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MPEC 2021-V164 : 2021 VV3

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2021 VV3

Observations:

Table with 13 columns: Object ID, Date, RA, Dec, Mag, etc. Lists observations for various objects like K21V03V, K21V03V*, etc.

K21V03V	KC2021	11	07.84013402	16	55.37	+43	09	27.3	17.0	GVEV164J95	
K21V03V	KC2021	11	07.84130002	16	52.95	+43	08	55.6	16.8	GVEV164Z04	
K21V03V	KC2021	11	07.84143402	16	53.98	+43	08	04.6	16.6	GVEV164J95	
K21V03V	KC2021	11	07.84271202	16	52.59	+43	06	43.7	17.0	GVEV164J95	
K21V03V	KC2021	11	07.84402302	16	49.97	+43	06	02.2		VEV164Z04	
K21V03V	KC2021	11	07.84620002	16	47.56	+43	03	43.8		VEV164Z04	
K21V03V	KC2021	11	07.84833602	16	45.24	+43	01	28.4		VEV164Z04	
K21V03V	KC2021	11	07.85051402	16	42.86	+42	59	10.4		VEV164Z04	
K21V03V	KC2021	11	07.87233002	16	20.87	+42	35	39.5	16.0	GVEV164Z80	
K21V03V	KC2021	11	07.87753502	16	15.42	+42	30	16.6	17.3	GVEV164Z80	
K21V03V	KC2021	11	07.88275302	16	09.96	+42	24	52.7	17.0	GVEV164Z80	
K21V03V	KC2021	11	07.96319202	14	49.80	+41	03	47.0	16.8	GVEV164Z99	
K21V03V	KC2021	11	07.96464902	14	48.43	+41	02	21.6	16.5	GVEV164Z99	
K21V03V	KC2021	11	07.96611502	14	47.04	+41	00	55.3	16.9	GVEV164Z99	
K21V03V	KC2021	11	07.97639202	14	54.14	+40	55	32.0	16.6	GXEV164Y00	
K21V03V	KC2021	11	07.97741802	14	53.17	+40	54	33.2		XEV164Y00	
K21V03V	KC2021	11	07.97844102	14	52.22	+40	53	34.2	16.4	GXEV164Y00	
K21V03V	KC2021	11	07.98277202	14	29.30	+40	45	27.8	16.5	VZEV164C95	
K21V03V	KC2021	11	07.98441002	14	27.74	+40	43	52.5	16.6	VZEV164C95	
K21V03V	KC2021	11	07.98604702	14	26.19	+40	42	17.1	17.0	VZEV164C95	
K21V03V	KC2021	11	07.98768502	14	24.67	+40	40	41.9	16.3	VZEV164C95	
K21V03V	KC2021	11	07.98932902	14	23.13	+40	39	06.9	16.8	VZEV164C95	
K21V03V	KC2021	11	07.99099002	14	21.58	+40	37	30.4	16.3	VZEV164C95	
K21V03V	KC2021	11	07.99262202	14	20.07	+40	35	56.2	16.9	VZEV164C95	
K21V03V	KC2021	11	07.99424202	14	18.58	+40	34	22.2	16.8	VZEV164C95	
K21V03V	KC2021	11	07.99589102	14	17.05	+40	32	47.1	16.9	VZEV164C95	
K21V03V	KC2021	11	07.99777802	14	15.30	+40	30	58.1	16.5	VZEV164C95	
K21V03V	#C2021	11	08.07597	02	13	38.82	+39	17	47.7	16.6	GVEV164H06
K21V03V	#C2021	11	08.07719	02	13	37.84	+39	16	42.7	16.7	GVEV164H06
K21V03V	#C2021	11	08.07872	02	13	36.59	+39	15	21.5	16.6	GVEV164H06
K21V03V	#C2021	11	08.07992	02	13	35.61	+39	14	17.1	16.6	GVEV164H06
K21V03V	C2021	11	08.09284	02	13	25.19	+39	02	51.7		VEV164H06
K21V03V	C2021	11	08.09456	02	13	23.81	+39	01	20.9		VEV164H06
K21V03V	C2021	11	08.09623	02	13	22.48	+38	59	52.7		VEV164H06
K21V03V	C2021	11	08.09794	02	13	21.11	+38	58	22.8	16.7	GVEV164H06
K21V03V	KC2021	11	08.13656002	12	44.53	+38	24	47.0	17.0	VuEV164H21	
K21V03V	KC2021	11	08.13763202	12	43.67	+38	23	51.7	17.1	VuEV164H21	
K21V03V	KC2021	11	08.13870602	12	42.81	+38	22	56.2	16.9	VuEV164H21	
K21V03V	KC2021	11	08.13977702	12	41.96	+38	22	00.9	17.2	VuEV164H21	
K21V03V	KC2021	11	08.14085002	12	41.08	+38	21	05.6	17.0	VuEV164H21	
K21V03V	KC2021	11	08.20317502	11	50.69	+37	28	51.5	17.5	VZEV164W33	
K21V03V	KC2021	11	08.20920802	11	46.12	+37	23	52.0	17.5	VZEV164W33	
K21V03V	KC2021	11	08.21527702	11	41.55	+37	18	51.3	17.6	VZEV164W33	
K21V03V	KC2021	11	08.82296	02	07	01.77	+30	27	26.5	18.1	GVEV164I93
K21V03V	KC2021	11	08.82453	02	07	01.11	+30	26	35.2	17.8	GVEV164I93
K21V03V	KC2021	11	08.82609	02	07	00.46	+30	25	44.1	18.0	GVEV164I93
K21V03V	KC2021	11	08.83252902	06	57.86	+30	22	26.5	18.2	GVEV164B49	
K21V03V	KC2021	11	08.83888302	06	55.12	+30	18	59.5	18.3	GVEV164B49	
K21V03V	KC2021	11	08.84523702	06	52.44	+30	15	33.7	18.4	GVEV164B49	
K21V03V	KC2021	11	08.85576	02	06	48.79	+30	09	56.7	18.2	GXEV164J57
K21V03V	KC2021	11	08.85861	02	06	47.65	+30	08	25.3	18.7	GXEV164J57
K21V03V	KC2021	11	08.86163	02	06	46.29	+30	06	47.4	18.2	GXEV164J57

Observer details:

- 204 Schiaparelli Observatory. Observer L. Buzzi. 0.84-m f/3.5 reflector + CCD.
- 381 Tokyo-Kiso. Observer J. Beniyama. 1.05-m f/3.1 Schmidt + CCD.
- 587 Sormano. Observers S. Barni, E. Colzani. Measurer P. Sicoli. 0.5-m f/6.8 reflector + CCD.
- 595 Farra d'Isonzo. Observer E. Pettarin. 0.40-m f/5.15 reflector + CCD.
- 900 Moriyama. Observer Y. Ikari. 0.26-m f/7.0 reflector + CCD.
- B49 Paus Observatory, Sabadell. Observer J. Camarasa. 0.30-m f/4.0 reflector + CCD.
- C82 Osservatorio Astronomico Nastro Verde, Sorrento. Observer N. Ruocco. 0.35-m f/6.3 Schmidt-Cassegrain + CCD.
- C95 SATINO Remote Observatory, Haute Provence. Observer J. Jahn. 0.60-m f/3.2 Newtonian reflector + CCD.
- H06 iTelescope Observatory, Mayhill. Observers M. Suzuki, H. Sato. 0.43-m f/4.5 reflector + CCD, 0.43-m f/6.8 astrograph + CCD + f/4.5 focal reducer.
- H21 Astronomical Research Observatory, Westfield. Observer R. Holmes. Measurers T. Linder, R. Holmes, L. Horn. 0.81-m f/4.0 astrograph + CCD.
- I93 St Pardon de Conques. Observer F. Losse. 0.40-m f/3.7 reflector + CCD.
- J57 Centro Astronomico Alto Turia, Valencia. Observer A. Fornas. Measurers A. Fornas, G. Fornas, E. Arce, V. Mas. 0.43-m f/6.8 reflector + CCD.
- J95 Great Shefford. Observer P. Birtwhistle. 0.41-m f/6.3 Schmidt-Cassegrain + CCD.
- L01 Visnjan Observatory, Tican. Observer K. Korlevic. 1.0-m f/2.9 reflector + CCD.
- N82 Multa Observatory. Observer L. Elenin. 0.4-m f/1.25 reflector + CCD.
- P93 Space Tracking and Communications Center, JAXA. Observers S. Okumura, T. Nimura. 1.0-m f/3.0 reflector + CCD.
- W33 Transit Dreams Observatory, Campobello. Observer D. Wilde. 0.36-m Schmidt-Cassegrain + CCD.
- Y00 SONEAR Observatory, Oliveira. Observer C. Jacques. 0.28-m f/2.2 astrograph + CCD.
- Z80 Northolt Branch Observatory. Observer G. Wells. Measurers G. Wells, D. Bamberger. 0.25-m f/8.0 Ritchey-Chretien + CCD.
- Z99 Clixby Observatory, Cleithorpes. Observer A. Mickleburgh. 0.36-m f/8 Schmidt-Cassegrain + CCD.

Orbital elements:

2021 VV3		Earth MOID = 0.0170 AU	
Epoch 2022 Jan. 21.0 TT = JDT 2459600.5		Veres	
M	92.93459	P	Q
n	0.74394439	+0.17569865	+0.97673554
a	1.2062641	Node	229.98756
e	0.7039734	Incl.	9.23791
P	1.32	H	23.52
		G	0.15
		U	8
Residuals in seconds of arc			
211107 381	0.3- 0.5-	211107 L01	0.0 0.1+
211107 381	0.4- 0.6-	211107 L01	0.1+ 0.1+
211107 381	0.3- 0.1-	211107 L01	0.3- 0.1+
211107 381	0.1- 0.2+	211107 Z80	0.6- 0.2-
211107 381	0.0 0.3-	211107 Z80	0.2+ 0.6-
211107 381	0.1- 0.1-	211107 587	0.0 0.3-
211107 381	0.3- 0.0	211107 587	0.0 0.4-

211107	381	0.1-	0.1-	211107	587	0.2-	0.5-	211107	C95	0.0	0.1-
211107	381	0.4-	0.9-	211107	587	0.0	0.6-	211107	C95	0.1-	0.1-
211107	381	0.5-	0.2-	211107	Z80	0.8+	0.1-	211108	H06	0.1+	0.3-
211107	381	0.1-	0.6-	211107	B49	0.1-	0.9+	211108	H06	0.1+	0.3-
211107	381	0.0	0.4-	211107	B49	0.2-	0.9+	211108	H06	0.0	0.1-
211107	381	0.1+	0.2+	211107	B49	0.2-	0.5+	211108	H06	0.1-	0.3-
211107	381	0.5+	0.5+	211107	B49	0.2-	0.8+	211108	H06	0.1-	0.3-
211107	P93	0.1-	0.2-	211107	B49	0.2+	0.6+	211108	H06	0.0	0.3-
211107	P93	0.1-	0.1-	211107	B49	0.3-	0.7+	211108	H06	0.1+	0.4-
211107	P93	0.3-	0.6-	211107	J95	0.1+	0.3+	211108	H06	0.2+	0.1-
211107	P93	0.1+	0.2+	211107	J95	0.1+	0.1+	211108	H21	0.0	0.3-
211107	900	0.1+	0.2+	211107	Z04	0.1+	0.4+	211108	H21	0.0	0.2-
211107	900	0.1+	0.4+	211107	J95	0.2+	0.2+	211108	H21	0.0	0.3-
211107	900	0.0	0.3+	211107	J95	0.0	0.5+	211108	H21	0.1+	0.3-
211107	N82	0.3+	0.2+	211107	Z04	0.2+	0.2+	211108	H21	0.1-	0.2-
211107	N82	0.5+	0.4+	211107	Z04	0.1-	0.2+	211108	W33	0.1-	0.3-
211107	N82	0.4-	0.4-	211107	Z04	0.1+	0.3+	211108	W33	0.0	0.0
211107	595	0.1+	1.3+	211107	Z04	0.0	0.3+	211108	W33	0.0	0.3-
211107	595	0.4+	0.5+	211107	Z80	0.1-	0.5-	211108	I93	0.1-	0.0
211107	595	0.3+	0.1-	211107	Z80	0.1-	0.6+	211108	I93	0.1-	0.1+
211107	595	0.5-	0.7+	211107	Z80	0.5-	0.4+	211108	I93	0.1-	0.0
211107	595	0.2+	0.3+	211107	Z99	0.2-	0.1+	211108	B49	0.4+	0.2+
211107	595	0.1-	0.0	211107	Z99	0.1-	0.4+	211108	B49	0.3-	0.1-
211107	595	0.2+	0.1-	211107	Z99	0.2-	0.2+	211108	B49	0.2-	0.1+
211107	C82	0.7+	0.4-	211107	Y00	0.5-	0.3-	211108	J57	0.2+	0.1+
211107	C82	1.1+	0.2-	211107	Y00	0.3-	0.1-	211108	J57	1.0+	0.2+
211107	L01	0.0	0.2+	211107	Y00	0.0	0.2-	211108	J57	0.2-	0.7-
211107	L01	0.0	0.3+	211107	C95	0.3+	0.2-				

Ephemeris:
2021 VV3

a,e,i = 1.21, 0.70, 9 q = 0.3571

Date	TT	R. A. (2000)	Decl.	Delta	r	Elong.	Phase	V
2021	10	09	13 49 14.9 -02 14 36	0.4330	0.5866	13.5	156.6	30.5
...								
2021	10	24	13 49 45.1 +02 17 08	0.1874	0.8141	14.0	162.9	31.5
...								
2021	11	01	13 44 47.7 +11 13 42	0.07540	0.9263	27.4	150.5	26.3
...								
2021	11	07	02 47 43.2 +63 42 07	0.02120	1.0056	132.5	46.6	16.9
2021	11	08	02 14 19.9 +40 30 00	0.03033	1.0184	154.6	24.6	17.1
2021	11	09	02 05 53.2 +28 56 27	0.04213	1.0310	163.2	16.1	17.6
...								
2021	11	15	01 56 44.4 +11 35 59	0.1231	1.1047	158.7	19.0	20.2
...								
2021	11	23	01 56 35.2 +07 43 09	0.2370	1.1970	149.0	25.1	21.9
...								
2021	12	08	02 02 30.4 +06 31 48	0.4643	1.3527	134.7	31.2	23.8

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