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Authors	Aleksic, J., Ansoldi, S., ANTONELLI, Lucio Angelo, Antoranz, P., Babic, A., Bangale, P., Barres de Almeida, U., Barrio, J. A., Becerra Gonzalez, J., Bednarek, W., Berger, K., Paiano, S., Palatiello, M., Paneque, D., Paoletti, R., Paredes, J. M., Paredes-Fortuny, X., Partini, S., Persic, M., Prada, F., Prada Moroni, P. G., Bernardini, E., PRANDINI, ELISA, Preziuso, S., Puljak, I., Reinthal, R., Rhode, W., Ribo, M., Rico, J., Rodriguez Garcia, J., Rugamer, S., Saggion, A., Biland, A., Saito, K., Salvati, M., Satalecka, K., Scalzotto, V., Scapin, V., Schultz, C., Schweizer, T., Shore, S. N., Sillanpaa, A., Sitarek, J., Blanch, O., Snidaric, I., Sobczynska, D., Spanier, F., Stamatescu, V., STAMERRA, Antonio, Steinbring, T., Storz, J., Sun, S., Suri, T., Takalo, L., Bock, R. K., TAVECCHIO, Fabrizio, Temnikov, P., Terzi, T., Tescaro, D., Teshima, M., Thaele, J., Tibolla, O., Torres, D. F., Toyama, T., Treves, A., Bonnefoy, S., Uellenbeck, M., Vogler, P., Wagner, R. M., Zandanel, F., Zanin, R., Bonnoli, G., Borracci, F., Bretz, T., Carmona, E., Carosi, A., Carreto Fidalgo, D., Colin, P., Colombo, E., Contreras, J. L., Cortina, J., COVINO, Stefano, da Vela, P., DAZZI, Francesco, de Angelis, A., de Caneva, G., de Lotto, B., Delgado Mendez, C., Doert, M., Dominguez, A., Dominis Prester, D., Dorner, D., Doro, M., Einecke, S., Eisenacher, D., Elsaesser, D., Farina, E., Ferenc, D., Fonseca, M. V., Font, L., Frantzen, K., Fruck, C., Garcia Lopez, R. J., Garczarczyk, M., Garrido Terrats, D., Gaug, M., Giavitto, G., Godinovi, N., Gonzalez Munoz, A., Gozzini, S. R., Hadamek, A., Hadasch, D., Herrero, A., Hildebrand, D., Hose, J., Hrupec, D., Idec, W., Kadenius, V., Kellermann, H., Knoetig, M. L., Krause, J., Kushida, J., LA BARBERA, ANTONINO, Lelas, D., Lewandowska, N., Lindfors, E., Longo, F., Lombardi, S., Lopez, M., Lopez-Coto, R., Lopez-Oramas, A., Lorenz, E., Lozano, I., Makariev, M., Mallot, K., Maneva, G., Mankuzhiyil, N., Mannheim, K., Maraschi, L., Marcote, B., Mariotti, M., Martinez, M., Mazin, D., Menzel, U., Meucci, M., Miranda, J. M., Mirzoyan, R., Moralejo, A., Munar-Adrover, P., Nakajima, D., Niedzwiecki, A., Nilsson, K., Nowak, N., Orito, R., Overkemping, A.
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Journal	VizieR Online Data Catalog

J/A+A/576/A126 The 2009 multiwavelength campaign on Mrk421 (Aleksic+, 2015)

The 2009 multiwavelength campaign on Mrk 421: Variability and correlation studies.

Aleksic J., Ansoldi S., Antonelli L.A., Antoranz P., Babic A., Bangale P., Barres de Almeida U., Barrio J.A., Becerra Gonzalez J., Bednarek W., Berger K., Bernardini E., Biland A., Blanch O., Bock R.K., Bonnefoy S., Bonnoli G., Borracci F., Bretz T., Carmona E., Carosi A., Carreto Fidalgo D., Colin P., Colombo E., Contreras J.L., Cortina J., Covino S., Da Vela P., Dazzi F., De Angelis A., De Caneva G., De Lotto B., Delgado Mendez C., Doert M., Dominguez A., Dominis Prester D., Dorner D., Doro M., Einecke S., Eisenacher D., Elsaesser D., Farina E., Ferenc D., Fonseca M.V., Font L., Frantzen K., Fruck C., Garcia Lopez R.J., Garczarczyk M., Garrido Terrats D., Gaug M., Giavitto G., Godinovi N., Gonzalez Munoz A., Gozzini S.R., Hadamek A., Hadasch D., Herrero A., Hildebrand D., Hose J., Hrupec D., Idec W., Kadenius V., Kellermann H., Knoetig M.L., Krause J., Kushida J., La Barbera A., Lelas D., Lewandowska N., Lindfors E., Longo F., Lombardi S., Lopez M., Lopez-Coto R., Lopez-Oramas A., Lorenz E., Lozano I., Makariev M., Mallot K., Maneva G., Mankuzhiyil N., Mannheim K., Maraschi L., Marcote B., Mariotti M., Martinez M., Mazin D., Menzel U., Meucci M., Miranda J.M., Mirzoyan R., Moralejo A., Munar-Adrover P., Nakajima D., Niedzwiecki A., Nilsson K., Nowak N., Orito R., Overkemping A., Paiano S., Palatiello M., Paneque D., Paoletti R., Paredes J.M., Paredes-Fortuny X., Partini S., Persic M., Prada F., Prada Moroni P.G., Prandini E., Preziuso S., Puljak I., Reinthal R., Rhode W., Ribo M., Rico J., Rodriguez Garcia J., Rugamer S., Saggion A., Saito K., Salvati M., Satalecka K., Scalzotto V., Scapin V., Schultz C., Schweizer T., Shore S.N., Sillanpaa A., Sitarek J., Snidaric I., Sobczynska D., Spanier F., Stamatescu V., Stamerra A., Steinbring T., Storz J., Sun S., Suri T., Takalo L., Tavecchio F., Temnikov P., Terzi T., Tescaro D., Teshima M., Thaele J., Tibolla O., Torres D.F., Toyama T., Treves A., Uellenbeck M., Vogler P., Wagner R.M., Zandanel F., Zanin R., (The MAGIC collaboration), Archambault S., Behera B., Beilicke M., Benbow W., Bird R., Buckley J.H., Bugaev V., Cerruti M., Chen X., Ciupik L., Collins-Hughes E., Cui W., Dumm J., Eisch J.D., Falcone A., Federici S., Feng Q., Finley J.P., Fleischhack H., Fortin P., Fortson L., Furniss A., Griffin S., Griffiths S.T., Grube J., Gyuk G., Hanna D., Holder J., Hughes G., Humensky T.B., Johnson C.A., Kaaret P., Kertzman M., Khassen Y., Kieda D., Krawczynski H., Krennrich F., Kumar S., Lang M.J., Maier G., McArthur S., Meagher K., Moriarty P., Mukherjee R., Ong R.A., Otte A.N., Park N., Pichel A., Pohl M., Popkow A., Prokoph H., Quinn J., Ragan K., Rajotte J., Reynolds P.T., Richards G.T., Roache E., Rovero A.C., Sembroski G.H., Shahinyan K., Staszak D., Telezhinsky I., Theiling M., Tucci J.V., Tyler J., Varlotta A., Wakely S.P., Weekes T.C., Weinstein A., Welsing R., Wilhelm A., Williams D.A., Zitzer B., (The VERITAS collaboration), Villata M., Raiteri C., Aller H.D., Aller M.F., Chen W.P., Jordan B., Koptelova E., Kurtanidze O.M., Lahteenmaki A., McBreen B., Larionov V.M., Lin C.S., Nikolashvili M.G., Angelakis E., Capalbi M., Carraminana A., Carrasco L., Cassaro P., Cesarini A., Fuhrmann L., Giroletti M., Hovatta T., Krichbaum T.P., Krimm H.A., Max-Moerbeck W., Moody J.W., Maccaferri G., Mori Y., Nestoras I., Orlati A., Pace C., Pearson R., Perri M., Readhead A.C.S., Richards J.L., Sadun A.C., Sakamoto T., Tammi J., Tornikoski M., Yatsu Y., Zook A.

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=2015A&A...576A.126A

ADC_Keywords: BL Lac objects ; Galaxies, Markarian

Keywords: BL Lacertae objects: individual: Mrk 421

Abstract:

We perform an extensive characterization of the broadband emission of Mrk 421, as well as its temporal evolution, during the non-flaring (low) state. The high brightness and nearby location (z=0.031) of Mrk 421 make it an excellent laboratory to study blazar emission. The goal is to learn about the physical processes responsible for the typical emission of Mrk 421, which might also be extended to other blazars that are located farther away and hence are more difficult to study. We performed a 4.5-month multi-instrument campaign on Mrk 421 between January 2009 and June 2009, which included VLBA, F- GAMMA, GASP-WEBT, Swift, RXTE, Fermi-LAT, MAGIC, and Whipple, among other instruments and collaborations. This extensive radio to very-high-energy (VHE; E>100GeV) gamma-ray dataset provides excellent temporal and energy coverage, which allows detailed studies of the evolution of the broadband spectral energy distribution.

Description:

Light Curves of Mrk 421 as shown in Figure 1 of the paper are presented for following instruments/observatories and bands (radio to very high energy gamma rays): Effelsberg (2.6, 4.6, 7.9, 10.3, 13.6, 21.7, 31GHz), Medicina (8.4GHz), Metsahovi (37GHz), OVRO (15GHz), Noto (8, 22GHz), OAGH (J, H, K bands), WIRO (J, K bands), MITSuME (g, Rc, Ic bands), ROVOR (B band), GRT (V, R, B, I bands), GASP (R band), Steward (V band), Swift/UVOT (UVW1, UVM2, UVW2), Swift/XRT (0.3-2 and 2-10keV), RXTE/PCA (2-10keV). RXTE/ASM (2-10keV), Swift/BAT (15-50keV), Fermi-LAT (>0.3keV), Whipple (>300GeV), MAGIC (>300GeV). The observation period is from 2009 January 19 (MJD 54850) to 2009

every two days. The Fermi-LAT photon fluxes are integrated over a three-day-long time interval, the RXTE/ASM and Swift/BAT photon fluxes over a seven-day long time interval. The Whipple 10-meter data (with an energy threshold of 400GeV) were converted into fluxes above 300GeV using a power-law spectrum with index of 2.5. Host galaxy fluxes are given where a good estimate is available, which is the case for some optical bands only. In the infrared, e.g., the host galaxy flux is larger than in the R band, however, we do not have a good estimate of the galaxy flux and therefore it is not given in the table.

Objects:

RA (2000)	DE	Designation(s)
11 04 27.31	+38 12 31.8	Mrk 421 = QSO B1101+384

File Summary:

FileName	Lrecl	Records	Explanations
ReadMe	80	.	This file
table1.dat	145	1182	Lightcurves of Mrk 421 from radio to VHE from MJD54850 (2009-01-09) to MJD54983 (2009-06-01)

See also:

J/A+A/545/A117 : Monitoring of Mrk 421 at 15 and 24GHz (Lico+, 2012)
J/A+A/559/A75 : 43GHz observation of the blazar Mrk 421 (Blasi+, 2013)

Byte-by-byte Description of file: table1.dat

Bytes	Format	Units	Label	Explanations
1- 21	A21	---	Inst	Instrument
23- 31	A9	---	Band	Band / energy range
33- 44	E12.6	Hz	bFreq	band frequency, lower boundary
46- 57	E12.6	Hz	BFreq	band frequency, upper boundary
59- 70	F12.6	d	MJDSt	Modified Julian Date, observation (time bin) start
72- 83	F12.6	d	MJDEnd	Modified Julian Date, observation (time bin) end
85- 93	A9	---	x_Flux	Flux unit
95-106	E12.6	---	Flux	Flux
108-119	E12.6	---	e_Flux	Flux error
121-132	E12.6	---	HFlux	?=0 Host galaxy flux (1)
134-145	E12.6	---	e_HFlux	?=0 Host galaxy flux error (1)

Note (1): The host galaxy is defined only for some optical instruments.
A value of 0.0 means that there is no estimation of the host galaxy flux, it does NOT mean that the flux is 0.0.

Acknowledgements:
Nina Nowak, nina.nowak(at)astro.su.se

(End) Nina Nowak [Stockholm University], Patricia Vannier [CDS] 04-Feb-2015

The document above follows the rules of the Standard Description for Astronomical Catalogues; from this documentation it is possible to generate f77 program to load files into arrays or line by line

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