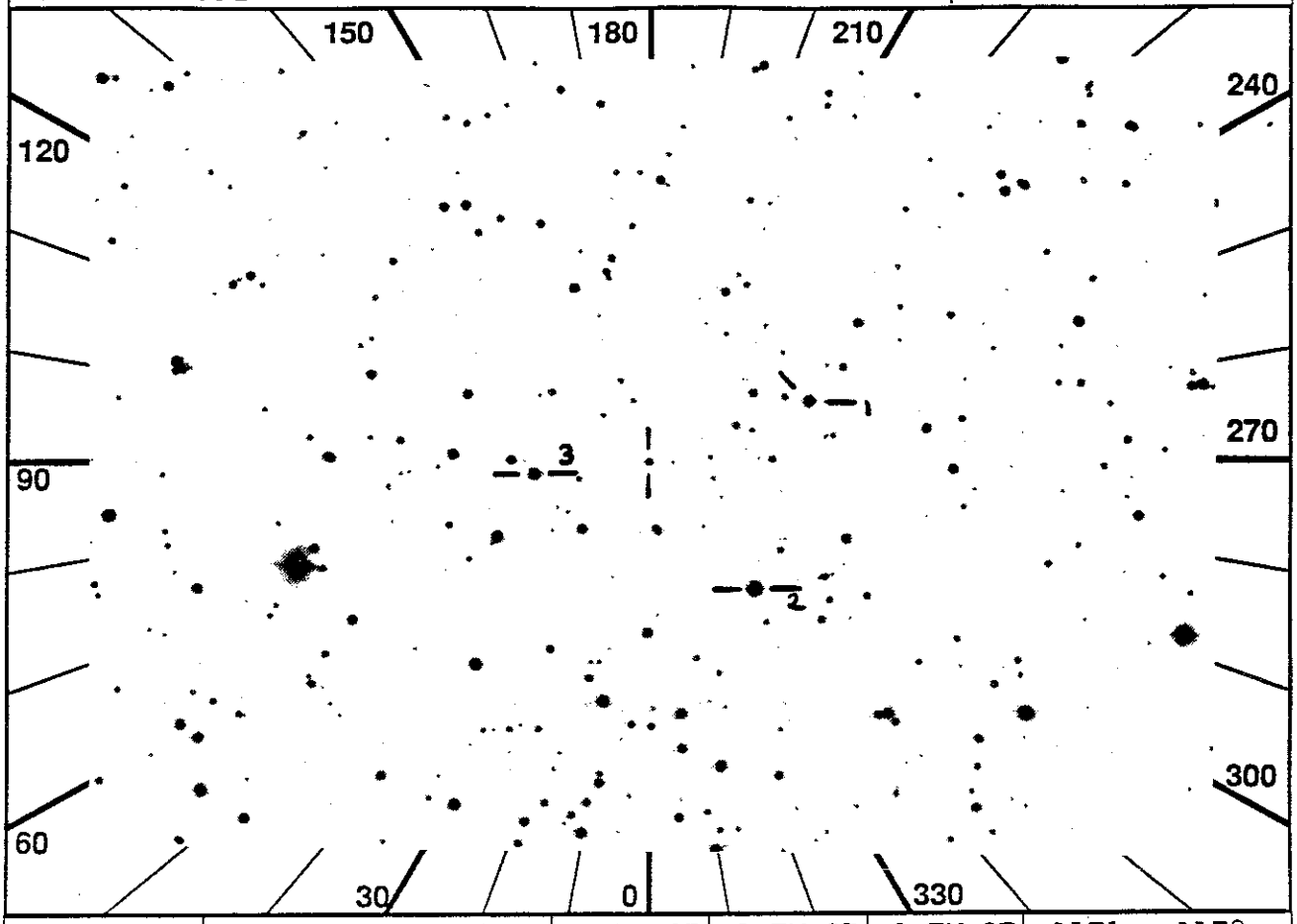


ID: 8415-11
Names: 1700+64
Type: Quasar
% Pol:
Pol Var:
Pos Ang:
Mechanism:
Comments:
Co-pointing with BBXRT.



UIT
Observation Description

1 RA 255.1686 DEC 64.2736 ROLL 246.31	ID 8415-12
2 TIME 1891	NAME 1700+64



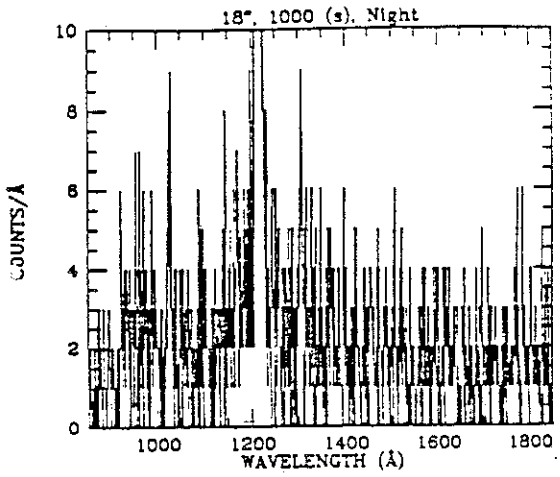
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	S H 154	src sim 17 14 2.3 5	7 4 ---	- - ---	- - ---	
4	W 266	ncn ngd 16 14 1.0	2 2 ---	-- - ---	-- - ---	FNTLOC
5	U 183	DT - T F 156 b1 31 b5	- -	- -	- -	

```
 6    JAC ITEM 16_0
 7        Config H W U
 8        ------------------------
 9    JAC All SETUP
10 W      Chk Stat  -LOC -CUR RDY
11        IMC BEGIN
12        HUT ITEM 5
13 W      WUP tgt= HUT faint star
14 W      *IF WUP target visible
15 W      * WUP PFK cur to target
16 W      * WUP ITEM 6  (Cntr)
17 W      * WUP ITEM 4  (Cur off)
18 W      *ELSE
19 W      * Config without WUP
20        All BEGIN
21 W      *IF WUP Deconfig
22 W      *  WUP ITEM 11_F_+1
23 W      *  Cur/ITEM 6 in fld, zm
24 W      * WUP ITEM 4  (Cur off)
25 W      * WUP ITEM 7  (Begin)
26 W      * Config with WUP
27    JOB Observe
28    JAC All PREVIEW
29        All QUIT
30        ------------------------
31    JAC ITEM 16_1
```

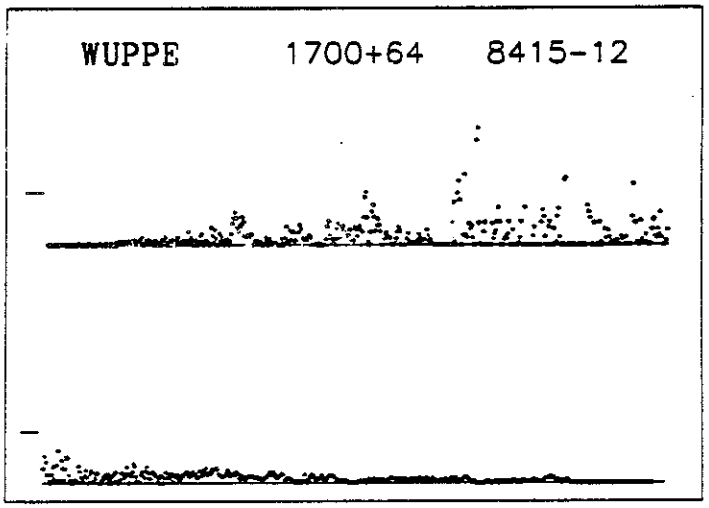
He II

1

OBJECT: HS1700+64
KEYWORDS: High Z Quasar
COMMENTS:
Z = 2.72
Please count each photon individually.
We don't want to lose any.
Five observations planned.

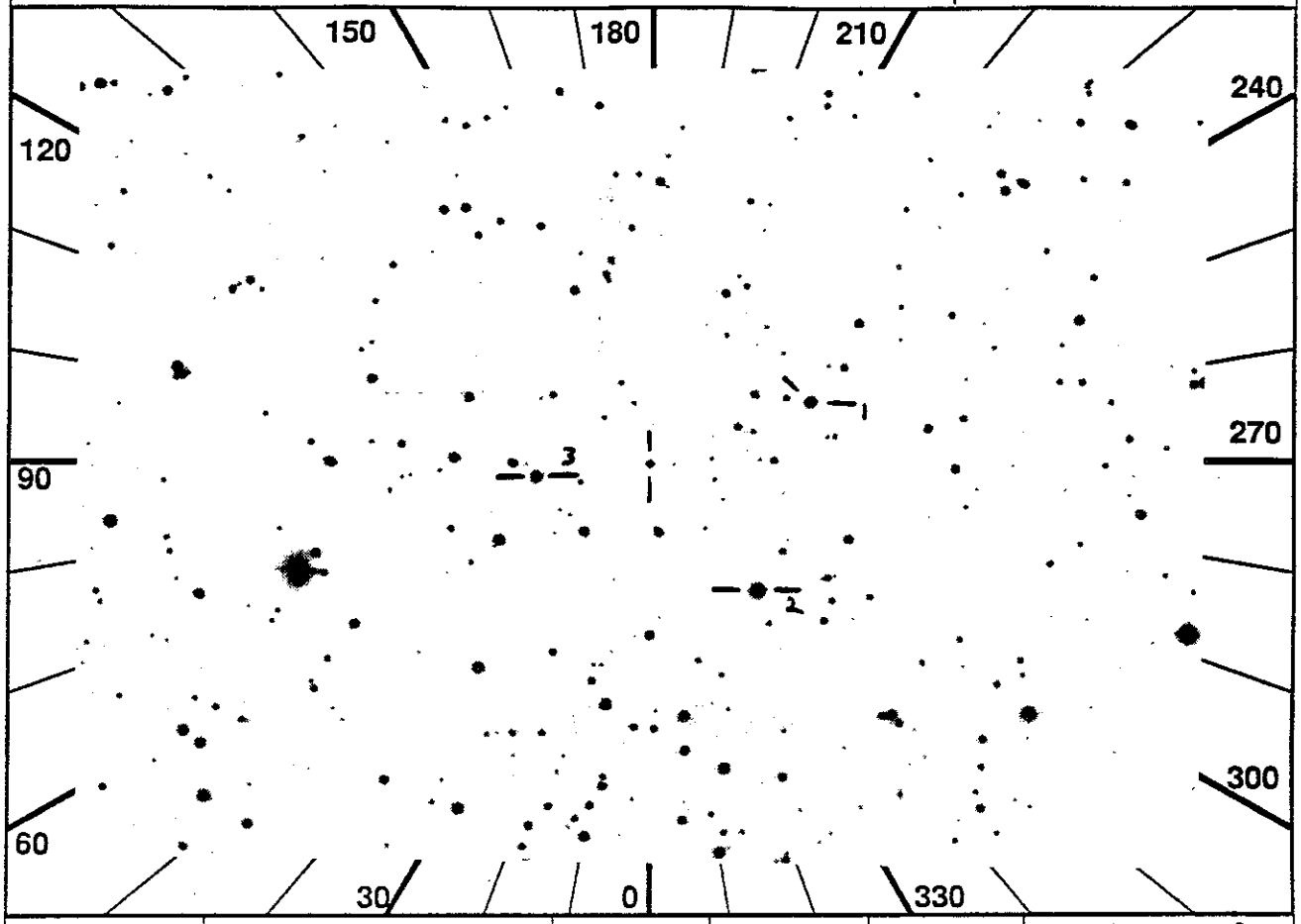


ID: 8415-12
Names: 1700+64
Type: Quasar
% Pol:
Pol Var:
Pos Ang:
Mechanism:
Comments:



UIT
Observation Description

1 RA 255.1686 DEC 64.7736 ROLL 246.31	ID 8415-13
2 TIME 1624	NAME 1700+64



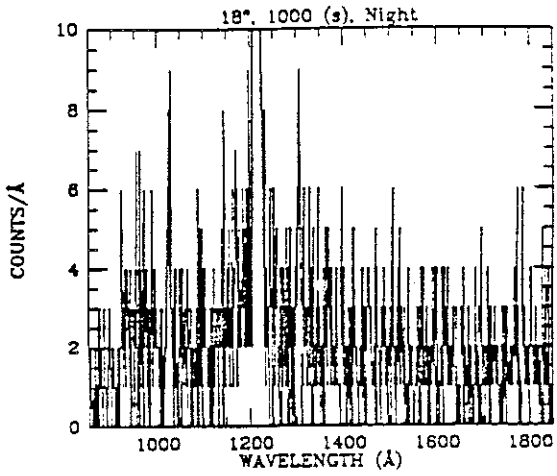
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 210	src sim 17 14 2.3 5	7 4 ---	- - ---	- - ---	
4	W 266	ncn ngd 16 14 1.0	2 2 ---	-- - ---	-- - ---	FNTLOC
5	U 238	DT 60 T F 31 b6 496 b3	- -	- -	- -	

```
 6    JAC ITEM 16_0
 7        Config H W U
 8        ------------------------
 9    JAC All SETUP
10 W      Chk Stat  -LOC -CUR RDY
11        IMC BEGIN
12        HUT ITEM 5
13 W      WUP tgt= HUT faint star
14 W      *IF WUP target visible
15 W      * WUP PFK cur to target
16 W      * WUP ITEM 6  (Cntr)
17 W      * WUP ITEM 4  (Cur off)
18 W      *ELSE
19 W      * Config without WUP
20        All BEGIN
21 W      *IF WUP Deconfig
22 W      *  WUP ITEM 11 F +1
23 W      *  Cur/ITEM 6 In fld, zm
24 W      * WUP ITEM 4  (Cur off)
25 W      * WUP ITEM 7  (Begin)
26 W      * Config with WUP
27    JOB Observe
28    JAC All PREVIEW
29        All QUIT
30        ------------------------
31    JAC ITEM 16_1
```

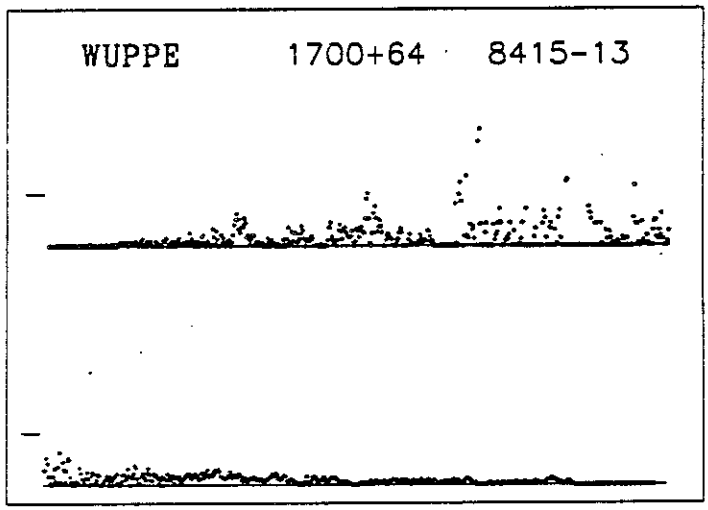
He II

1

OBJECT: HS1700+64
KEYWORDS: High Z Quasar
COMMENTS:
Z = 2.72
Please count each photon individually.
We don't want to lose any.
Five observations planned.



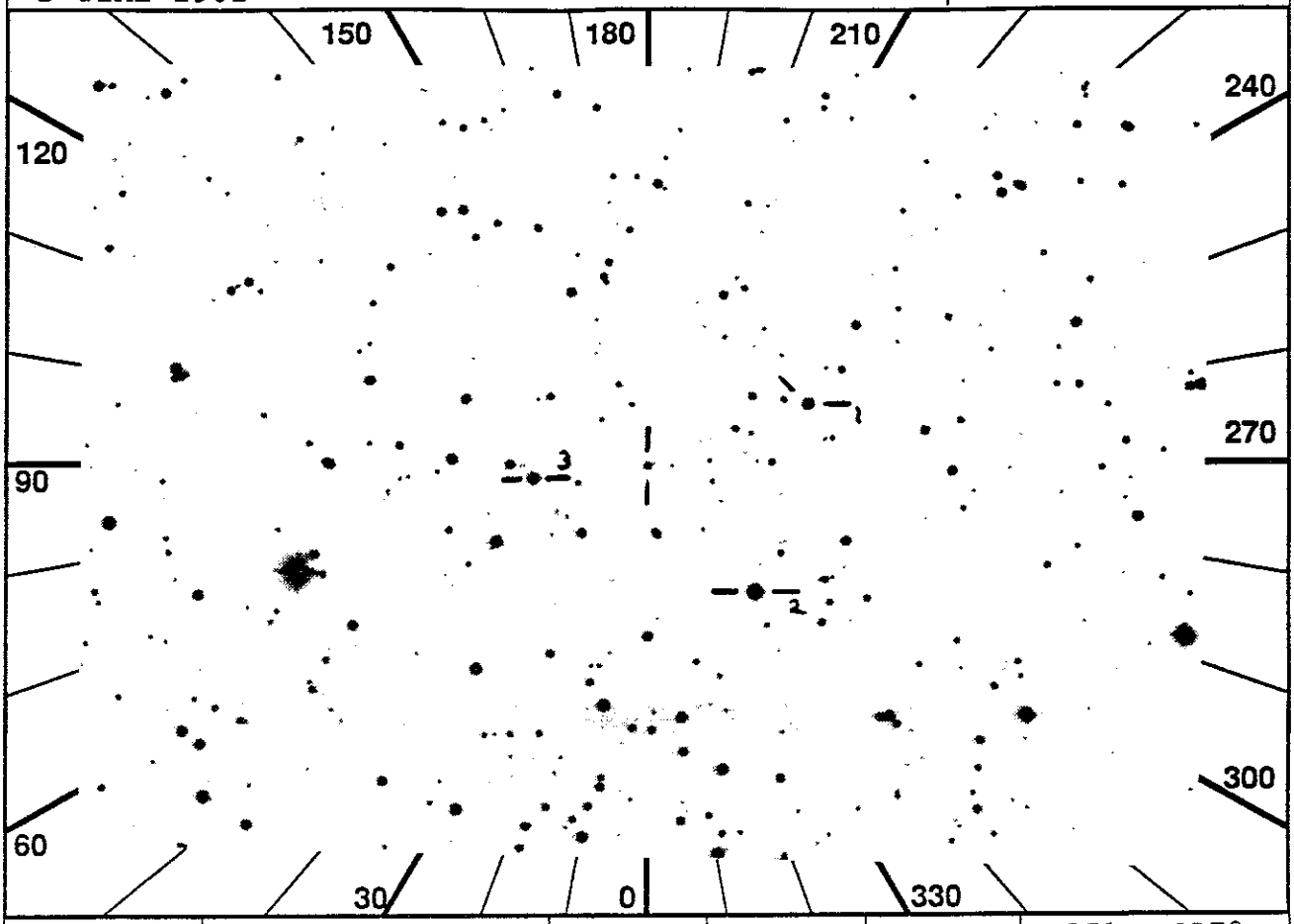
ID: 8415-13
Names: 1700+64
Type: Quasar
% Pol:
Pol Var:
Pos Ang:
Mechanism:
Comments:



UIT
Observation Description

1 RA 255.1686 DEC 64.2736 ROLL 246.31 | ID 8415-14

2 TIME 1981 | NAME 1700+64



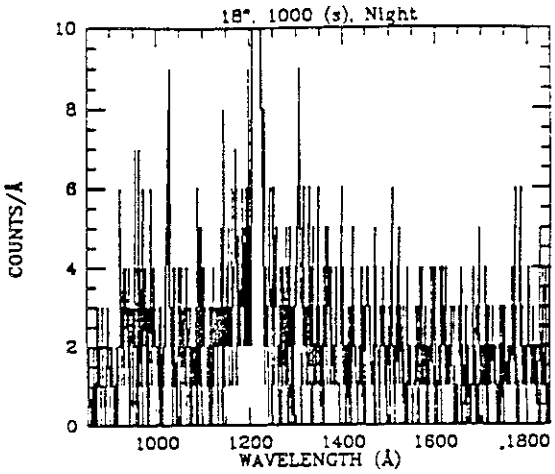
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 267	src sim 17 14 2.3 5	7 4 ---	- - ---	- - ---	W DARK
4	W 266	ncn ngd 16 14 1.0	2 2 ---	-- - ---	-- - ---	FNTLOC
5	U 237	DT - T F 11 a6	2 b5	- -	- -	- -

```
 6    JAC ITEM 16_0
 7        Config H W U
 8        ------------------------
 9    JAC All SETUP
10 H -    Note:  faint target--if
11 H       necessary wait until
12 H       night to acquire.
13 W JAC Chk Stat  -LOC -CUR RDY
14        IMC BEGIN
15        HUT ITEM 5
16 W      WUP tgt= HUT faint star
17 W      *IF WUP target visible
18 W      * WUP PFK cur to target
19 W      * WUP ITEM 6  (Cntr)
20 W      * WUP ITEM 4  (Cur off)
21 W      *ELSE
22 W      * Config without WUP
23        All BEGIN
24 W      *IF WUP Deconfig
25 W      *  WUP ITEM 11_F_+1
26 W      *  Cur/ITEM 6 in fld, zm
27 W      * WUP ITEM 4  (Cur off)
28 W      * WUP ITEM 7  (Begin)
29 W      * Config with WUP
30    JOB Observe
31    JAC All PREVIEW
32        All QUIT
33        ------------------------
34    JAC ITEM 16_1
```

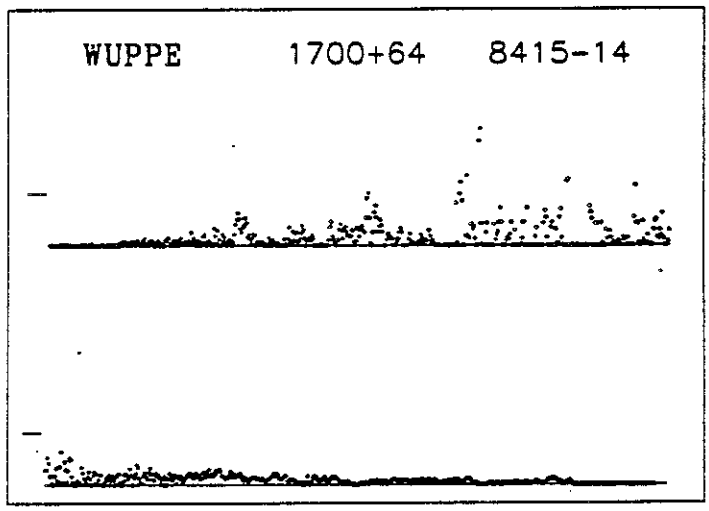
He II

1

OBJECT: HS1700+64
KEYWORDS: High Z Quasar
COMMENTS:
Z = 2.72
Please count each photon individually.
We don't want to lose any.
Five observations planned.



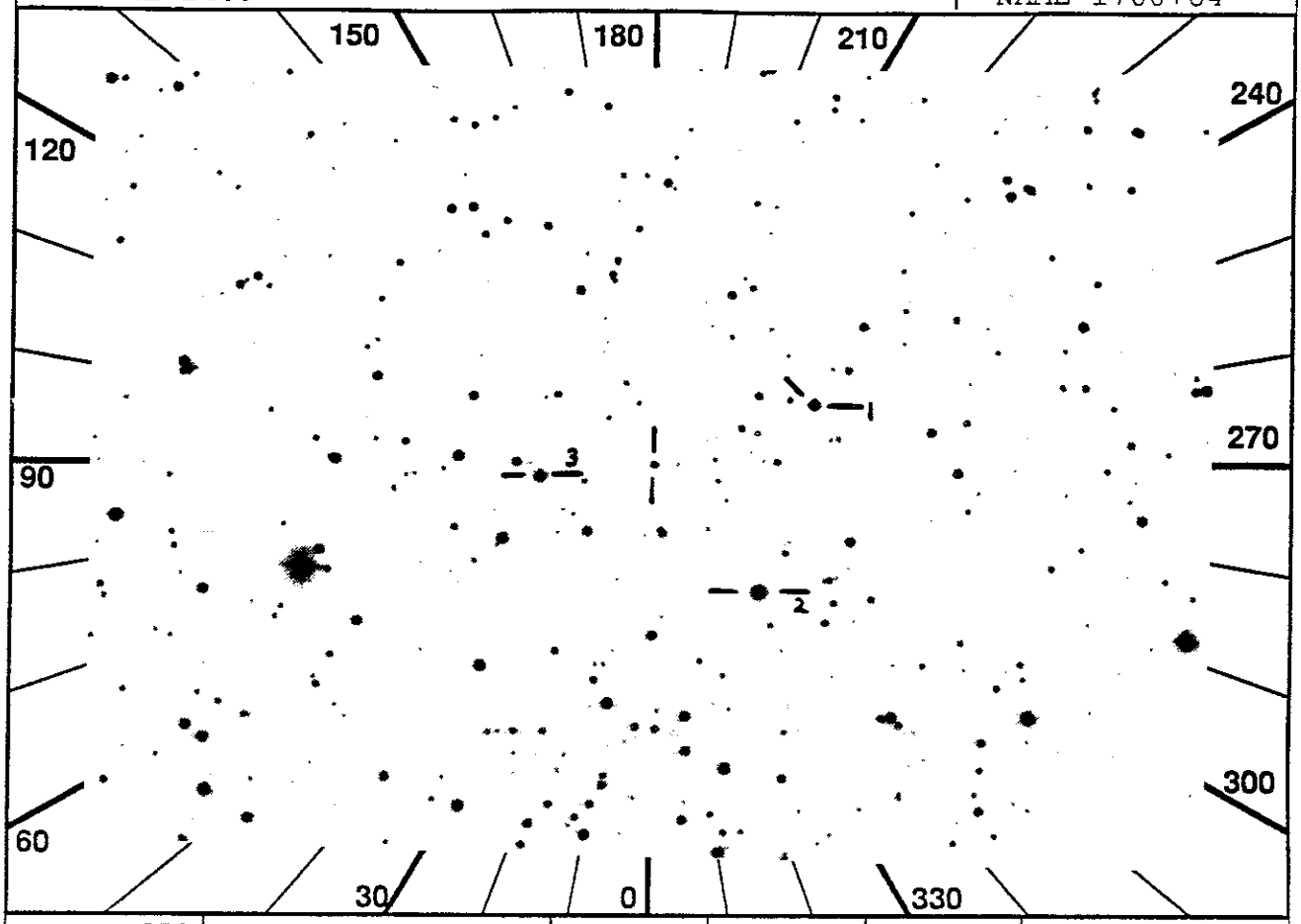
ID: 8415-14
Names: 1700+64
Type: Quasar
% Pol:
Pol Var:
Pcs Ang:
Mechanism:
Comments:



UIT
Observation Description

1 RA 255.1686 DEC 64.7736 ROLL 246.31 | ID 8415-15

2 TIME 2489 | NAME 1700+64



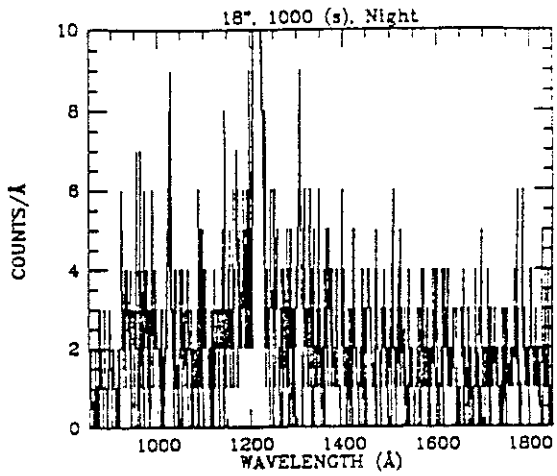
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	S H 316	src sim 17 14 3.2 5	7 4 ---	- - ---	- - ---	W DARK
4	W 266	ncn ngd 16 14 1.0	2 2 ---	-- - ---	-- - ---	FNTLOC
5	U 245	DT - T F 62 b5 187 b1		- - - - - -		LTSTRT

```
 6    JAC ITEM 16_0
 7        Config H W U
 8        ------------------------
 9    JAC All SETUP
10 H -    Note:  faint target--if
11 H       necessary wait until
12 H       night to acquire.
13 W JAC Chk Stat  -LOC -CUR RDY
14        IMC BEGIN
15        HUT ITEM 5
16 W      WUP tgt= HUT faint star
17 W      *IF WUP target visible
18 W      * WUP PFK cur to target
19 W      * WUP ITEM 6  (Cntr)
20 W      * WUP ITEM 4  (Cur off)
21 W      *ELSE
22 W      * Config without WUP
23 U      Config without UIT
24        All BEGIN
25 W      *IF WUP Deconfig
26 W      *  WUP ITEM 11_F_+1
27 W      *  Cur/ITEM 6 In fld, zm
28 W      * WUP ITEM 4  (Cur off)
29 W      * WUP ITEM 7  (Begin)
30 W      * Config with WUP
31 U JOB Wait for TIME AVAIL 2184
32 U      UIT BEGIN
33 U JAC Config with UIT
34   JOB Observe
35   JAC All PREVIEW
36        All QUIT
37        ------------------------
38   JAC ITEM 16_1
```

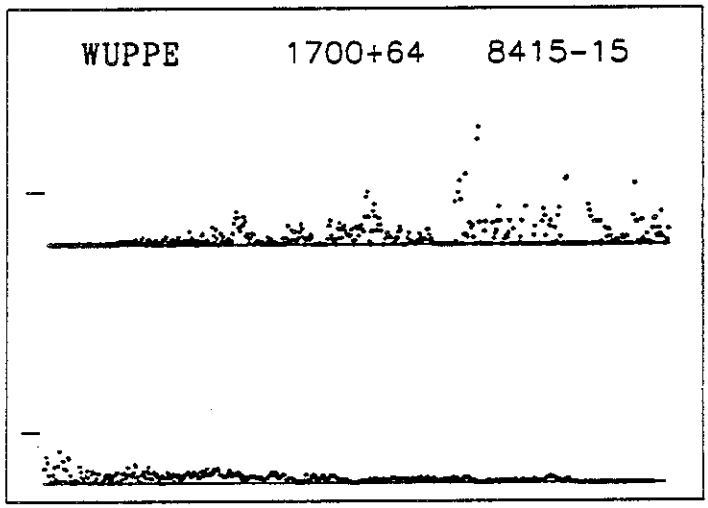
He II

1

OBJECT: HS1700+64
KEYWORDS: High Z Quasar
COMMENTS:
Z = 2.72
Please count each photon individually.
We don't want to lose any.
Five observations planned.



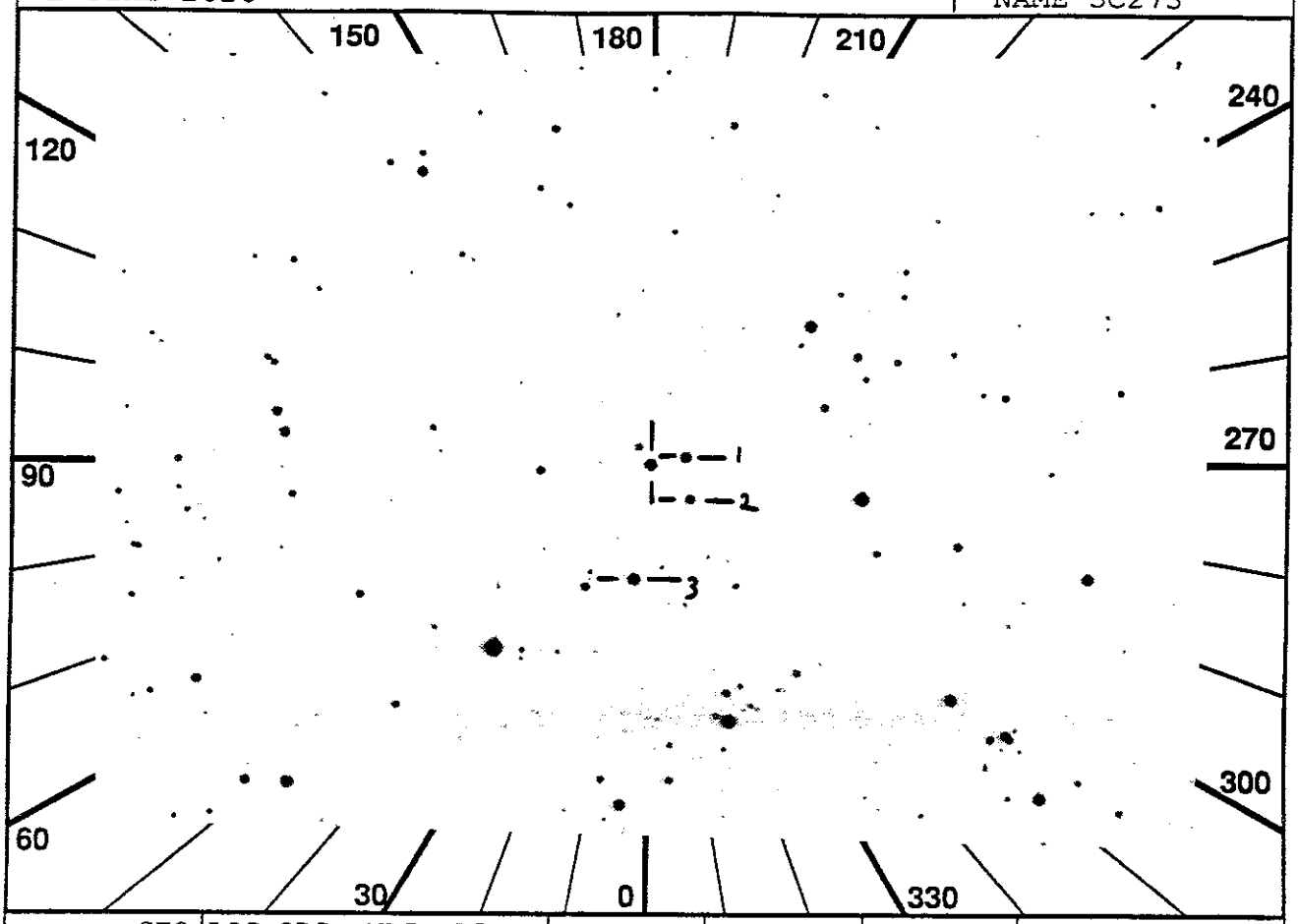
ID: 8415-15
Names: 1700+64
Type: Quasar
% Pol:
Pol Var:
Pos Ang:
Mechanism:
Comments:



UIT
Observation Description

1 RA 186.6385 DEC 2.3287 ROLL 42.91 | ID 8424-11

2 TIME 2626 | NAME 3C273



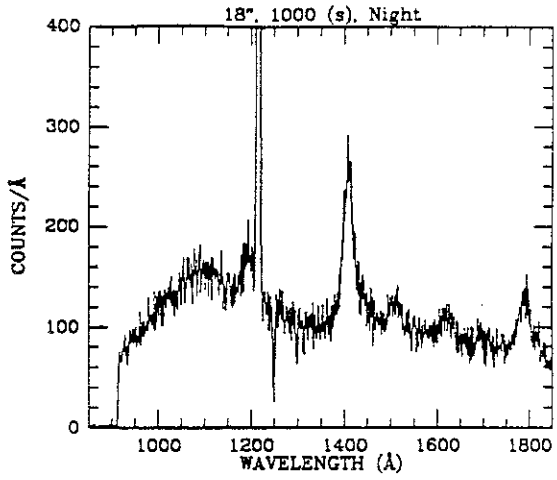
	SEQ	LOC OBS MAG LGR·D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 58	src sim 14 14 3.5 5	7 4 ---	- - ---	- - ---	~~W DARK~~
4	W 267	aut ngd 13 11 1.0	2 2 60	2 2 ---	-- - ---	BKG1
5	U 204	DT - T F 24 b5 31 b1	31 a1	- -	- -	LTSTRT AS2DFJ

```
 6 I      CMD WRI_3900_F0028B24
 7 I      CMD WRI_3900
 8 I        F007F0010FA0 (4s upd)
 9   JAC  ITEM 16_0
10        Config H W U
11        ------------------------
12   JAC  All SETUP
13 ~~H~~  ~~Note: faint target=>if~~
14 ~~H~~  ~~necessary wait until~~
15 ~~H~~  ~~night to acquire.~~
16   JAC  Chk Stat  -LOC -LOC RDY
17        IMC BEGIN
18        HUT ITEM 5
19 U      Config without UIT
20        All BEGIN
21 W      NOTE: WUP 1st seq = BKG
22 U JOB  Wait for TIME AVAIL 2184
23 U      UIT BEGIN
24 U JAC  Config with UIT
25   JOB  Observe
26   JAC  All PREVIEW
27        All QUIT
28        ------------------------
29   JAC  ITEM 16_1
30 I      CMD ISS_3908  (1s upd)
31 I      CMD ISS_3928
```

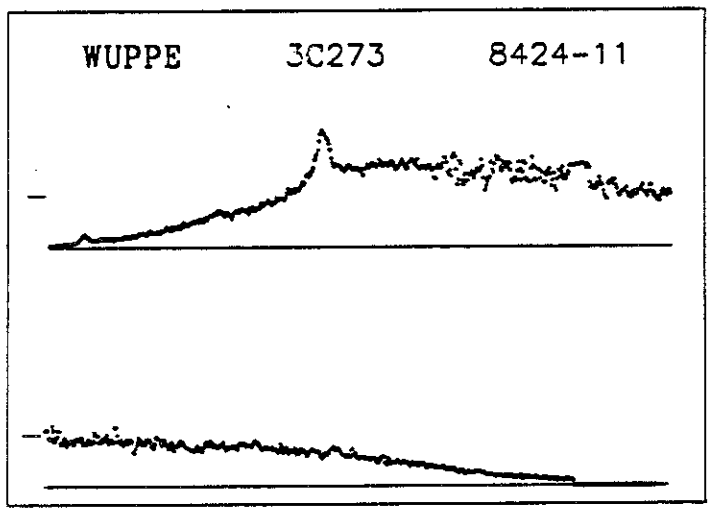
low z QSO

1

OBJECT: 3C 273
KEYWORDS: quasar
COMMENTS:
Z = 0.158



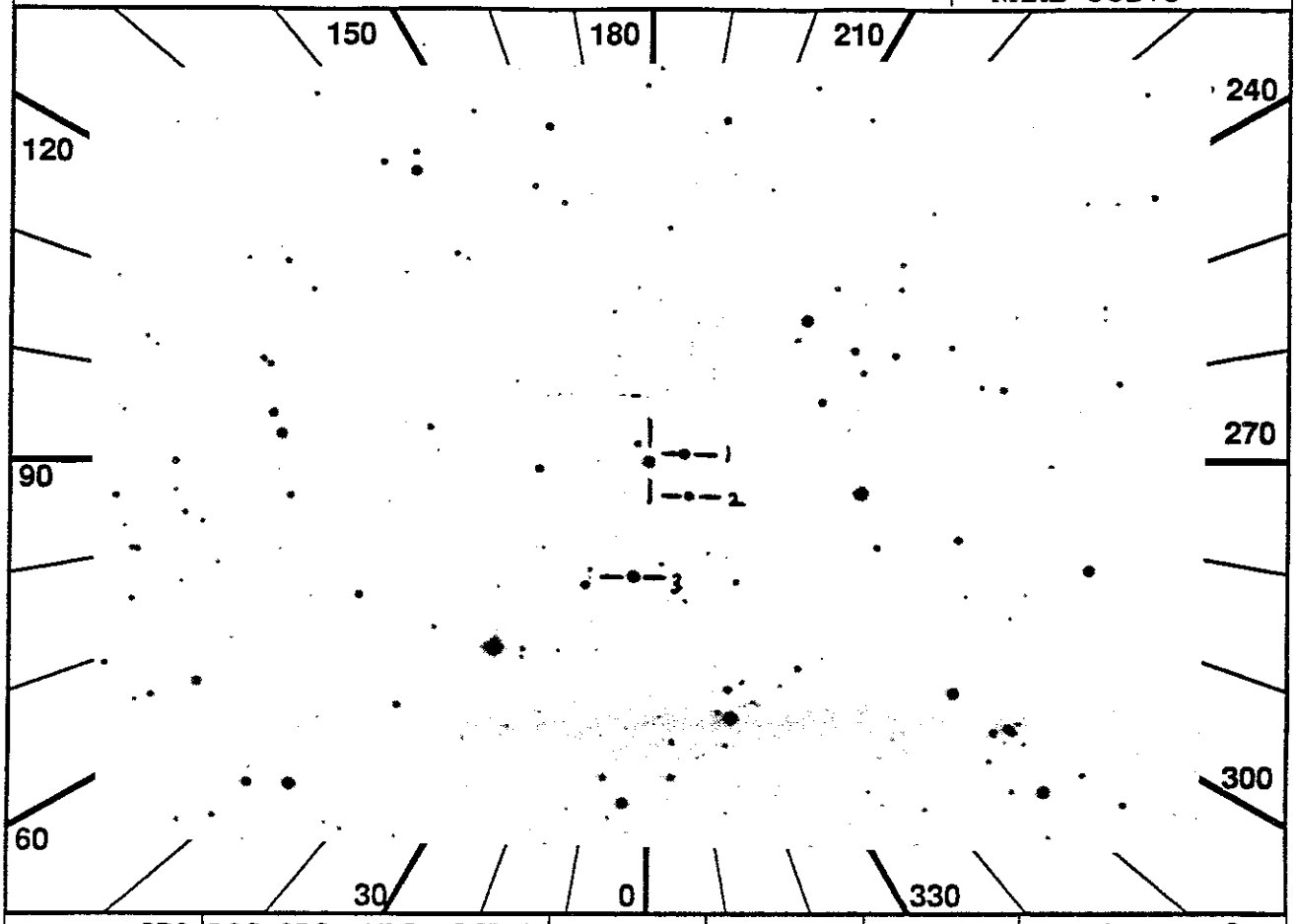
ID: 8424-11
Names: 3C273 1226+023
Type: QSO
% Pol: 0.3
Pol Var:
Pos Ang:
Mechanism:
Comments: Obs begins with an offset and integration on the background. Co-pointing with BBXRT.



UIT
Observation Description

1 RA 186.6385 DEC 2.3287 ROLL 42.91 | ID 8424-12

2 TIME 1894 | NAME 3C273



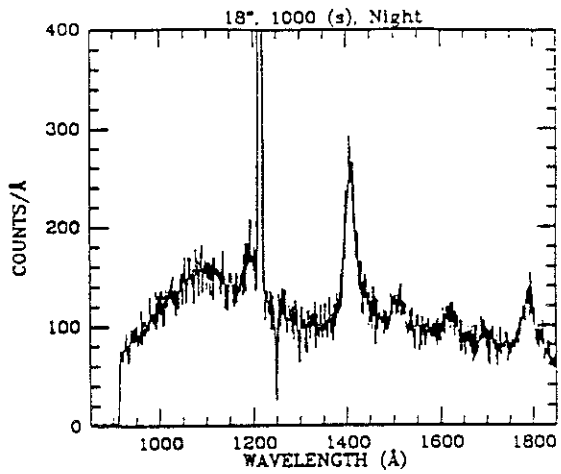
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 171	src sim 14 14 3.5 5	7 4 ---	- - ---	- - ---	~~W DARK~~
4	W 267	aut ngd 13 11 1.0	2 2 60	2 2 ---	-- - ---	BKG1
5	U 239	DT - T F 18 b5 110 a6		- - - - - -		AS2DFJ

6	I	CMD WRI_3900_F0028B24	17		IMC BEGIN
7	I	CMD WRI_3900_	18		HUT ITEM 5
8	I	F007F0010FA0 (4s upd)	19		All BEGIN
9	JAC	ITEM 16 0	20	W	NOTE: WUP 1st seq = BKG
10		Config H W U	21	JOB	Observe
11		----------	22	JAC	All PREVIEW
12	JAC	All SETUP	23		All QUIT
13	H -	Note: faint target--if	24		----------
14	H	necessary wait until	25	JAC	ITEM 16_1
15	H	night to acquire.	26	I	CMD ISS_3908 (1s upd)
16	JAC	Chk Stat -LOC -LOC RDY	27	I	CMD ISS_3928

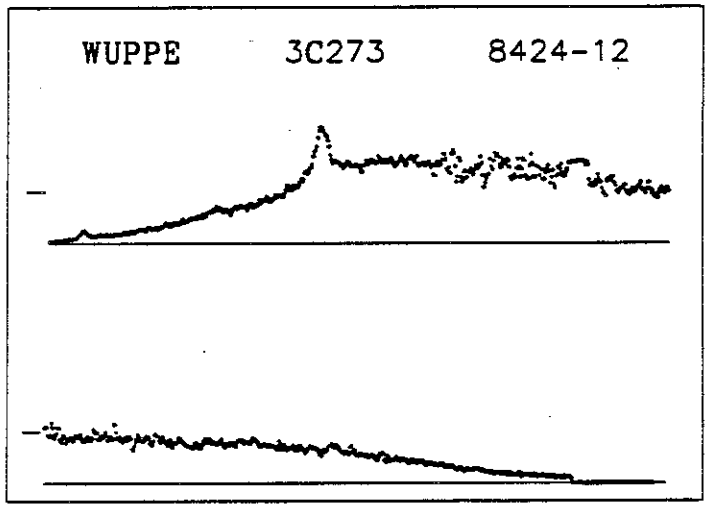
low z QSO

1

OBJECT: 3C 273
KEYWORDS: quasar
COMMENTS:
Z = 0.158

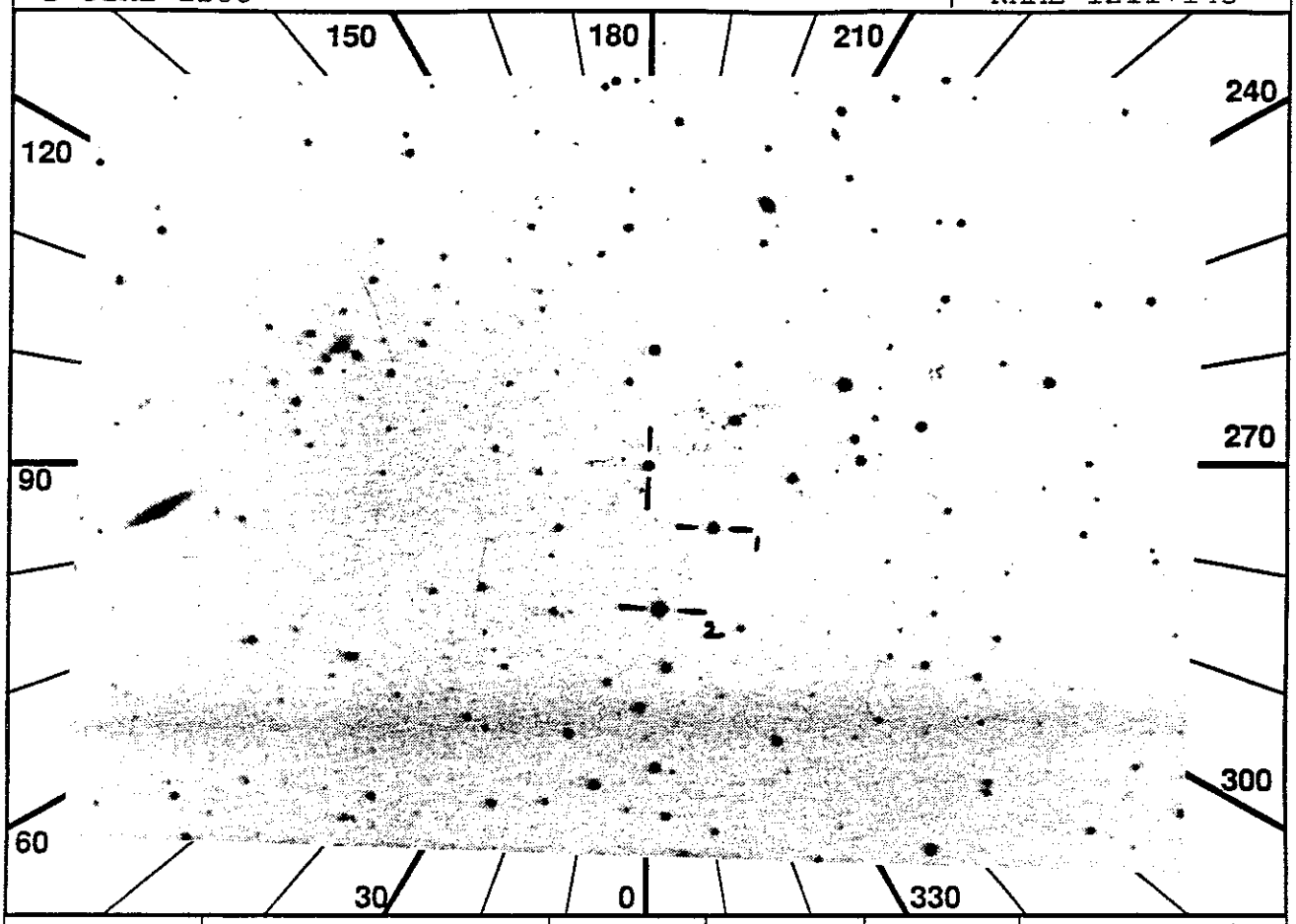


ID: 8424-12
Names: 3C273 1226+023
Type: QSO
% Pol: 0.3
Pol Var:
Pos Ang:
Mechanism:
Comments: Obs begins with an offset and integration on the background. Co-pointing with BBXRT.



UIT
Observation Description

1 RA 182.9367 DEC 14.3314 ROLL 159.32	ID 8506-10
2 TIME 1288	NAME 1211+143



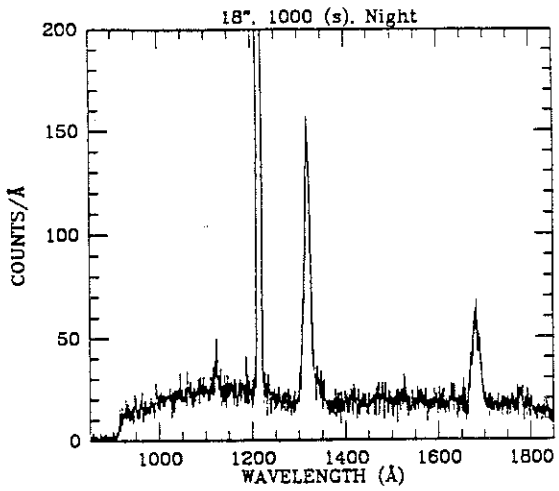
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 204	src sim 15 14 2.6 5	7 4 ---	- - ---	- - ---	
4	W 268	ncn ngd 15 12 2.3	2 2 ---	-- - ---	-- - ---	FNTLOC
5	U 101	DT - T F 31 a1 31 b1		- - - - - -		

```
 6    JAC ITEM 16_0                    19 W      * Config without WUP
 7        Config H W U                 20        All BEGIN
 8        ------------------------     21 W      *IF WUP Deconfig
 9    JAC All SETUP                    22 W      *  WUP ITEM 11_F_+1
10 W      Chk Stat  -LOC -CUR RDY      23 W      *  Cur/ITEM 6 in fld, zm
11        IMC BEGIN                    24 W      * WUP ITEM 4  (Cur off)
12        HUT ITEM 5                   25 W      * WUP ITEM 7  (Begin)
13 W      WUP tgt= HUT faint star      26 W      * Config with WUP
14 W      *IF WUP target visible       27    JOB Observe
15 W      * WUP PFK cur to target      28    JAC All PREVIEW
16 W      * WUP ITEM 6  (Cntr)         29        All QUIT
17 W      * WUP ITEM 4  (Cur off)      30        ------------------------
18 W      *ELSE                        31    JAC ITEM 16_1
```

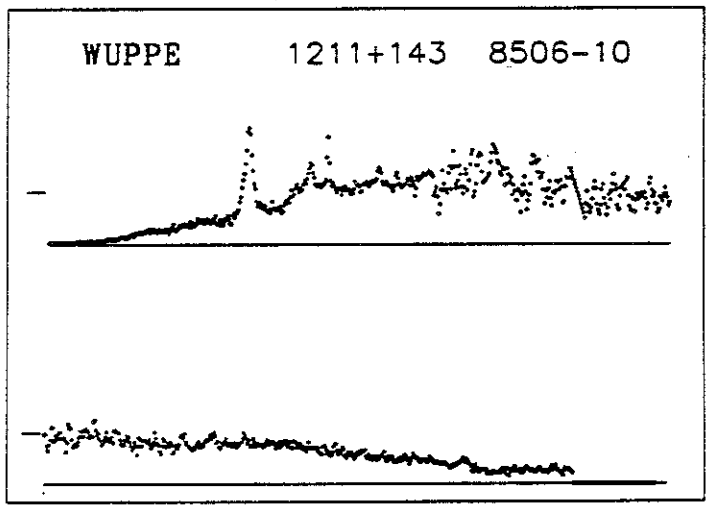
low z QSO BBB

1

OBJECT: PG1211+143
KEYWORDS: quasar
COMMENTS:
Z = 0.085



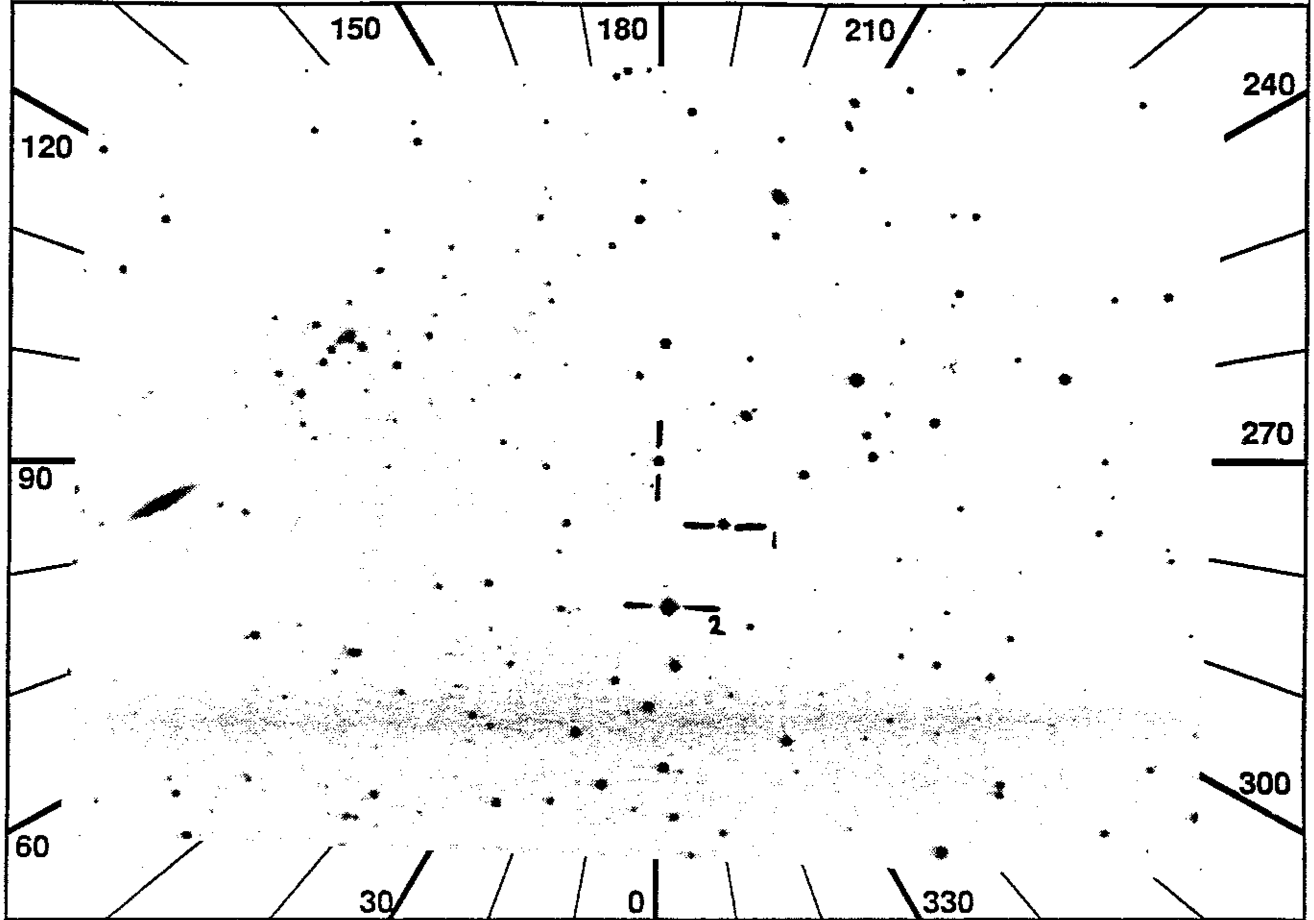
ID: 8506-10
Names: 1211+143 PG
Type: QSO
% Pol:
Pol Var:
Pos Ang:
Mechanism:
Comments:
Co-pointing with BBXRT.



UIT
Observation Description

1 RA 182.9367 DEC 14.3314 ROLL 155.67 | ID 8506-20

2 TIME 1342 | NAME 1211+143



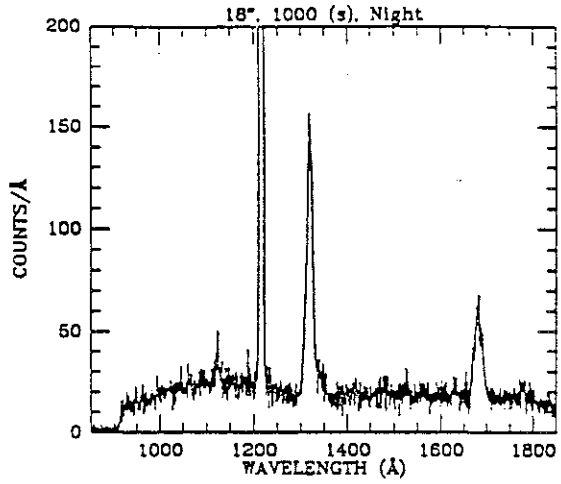
	SEQ	LOC OBS	MAG	LGR D	A FM OF	A FM OF	A FM OF	ALT1	ALT2
3	P H 292	src sim	15 14	2.6 5	7 4 ---	- - ---	- - ---		
4	W 268	ncn ngd	15 12	2.3	2 2 ---	-- - ---	-- - ---	FNTLOC	
5	U 240	DT -	T F 20 b5	11 b5	- -	- -	- -		

```
 6    JAC ITEM 16_0                    19 W      * Config without WUP
 7        Config H W U                 20        All BEGIN
 8        ------------------------     21 W      *IF WUP Deconfig
 9    JAC All SETUP                    22 W      *  WUP ITEM 11 F +1
10 W      Chk Stat  -LOC -CUR RDY      23 W      *  Cur/ITEM 6 In fld, zm
11        IMC BEGIN                    24 W      * WUP ITEM 4  (Cur off)
12        HUT ITEM 5                   25 W      * WUP ITEM 7  (Begin)
13 W      WUP tgt= HUT faint star      26 W      * Config with WUP
14 W      *IF WUP target visible       27    JOB Observe
15 W      * WUP PFK cur to target      28    JAC All PREVIEW
16 W      * WUP ITEM 6  (Cntr)         29        All QUIT
17 W      * WUP ITEM 4  (Cur off)      30        ------------------------
18 W      *ELSE                        31    JAC ITEM 16_1
```

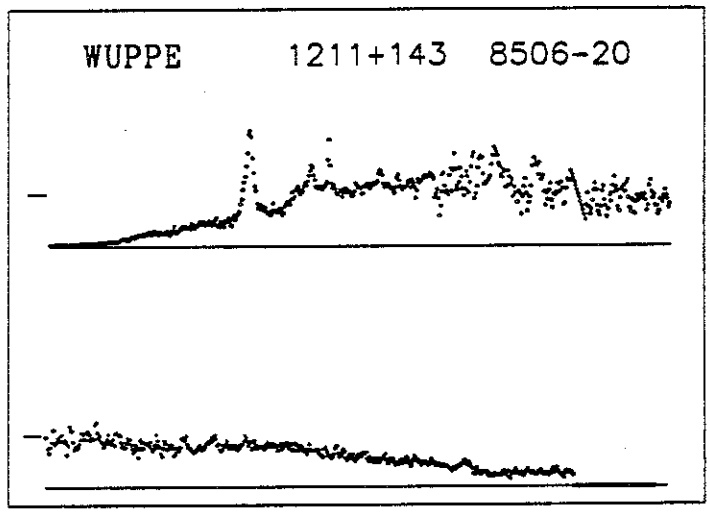
low z QSO BBB

|

OBJECT: PG1211+143
KEYWORDS: quasar
COMMENTS:
Z = 0.085



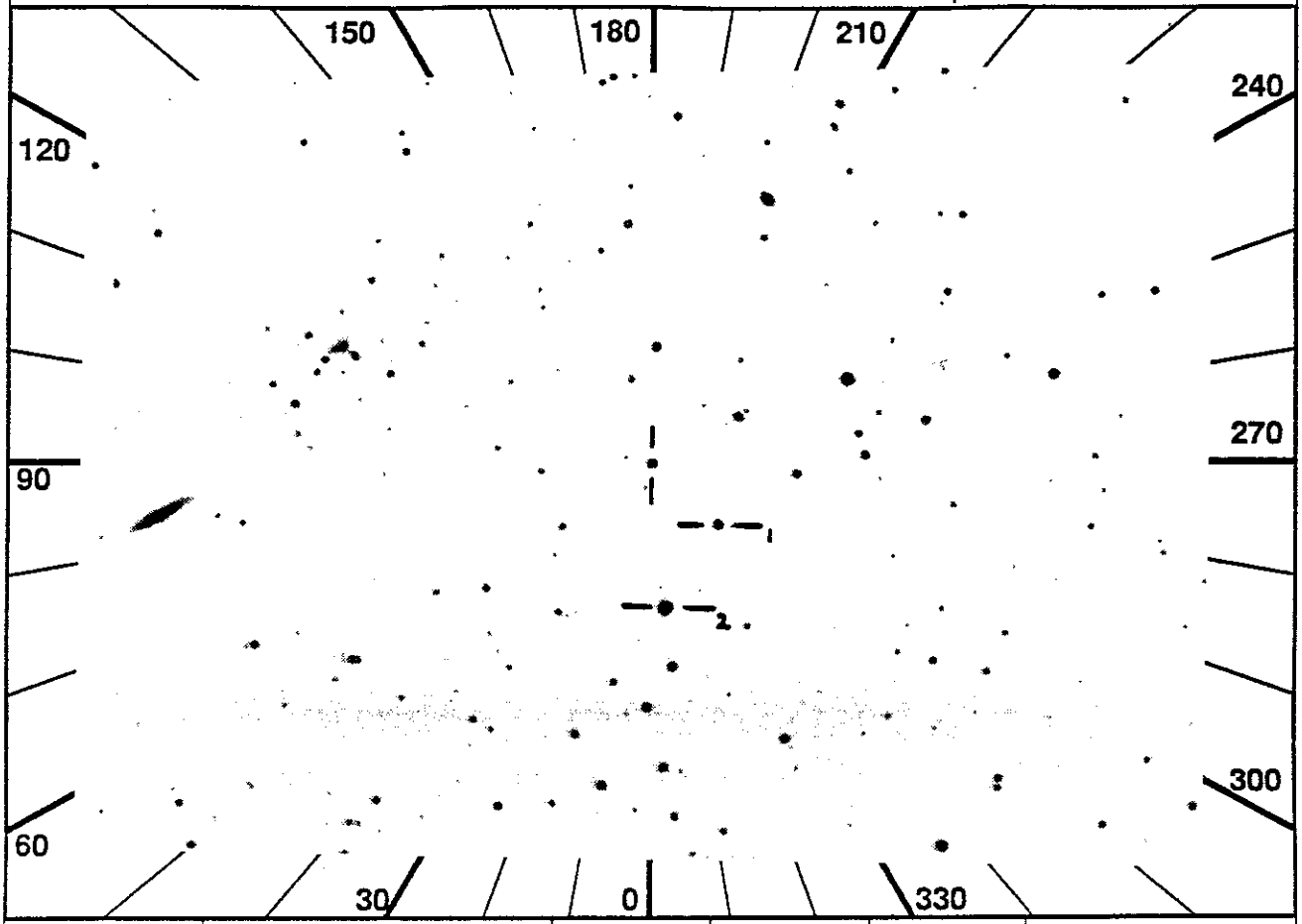
ID: 8506-20
Names: 1211+143 PG
Type: QSO
% Pol:
Pol Var:
Pos Ang:
Mechanism:
Comments:
Co-pointing with BBXRT.



UIT
Observation Description

1 RA 182.9367 DEC 14.3314 ROLL 97.43 | ID 8506-30

2 TIME 607 | NAME 1211+143



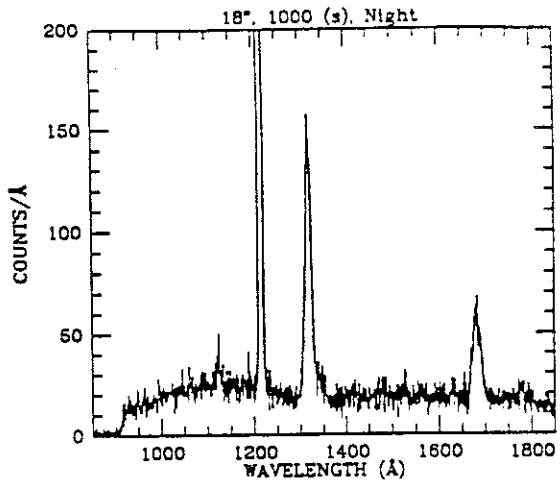
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	S H 206	src sim 15 14 3.3 5	7 4 ---	- - ---	- - ---	
4	W 6	nlc ngd 15 15 1.0	7 4 120	-- - ---	-- - ---	NOLOC
5	U 37	DT - T F 31 b5	- - - -	- - - -		

```
 6    JAC ITEM 16_0                    13        All BEGIN
 7        Config H W U                 14    JOB Observe
 8        ---------------------------  15    JAC All PREVIEW
 9    JAC All SETUP                    16        All QUIT
10 W      Chk Stat  -LOC -PAU RDY      17        ------------------------
11        IMC BEGIN                    18    JAC ITEM 16_1
12        HUT ITEM 5
```

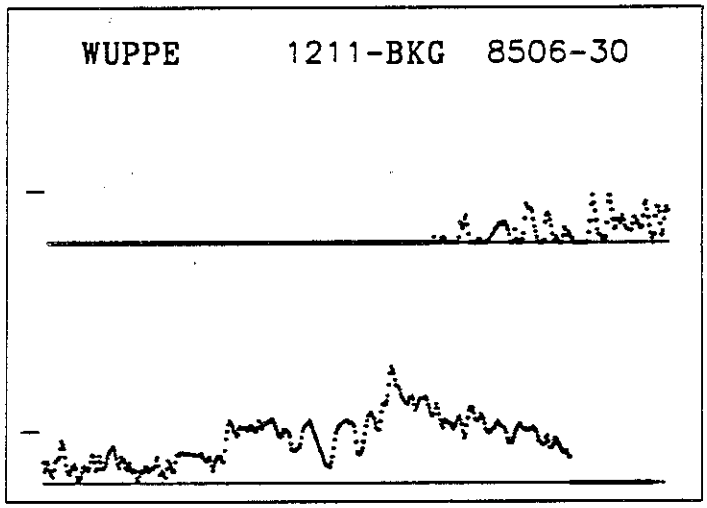
low z QSO BBB

1

OBJECT: PG1211+143
KEYWORDS: quasar
COMMENTS:
Z = 0.085

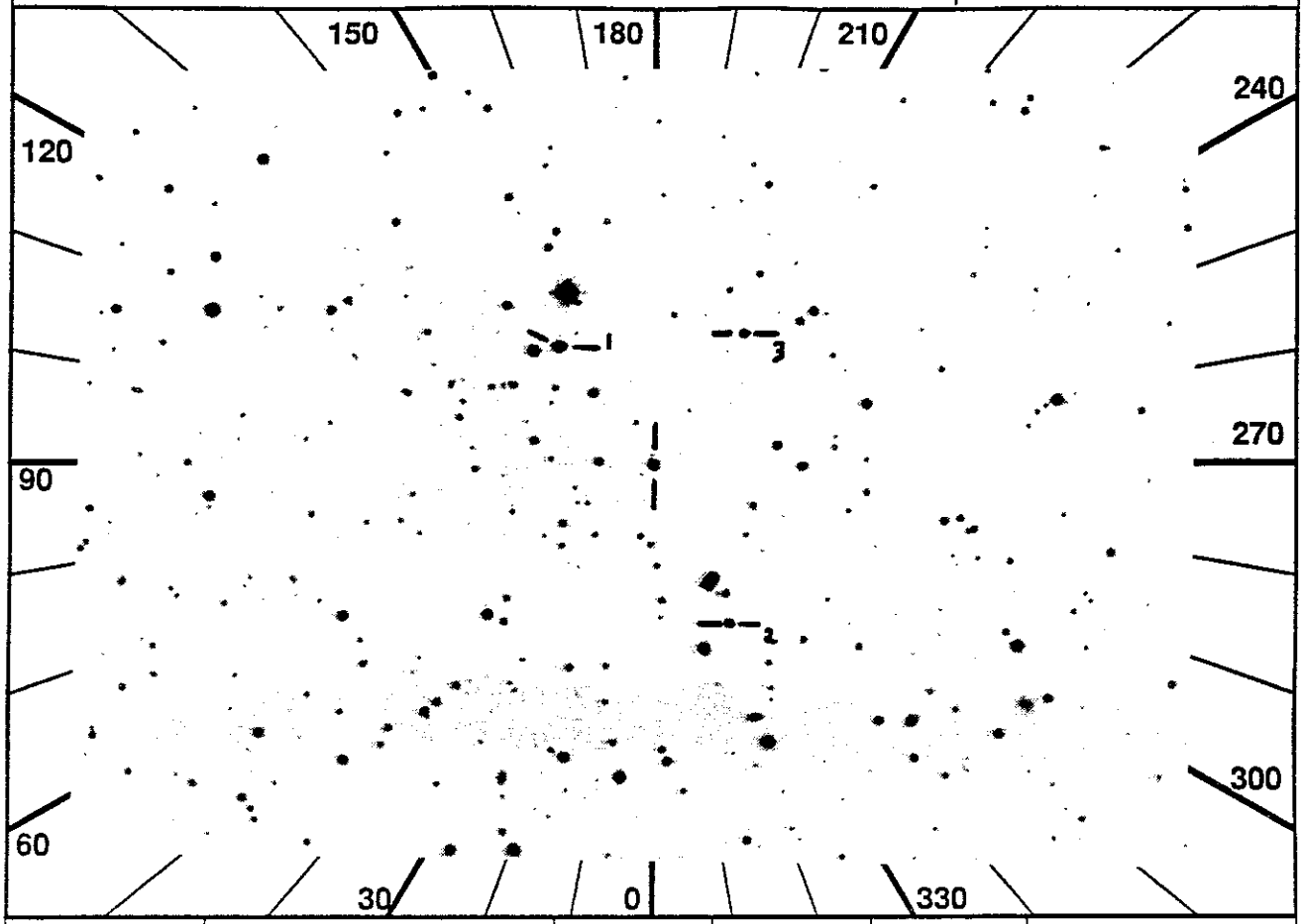


ID: 8506-30
Names: 1211+143 PG
Type: QSO
% Pol:
Pol Var:
Pos Ang:
Mechanism:
Comments: Background obs only.
Co-pointing with BBXRT.



UIT
Observation Description

1 RA 328.9932 DEC -30.4650 ROLL 163.62	ID 8623-11
2 TIME 1834	NAME 2155-304



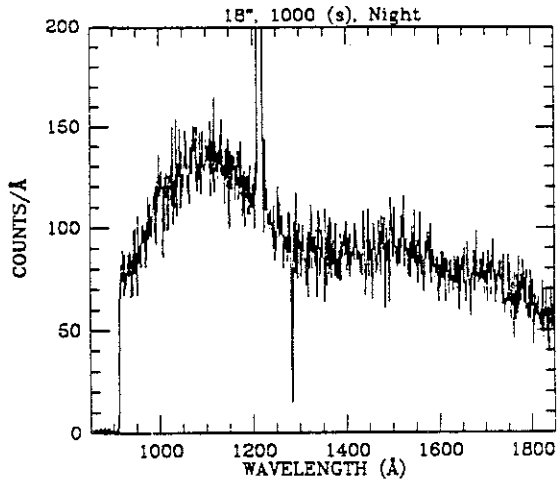
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	P H 72	src sim 15 15 3.4 5	7 4 ---	- - ---	- - ---	
4	W 269	ncn ngd 14 12 2.7	2 2 ---	2 2 60	-- - ---	FNTLOC BKG2
5	U 212	DT - T F 31 a2 31 a4	31 a5	31 b5	- -	

```
 6    JAC ITEM 16_0                    20        All BEGIN
 7        Config H W U                 21 W      *IF WUP Deconfig
 8        ------------------------     22 W      *  WUP ITEM 11_F_+1
 9    JAC All SETUP                    23 W      *  Cur/ITEM 6 in fld, zm
10 W      Chk Stat  -LOC -CUR RDY      24 W      * WUP ITEM 4  (Cur off)
11        IMC BEGIN                    25 W      * WUP ITEM 7  (Begin)
12        HUT ITEM 5                   26 W      * Config with WUP
13 W      WUP tgt= HUT faint star      27 W      NOTE: WUP last seq = BKG
14 W      *IF WUP target visible       28    JOB Observe
15 W      * WUP PFK cur to target      29    JAC All PREVIEW
16 W      * WUP ITEM 6  (Cntr)         30        All QUIT
17 W      * WUP ITEM 4  (Cur off)      31        ------------------------
18 W      *ELSE                        32    JAC ITEM 16_1
19 W      * Config without WUP
```

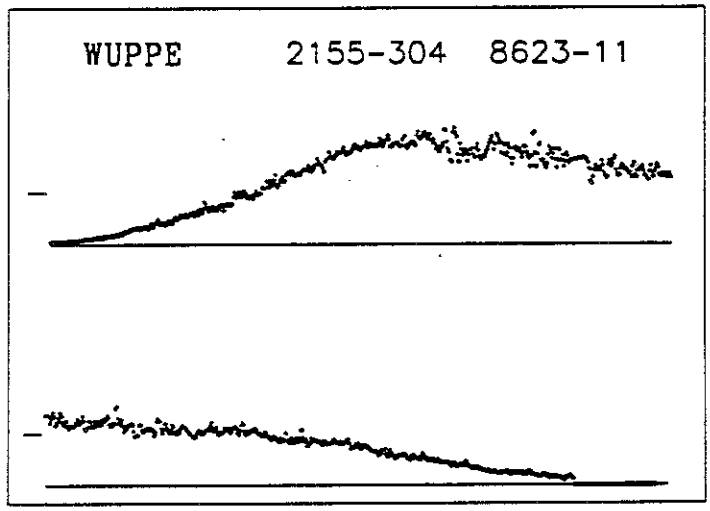
BL Lee (varies to brighter — like 13)

1

OBJECT: PKS 2155-304
KEYWORDS: BL Lac Object
COMMENTS:
Look for redshifted Lyman α absorption
or a Lyman edge

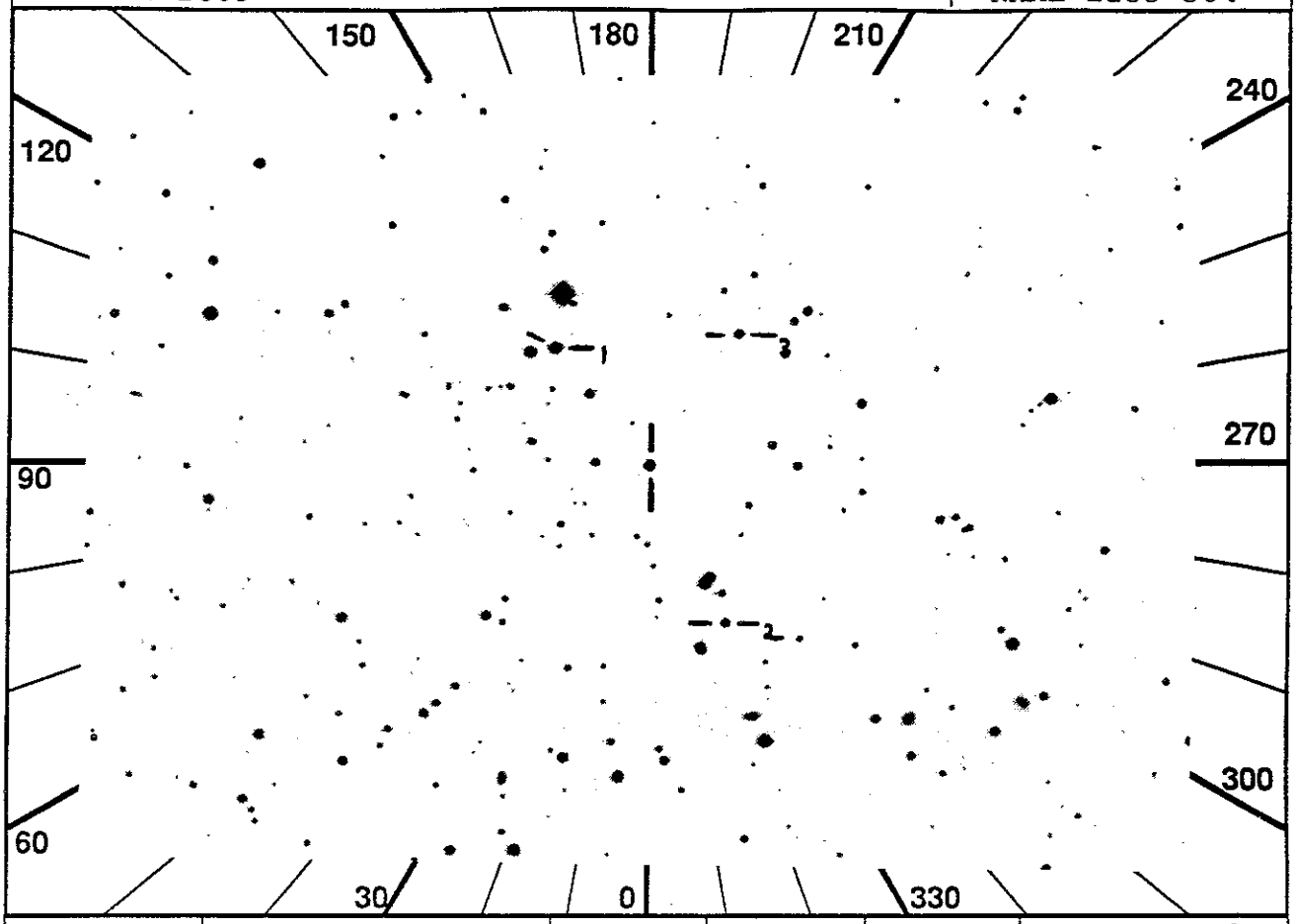


ID: 8623-11
Names: 2155-304 PKS
Type: Blazar
Z: 0.170
Mag: 13- 14
% Pol: up to 7%
Pol Var: yes
Pos Ang: 160 (var)
Mechanism: Synchrotron emiss
Comments: UV polarization
wavelength dependence.
UV pol variability (comp
with -40 pting).



UIT
Observation Description

1 RA 328.9932 DEC -30.4650 ROLL 5.89	ID 8623-40
2 TIME 2609	NAME 2155-304



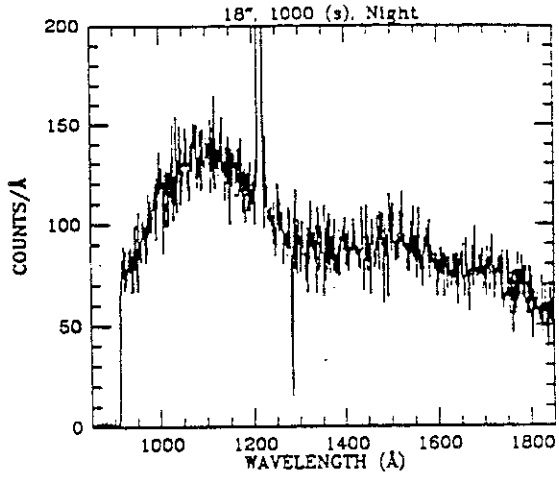
	SEQ	LOC OBS MAG LGR D	A FM OF	A FM OF	A FM OF	ALT1 ALT2
3	S H 315	src sim 15 15 3.0 5	7 4 ---	- - ---	- - ---	
4	W 269	ncn ngd 14 12 2.7	2 2 ---	2 2 60	-- - ---	FNTLOC BKG2
5	U 187	DT - T F 31 a1 31 b1 248 b5		- - - -		LTSTRT

```
 6    JAC ITEM 16_0                    22 W      *IF WUP Deconfig
 7        Config H W U                 23 W      *  WUP ITEM 11_F_+1
 8        ------------------------     24 W      *  Cur/ITEM 6 In fld, zm
 9    JAC All SETUP                    25 W      * WUP ITEM 4  (Cur off)
10 W      Chk Stat  -LOC -CUR RDY      26 W      * WUP ITEM 7  (Begin)
11        IMC BEGIN                    27 W      * Config with WUP
12        HUT ITEM 5                   28 W      NOTE: WUP last seq = BKG
13 W      WUP tgt= HUT faint star      29 U JOB  Wait for TIME AVAIL 2184
14 W      *IF WUP target visible       30 U      UIT BEGIN
15 W      * WUP PFK cur to target      31 U JAC  Config with UIT
16 W      * WUP ITEM 6  (Cntr)         32   JOB  Observe
17 W      * WUP ITEM 4  (Cur off)      33   JAC  All PREVIEW
18 W      *ELSE                        34        All QUIT
19 W      * Config without WUP         35        ------------------------
20 U      Config without UIT           36   JAC  ITEM 16_1
21        All BEGIN
```

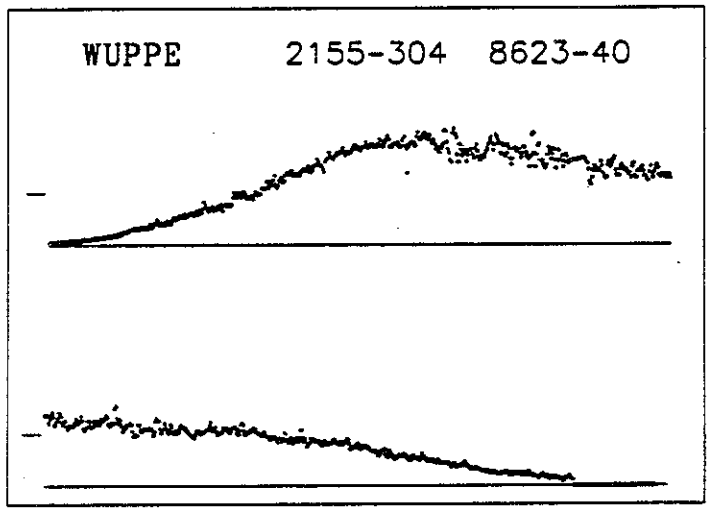
BL Lae (varies to 13)

1

OBJECT: PKS 2155-304
KEYWORDS: BL Lac Object
COMMENTS:
Look for redshifted Lyman α absorption or a Lyman edge



ID: 8623-40
Names: 2155-304 PKS
Type: Blazar
Z: 0.170
Mag: 13- 14
% Pol: up to 7%
Pol Var: yes
Pos Ang: 160 (var)
Mechanism: Synchrotron emiss
Comments: UV polarization wavelength dependence. UV pol variability (comp with -11 pting). Co-pointing with BBXRT.



UIT
Observation Description