```
From abridle Thu Oct 1 22:49:47 1992
X-VM-VHeader: ("From:" "Sender:" "Resent-From" "To:" "Apparently-To:" "Cc:"
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X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil nil]
        ["497" "Thu" "1" "October" "92" "22:48:51" "-0400" "Alan Bridle" "abridle "
nil "10" "Re: AG 361 = Jets" "^From:" nil nil "10"])
Received: by polaris.cv.nrao.edu (AIX 3.1/UCB 5.61/1.0)
        id AA05809; Thu, 1 Oct 92 22:48:51 -0400
Message-Id: <9210020248.AA05809@polaris.cv.nrao.edu>
References: <9210012221.AA02864@astsun.astro.Virginia.EDU>
From: abridle (Alan Bridle)
To: rg2v@astsun.astro.Virginia.EDU
Subject: Re: AG 361 = Jets
Date: Thu, 1 Oct 92 22:48:51 -0400
```

We'll need a list of target positions in B1950 co-ordinates to start making a file that is actually useful. I presume you'll have a list of optical positions accessible tomorrow? We can cross-check them with any radio positions that I can lay my hands on, and always edit them later if necessary, but it would be helpful to start with the ones that we'll actually need for the observing if possible. Optical positions good to a few arcsec or better will do just fine for all cases.

Cheers, A.

From root Mon Oct 5 18:53:50 1992 X-VM-v5-Data: ([nil nil nil nil nil nil nil nil] ["3559" "Mon" "5" "October" "92" "18:51:05" "EDT" "Richard Gelderman" "rg2v@astsun9.astro.Virginia.EDU" nil "94" "objects which are calibrators" "^From:" nil nil "10"]) Received: from cv3.cv.nrao.edu by polaris.cv.nrao.edu (AIX 3.1/UCB 5.61/1.0) id AA18906; Mon, 5 Oct 92 18:53:50 -0400 Received: from Virginia.EDU (uvaarpa.Virginia.EDU) by cv3.cv.nrao.edu (4.1/DDN-DLB/1.13) id AA15687; Mon, 5 Oct 92 18:53:50 EDT Received: from astsun9.astro.virginia.edu by uvaarpa.Virginia.EDU id aa14946; 5 Oct 92 18:53 EDT Received: by astsun9.astro.Virginia.EDU (4.1/1.34) id AA21410; Mon, 5 Oct 92 18:51:05 EDT Message-Id: <9210052251.AA21410@astsun9.astro.Virginia.EDU> From: Richard Gelderman <rg2v@astsun9.astro.Virginia.EDU> To: abridle@NRAO.EDU Subject: objects which are calibrators Date: Mon, 5 Oct 92 18:51:05 EDT

Alan-

Here is a copy of the message I sent to Rick Perley, and his reply. I have not heard from Clive Tadhunter about 0634-20, nor found anything in the literature.

We were planning on doing 0925 at both L and X bands. Wil vanBreugel's 6cm A array map of 1117-248 showed a clean double with a center to center separation of half an arcsecond. Our only aim in observing it would be to get better sensitivity and see diffuse extended structure or to spot a core (both would be hard due to dynamic range limits from bright double).

What is your reaction to Rick Perley's note?

Richard

>From rg2v@astsun.astro.Virginia.EDU Fri Oct 2 17:56:49 1992
To: rperley@nrao.edu
Subject: images for calibrators
Status: R

The project Alan Bridle, Mark Whittle, and I have is to look at the radio structure of AGN that were selected for their broad, structured forbidden line emission profiles. We have been granted 6 hours to obtain high resolution snapshots of the objects that have no such images available in the literature.

Here are the sources that Alan and I had planned on obtaining images of during our November 18 A-array run. We would appreciate any images or information about the extent/compactness of these quasars. Please contact me if you need any other information. Thank You.

Richard Gelderman Univ. of Virginia (804)924-7935 (804)924-3104 FAX

0925-203

We know of no image at any frequency or resolution for this object. It is a flat spectrum, core dominated quasar which is slightly resolved at X band.

1117-248

Wil vanBreugel published a 2cm A array map, but we are hoping for better sensitivity to determine whether there is extended structure, and how symmetric the lobes are. Different frequencies to determine spectrum of components and whether there is a core between the double lobes of this 0.7" source.

1302-102

Gower and Hutchings have a 20cm image which shows extended lobes to 15 or 20 arcseconds about a core that appears elongated. This would not be evident from the information in the calibrator lists.

>From rperley@aoc.nrao.edu Mon Oct 5 16:49:42 1992
Date: Mon, 5 Oct 92 14:49:21 MDT
From: Rick Perley <rperley@aoc.nrao.edu>
To: rg2v@astsun.astro.Virginia.EDU
Subject: Your objects
Status: R

Dear Richard:

Here is what I know of these objects.

1) 0925-203. This has much extended structure about the unresolved core. The total 20cm flux exceeds 1.1 Jy, while the nucleus is 0.7 Jy. I don't recall ever making an image of this one. By X-band, the extended strucure is very much weakened, perhaps by the size of the primary beam, or perhaps through resolution.

2) 1117-248 This is a steep spectrum, partially resolved object at 6 and 20cm. No other structure was found. You'll probably need the VLBA to do better.

3) 1302-102 I have a rough image showing a possible jet leading northwards about 8 arcsecones, and a detached patch of emission 5" to the SE. Nothing unusual about this, to the level the map is good for (about 500:1 in Dynamic Range).

For all these objects, you are much better off in obtaining new observations. Since all are dominated by strong core emission, only a few snapshots will be required to greatly surpass anything I have done. It would take more time to recover the old data than to slip in a few scans in your upcoming run. You should also carefully consider whether you want to use the spectral line system, in order to have better dynamic range.

Best of Luck

Rick Perley

I have a nearly working observe file, with some differences from our original plan. I'd like to talk about it with you and call it done.

My account is rgelderm, and the files are on u2/rgelderm as ag361* and *.lis. If you can see me tomorrow, let me know by email.

From rgelderm Wed Nov 11 10:23:54 1992
X-VM-v5-Data: ([nil nil nil nil t nil nil nil nil]
 ["364" "Wed" "11" "November" "92" "10:23:53" "-0500" "Richard Gelderman"
"rgelderm " "<921111523.AA14216@polaris.cv.nrao.edu>" "9" "confirmation" "^From:"
nil nil "11"])
Received: by polaris.cv.nrao.edu (AIX 3.1/UCB 5.61/1.0)
 id AA14216; Wed, 11 Nov 92 10:23:53 -0500
Message-Id: <921111523.AA14216@polaris.cv.nrao.edu>
From: rgelderm (Richard Gelderman)
To: abridle
Subject: confirmation
Date: Wed, 11 Nov 92 10:23:53 -0500

Got confirmation from OBSERVE (Chuck) and ANALYSTS (Sue Prewitt). I'll see you with the data tape in late November. Thanks.

I overheard you tell Barry that Laing was coming in mid December. Do you have an email address where I could contact him today? I need to ask him about emission line fluxes for some 3C galaxies he has observed but not published.

From root Wed Nov 11 13:54:08 1992 X-VM-v5-Data: ([nil nil nil nil t nil nil nil] ["1501" "Wed" "11" "November" "92" "13:51:09" "EST" "Richard Gelderman" "rg2v@astsun9.astro.Virginia.EDU" "<9211111851.AA05835@astsun9.astro.Virginia.EDU>" "42" "PKS 0634-20: Tadhunter's reply" "^From:" nil nil "11"]) Received: from cv3.cv.nrao.edu by polaris.cv.nrao.edu (AIX 3.1/UCB 5.61/1.0) id AA16207; Wed, 11 Nov 92 13:54:07 -0500 Received: from Virginia.EDU (uvaarpa.Virginia.EDU) by cv3.cv.nrao.edu (4.1/DDN-DLB/1.13) id AA03335; Wed, 11 Nov 92 13:54:09 EST Received: from astsun9.astro.virginia.edu by uvaarpa.Virginia.EDU id aa01638; 11 Nov 92 13:54 EST Received: by astsun9.astro.Virginia.EDU (4.1/1.34) id AA05835; Wed, 11 Nov 92 13:51:09 EST Message-Id: <9211111851.AA05835@astsun9.astro.Virginia.EDU> From: Richard Gelderman <rg2v@astsun9.astro.Virginia.EDU> To: abridle@NRAO.EDU Subject: PKS 0634-20: Tadhunter's reply Date: Wed, 11 Nov 92 13:51:09 EST Here is the reply I got from Clive Tadhunter regarding 0634-20: >From ph1cnt@sunc.sheffield.ac.uk Wed Nov 11 12:32:39 1992 Via: uk.ac.sheffield.sunc; Wed, 11 Nov 1992 17:06:17 +0000 From: C Tadhunter <ph1cnt@sunc.sheffield.ac.uk> Date: Wed, 11 Nov 92 17:06:47 GMT To: rg2v@astsun.astro.Virginia.EDU Subject: PKS0634-20 Status: R Dear Richard, Thanks for your message about PKS0634-20 etc.... The problem with our A/B array data is that there is a lot of partially resolved structure on large scales which tends to make it difficult to map. However, I do recall when I that when I looked at the data of 0634-20, the core was detected. I think that it is doubtful that the data would give much information about the immediate surrounds of the core. You are welcome to have those A/B array data for 0634-20 (are they in an archive somewhere?) I also have the data here on linch tape, but it is difficult for me to access because we are just setting up our data reduction software in Sheffield, and we don't have a linch tape drive! Another idea is to contact W.van Breugel. He showed me some beautiful maps of PKS0634-20, which were made by combining the data from several arrays. They would probably show any faint features near the nucleus. Wil must have A/B array data, because the maps had a high spatial resolution.

I'd be interested to hear about your CSS work in more detail sometime.

Cheers

Clive Tadhunter

I'll talk with you about the next step to getting 0634-20 data.

From abridle Wed Nov 11 14:40:16
1992
X-VM-v5-Data: ([nil nil nil nil nil nil nil nil nil]
 ["502" "Wed" "11" "November" "92" "14:40:07" "-0500" "Alan Bridle" "abridle "
nil "9" "Re: PKS 0634-20: Tadhunter's reply" "^From:" nil nil "11"])
Received: by polaris.cv.nrao.edu (AIX 3.1/UCB 5.61/1.0)
 id AA26512; Wed, 11 Nov 92 14:40:07 -0500
Message-Id: <921111940.AA26512@polaris.cv.nrao.edu>
References: <921111851.AA05835@astsun9.astro.Virginia.EDU>
From: abridle (Alan Bridle)
To: Richard Gelderman <rg2v@astsun9.astro.Virginia.EDU>
Subject: Re: PKS 0634-20: Tadhunter's reply
Date: Wed, 11 Nov 92 14:40:07 -0500

The archive is public-domain and you could get a copy of Tadhunter's data from the archive by a request to ANALYSTS. I would send them also a copy of his E-mail as it helps to speed the process up if it is clear that the original user is aware of the request.

Van Breugel has been hawking slides of his multiconfiguration image around at meetings for some years, but I don't think it's published. You could ask him what his highest resolution was/is and whether he'd let you look at that image

Just to let you know we greatly enjoyed the home-brew beer this weekend, a very nice item!

I've sent off letters to all of your postdoc application addresses with deadlines through January 31. I noticed that the next one on your list was to Arecibo for an upgrade-related position. Maybe we should talk a bit about that. I think they will be looking for someone with specific sorts of experience there, and it's not clear to me that it's a suitable post for you to apply for. Let's discuss that briefly nect time you're up here.

Best wishes, and thanks again for the beer,

Α.

From root Tue Jan 19 21:15:47 1993 X-VM-v5-Data: ([nil nil nil nil t nil nil nil] ["991" "Tue" "19" "January" "93" "21:15:39" "EST" "Richard Gelderman" "rg2v@astsun.astro.Virginia.EDU" "<9301200215.AA16167@astsun.astro.Virginia.EDU>" "21" "Re: Misc" "^From:" nil nil "1"]) Received: from uvaarpa.Virginia.EDU by polaris.cv.nrao.edu (AIX 3.2/UCB 5.64/4.03) id AA35346; Tue, 19 Jan 1993 21:15:46 -0500 Received: from astsun.astro.virginia.edu by uvaarpa.Virginia.EDU id aa21243; 19 Jan 93 21:15 EST Received: by astsun.astro.Virginia.EDU (4.1/1.34) id AA16167; Tue, 19 Jan 93 21:15:39 EST Message-Id: <9301200215.AA16167@astsun.astro.Virginia.EDU> From: Richard Gelderman <rg2v@astsun.astro.Virginia.EDU> To: abridle@polaris.cv.nrao.edu Subject: Re: Misc Date: Tue, 19 Jan 93 21:15:39 EST

I am on Kitt Peak, surrounded by fog and light sleet.

Thank you for the recommendations. I agree about the Arecibo application. I thank you for paying attention to the descriptions and bringing it to my attention though. I included everything I knew about and could even remotely be qualified for -- it was not intended to be absolute

I am sorry about that post TUNA appointment last week. We did not find out it was cancelled till we got there. You weren't in your office and I had a ride back if I left then. I meant to explain then but got carried away in pre-observing work.

I seriously need advice about this paper to be. Creating a postscript file that included enough figures has been too much for me so far. I do have it assembled in a folder here. Perhaps for silly reasons I have been reluctant to just mail it to you.

I will definitely look you up in early February to try this again. I apologize for being a ditz about this. It is my first time is my only excuse.

I've taken a first look at your draft. I'm finding it a bit hard to read without Figure captions and numbers but I think I have the overall picture nevertheless.

Secs 1 thru 4 seem straightforward enough, a bit long on IRAF jargon but I suppose this is inescapable these days. (I try to get my radio colleagues to emphasize algorithmic content of data reduction rather than just naming AIPS tasks and facilities, but I don't have a lot of success -- maybe only specialists read these sections of papers anyway!)

In Section 5.3, first line states a conclusion that I don't quite see in the data themselves. I don't see that your CSS objects all have broader OIII than any other AG's, as the broadest FWHM and FW20 values for the CSS are only barely above the broadest for the RG's. It's the *distribution* of the values that's so different. The CSS display many more high-width systems and contain hardly any below the peaks of the radio-loud QSO or Sey (without linear source) FWHM or FW20 distributions. (This is an important distinction).

I'm presuming that Sections 5.1 and 5.2 are just "notes to yourself" at the moment as they contain unanswered questions and don't seem to go anywhere in particular.

The kurtosis part of sec 5.4 also seems to disappear without reaching a conclusion.

I have marked a bunch of typos on the text copy.

Do you want to meet to talk about this some time? Or do you want to draft the "summary" first? (I think this might be a good idea, as it would probably help you to focus Sec.5 better)

I'll be in town until March 19, then away for 3 weeks.

Best wishes, Alan