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Maria Massi
JIVE

In order to obtain the status of the instrumental polarization (i.e. the so called 'D terms') at the European telescopes, a total of 9 NME (Network Monitoring Experiments) has been processed.

The NME were performed during the years 1997 and 1998 with the MkIII in Mode A.

For each of the 14 IF channels AIPS produces one independent estimate of the amplitude (A) and phase (ϕ) of the D term at a given telescope. The average in IF for A and ϕ and their standard deviations are given in Table 1-4; where Tables 1 and 2 refer to the experiments at 6 cm and Tables 3 and 4 to the experiments at 18 cm. The amplitudes are in percent.

The phases given in the Tables are relative, that is the quantity 'R-L' affects (with opposite sign) the ϕ_R and ϕ_L. In order to check the variability from epoch to epoch we plot in Fig.1 the quantity $\phi_R + \phi_L$ which is independent from the R-L term.

The run 97-1 refers to february 1997 and the run 97-2 to June; the A and B experiments are one week apart (see Table 1).

One should expect the quantity $\phi_R + \phi_L$ be stable within the A-B interval. The result (see Fig. 1) is that only for Westerbork and Medicina we found a considerable regularity within the same run in both cases (97-1 and 97-2).

Figure 1 shows also the quantity $A- < A >$. At the right bottom of each panel it is also shown the average of the σ_ν. We note that but Westerbork all the telescopes have $\sigma < 0.8\%$. The origin of the large value ($\sigma = 2.8\%$) at Westerbork cannot be dependent on the large A value. In fact, while at Medicina the amplitude is even higher than the one at Westerbork, the σ at Medicina remains lower than 0.8%.

Another clear evidence that the large values of A and σ at Westerbork have different origins can be found by looking at the experiment 98-1. In this experiment, where the instrumental polarization at Westerbork assumes its lowest value (especially D_{LEFT}), only one telescope was used instead of the whole array. We see how σ_ν still remains above 2%.

In conclusion we see that at 6 cm: Effelsberg, Torun, Jodrell and Crimea exhibit level of instrumental polarization below 3%, Cambridge a bit higher, whereas the other stations have D terms above 9%. The situation at 18 cm for D_{RIGHT} is a bit more homogeneous among the stations (except for Westerbork) whereas for D_{LEFT} it seems we have, once again, two groups with distinct performances.

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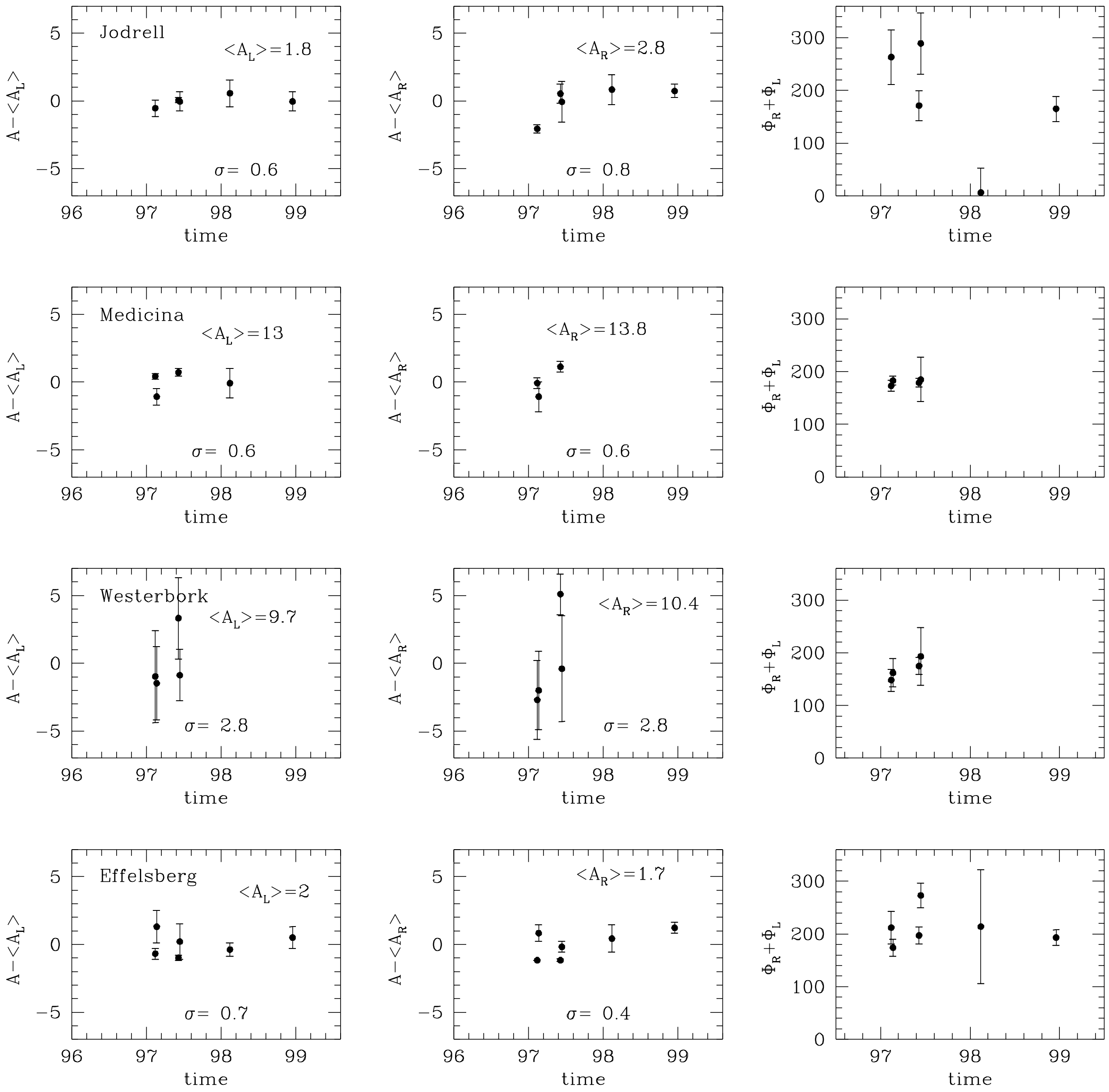

Fig. 1.— Instrumental Polarization at $\lambda = 6\ cm$

λ=6cm

D_{LEFT}

#	Noto	Effelsberg	Torun	Jodrell	Cambridge	Crimea	Westerbork	Medicina	Onsala	Shangai
	$A \pm \sigma_\nu$	A $\pm\sigma_\nu$	A $\pm\sigma_\nu$	A $\pm\sigma_\nu$	A $\pm\sigma_\nu$	A $\pm\sigma_\nu$	A $\pm\sigma_\nu$	A $\pm\sigma_\nu$	A $\pm\sigma_\nu$	A $\pm\sigma_\nu$
97-1A		1.3±0.4	1.2±0.2	1.3±0.6	2.9±0.6		8.7±3.4	13.4±0.2	18.4±2.5[a]	32.6±2.9[a]
97-1B		3.3±1.2	1.7±0.7				8.2±2.7	11.9±0.6		32.2±0.8[a]
97-2A		1.0±0.2	3.6±0.3	1.9±0.2		2.9±0.7	13±3.0	13.7±0.3		29.3±1.5[a]
97-2B	3.3±2.0	2.2±1.3		1.8±0.7		2.3±1.1	8.8±1.9	9.7±1.2		29.0±1.6[a]
98-1	4.4±1.3	1.6±0.5	3.0±1.0	2.4±1.0	4.9±2.3	2.8±1.4	3.4±2.3[b]	12.9±1.1	10.0±1.3	9.9±2.5
98-4	2.7±1.2	2.5±0.8		1.8±0.7	2.4±0.9					7.1±3.3

a: old receiver; b: one telescope only

#	Noto	Effelsberg	Torun	Jodrell	Cambridge	Crimea	Westerbork	Medicina	Onsala	Shangai
	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$
97-1A		107±15	132±10	-6±23	47±7		-173±13	33±6	148±6[a]	166±8[a]
97-1B		-112±3	-114±85				-72±15	120±8		156±2[a]
97-2A		170±9	-104±14	106±19		70±14	96±13	106±6		-144±7[a]
97-2B	-78±94	6±18		126±27		77±21	85±20	100±7		-145±1[a]
98-1	-80±8	-136±100	-178±62	20±43	-122±63	85±35	-50±49[b]	103±6	-76±11	12±37
98-4	-49±30	-35±8		-84±20	-43±27					138±27

TABLE 1

λ=6cm

D_{RIGHT}

#	Noto	Effelsberg	Torun	Jodrell	Cambridge	Westerbork	Medicina
	$A \pm \sigma_\nu$	$A \pm \sigma_\nu$	$A \pm \sigma_\nu$	$A \pm \sigma_\nu$	$A \pm \sigma_\nu$	$A \pm \sigma_\nu$	$A \pm \sigma_\nu$
97-1A		0.5±0.3	1.4±0.3	0.7±0.3		7.7±2.9	13.7±0.4
97-1B		2.5±0.6	0.8±0.4			8.4±2.9	12.7±1.1
97-2A		0.5±0.1	1.1±0.3	3.3±0.7		15.5±1.5	14.9±0.4
97-2B		1.5±0.4		2.7±1.5		10.0±3.9	5.5±1.1
98-1	4.5±2.2	2.1±1.0	4.0±0.8	3.6±1.1	5.8±1.2	6.3±2.9[b]	
98-4	1.9±0.4	2.9±0.4	2.7±1.5	3.5±0.5	3.3±0.6		

b: one telescope only

#	Noto	Effelsberg	Torun	Jodrell	Cambridge	Westerbork	Medicina
	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$
97-1A		105±27	-177±13	-91±47		-39±17	140±8
97-1B		-74±16	-162±36			-126±23	63±1
97-2A		27±13	122±50	65±21		79±9	73±6
97-2B		-93±15		163±52		108±51	85±41
98-1	-95±20	-10±42	-178±27	26±19	-87±89	2±22[b]	
98-4	157±25	-132±13	50±34	-111±13	-100±20		

TABLE 2

λ=18cm

D_{LEFT}

#	Noto	Effelsberg	Torun	Jodrell	Cambridge	Westerbork	Medicina	Onsala	Shangai
	$A \pm \sigma_\nu$	$A \pm \sigma_\nu$	$A \pm \sigma_\nu$	$A \pm \sigma_\nu$	$A \pm \sigma_\nu$	$A \pm \sigma_\nu$	$A \pm \sigma_\nu$	$A \pm \sigma_\nu$	$A \pm \sigma_\nu$
97-2A	4.6±1.3	4.3±0.2	5.5±0.2	3.5±0.2		32.5±3.8	16.6±0.5	13.3±1.3	
97-2B	5.1±0.9	4.2±0.2	5.2±0.3	3.0±0.2	2.3±1.3	31.9±3.5	17.3±0.7	12.8±1.1	
98-4	4.7±1.8	7.2±1.1	4.0±2.0	2.6±1.2			20.9±5.1	9.5±2.8	7.9±2.7

#	Noto	Effelsberg	Torun	Jodrell	Cambridge	Westerbork	Medicina	Onsala	Shangai
	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$
97-2A	28±41	126±5	132±4	127±11		62±11	-39±10	138±11	
97-2B	30±39	115±4	127±10	115±15	-127±83	56±9	-44±8	129±10	
98-4	63±59	53±37	-147±16	171±39			-18±22	-144±11	-84±72

TABLE 3

λ=18cm

D_{RIGHT}

#	Noto	Effelsberg	Torun	Jodrell	Westerbork	Medicina	Onsala
	$A \pm \Delta A_{IF}$	$A \pm \Delta A_{IF}$	$A \pm \Delta A_{IF}$	$A \pm \Delta A_{IF}$	$A \pm \Delta A_{IF}$	$A \pm \Delta A_{IF}$	$A \pm \Delta A_{IF}$
97-2A	5.7±0.6	2.9±0.6	6.4±1.1	1.6±0.6	32.5±2.5	6.5±0.7	8.0±1.3
97-2B	5.5±0.5	2.7±0.5	6.3±0.9	1.3±0.4	31.8±2.3	6.3±0.8	8.2±1.1
98-4	4.2±0.7	5.1±0.8	5.9±1.4	1.3±0.7		8.2±2.1	9.7±2.1

#	Noto	Effelsberg	Torun	Jodrell	Westerbork	Medicina	Onsala
	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$	$\phi \pm \Delta\phi$
97-2A	99±16	39±7	51±9	95±9	125±3	102±8	49±22
97-2B	101±22	39±11	65±5	91±22	134±2	109±9	59±23
98-4	-25±21	-29±33	-9±17	118±80		129±6	-15±20

TABLE 4