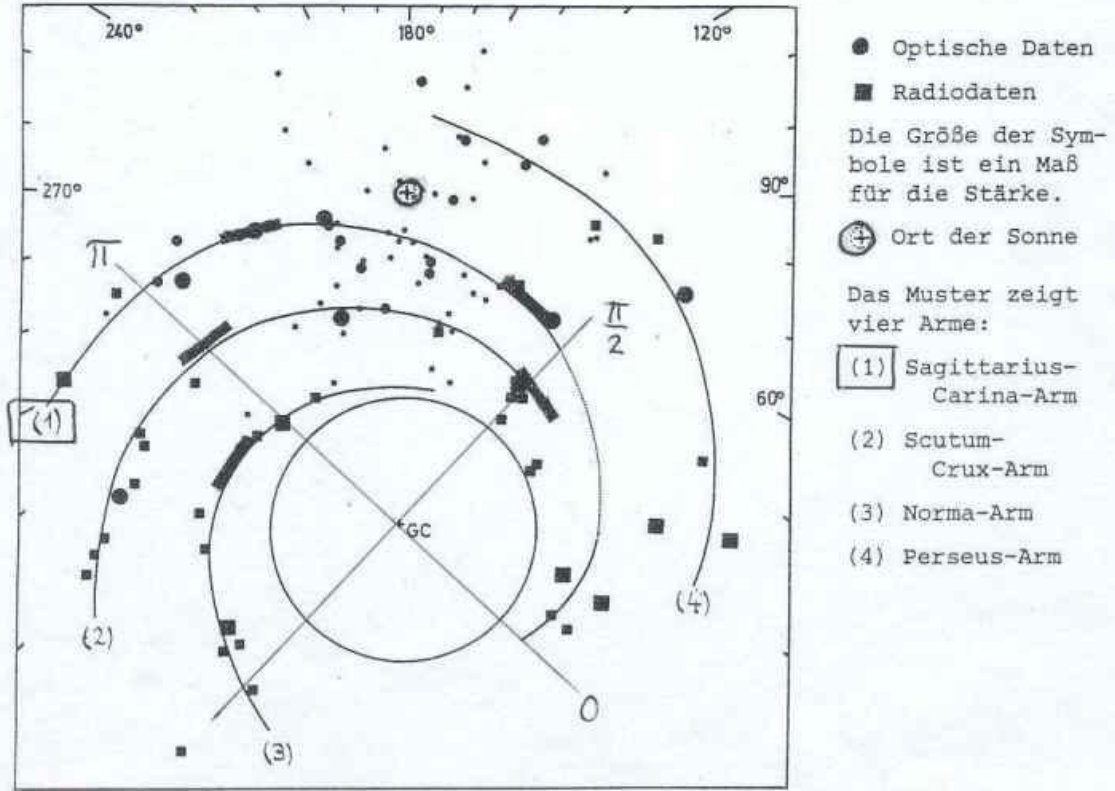


## Appendix 2

### Spiralmodell der Galaxis

nach Y.M.Georgelin, Y.P.Georgelin: Astron.Astrophys. 49 (1976) 57



The spiral arm of Sagittarius (1) is investigated:

For the hyperbolic spiral:  
 $r = a / (\varphi - v)$   
 with  $r / r_0 = (\varphi_0 - v) / (\varphi - v)$   
 $\Rightarrow v = 6.05$  (from graphic)

| $\varphi$  | $r$ [cm] | $\ln(r / r_0)$ | log.<br>$c = \ln(r / r_0) / \varphi$ | hyp.<br>$a = r \cdot (\varphi - v)$ | Archim.<br>$\Delta r$ |
|------------|----------|----------------|--------------------------------------|-------------------------------------|-----------------------|
| 0          | 2.5      | 0              |                                      | 15.1                                |                       |
| $\pi / 4$  | 3.0      | 0.182          | 0.23                                 | 15.8                                | 0.5                   |
| $\pi / 2$  | 3.6      | 0.365          | 0.23                                 | 16.1                                | 0.6                   |
| $3\pi / 4$ | 4.3      | 0.542          | 0.23                                 | 15.9                                | 0.7                   |
| $\pi$      | 5.2      | 0.732          | 0.23                                 | 15.1                                | 0.9                   |
|            |          |                | ↑<br>fits best !                     | ↑<br>cannot be strictly refused     | ↑<br>does not fit !   |