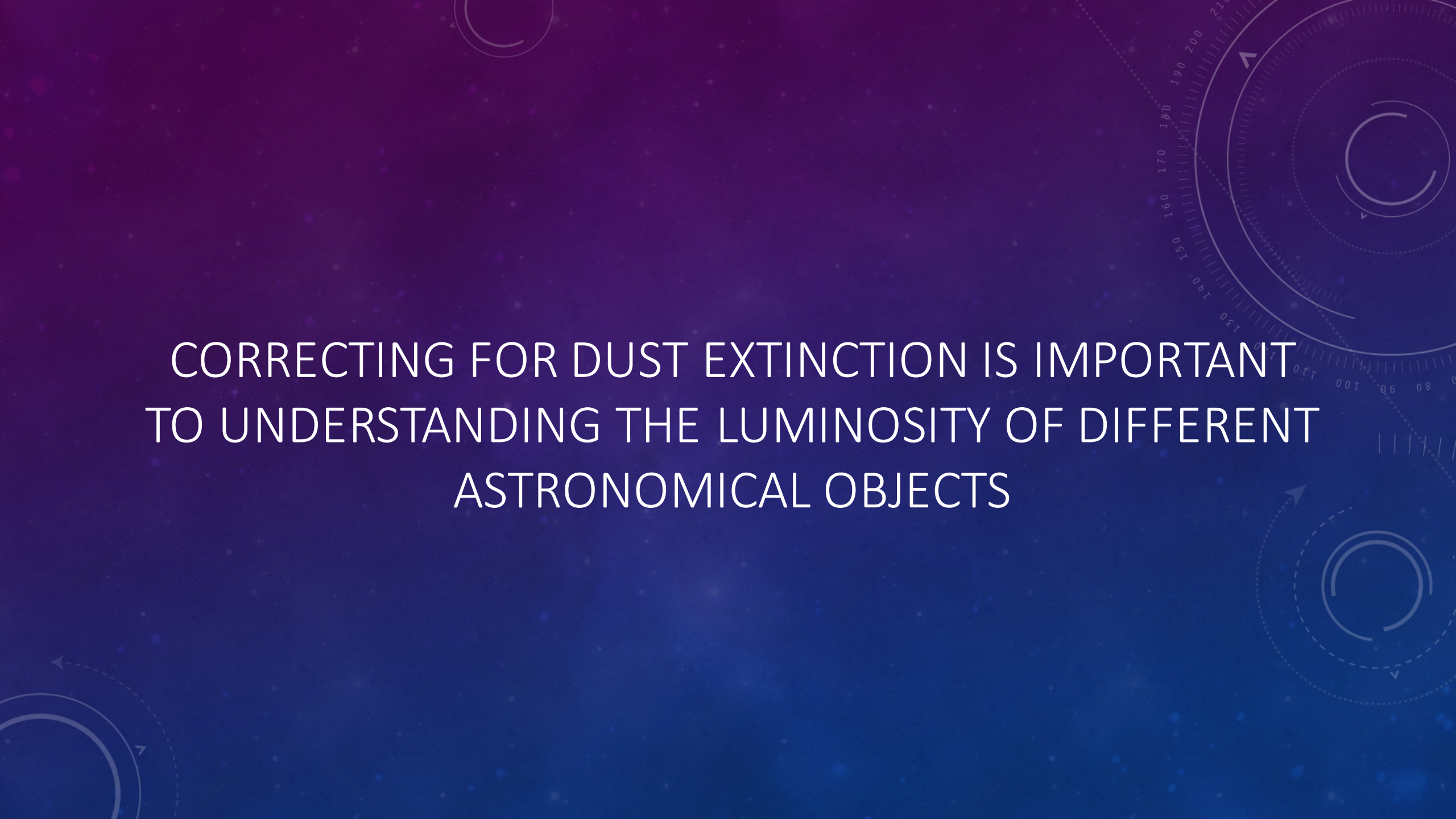


The background is a deep blue gradient with a starry texture. Overlaid on the left side are several white geometric elements: a large circular scale with degree markings from 140 to 260, and several concentric circles with arrows indicating clockwise or counter-clockwise rotation. These elements suggest astronomical or scientific themes.

HOW WELL DO WE KNOW THE MILKY WAY REDDENING?

TATE WALKER FOR DR. PETER BROWN

The background is a deep blue gradient with a subtle pattern of small, light blue dots, resembling a star field. Overlaid on this are several faint, white geometric and astronomical motifs. In the top right, there is a large circular scale with degree markings from 0 to 210 and concentric circles. In the bottom right, there are dashed circular paths with arrows indicating a clockwise direction. In the bottom left, there are solid circular arcs with arrows. These elements suggest a theme of astronomy or celestial mechanics.

CORRECTING FOR DUST EXTINCTION IS IMPORTANT
TO UNDERSTANDING THE LUMINOSITY OF DIFFERENT
ASTRONOMICAL OBJECTS

DALCANTON ET AL. (2009) WARNS US THAT THE SCHLEGEL ET AL. (1998) DUST MAP ISN'T CORRECT FOR M82

²³ The one exception is M82, for which the Schlegel et al. (1998) value is clearly contaminated by point source emission from M82 itself, leading to an erroneously high foreground extinction ($A_B = 0.685$). Instead, we took $A_B = 0.25$, based upon regions immediately adjacent to M82.



The background is a gradient of deep blue and purple, speckled with small white dots representing stars. On the right side, there are faint, stylized circular patterns resembling astronomical maps or orbits, with some numerical labels like 160, 170, 180, 190, 200, 210, 150, 140, 130, 120, 110, 100, 90, 80, 70, 60, 50, 40, 30, 20, 10, 0. There are also dashed lines and arrows indicating movement or orbits.

WHAT OTHER NEARBY GALAXIES MIGHT BE
CONTAMINATING THE DUST MAPS?

PROCESS

```
71
72 ∨ def tableFill(dam, ra, dec, appender,nme):
73     t = Table(None)
74     Am = Column(name = 'Arcminute')
75     North = Column(name = 'North')
76     East = Column(name = 'East')
77     South = Column(name = 'South')
78     West = Column(name = 'West')
79     t.add_columns([Am,North, East, South, West])
80     tA_v = []
81     curVal = [None] *4 #n = 0, e = 1, s = 2, w = 3
82     coord = [None] *4 #n = 0, e = 1, s = 2, w = 3
83     #get values for each arcminute
84 ∨ for j in range(0,dam+1):
85         fourCoord(j, ra, dec, coord)
86         t.add_row()
87         t[j][0]=j
88 ∨ for i in range(0,4):
89             C = coordinates.SkyCoord(coord[i])
90             table = IrsaDust.get_extinction_table(C.fk5, show_progress = False)
91             curVal[i] = (table['A_SandF'][2])
92             t[j][i+1] = curVal[i]
93             curVal = curVal[:]
94             tA_v.append(curVal)
95         t.add_row()
96         for i in range(0,5): #this adds a blank line to the table to separate queries
97             t[j+1][i] = None
98         n = [nme]
99         namesTable = Table([n], names=('n'))
100         final_name = namesTable.to_pandas()
101         final_vals = t.to_pandas()
102         from pandas import ExcelWriter
103         with open('A_v Values.csv', appender) as f:
104             final_name.to_csv(f, header =False, index = False)
105             appender = 'a'
106         with open('A_v Values.csv', appender) as f:
107             final_vals.to_csv(f, header =True, index = False, sep = ',')
108         return(tA_v)#gets the data from IRSA database and stores A_v in array
109
110 ∨ def grabImage(ra,dec):
111     imagelist = IrsaDust.get_image_list(SkyCoord(ra,dec).fk5, image_type="100um", radius=2*u.degree)
112     image_file = download_file(imagelist[0],cache=True)
113     image_data.append(fits.getdata(image_file, ext=0)) #gets image from IRSA database
```

Welcome to A_v Calculator!

Created by: Tate Walker for Dr. Peter Brown at Texas A&M University

Enter [1] to enter galaxies by hand. Enter [2] to import a .txt file of names. Enter [q] to quit.

TateWalker / Galactic-Data

Unwatch 1 Star 0 Fork 0

Code Issues 0 Pull requests 0 Projects 0 Wiki Settings Insights

Program to get various values from NED and IRSA Databases

Add topics

Edit

32 commits 3 branches 0 releases 1 contributor Apache-2.0

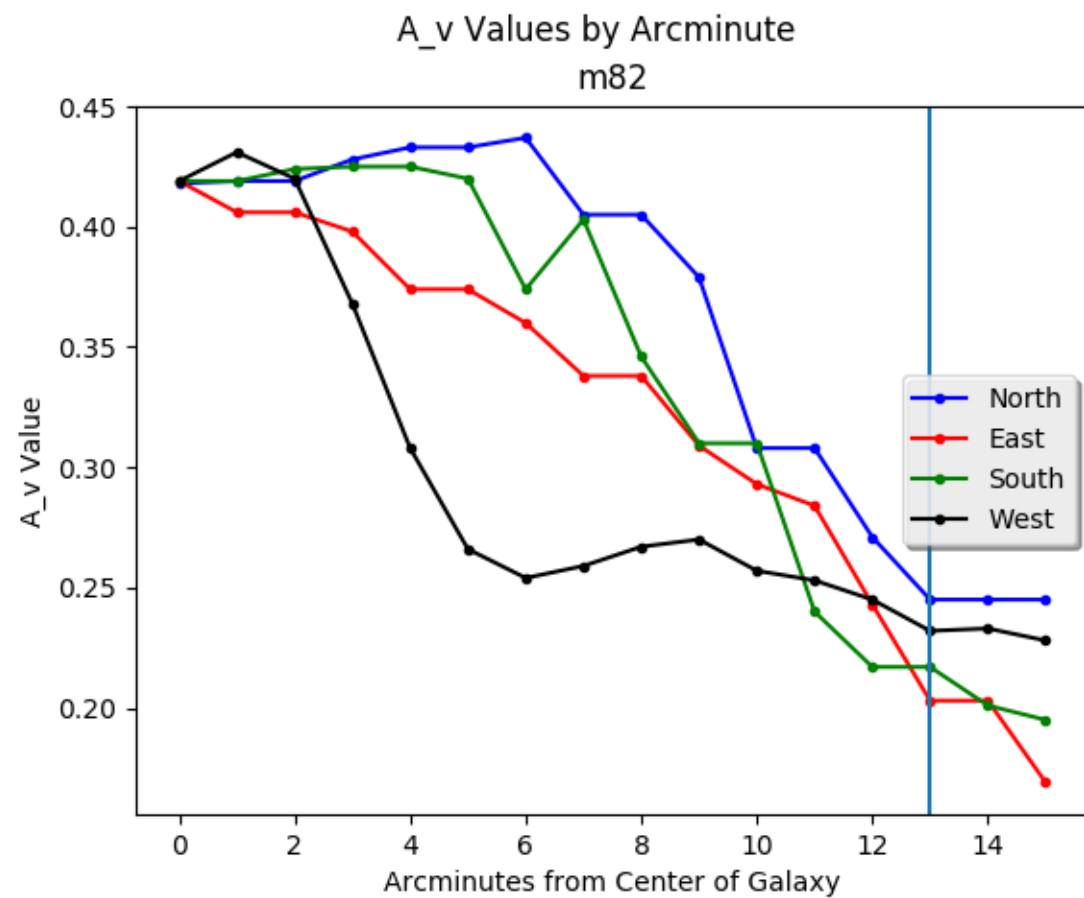
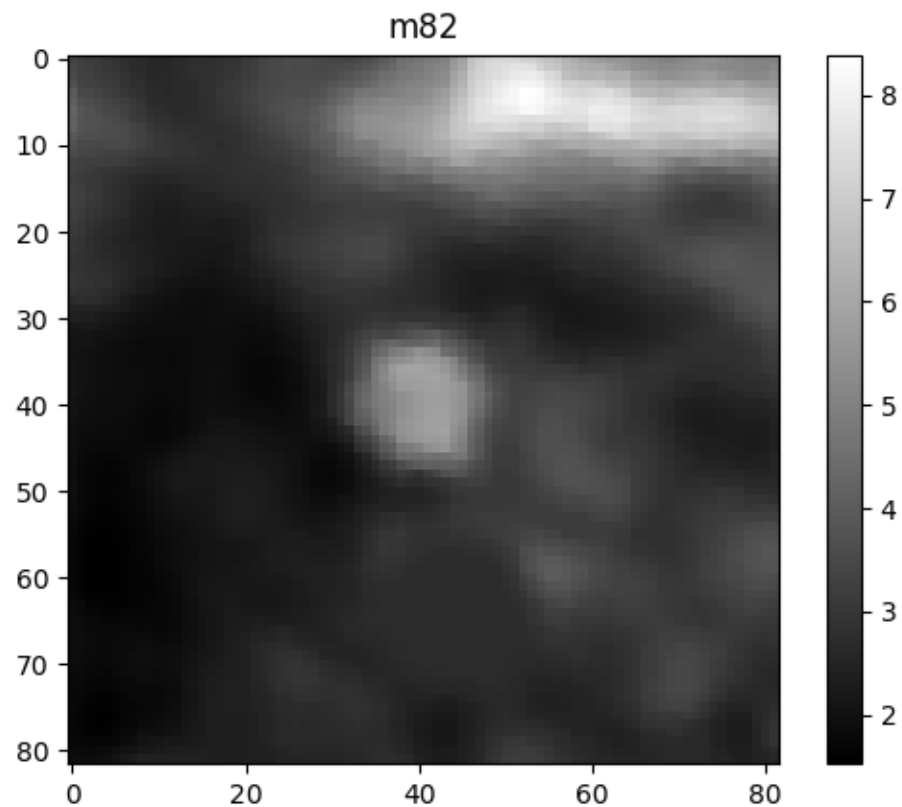
Branch: master New pull request

Create new file Upload files Find file Clone or download

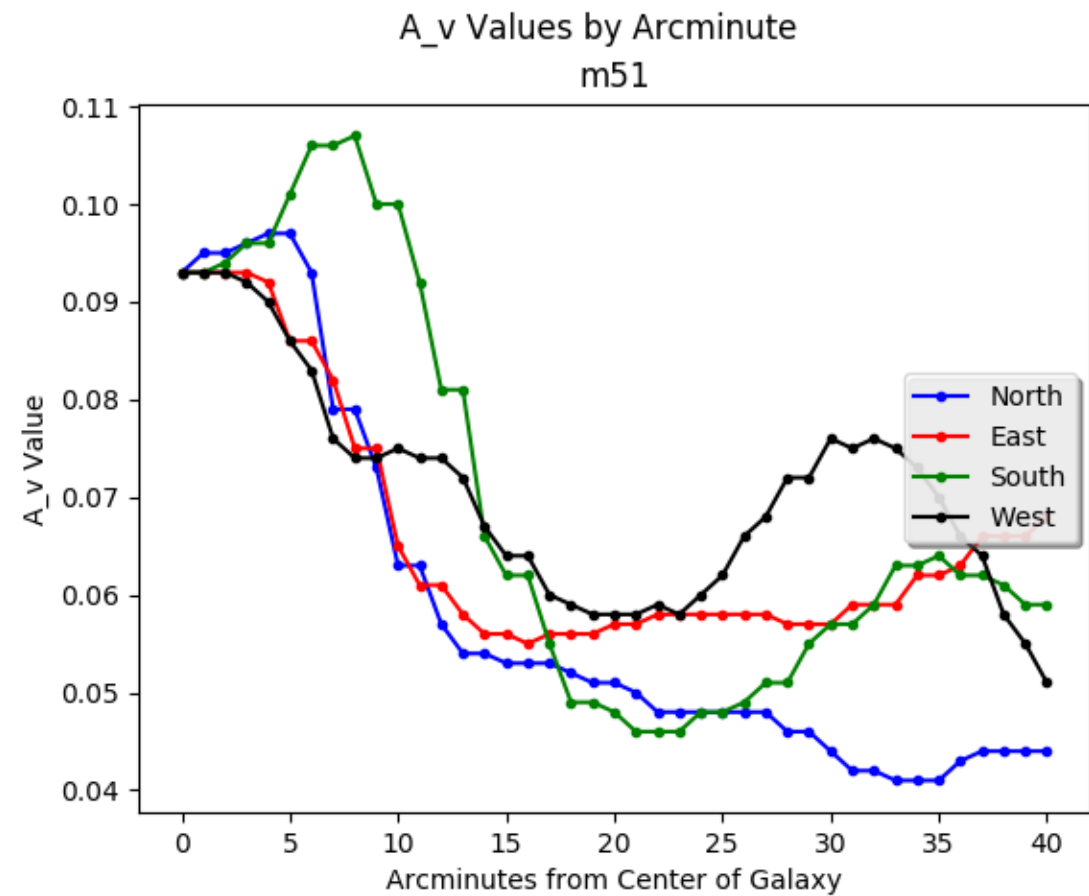
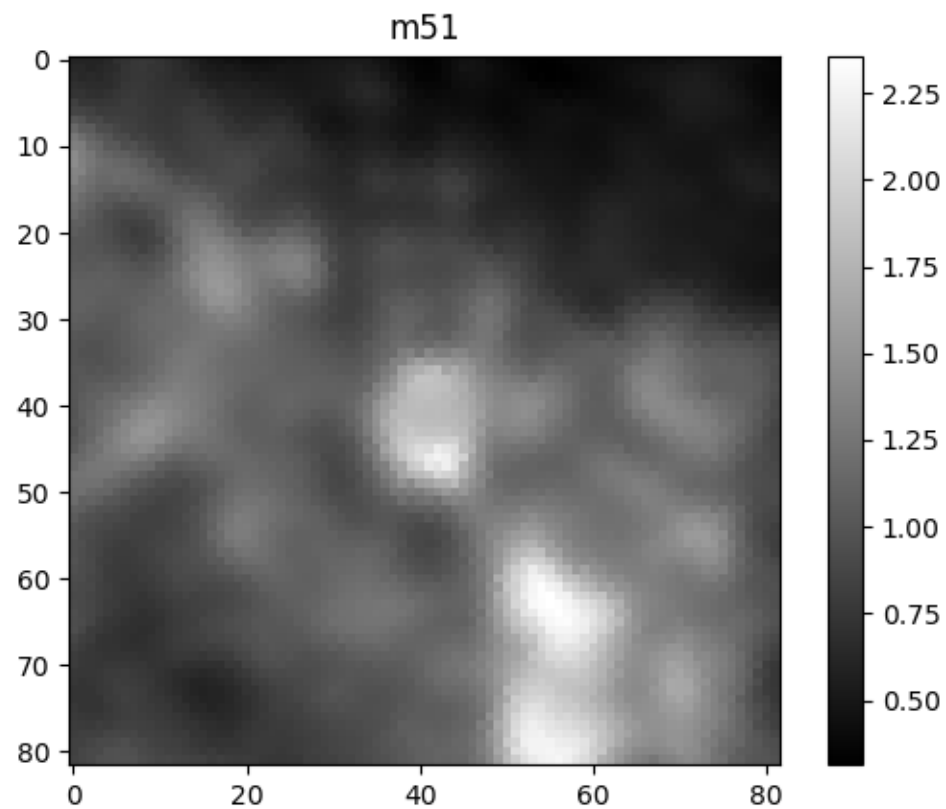
Tate Walker added customization for photo and graph output		Latest commit 3667639 on Jul 19
.gitignore	changed gitignore	2 months ago
LICENSE	Initial commit	2 months ago
README.md	Update README.md	2 months ago
comparator.py	added ned scraping to grab velocities	2 months ago
input.txt	added diameter values and graphed them with A_v vals	a month ago
irsa.py	added customization for photo and graph output	a month ago
ned.py	added ned query capabilities	2 months ago
velocities.py	added diameter values and graphed them with A_v vals	a month ago

<https://github.com/TateWalker/Galactic-Data>

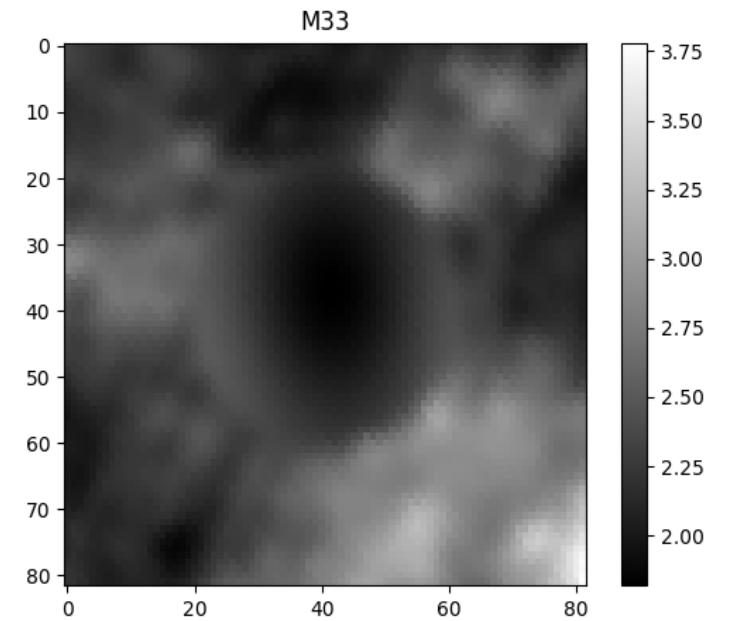
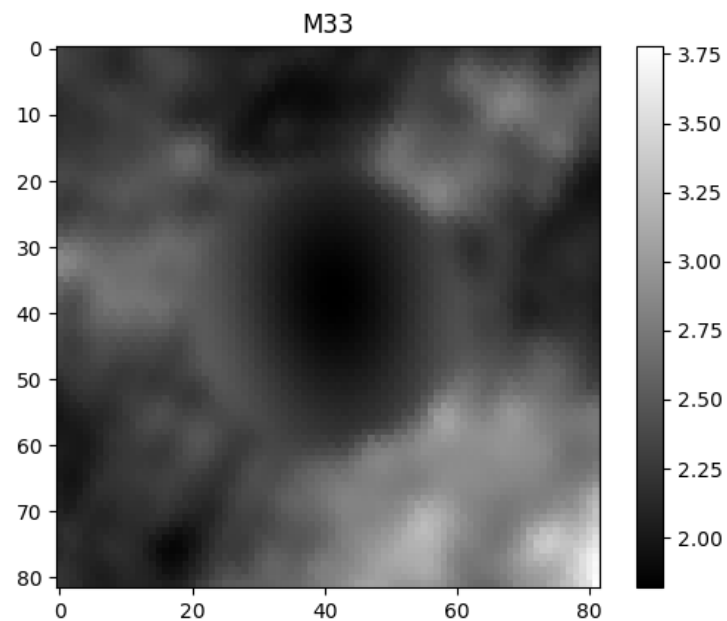
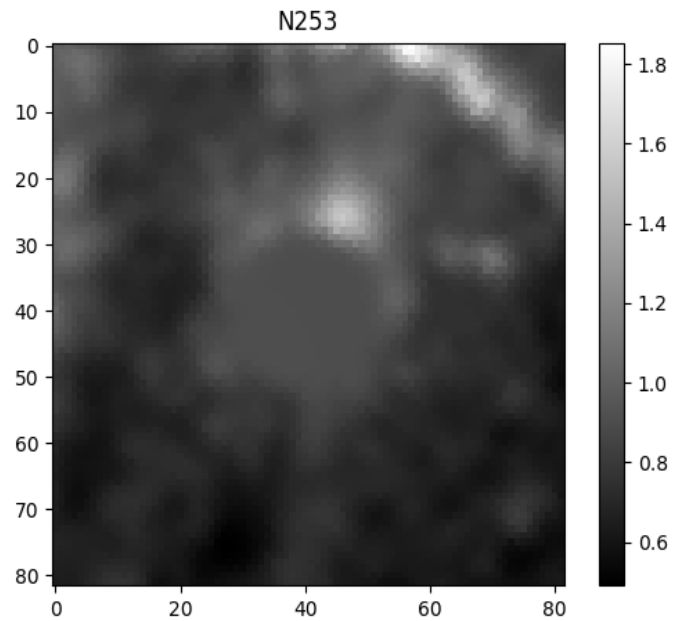
M82



M51 (WHIRLPOOL / NGC5195A)



SOME SOURCES ARE REMOVED



CONCLUSIONS

1. We are compiling a list of more appropriate Milky Way reddening values for nearby galaxies
2. Don't assume you can just pull values from NED without understanding where they originally came from and the uncertainties involved