

An Interferometry Imaging Beauty Contest

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J.D. Monnier , M. Zhao (Univ. of Michigan)

J.S. Young, H. Thorsteinsson (Univ. of Cambridge)

S.C. Meimon, L. Mugnier, G. Le Besnerais (ONERA)

E. Thiebaut (CRAL / Obs. Lyon)

P.G. Tuthill (Univ. of Sydney)

***Jet Propulsion Laboratory, California Institute of Technology**

New Frontiers in Stellar Interferometry

13:45 hrs, Friday, 25 June 2004

25 June 2004

An Interferometry Imaging Beauty Contest,
New Frontiers in Stellar Interferometry,
Glasgow, Scotland.

Motivation & Framework for the Contest

- Promote the use of the OI-FITS data format; identify problems in its definition, and revise it as necessary
- Engage the interferometry community in a formal assessment of existing imaging software.
- Encourage the development of new software tailored to the needs of optical interferometry.

BSMEM

H. Thorsteinsson & J.S. Young (Univ. of Cambridge)

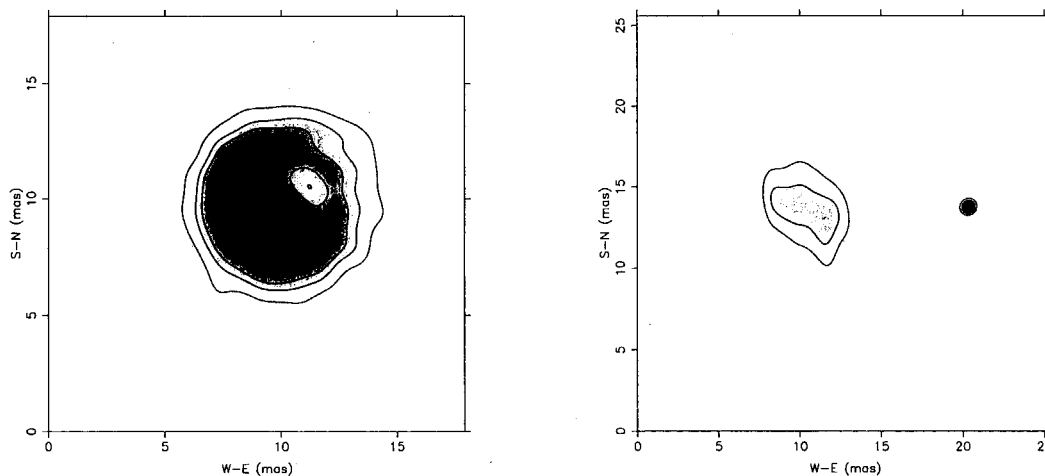


Figure 3. Entries by H. Thorsteinsson and J.S. Young. Results from reconstruction of the contest data sets using BS MEM. The contour levels are at 2, 10, 20, 30, 40, 50, 60, 70, 80, and 90%.

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WISARD

S. Meimon, L. Mugnier, G. Le Benerais (ONERA)

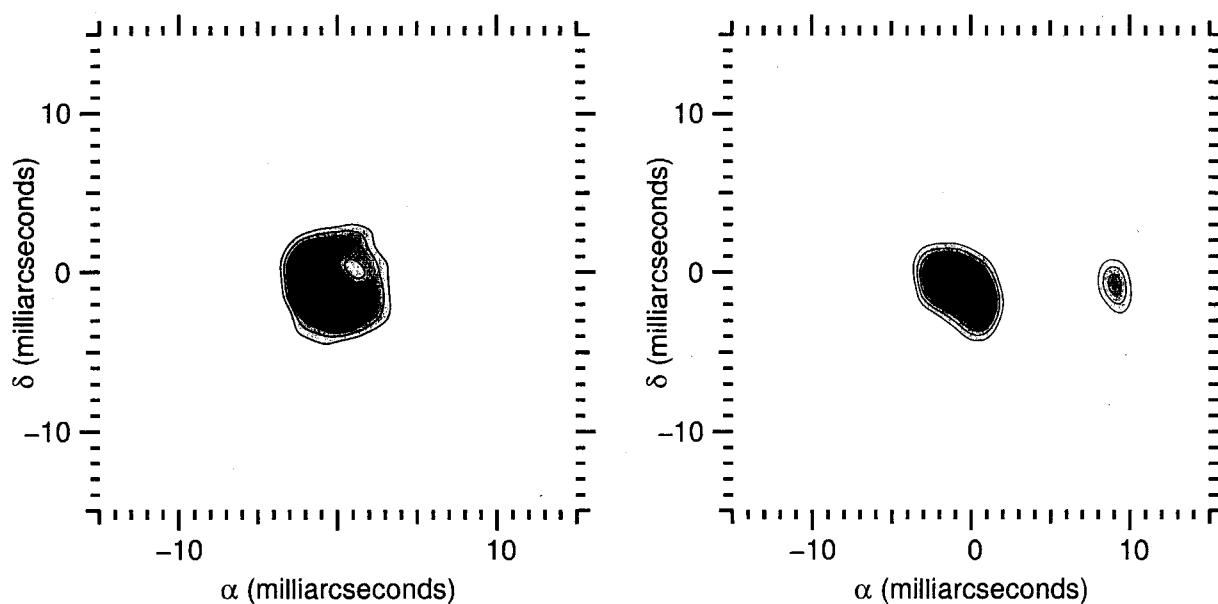


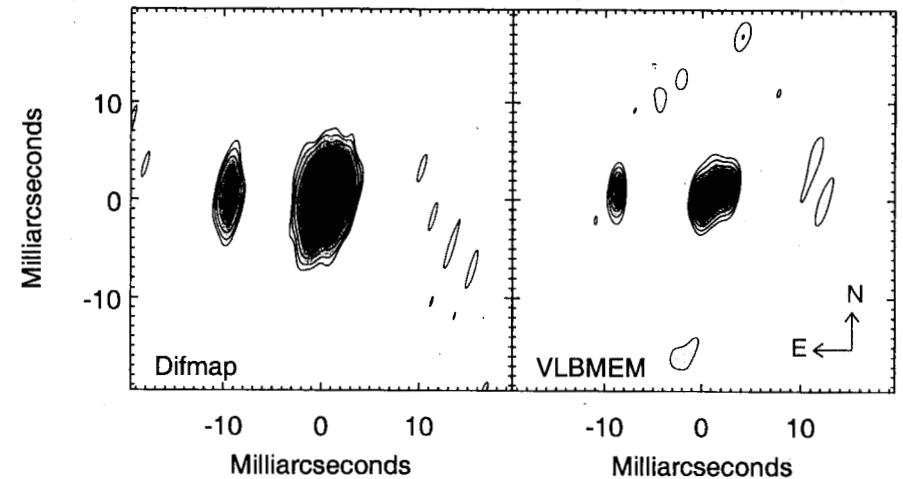
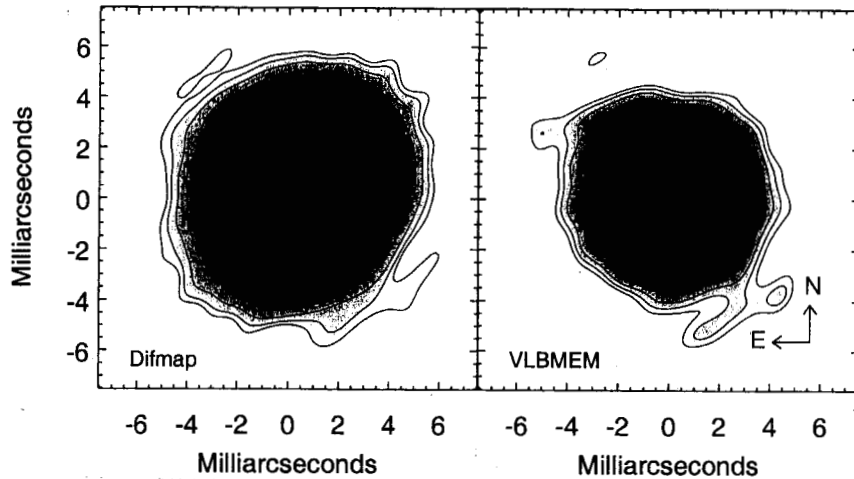
Figure 4. Entries by S.C. Meimon *et al.* Contour levels are at 10, 20, 30, 40, 50, 60, 70, 80, and 90% of the maximum.

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VLBMEM & Difmap

J.D. Monnier, M. Zhao (Univ. of Michigan)



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MIRA

E. Thiébaud (CRAL / Obs. de Lyon)

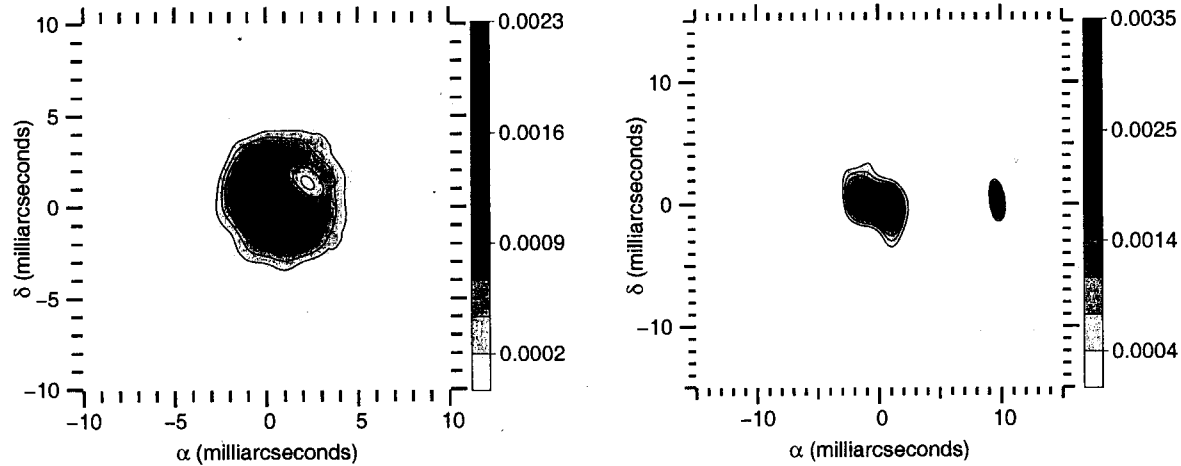
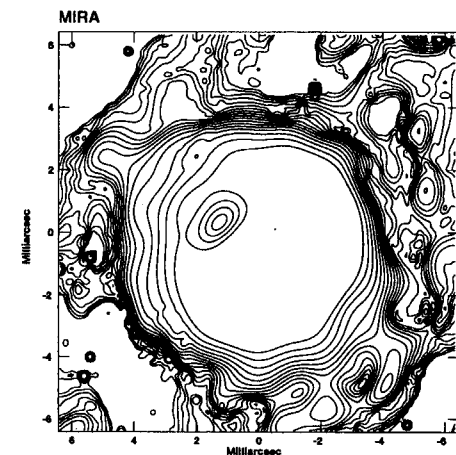
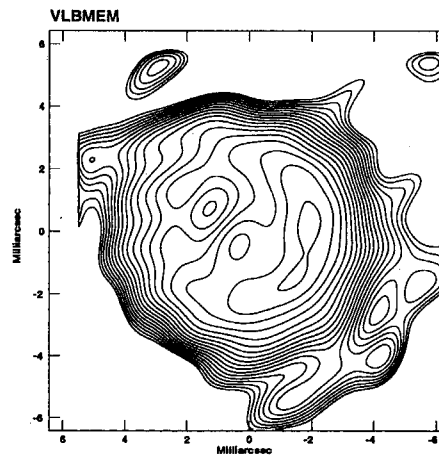
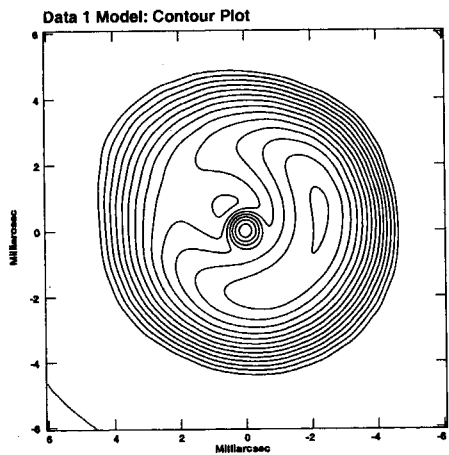
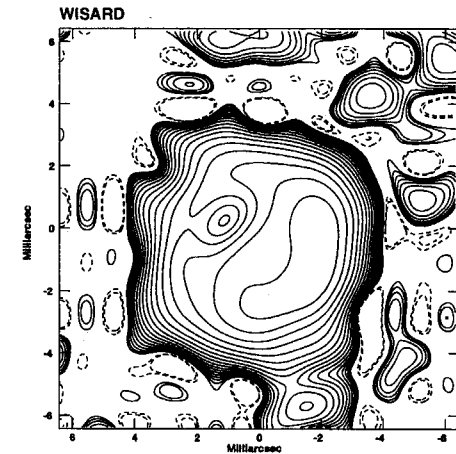
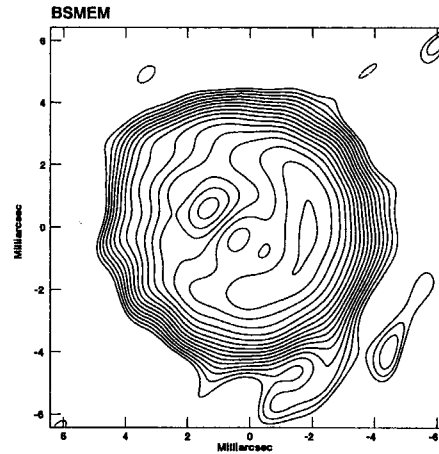
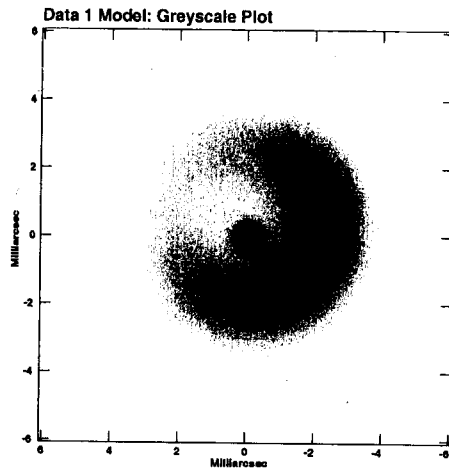


Figure 7. Entries by E. Thiébaud. Contour levels are at 10, 20, 30, 40, 50, 60, 70, 80, and 90% of the maximum.

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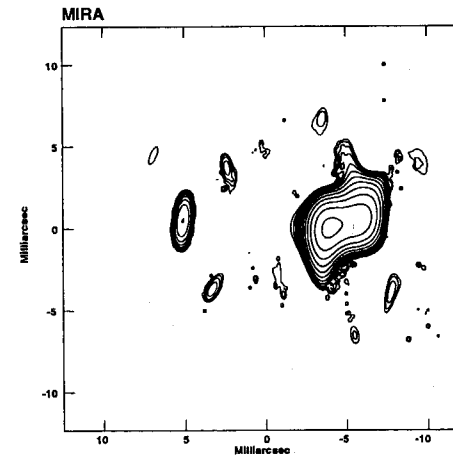
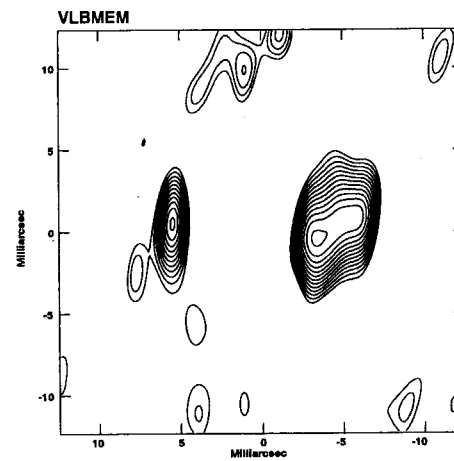
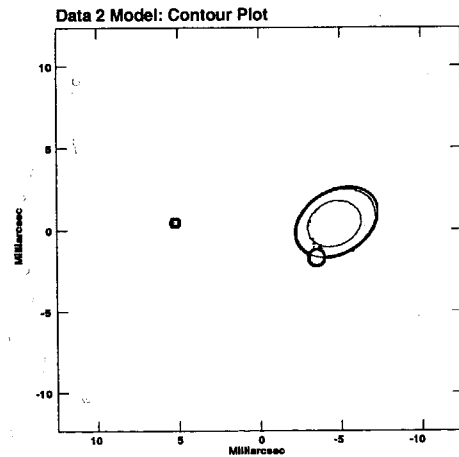
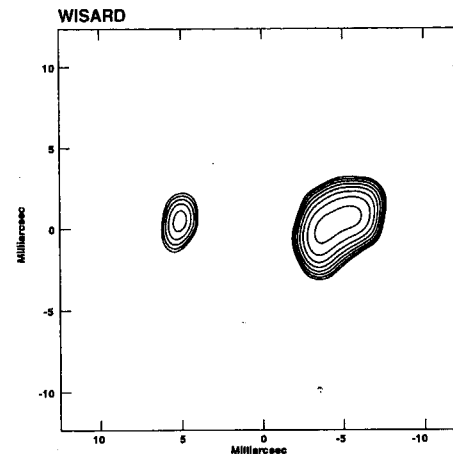
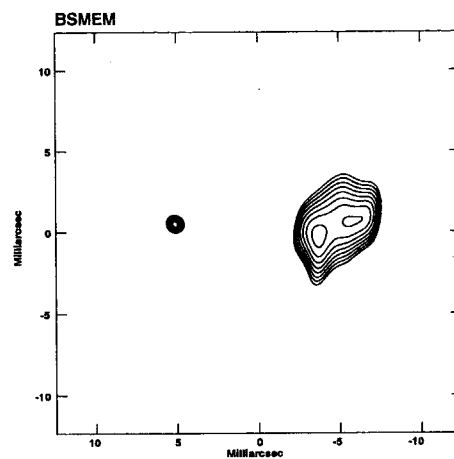
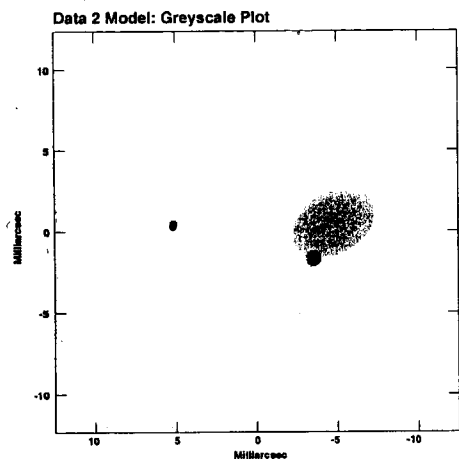
Data Set 1



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Data Set 2



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Rapport sur le concours de l'année 2004

Commissaires MM. Cotton, Hummel, Lawson rapporteur

Table 2. Imaging Beauty Contest Results

	<i>Data Set 1</i>		<i>Data Set 2</i>		$\Sigma \sigma/\text{peak}$
	σ	σ/peak	σ	σ/peak	
BSMEM	0.000079	0.38	0.00035	0.116	0.50
WISARD	0.00034	1.52	0.00049	0.163	1.68
VLBMEM	0.00024	1.07	0.0024	0.798	1.87
MIRA	0.0012	5.36	0.0016	0.532	5.98

Data 1 peak = 2.239×10^{-4} *Data 2* peak = 3.0677×10^{-1}

The clear winner by this measure is H. Thorsteinsson and J.S. Young, the BSMEM entry.

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Acknowledgements

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