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Title	VizieR Online Data Catalog: VRIJHK photometry of 3C 279 (Sandrinelli+, 2016)
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Quasi-periodicities at year-like timescales in blazars.
 Sandrinelli A., Covino S., Dotti M., Treves A.
 <Astron. J., 151, 54 (2016)>
 =[2016AJ....151...54S](#) (SIMBAD/NED BibCode)

ADC_Keywords: QSOs ; Photometry, infrared ; Photometry, VRI

Keywords: BL Lacertae objects: general -
 BL Lacertae objects: individual: (PKS 0537-441,OJ 287,3C 379,
 PKS 1510-089,PKS 2005-489), (PKS 2155-304) -
 galaxies: active - galaxies: statistics - galaxies: photometry

Abstract:
 We searched for quasi-periodicities on year-like timescales in the light curves of six blazars in the optical--near-infrared bands and we made a comparison with the high energy emission. We obtained optical/NIR light curves from Rapid Eye Mounting photometry plus archival Small & Moderate Aperture Research Telescope System data and we accessed the Fermi light curves for the γ -ray data. The periodograms often show strong peaks in the optical and γ -ray bands, which in some cases may be inter-related. The significance of the revealed peaks is then discussed, taking into account that the noise is frequency dependent. Quasi-periodicities on a year-like timescale appear to occur often in blazars. No straightforward model describing these possible periodicities is yet available, but some plausible interpretations for the physical mechanisms causing periodic variabilities of these sources are examined.

Description:
 The starting point of the present investigation is the VRIJHK photometric observations obtained with the robotic Rapid Eye Mounting telescope (REM) at La Silla, which are described in detail in Sandrinelli et al. 2014 (cat. [J/A+A/562/A79](#)). We add to the data available in the above mentioned paper the REM photometry of 3C 279 (see Table2), which is unpublished thus far.

File Summary:

FileName	Lrecl	Records	Explanations
ReadMe	80	.	This file
table1.dat	48	6	Blazar sample
table2.dat	20	1083	Rapid Eye Mounting telescope (REM) photometry of 3C 279

See also:
[VII/274](#) : The Roma BZCAT - 5th edition (Massaro+, 2015)
[J/A+A/562/A79](#) : Variability of seven blazars in six bands (Sandrinelli+, 2014)
[J/ApJ/722/520](#) : Gamma-ray light curves of Fermi blazars (Abdo+, 2010)
[J/AJ/133/2866](#) : 2001-02 optical variability of blazar 3C279 (Kartaltepe+, 2007)

Byte-by-byte Description of file: [table1.dat](#)

Bytes	Format	Units	Label	Explanations
1- 11	A11	---	Name	Name of the blazar
13- 14	I2	h	RAh	Hour of Right Ascension (J2000) (1)
16- 17	I2	min	RAm	Minute of Right Ascension (J2000) (1)
19- 20	I2	s	RA s	Second of Right Ascension (J2000) (1)
22	A1	---	DE-	Sign of the Declination (J2000) (1)
23- 24	I2	deg	DEd	Degree of Declination (J2000) (1)
26- 27	I2	arcmin	DEm	Arcminute of Declination (J2000) (1)
29- 30	I2	arcsec	DES	Arcsecond of Declination (J2000) (1)
32- 37	A6	---	Class	Class from Massaro et al. 2015 (cat. VII/274) (BL Lac or FSRQ=Flat Spectrum Radio Quasar)
39- 41	A3	---	SED	SED classification (2)
43- 48	F6.4	---	z	[0.07/0.9] Redshift (1)

Note (1): From the Simbad archive (<http://simbad.u-strasbg.fr/>).

Note (2): Classes are defined as follows:
 LSP = Low synchrotron peaked blazar (Abdo et al. 2010, cat. [J/ApJ/722/520](#));
 ISP = Intermediate synchrotron peaked blazar (Abdo et al. 2010, cat. [J/ApJ/722/520](#));
 HSP = High synchrotron peaked blazar (Abdo et al. 2010, cat. [J/ApJ/722/520](#)).

Bytes	Format	Units	Label	Explanations
1	A1	---	Flt	[VRIJHK] Filter used in the observation (V, R, I, J, H, or K)
3-	7	I5	d	MJD [53462/55742] Modified Julian Date of the observation
9-	14	F6.3	mag	<mag> [9.5/16.9] Average magnitude in Filter
16-	20	F5.3	mag	e_<mag> [0/1] Error in <mag>

History:

From electronic version of the journal

(End) Prepared by [AAS]; Sylvain Guehenneux [CDS] 13-Jul-2016

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