ACTIVITE DU GROUPE EN FEVRIER 87

1. BILAN DES OBSERVATIONS

1.1 Bilan des estimations d'Etoiles Variables

Le bilan général figure page ci-contre

PROGRAMMES "RECHERCHE" ET "CAMPAGNES"

- ϱ Per : FRL-2, KCH-4, CHC-3, FND-3
- UY Ari : FND-1
- RR VI-51 Lyn : DQZ-39
- FZ Ori : FND-2
- V781 Tau : DQZ-18
- TU CVn : KCH-1, CHC-3, EYR-3, DMT-7, FND-3
- V449 Cyg : FND-1
- OT Gem : KCH-5, GMZ-1, PEL-7, CNO-1, MIS-2, EYR-5, FGR-1, DMT-7, FND-7
- V436 Per : GMZ-1, SDN-4

1.2 Bilan des Occultations Astéroïdales

Voir tableaux des pages 2,3 et 4 gauche .

2. BILAN DES ETUDES

G.BOISTEL :

Au point mort pour toutes les études (attente des remarques du Referee concernant rô Per)
Transmission du dossier TU CVn 1980/85 à Ennio PORETTI.

M.DUMONT :

. Petite étude de TT Aql (1982 à 1986).

. Reprise du dossier AE Aur.

. Deux nouveaux volontaires pour les Mirae d'Hipparcos :
FRL et B.PETOT

E.PORETTI :

IL METODO ALCEP - Essendo conseguenza del diverso approccio all'osservazione visuale che ci contraddistingue, il metodo di riduzione delle stime effettuate sulle SR e sulle L costituisce una caratteristica fondamentale del GEOS. Questa considerazione è stata fatta più volte, ma ad essa non è mai seguita una iniziativa che facesse meglio conoscere il metodo ALCEP fuori dal nostro ambito. Tenuto conto che si sono succeduti studi GEOS basati su molte stime (V449 Cyg, OP Her, ρ Per, EU Del, IS Gem) e che diversi astronomi si sono interessati alle stime visuali su SR e L di lungo periodo, da qualche tempo lavoravo attorno all'idea di preparare un articolo destinato ad una rivista professionale che illustrasse il metodo ALCEP e che sottoli-

(suite p.4 droite)

OBSERVATEUR	SITE	SIGLE	Nb.NUITS 87	Nb.NUITS FEV	Nb.MESURES 1987	Nb.MESURES FEV
FERRAND	F-78/61	FND	16	7	629	219
Mle PELLO	E - B	PEL	5	4	140	134
KUCHTO	F - 78	KCH	10	4	408	130
DUMONT	F - 78	DMT	7	3	235	129
GHEZZI	I - MI	GZZ	?	?	76	76
CHECCUCCI	I - SI	CHC	16	7	176	74
DEQUINZE	B - S	DQZ	4	2	151	63
SUAUDNI	I -Roma	SDN	3	2	107	56
EYRAUD	F - 94	EYR	9	3	61	20
MACCARINI	I - GE	MAC	2	1	41	20
CANOLA	I - CO	CNO	8	1	167	18
GUIMEZANES	F - 66	GMZ	4	2	51	14
FRANGEUL	F - 49	FRL	4	2	47	8
MISSON	F - 92	MIS	5	2	32	8
ARQUIER	F - 66	ARQ	3	1	21	6
FIGER	F - 75	FGR	8	2	47	5
					3417 / 31	980

programmes GEOS "RC" MES./ET.	"P" MES./ET.	"R" MES./ET.	"To" MES./ET.
17/ 6	118/37	38/11	46/23
7/ 1	9/ 5	78/12	49/ 3
10/ 3	34/ 8	27/ 8	84/27
14/ 2	76/ 4	29/ 7	52/13
6/ 2	6/ 1	40/11	22/ 8
57/ 2	6/ 1		
8/ 2	7/ 3	42/11	6/ 2
8/ 2	3/ 1	5/ 2	
1/ 1		8/ 3	9/ 3
2/ 2		14/ 8	3/ 2
2/ 1	3/ 1	11/ 9	1/ 1
2/ 1		6/ 2	
1/ 1		2/ 2	1/ 1
		5/ 5	
		4/ 2	

OBSERVER	PLACE	ABBREV.	INSTR.	TOT
ALJAMA F.	E Sabadell	ALJ	T 100 v	1
BARTHES J.	F Castres	BRH	T 210 v	2
BARUFFETTI P.	I Massa	BFF	T 310 v	2
BATTARRILLI A.	I Trento	BTT	L 77 v	1
BLANCHART C.	B Bruxelles	BAA	T 203 v	2
BONDESEGNA R.	B Dourbes	BNN	T 300 v	1
BOURGEOIS J.	F Bagnères	BGS	T 1060 v	1
CARDIEL N.	E Madrid	CAD	L 60 v	1
CASAS R.	E Sabadell	CAS	T 365 v	3
CAVAGNA M.	I Calvignano	CVG	T 254 v	1
COLOMPA A.	I Reggio Calabria	CMB	T 410 v	2
COURBIN F.	F Vernon	COU	T 200 v	1
DE BENEDETTO G.	I Reggio Calabria	DBT	T 410 v	1
DELAHAYE F.	F Bordeaux	DHY	T 150 v	3
DENTEL M.	DDR Bernau	DEN		2
ELLIOTT A.	UK Leeds	ELL	T 200 v	1
FILIPOWICZ	PL Otwock	FWZ		1
GALLART C.	E Igualada	GAL	T 305 v	1
GALLEGO J.	E Madrid	GLL	L 75 v	0.5
GENOVESE M.	I Torino	GEN	T 210 v	1
GERMANN R.	CH Wald	RGR		1
GOMEZ A.	E Madrid	GOE	L 75 v	
GOMEZ J.	E Mollet	GEZ	T 200 v	1
GROS C.	F Besançon	GRS	T 250 v	2
GRUNET C.	DK Virum	GNT	T 200 v	1
Gruppo Astrofili Savonesi	I Savona	SAV	L 100 v	1
GRYCAN A.	F Toulouse	GRY	T 310 v	0.5
GUERISSE J.-D.	B Bruxelles	GUE	T 200 v	1
INGHIRAMI M.	I Massa	ING	T 114 v	2
IVICA Z.	YU Rijeka	IVC	T 110 v	1
KOHL M.	CH Uster	KHL	T 150 v	1
LECACHEUX J.	F Meudon	JLX	L 60 v	1
LE TALLEC H.	F Toulouse	TLL	T 200 v	1
LIPSKI P.	DDR Dresden	LPK	L 110 v	3
MAHOT C.	F Vauvenargues	MAO	T 120 v	1
MAKSYMOWICZ S.	F Chapet	MKW	L 75 v	2
MARCH M.	E Mataro	MAH	L 60 v	1
MARGESIN B.	I Trento	MGS	B 32 v	1
MARINELLO W.	I Brescia	MLO	T 150 v	0.5
MARTI J.	E Mataro	MTI	T 150 v	1
MARX H.	D Stuttgart	MRX	T 350 v	1
MAZALREY P.	F Vernon	MAZ	T 280 v	2

OBSERVER	PLACE	ABBREV.	INSTR.	TOT
MEUDON Observatory	F Meudon	meu	T 1000 tv	5
MICHON J.-P.	F Herment	MIH	T 200 v	2
MIRCO E.	I Trento	MCO	T 200 v	2
NAPOLITANO G.	I St Maria D.Mole	NAP	T 130 v	3
NEZRY E.	F Toulouse	NZY	T 310 v	0.5
NICE Observatory	F Nice	nic	T 400 pp	1
ORTIZ E.	E Vitoria	OTZ	L 90 v	1
PARIS Observatory	F Paris	par	L 390 pp	2
PLANA S.	I Varallo	PAA	T 100 v	1
PIC-DU-MIDI Observatory	F Bagnères	pdm	T 1060 tv	3
RASPADORI G.	I Bologna	RSP	T 350 v	1
REGHEERE G.	F Grenoble	RGE	L 60 v	1
RENOU A.	F Brissac	RNO	T 120 v	2
RODRIGUEZ D.	E Villalba	ROD 1	L 90 v	2
"	E Mostoles	ROD 2	T 260 v	
SCHIEB D.	F Illfurth	SIB	T 114 v	1
Specola Solare Ticinese	CH Locarno	sst	T 500 pp	1
STRABLA L.	I Brescia	SBL	T 150 v	0.5
THIRIONET Y.	B Bruxelles	TNT	T 260 v	1
TODINI P.	I Isola d'Arbia	TOD	T 250 v	2
TULIPANI F.	I Tizzano	TLP	T 350 v	2
VAISSIERE F.	F St Genest-Lerp	VAI	T 200 v	2
WIETH -KNUDSEN N.P.	DK Tisvildelje	WHK	T 305 v	2
ZAWILSKI	PL Lodz	ZWK		1
ZIMMERMANN L.	B Bruxelles	ZMI	T 100 v	1

Place:
- B Belgium
- CH Switzerland
- D Federal Rep. of Germany
- DDR German Democratic Rep.
- DK Danemark
- E Spain
- F France
- PL Poland
- I Italy
- UK United Kingdom
- YU Yugoslavia

Instrument: When one observer uses several instruments, only the larger one is listed.

T: reflector L: refractor B: binoculars

v: visual tv: video camera pp: photoélectric photometry

Total: "0.5" means that the observation was made with 2 observers at the same telescope.

ABBREV.	1986 OCT I3 AGK3 +I3°04 9I 487 Venetia	1986 OCT 22 SAO I64275 4I7 Suevia	1986 OCT 26 AGK3 +I9°0229 597 Bandusia	1986 OCT 27 AGK3 +02°0008 93 Minerva	1986 OCT 29 AGK3 +I9°0870 222 Lucia	1986 NOV I3 AGK3 +20°04 I7 9 Metis	1986 DEC 2 AGK3 +06°0220 I25 Liberatrix	1986 DEC 4 SAO I57658 233 Asterope	1986 DEC I4 AGK3 +05°07I2 509 Iolanda
MIH						–		–	
MCO				–			–		
MAP	–				–		–		
mic		–							
OTZ							+?k		
par	–								– e
PAA				–					
pdm	– c						– l		
RSP		– e							
RGE						–			
RNO			– b				–		
ROD 1		–							
ROD 2				– b					
SIB				– h					
sst				– b					
INT			–						
TOD		–			–				
TIP	– b	–							
VAI				– e			–		
WHK	–					– j			
ZWK					–				
ZMN	–								
TOTAL	II II ≠st	II IO≠st	6 5≠st	2I I7≠st	6 6≠st	IO IO≠st	2I I9≠st	4 4≠st	6 6≠st

a: A 2 magnitude drop from $I^h28^m31^s.5$ to $I^h28^m38^s.9$ U.T. Small fluctuations around I^h25. See also notes "c"&"d" (Table II)
b: Minor Planet passed south of the star.
e: Incomplete observation due to weather or technical problems.
f: Minerva passed north of the star. See also note "b".
g: Disparition at $I9^h26^m47^s.5$ U.T. during I6 seconds. Not instanta - neous. See special circular devoted to that event.
h: Observing interruption for some seconds around $I9^h26$ U.T.
j: Star and asteroid not separated between $3^h08^m06^s$ to $3^h2I^m54^s$ U.T.
k: Occultation beginning at $I8^h27^m09^s.5$ U.T. during 7.6 seconds. See also note "l", and special circular devoted to that event.
l: Minor Planet passed north of the star.

Table I: Notes on visual and video observations

ABBREV.	1986 OCT I3 AGK3 +I3°04 9I 487 Venetia	1986 OCT 22 SAO I64275 4I7 Suevia	1986 OCT 26 AGK3 +I9°0229 597 Bandusia	1986 OCT 27 AGK3 +02°0008 93 Minerva	1986 OCT 29 AGK3 +I9°0870 222 Lucia	1986 NOV I3 AGK3 +20°04 I7 9 Metis	1986 DEC 2 AGK3 +06°0220 I25 Liberatrix	1986 DEC 4 SAO I57658 233 Asterope	1986 DEC I4 AGK3 +05°07I2 509 Iolanda
ALJ							–		
BRH			–				–		
BFF				–			–		
BTT							–		
BAA			–			–			
BRN			–						
BGS		–							
CAD		–							
CAS	– b			– e			–		
CVG				–					
CAB							–		–
COU									–
DHY	–					–	–		
DEN						–		–	
ELL					–				
FWZ					–				
GAL		–							
GIL-GOE		–							
GEN							–		
RGR				+?g					
GEZ		–e							
GRS	–		–	–					
GNT						–			
SAV				–					
GRY-NZY				–e					
GUE						–			
ING				–			–		
IVC							–		
KHL								–	
TIL				– e					
LPK	+?a					–	–		
MAO					–				
MKW							–		–
MAH				–					
MGS							–		
MIA-SBL				–					
MTI				–					
MRX				– f					
MAZ							–		–
meu	– d					– l	–	–	– m

	Least - distance		Comments
	Time (U.T.)	Separation	
c	$1^h29^m00^s \pm 30^s$	$1''.8 \pm 0''.2$ S	(pdm) ≃ 10 minuts later, shift
d	$1^h28^m.0 \pm 0^m.5$	$2''.8 \pm 0''.3$ S	(meu) to Central Africa.
i	$3^h15^m15^s \pm 10^s$	$2''.0 \pm 0''.35$ N	(meu) See also Table III.
m	$20^h39^m.6 \pm 0^m.6$	≃ $1''.5$ S	(meu) ≃ 5 minuts sooner.

Table II: Precisions on video observations (see also Table I).

Event	Shifts respective to asteroid motion	
	Source E.Goffin ephemeris	Source Data on Occ.New. charts
1986 OCT 27 AGK3 +02°0008 (93) Minerva	- 5.7 minuts (sooner) + 1".2 N New track: Budapest, Locarno, Lyon, Bordeaux... See also Table I and the special circular for that.	- 11 minuts (sooner) + 0".2 N
1986 NOV 13 AGK3 +20°0417 (9) Metis	- 3.7 min - 0".2 S See also Table II (i)	0 + 0".2 N
1986 DEC 28 AGK3 +28°0601 (87) Sylvia	- 2 min + 0".5 N New path: Greenland, Spain...	- 3.5 min +0".7 N

Table III: Last-minut predictions from plates made at Uccle Royal Observatory.

Other observations:

1986 OCT 1, SAO 166016, (598) Octavia: JLX -

1986 OCT 18, AGK3 +13°0491, (613) Ginevra: DBT -
pdm -

Roland BONINSEGNA

neasse l'importanza degli errori sistematici nell'osservazione delle stelle variabili. La versione definitiva di questo articolo è stata messa a punto nell'autunno 1986 da una serie di corrispondenze fra POI,FGR,RAL e BTL. Comunicato nel dicembre '86 ad ASTROPHYSICS AND SPACE SCIENCE, il lavoro ('A method for the analysis of long series of visual observations of red, small amplitude variable stars', autori Ph. Ralincourt,E. Poretti e G. Boistel) è stato accettato senza alcuna modifica per la pubblicazione, ormai imminente. E' allegato il testo del paragrafo introduttivo.

OSSERVAZIONI FOTOELETTRICHE - Dal mese di dicembre è operativo presso l'Osservatorio Astronomico di Merate il nuovo fotometro a conteggio di fotoni ed uscita su calcolatore del telescopio 50 cm. Fra le stelle test osservate, oltre a diverse standard, anche V781 Tau e FND11 Psc. Maggiori dettagli in seguito, ad elaborazione dati ultimata.

1. INTRODUCTION

The usefulness of the visual observations of variable stars is much of a controversial matter. Series of visual estimates of Mira and U Gem type stars spanning long intervals are currently accepted and used. First elements of eclipsing binaries and RR Lyr stars fainter than mag 11 and of amplitude greater than 0.5 mag are frequently established from visual observations: many such examples can be found in the 'Journal of the AAVSO', the 'BRSAG Bulletin', the 'GEOS Circular', 'Variable Stars', etc. On the contrary, results obtained by independent visual observers on bright periodic variables of amplitude smaller than 0.5 mag are contradditory and such as to allow their credibility to be questioned (Szeidl, 1980). On the other hand, the observation of such stars can easily be managed by amateurs using their own photoelectric instrumentation or working in collaboration with Astronomical Observatories. As regards the RR Lyr stars, a carefully balanced assessment of visual versus photoelectric results was made by Szeidl and Szabados (1984).

The problems set by irregular and semiregular stars of late spectral type are more controversial. Too bright for an adequate photographic survey, their photoelectric observation would demand telescope-time distributed over several consecutive years. It is obvious that an increase of the number of non-professional observers equipped with photoelectric instruments would ensure, in the years to come, a good coverage of the activity of such stars. In that sense, the policy of the major visual observer associations developing their own photoelectric sections must be pointed out. There however remains the problems set by the enormous amount of information contained in extended series of visual observations available on semiregular and irregular variable stars of late spectral type.

What sort of difficulty can be encountered when using such series? Visual estimates covering a period of ten years can be used not only to get an idea of the light curve but also to find possible periodicities. Mantegazza (1982) has obtained significant results from the visual observations of μ Cep secured by Hassenstein (1938), while he could not derive any conclusion from visual estimates by the A.A.V.S.O., owing to the presence of important systematic errors. The same problem had already been encountered for the same star by Larsson-Leander (1964) who concluded that, as regards red variables with small amplitudes: 'long series of estimates, made by one and the same observer, might show much smaller scatter and more closely reproduce the real variations'. It appears obvious that the poor results are caused by the existence of a systematic difference between observers which is quite unsuspectedly introduced into the processing of the estimates: apparent variations are thus induced and the error intrinsic to the method of visual observation is thereby magnified. Recently, Percy et al. (1985) have pointed out the presence of systematic errors in visual estimates of ρ Cas by the A.A.V.S.O., though they could not assess its numerical importance.

The procedure (called ALCEP method) described in the present paper allows the correction of such errors for series secured by a great number of visual observers and yields data which is more directly usable. This guarantees a light curve which is more representative of the fundamental characters of the variation of brightness and ensures a real improvement of the accuracy as the number of observers and estimates increases. Moreover, the assessment of the mean error, made in a more correct manner, gives a better idea of the confidence one can place in the results.

3. INFORMATIONS GEOS

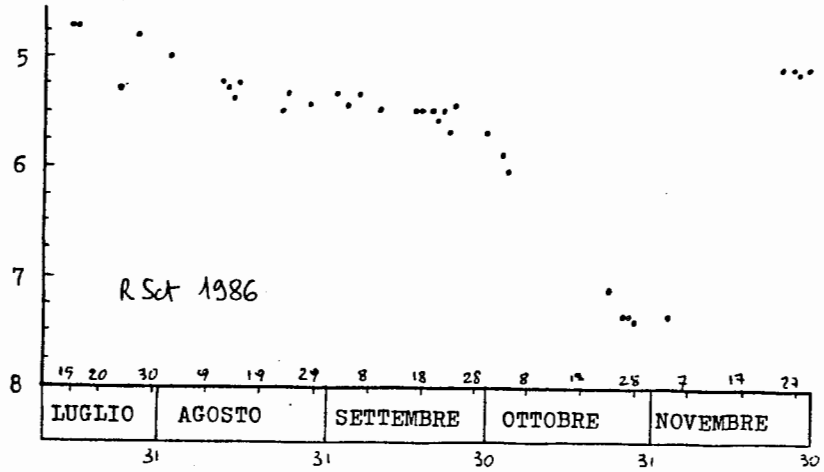
Il est rappelé que les résumés des Interventions effectuées au Symposium de Las Fuentes 86 devaient être adressés à Juan FABREGAT dans les plus brefs délais ... avis aux retardataires .

4. TRIBUNE LIBRE

N.IACOVONE

. Osservazioni 1986 di R Sct

Tale stella é stata seguita dal 15 LUG al 29 NOV, totalizzando complessivamente 35 stime visuali con binoculo 10x50 .



P.LOUIS

. V781 Tau

Appel urgent à tous les observateurs qui ont des mesures de V781 Tau. pour qu'ils m'envoient leurs observations.
Rédaction d'une GEOS Circular dès la fin mars.

5. INFORMATIONS FINANCIERES

Cotisations 87 : A.FIGER (10000FF), A.MARAZITI (38880£-180FF), G.BOISTEL (200FF) .

6. CHANGEMENT D'ADRESSE

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