

UAI SSV

Sezione variabili pulsanti a corto periodo  
Short Period Pulsators (SPP) Section

La variabile XZ Lac (RRab con Blazhko)  
Aggiornamento dati osservativi

XXIII Convegno Nazionale G.A.D.  
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Riccardo Papini

# IBVS 4385

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## **XZ Lac = NSV 14114**

NSV 14114 was discovered by Brun (1964) during the analysis of the photographic investigation of the stars in the “4 Lac” field carried out by Weber. In his paper Brun listed NSV 14114 as the No. 41 of his own catalogue of newly discovered variables and classified it as a suspected RR-type star with a range of variation: 12.7-13.8 (P); for the epoch 1900.0 he gave the following coordinates:

R.A.:  $22^{\text{h}}15^{\text{m}}03^{\text{s}}$  Decl.:  $+49^{\circ}15'0$

precessed to the epoch 2000.0 being:

R.A.:  $22^{\text{h}}19^{\text{m}}02^{\text{s}}$  Decl.:  $+49^{\circ}45'1$

No final designation was accepted for “Brun 41” and, on the basis of these pieces of information, it was included in the NSV Catalogue (Kholopov et al., 1982). Checking literature on variable stars, I could not find any other publication on NSV 14114 than Brun’s (1964) paper.

Massimiliano MARTIGNONI  
Via Lonate Pozzolo n.128  
I-21052 Busto Arsizio, Italy

# La XZ Lac nella letteratura

## **XZ Lacertae: Periodensprung und Blazhko-Effekt** **XZ Lacertae: Period Jump and Blazhko effect**

Edgar Wunder

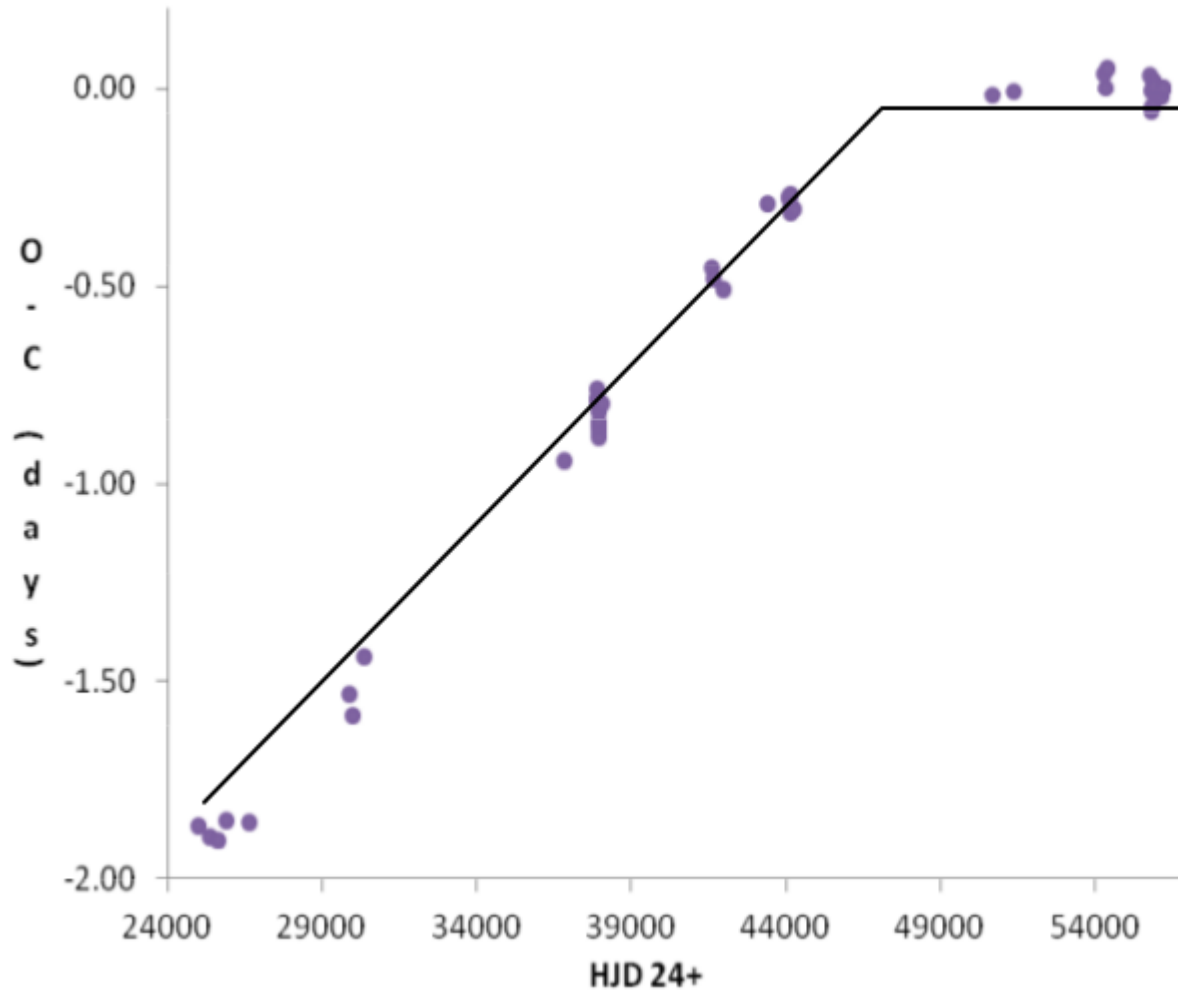
**Abstract:** *This investigation studies the pulsational behavior of the RRab star XZ Lac based on 63 times of maxima since 1927. A sudden period jump of 4.7 seconds in 1988 is evident. The following elements are valid:*

*1927 to 1988:  $HJD (Max) = 24\,25361.57 + 0.63044503 * E$*

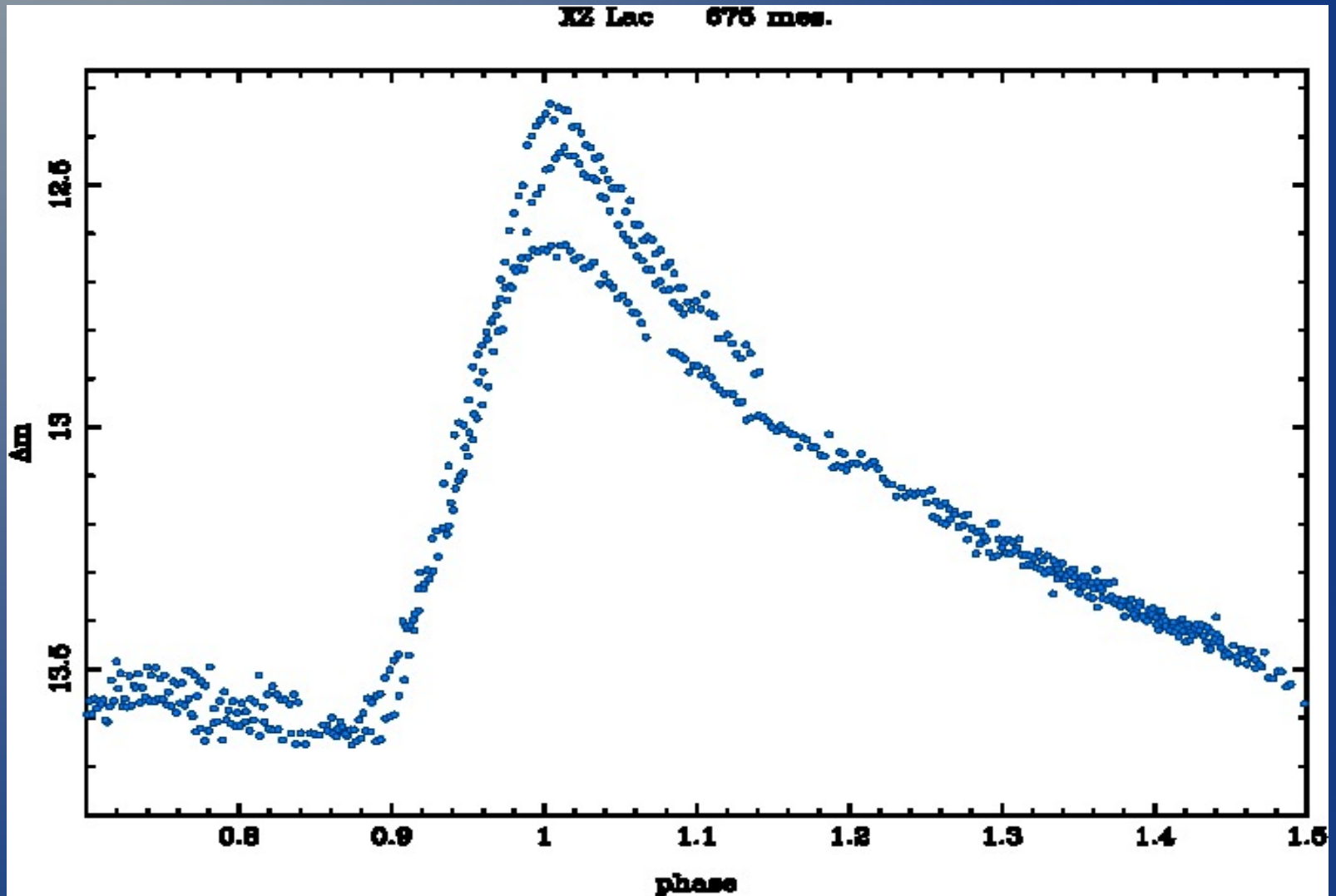
*since 1988:  $HJD (Max) = 24\,56167.513 + 0.6303909 * E$*

*New CCD-observations (filter V) show brightness variations between 12.4 in maximum and 13.6 mag in minimum. The amplitude may be even higher in the most extreme phase of the Blazhko cycle. The “rise time” (M-m) is typically 0.21 of the main period but varies through the Blazhko cycle. A strong Blazhko effect evokes O-C variations of more than  $\pm 1$  hour. The data is still insufficient to determine the length of the Blazhko period for sure. Most probably the Blazhko period is approximately 76 or 84 days.*

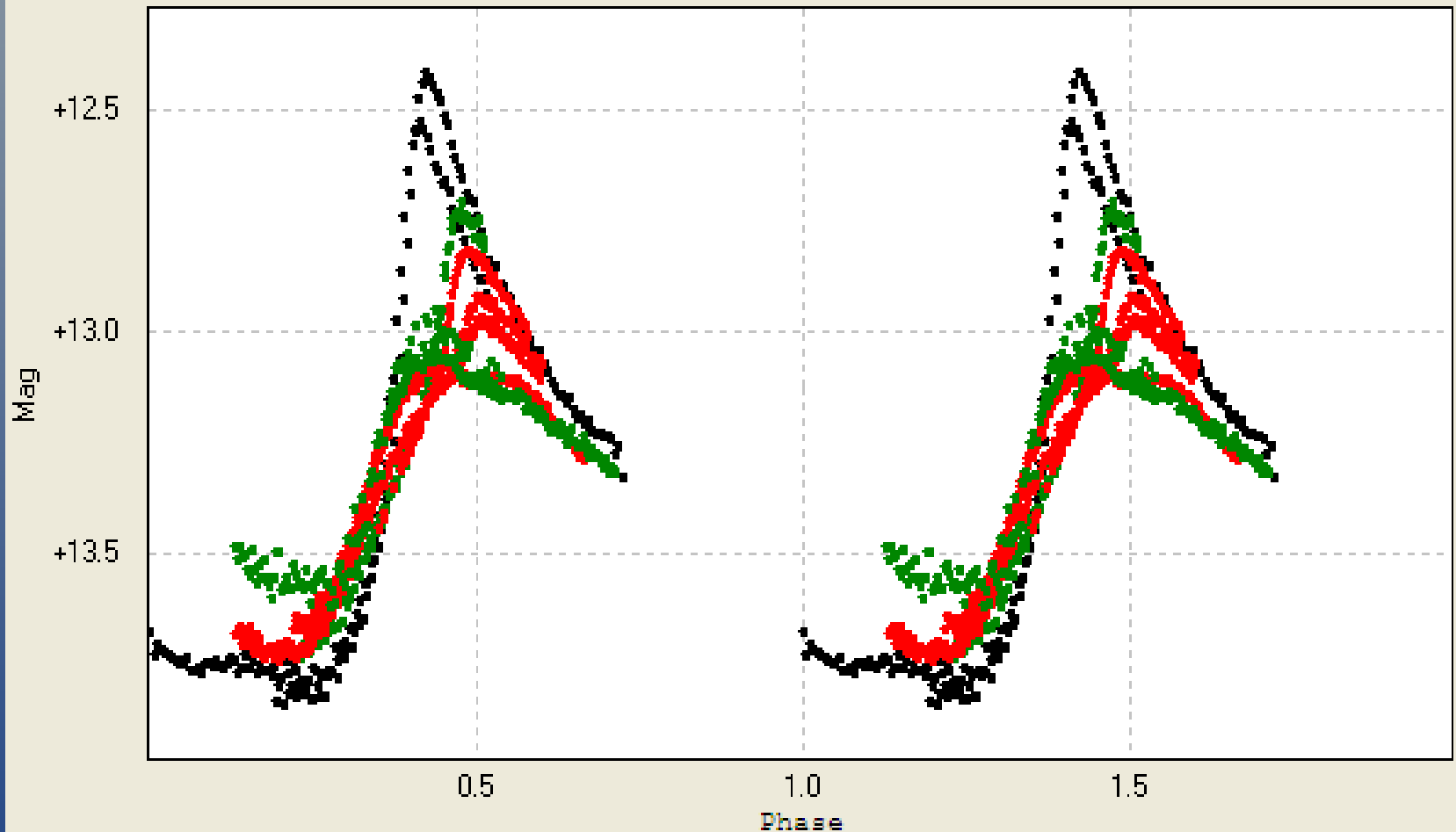
# Brusco cambio di periodo nel 1988



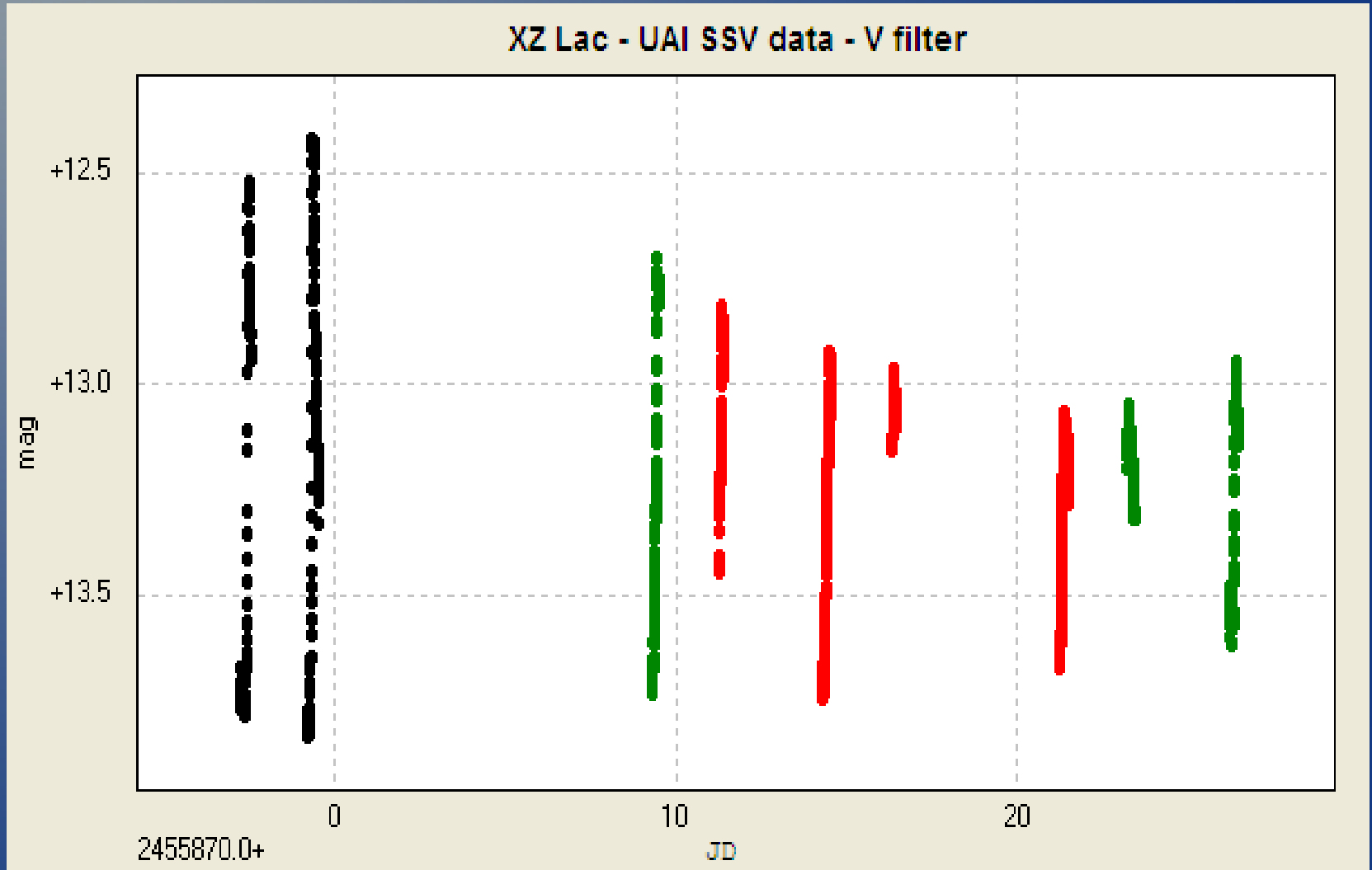
# Curva di fase – fonte dati GEOS database



# Curva di fase – fonte dati UAI SSV SPP



# Notti successive UAI SSV SPP (2014)

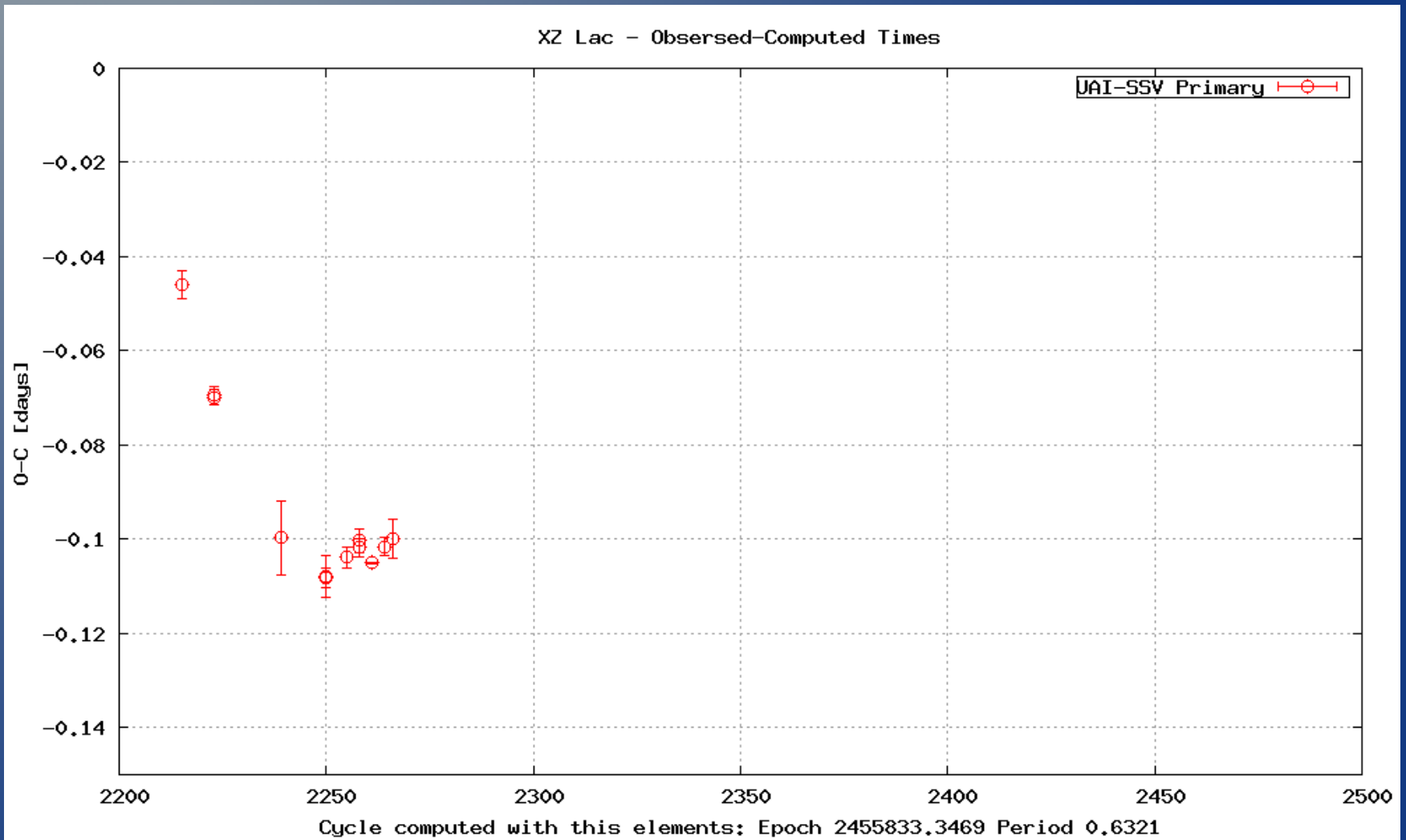




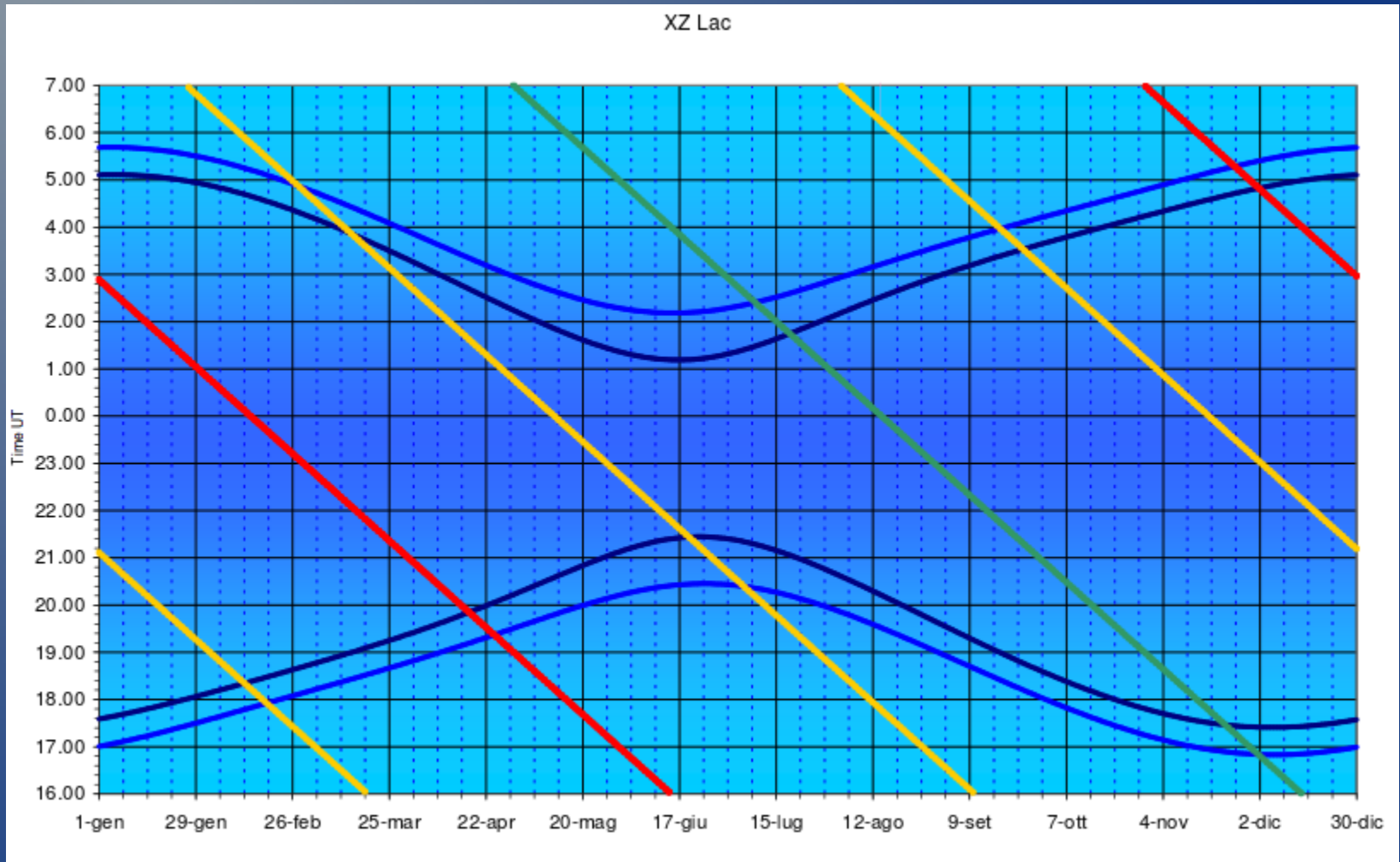




# Grafico dei residui O-C (UAI 2015)



# Visibilità durante l'anno



# Effemeridi

Latitude 43,6 - Longitude -11,2 - Time Zone 0 - Day Light Saving time 0 - UNIVERSAL TIME

Day	Sun -12°	Sun -18°	Sun -18°	Sun -12°	Star Name	90 minutes earlier	Azi	Alt	Time of maximum	Azi	Alt	90 minutes later	Azi	Alt	Hel Cor
mar 06-10-2015	17:52	18:26	03:44	04:18					*** No events on this night ***						
mer 07-10-2015	17:51	18:24	03:46	04:19	XZ Lac	mer 18:56	241	73	mer 20:26	185	84	mer 21:56	120	74	289
gio 08-10-2015	17:49	18:22	03:47	04:20	XZ Lac	ven 01:11	124	42	ven 02:41	132	29	ven 04:11	142	18	288
ven 09-10-2015	17:47	18:20	03:48	04:21	XZ Lac	ven 16:18	239	49	ven 17:48	243	63	ven 19:18	235	78	287
sab 10-10-2015	17:45	18:19	03:49	04:23	XZ Lac	sab 22:33	117	66	dom 00:03	120	52	dom 01:33	126	38	286
dom 11-10-2015	17:44	18:17	03:50	04:24					*** No events on this night ***						
lun 12-10-2015	17:42	18:15	03:52	04:25	XZ Lac	lun 19:55	200	83	lun 21:25	122	76	lun 22:55	117	61	283
mar 13-10-2015	17:40	18:14	03:53	04:26					*** No events on this night ***						
mer 14-10-2015	17:39	18:12	03:54	04:27	XZ Lac	mer 17:18	243	62	mer 18:48	238	76	mer 20:18	157	83	281
gio 15-10-2015	17:37	18:10	03:55	04:28	XZ Lac	gio 23:33	119	53	ven 01:03	125	39	ven 02:33	134	27	279
ven 16-10-2015	17:36	18:09	03:56	04:30					*** No events on this night ***						
sab 17-10-2015	17:34	18:07	03:58	04:31	XZ Lac	sab 20:55	124	77	sab 22:25	117	63	sab 23:55	121	48	275
dom 18-10-2015	17:32	18:06	03:59	04:32					*** No events on this night ***						
lun 19-10-2015	17:31	18:04	04:00	04:33	XZ Lac	lun 18:18	240	74	lun 19:48	171	84	lun 21:18	119	72	272

Grazie per l'attenzione

