

From: Bradley M. Peterson <peterson@payne.mps.ohio-state.edu>  
To: abridle@NRAO.EDU  
Cc: peterson@payne.mps.ohio-state.edu  
Subject: request for help  
Date: Wed, 4 Oct 95 14:35:40 EDT

Dear Dr. Bridle,

I am currently working on an introductory graduate-level textbook on active galactic nuclei, which is to be published next year by Cambridge University Press. Right now I am working on assembling the figures for the book. One of the things I think I should show in the first chapter is a direct comparison of the radio morphologies of FR I and FR II sources. I would like to show the highest dynamic range maps I can find of "prototypical" FR I/II sources. I am thinking of displaying these as contour plots, though half-tones might be even better if the contrast is right --- I'm especially interested in bringing out the jet components, and in making sure that the compact central source also shows up.

Some nice FR II maps I have seen and are more or less what I'm looking for are in your 1994 AJ paper (Bridle et al. 1994, AJ, 108, 766). I particularly like 3C 175 (figs 7 or 8), 3C 204 (fig 10), 3C 336 (fig 27), and 3C 47 (fig 36), which seem to have all the features that I'm looking for. Overall, I think fig 8 (the higher resolution total intensity map of 3C 175) is the most desirable. Would you be willing to let me use one of these figures in my book? If so, is it possible for you to provide me with the original (processed) images?

I would also like to find a suitable FR I map of similar dynamic range and resolution, for comparison purposes. Any chance that you can give me some guidance here? Do you have any similar quality maps of FR I sources that you would be willing to let me use? If not, can you recommend someone else I might contact?

I can deal with just about any reasonable image format, by the way.

Looking forward to any help you can provide.

Cheers,  
Brad Peterson

From: abridle (Alan Bridle)  
To: Bradley M. Peterson <peterson@payne.mps.ohio-state.edu>  
Subject: Re: request for help  
Date: Wed, 4 Oct 1995 15:48:32 -0400

Bradley M. Peterson writes:

> Dear Dr. Bridle,  
> I am currently working on an introductory graduate-level  
> textbook on active galactic nuclei, which is to be published next year  
> by Cambridge University Press. Right now I am working on assembling  
> the figures for the book. One of the things I think I should show  
> in the first chapter is a direct comparison of the radio  
> morphologies of FR I and FR II sources. I would like to show the  
> highest dynamic range maps I can find of "prototypical" FR I/II  
> sources. I am thinking of displaying these as contour plots, though  
> half-tones might be even better if the contrast is right --- I'm  
> especially interested in bringing out the jet components, and in  
> making sure that the compact central source also shows up.  
> Some nice FR II maps I have seen and are more or less what I'm  
> looking for are in your 1994 AJ paper (Bridle et al. 1994, AJ, 108, 766).  
> I particularly like 3C 175 (figs 7 or 8), 3C 204 (fig 10),  
> 3C 336 (fig 27), and 3C 47 (fig 36), which seem to have all the  
> features that I'm looking for. Overall, I think fig 8 (the higher  
> resolution total intensity map of 3C 175) is the most desirable.  
> Would you be willing to let me use one of these figures in my  
> book? If so, is it possible for you to provide me with the original  
> (processed) images?  
> I would also like to find a suitable FR I map of  
> similar dynamic range and resolution, for comparison purposes.  
> Any chance that you can give me some guidance here? Do you have  
> any similar quality maps of FR I sources that you would be willing  
> to let me use? If not, can you recommend someone else I might contact?  
> I can deal with just about any reasonable image format,  
> by the way.

I'd be happy to help. You are welcome to have the FITS format images  
for this purpose, or I could provide GIFs with color or b/w transfer  
functions already applied.

I could also provide the very nice 20/18 cm image of the FR-II radio  
galaxy 3C219 from Clarke et al. ApJ 385, 173 (1992).

For an FR-I, I could provide a VLA images of the inner plumes of  
3C31, or (for a small, low-power, FR-I) of M84 (Virgo cluster  
elliptical, as shown in my Ann.Rev. Vol.22 (1984) article only at  
higher angular resolution.

A.

From: Bradley M. Peterson <peterson@payne.mps.ohio-state.edu>  
To: abridle@polaris.cv.nrao.edu  
Cc: peterson@payne.mps.ohio-state.edu  
Subject: Re: request for help  
Date: Wed, 4 Oct 95 16:36:24 EDT

Dear Alan,

Thanks for your willingness to help. What I think I would like are the FITS format files for 3C 175 (as in the 1994 AJ paper, Fig 8) as the FR II example and M 84 as the FR I. Both of these look great, and as near as I can tell (being a non-expert!) look very "prototypical" (no really weird things to have to explain).

I think that the contour plots will be best for showing the gradients (edge-brightening in the FR II especially).

A couple of things:

- our contour plotting software is probably not as good as in AIPS (we use a combination of VISTA and Mongo). It would therefore be helpful to know the contour levels to plot. I'm using this particular software since I want all the figures to have uniform appearance, and to satisfy CUP's desire for PostScript format figures.

- we will also probably NOT put RA and DEC scales on the figures, but will instead just show scale bars off to one side. Angular scale information would be very useful.

- the easiest way to get the files here is for you to deposit them on my anonymous ftp area. Instructions follow.

- please also let me know how the data should be acknowledged.

Again, thanks very much for your help.

Cheers,  
Brad

To deposit the files, do the following:

```
ftpessel.mps.ohio-state.edu    ! ftp toessel at Ohio State
OR
ftp 128.146.37.206            ! Astronomy Department
```

```
Name: anonymous                ! log in as "anonymous"
Password:bjmoose@whatsamatta_u.edu ! use your address as
! password
```

```
cd pub/peterson                ! change directories
```

```
binary                          ! change mode to binary
put file.fits                    ! deposit binary file
```

```
bye                            ! finished
```

From: abridle (Alan Bridle)  
To: Bradley M. Peterson <peterson@payne.mps.ohio-state.edu>  
Subject: Re: request for help  
Date: Thu, 5 Oct 1995 17:48:06 -0400

Bradley M. Peterson writes:

- > Dear Alan,
- > Thanks for your willingness to help. What I think I would like
- > are the FITS format files for 3C 175 (as in the 1994 AJ paper, Fig 8)
- > as the FR II example and M 84 as the FR I. Both of these look great,
- > and as near as I can tell (being a non-expert!) look very "prototypical"
- > (no really weird things to have to explain).

I have just put the files 3c175ci.fit and m84ci.fit in /pub/peterson

3C175 can be acknowledged with reference to the published paper, it is the very same data were contoured in Fig.8

The M84 image is actually unpublished, and can be referred to as unpublished data of A.H.Bridle and R.A.Laing. It combines data from the VLA B and C configurations that were mentioned, but not shown explicitly, in Laing & bridle, MN 228, 557 (1987)..

- > I think that the contour plots will be best for showing the gradients
- > (edge-brightening in the FR II especially).
- > A couple of things:
- > - our contour plotting software is probably not as good as in
- > AIPS (we use a combination of VISTA and Mongo). It would therefore be
- > helpful to know the contour levels to plot. I'm using this particular
- > software since I want all the figures to have uniform appearance,
- > and to satisfy CUP's desire for PostScript format figures.

I'll do some contour-fiddling tomorrow and make a suggestion to you.  
I could also send you a Postscript file with the contours if you prefer.

Alan B.

From: Bradley M. Peterson <peterson@payne.mps.ohio-state.edu>  
To: abridle@polaris.cv.nrao.edu  
Subject: FR I and II files  
Date: Fri, 13 Oct 95 16:08:34 EDT

Dear Alan,

I just wanted to let you know that I received the files, and it looks like we will have no trouble producing good contour maps. Thanks very much for your help with this, I'll let you know if we run into any problems.

Cheers,  
Brad