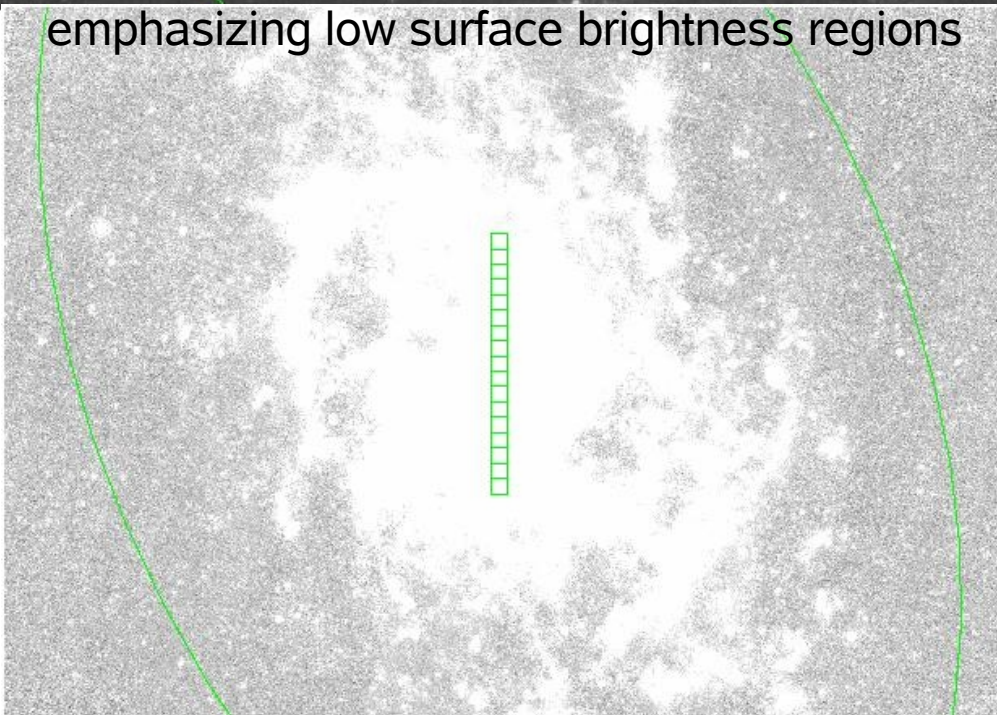


Box	TIR	minimum S/N=5							
		$f_v^{\min}=0.3\text{Jy}$		$f_v^{\min}=0.5\text{Jy}$		$f_v^{\min}=0.7\text{Jy}$		$f_v^{\min}=1.0\text{Jy}$	
	$10^{-13}\text{W/m}^2$	#	hrs	#	hrs	#	hrs	#	hrs
1	0.90	6	1.365	6	1.365	4	0.931	3	0.151
2	1.10	6	0.949	6	0.949	6	0.949	3	0.151
3	1.48	6	0.589	6	0.589	6	0.589	5	0.495
4	1.13	6	0.918	6	0.918	6	0.918	3	0.151
5	0.99	6	1.136	6	1.136	4	0.750	3	0.151
6	1.36	6	0.674	6	0.674	6	0.674	4	0.472
7	2.17	6	0.365	6	0.365	6	0.365	6	0.365
8	2.48	6	0.326	6	0.326	6	0.326	6	0.326
nuc									
9	1.95	6	0.413	6	0.413	6	0.413	6	0.413
10	1.95	6	0.413	6	0.413	6	0.413	6	0.413
11	1.20	6	0.789	6	0.789	6	0.789	3	0.151
12	1.68	6	0.493	6	0.493	6	0.493	6	0.493
13	1.19	6	0.789	6	0.789	6	0.789	3	0.151
14	1.10	6	0.949	6	0.949	6	0.949	3	0.151
15	1.11	6	0.949	6	0.949	6	0.949	3	0.151
16	1.51	6	0.589	6	0.589	6	0.589	5	0.495
17	2.02	6	0.390	6	0.390	6	0.390	6	0.390



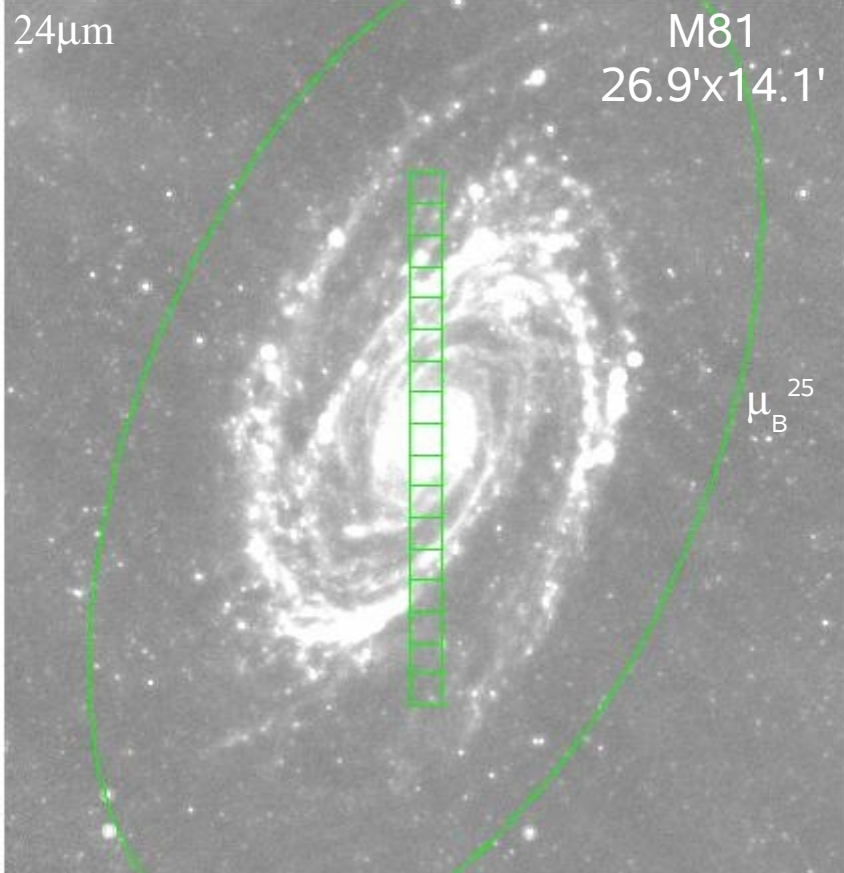
- Lines observed
- [CII] 157.7 ~  $3 \cdot 10^{-3}$  FIR
  - [OI] 145.5 ~  $2 \cdot 10^{-4}$  FIR
  - [NII] 121.9 ~  $3 \cdot 10^{-4}$  FIR
  - [OIII] 88.4 ~  $1 \cdot 10^{-3}$  FIR
  - [OI] 63.2 ~  $2 \cdot 10^{-3}$  FIR
  - [NIII] 57.3 ~  $3 \cdot 10^{-4}$  FIR

Malhotra et al. 2001

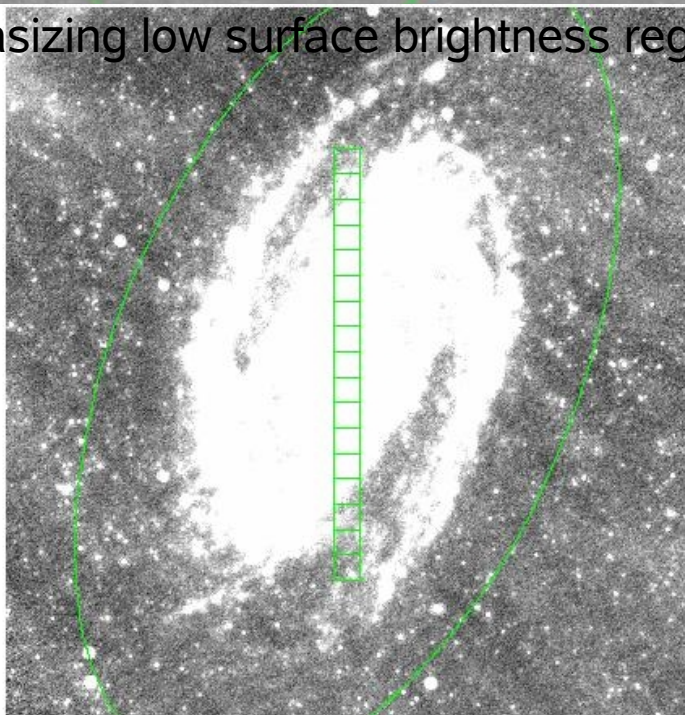
**12.1**    **12.1**    **11.3**    **5.1**

↙    ↑    ↙    ↗

Total integration for  
Regions 1-17: (to  $\sim 0.19R_{25}$ )



emphasizing low surface brightness regions



Box	TIR $10^{-13}W/m^2$	minimum S/N=5							
		$f_v^{\min}=0.3Jy$ # hrs	$f_v^{\min}=0.5Jy$ # hrs	$f_v^{\min}=0.7Jy$ # hrs	$f_v^{\min}=1.0Jy$ # hrs				
	1	0.26	3 0.518	3 0.518	3 0.518	2 0.232			
	2	0.35	3 0.298	3 0.298	3 0.298	3 0.298			
	3	0.63	6 2.649	4 1.695	3 0.174	3 0.174			
	4	1.24	6 0.789	6 0.789	6 0.789	4 0.537			
	5	0.94	6 1.184	6 1.184	4 0.750	3 0.151			
	6	0.87	6 1.366	6 1.366	4 0.932	3 0.152			
	7	0.82	6 1.471	6 1.471	3 0.154	3 0.154			
	8	1.36	6 0.674	6 0.674	6 0.674	4 0.472			
nuc	9	3.58	6 0.264	6 0.264	6 0.264	6 0.264			
	10	1.05	6 0.949	6 0.949	5 0.767	3 0.151			
	11	0.71	6 1.839	4 1.222	3 0.163	3 0.163			
	12	0.61	6 2.650	4 1.696	3 0.175	3 0.175			
	13	0.82	6 1.471	6 1.471	3 0.154	3 0.154			
	14	0.47	6 4.280	3 0.224	3 0.224	3 0.224			
	15	0.31	3 0.382	3 0.382	3 0.382	2 0.196			
	16	0.19	3 0.871	3 0.871	2 0.369	2 0.369			
	17	0.42	3 1.313	2 0.594	2 0.594	1 0.111			
			<b>19.6</b>	<b>13.0</b>	<b>5.2</b>	<b>2.8</b>			

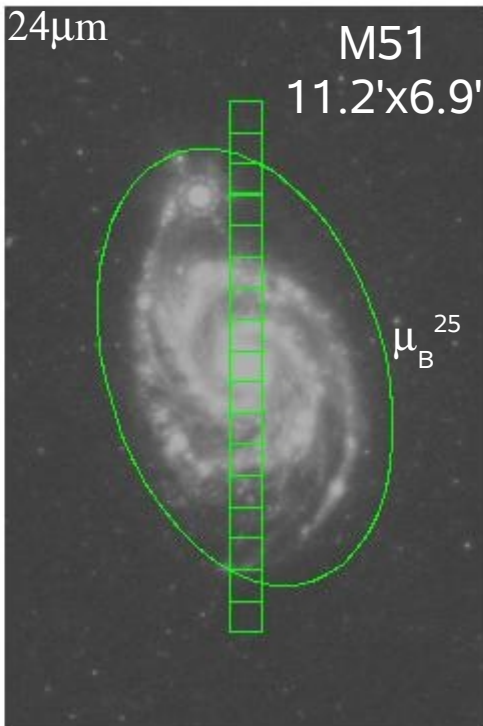
Lines observed

- [CII] 157.7 ~  $3 \cdot 10^{-3}$ FIR
- [OI] 145.5 ~  $2 \cdot 10^{-4}$ FIR
- [NII] 121.9 ~  $3 \cdot 10^{-4}$ FIR
- [OIII] 88.4 ~  $1 \cdot 10^{-3}$ FIR
- [OI] 63.2 ~  $2 \cdot 10^{-3}$ FIR
- [NIII] 57.3 ~  $3 \cdot 10^{-4}$ FIR

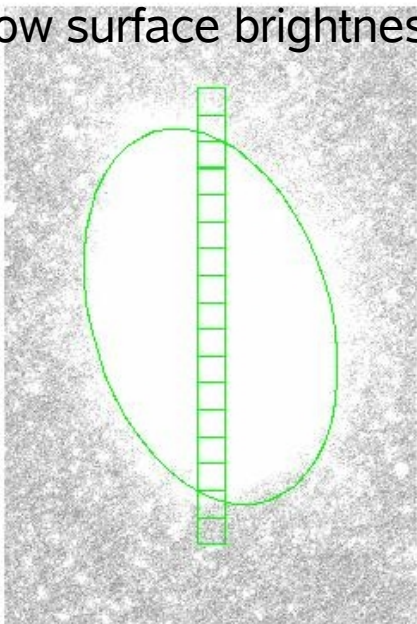
Malhotra et al. 2001

Total integration for  
Regions 3-14: (to  $\sim 0.35R_{25}$ )





emphasizing low surface brightness regions

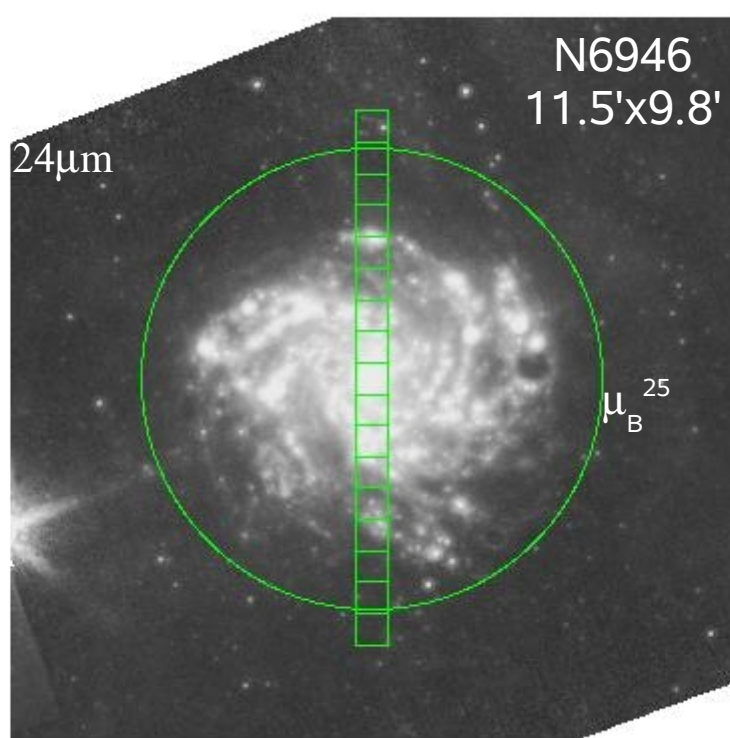


Box	TIR $10^{-13} \text{W/m}^2$	minimum S/N=5							
		$f_v^{\min}=0.3 \text{Jy}$ # hrs	$f_v^{\min}=0.5 \text{Jy}$ # hrs	$f_v^{\min}=0.7 \text{Jy}$ # hrs	$f_v^{\min}=1.0 \text{Jy}$ # hrs				
1	0.11	3 2.055	2 0.937	2 0.937	1 0.144				
2	0.19	3 0.829	3 0.829	2 0.327	2 0.327				
3	0.42	4 4.456	3 0.247	3 0.247	3 0.247				
4	0.62	6 2.650	4 1.696	3 0.175	3 0.175				
5	1.24	6 0.789	6 0.789	4 0.789	4 0.537				
6	3.25	6 0.271	6 0.271	6 0.271	6 0.271				
7	3.62	6 0.261	6 0.261	6 0.261	6 0.261				
8	9.04	6 0.241	6 0.241	6 0.241	6 0.241				
nuc	16.91	6 0.241	6 0.241	6 0.241	6 0.241				
10	7.92	6 0.241	6 0.241	6 0.241	6 0.241				
11	2.77	6 0.296	6 0.296	6 0.296	3 0.296				
12	2.24	6 0.365	6 0.365	6 0.365	6 0.365				
13	1.01	6 1.136	6 1.136	4 0.750	3 0.151				
14	0.57	6 2.659	3 0.184	3 0.184	3 0.184				
15	0.36	3 0.298	3 0.298	3 0.298	3 0.298				
16	0.15	3 1.218	2 0.499	2 0.499	1 0.107				
17	0.04	1 0.499	0 0.061	0 0.061	0 0.061				
		<b>6.0</b>	<b>3.5</b>	<b>3.1</b>	<b>2.5</b>				

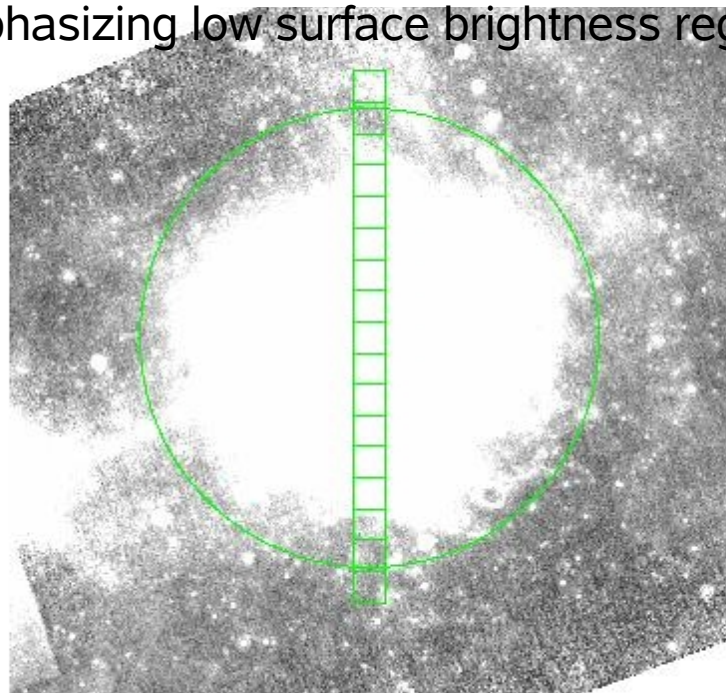
Lines observed

- [CII]  $157.7 \sim 3 \cdot 10^{-3} \text{FIR}$
- [OI]  $145.5 \sim 2 \cdot 10^{-4} \text{FIR}$
- [NII]  $121.9 \sim 3 \cdot 10^{-4} \text{FIR}$
- [OIII]  $88.4 \sim 1 \cdot 10^{-3} \text{FIR}$
- [OI]  $63.2 \sim 2 \cdot 10^{-3} \text{FIR}$
- [NIII]  $57.3 \sim 3 \cdot 10^{-4} \text{FIR}$

Total integration for  
Regions 6-15: (to  $\sim 0.70R_{25}$ )



emphasizing low surface brightness regions



Box	TIR $10^{-13} \text{W/m}^2$	minimum S/N=5							
		$f_v^{\min}=0.3 \text{Jy}$ # hrs	$f_v^{\min}=0.5 \text{Jy}$ # hrs	$f_v^{\min}=0.7 \text{Jy}$ # hrs	$f_v^{\min}=1.0 \text{Jy}$ # hrs				
1	0.16	3 1.147	3 1.147	2 0.429	2 0.429				
2	0.11	3 2.044	2 0.926	2 0.926	1 0.133				
3	0.21	3 0.666	3 0.666	2 0.296	2 0.296				
4	0.74	6 1.836	5 1.487	3 0.160	3 0.160				
5	1.43	6 0.609	6 0.609	6 0.609	4 0.422				
6	1.31	6 0.702	6 0.702	6 0.702	4 0.472				
7	3.39	6 0.268	6 0.268	6 0.268	6 0.268				
8	7.30	6 0.241	6 0.241	6 0.241	6 0.241				
nuc	9 26.68	6 0.241	6 0.241	6 0.241	6 0.241				
10	6.31	6 0.241	6 0.241	6 0.241	6 0.241				
11	5.06	6 0.241	6 0.241	6 0.241	6 0.241				
12	1.92	6 0.421	6 0.421	6 0.421	6 0.421				
13	0.98	6 1.136	6 1.136	4 0.750	3 0.151				
14	0.69	6 2.033	4 1.225	3 0.166	3 0.166				
15	0.22	3 0.641	3 0.641	3 0.641	2 0.270				
16	0.13	3 1.719	2 0.600	2 0.600	1 0.117				
17	0.09	3 3.216	2 1.234	1 0.158	1 0.158				
		<b>6.1</b>	<b>5.3</b>	<b>3.9</b>	<b>2.9</b>				

Lines observed

- [CII]  $157.7 \sim 3 \cdot 10^{-3} \text{FIR}$
- [OI]  $145.5 \sim 2 \cdot 10^{-4} \text{FIR}$
- [NII]  $121.9 \sim 3 \cdot 10^{-4} \text{FIR}$
- [OIII]  $88.4 \sim 1 \cdot 10^{-3} \text{FIR}$
- [OI]  $63.2 \sim 2 \cdot 10^{-3} \text{FIR}$
- [NIII]  $57.3 \sim 3 \cdot 10^{-4} \text{FIR}$

Total integration for  
Regions 5-14: (to  $\sim 0.68R_{25}$ )