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Dr. Alan H. Bridle
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Dear Dr. Bridle:

We are happy to inform you that the manuscript, "Radio Structure and Optical Identification of 3C319"

has been accepted for publication and has been tentatively scheduled for the November 1979 issue of the ASTRONOMICAL JOURNAL.

Enclosed please find the reprint order and page charge authorization form. Please return it immediately to the American Institute of Physics at 335 East 45th Street, New York, New York 10017, ATTENTION: Billing Division.

For an estimate of the number of pages, it is our experience that typical manuscripts run between one-third and two-fifths of the number of typed pages if no large figures or photo-ready, reduced tables are included.

THE EDITORS

Referee's report on "Structure and Optical Identification of 3C 319" by Bridle and Fomalont.

This paper is definitely suitable for publication in The Astronomical Journal.

Perhaps the authors could mention the probability of chance association of the radio "head" with a foreground 20^{m} star. Also, in the abstract, I think it would be better to say "has a diameter of x arcsec" rather than "is resolved". There are a few minor comments in pencil on the manuscript.

Positions for galaxies in the region of 3C 319 18 Jan 1979

1950.0 R.A.	Decl.		
15 22 42.20	54 39 55.3	star	
15 22 42.92	54 39 07.2		outside r.s.
15 22 42.28	54 39 39.4		outside r.s.
15 22 43.90	54 38 38.4	Wyndham's original identification*	
15 22 43.97	54 39 09.8		outside r.s.
15 22 44.19	54 38 58.4		
15 22 44.80	54 38 47.9		
15 22 45.44	54 38 24.1		outside r.s
15 22 45.59	54 38 52.5		
15 22 47.67	54 39 11.1	Cf. compact radio source: 15 22 47.68 54 39 11.3	
15 22 48.73	54 38 47.0		outside r.s.
15 22 49.33	54 39 18.3		"
15 22 50.70	54 39 11.3		"
15 22 53.01	54 38 14.2		"
15 22 55.57	54 38 15.4		"

* There seems to be a defect on our E plate near this galaxy which makes it difficult to estimate the centroid very well.

OBJ OPT	Wills	(±0".4)	15	22	47.67	54	39	11.1	±0.4	UT 6.25
	B&G	(±0".5)			47.71			10.6	±0.5	4
	Carb	(±1.0)	15	22	47.61	54	39	11.2	±1	1
Weighted mean ($1/\sigma^2$)					47.68	54	39	10.9		

RADIO	Carb	47.75±0.05	11.6±0.5
	VLA1	47.68±.05	11.3±0.5
	VLA2	47.73±.05(?)	11.7±0.5(?)

1" discrep between VLA2 and optical weighted mean.

0".95 — VLA2+CAM → 47.74 11.7
VLA2/CAM —

$b \sim +52°$ $m_{pg}=20 \rightarrow 10^{3.4}$/sq.degree (Allen). brightness equal vb.
i.e. per arc sec. $\sim 1/2$ *. ?

3C319 March 28 1978

20cm 2, 3, 4, 6, 7, 8, 9, 11 (8)

6cm 1, 2, 3, 4, 6, 7, 8, 9, 11 (9)

1 - AW1 484.00 ✓
2 - AW4 5222.90 ✓
3 - DE1 -80.00
4 - DW2 44.85 ✓
6 - BW6 3188.09 ✓
7 - DE4 147.33
8 - AW5 7659.48 ✓
9 - AW6 10472.87 ✓
11 - DE8 484.00

Cal. 1526+670 used 15 26 12^s.150 +67 01 16.8
"better" −0".6 −0".3
12^s.05 16.5

9km taper at 1479 MHz → cln beam 4".40 × 4".04 at p.a. 1°
4885 1".33 1.22

EW head HW NS head HW
$\frac{2.35}{5.3} \times 5 = 2.22$ $\frac{2.88}{5.3} \times 5 = 2.72$ ⇒ 2".37 → 2.27 i.e. 2".3 ± 0".2 NS
1.3 1.5 1".8 ± 0".3 EW

Wynd 18".3 optical (Wills) = 15^h 22^m 43^s.90 54° 38′ 38".4
OBJ X —— (geom. mean) = 15^h 22^m 47^s.68 54° 39′ 11".2 +3^s.78 +32".8
radio head 15^h 22^m 47^s.73 54° 39′ 11".7 +3^s.83 +33".3

3C319 Antennas/Baselines

1	2	3	4	6	7	8	9	11
0.5	5.2	0.1	1.6	3.2	0.15	7.7	10.5	0.7
DW8	BW8	DE1	CW8	BW6	DE4	AWS	AW6	CWS

⇒

	1	2	3	4	6	7	8	9	11
1		4.7	0.4	1.1	2.7	0.35	7.2	10.0	0.2
2			5.1	3.6	2.0	5.05	2.5	5.3	4.5
3				1.5	3.1	0.05	7.6	10.4	0.6
4					1.6	1.35	6.1	8.9	0.9
6						3.05	4.5	7.3	2.5
7							7.55	10.35	0.55
8								2.8	7.0
9									9.8
11									

Baseline order:

km	Pair
10.4	3-9
10.35	7-9
10.0	1-9
9.8	9-11
8.9	4-9
7.6	3-8
7.55	7-8
7.3	6-9
7.2	1-8
7.0	8-11
6.1	4-8
5.3	2-9
5.1	2-3
5.05	2-7
4.7	1-2
4.5	2-11
4.5	6-8
3.6	2-4
3.1	3-6

km	Pair
3.05	6-7
2.8	8-9
2.7	1-6
2.5	2-8
2.0	2-6
1.6	4-6
1.5	3-4
1.1	1-4
0.9	4-11
0.6	3-11
0.55	7-11
0.4	1-3
0.35	1-7
0.2	1-11
0.05	3-7

2.5 2-8