

ACCURATE COORDINATES FOR VLBA ANTENNAS

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12 May 1989

Accurate survey coordinates now exist for all of the ten VLBA antenna sites. These are listed in the attached table. Specifically, the tabular entries are the following: two-letter site code; geodetic latitude and longitude at the pintle bearing; ground-level elevation above mean sea level, in meters and feet; and cartesian coordinates in meters.

Preliminary coordinates based on VLBI measurements have been determined for the Pie Town antenna. The cartesian coordinates (provided by Bill Cotton) are

x: -1640951.83 m
y: -5014816.88 m
z: 3575412.31 m

From these, one obtains

Latitude: 34° 18' 03".93 N
Longitude: 108° 07' 09".00 W
Elevation: 2344.8 m MSL

These differ enough from the survey values that one is forced to suspect problems with the latter. The discrepancy, however, is of no practical consequence.

VLBA STATION COORDINATES

Site	Latitude (N)	Longitude (W)	Elevation (MSL)	x(m)	y(m)	z(m)
PT	34° 18' 03".61	108° 07' 07".24	2371 m = 7781 ft	-1640917	-5014857	3575419
KP	31° 57' 22".39	111° 36' 42".26	1916 m = 6285 ft	-1995633	-5037377	3357333
LA	35° 46' 30".33	106° 14' 42".01	1967 m = 6453 ft	-1449708	-4975339	3709130
FD	30° 38' 05".63	103° 56' 39".13	1615 m = 5298 ft	-1323960	-5332231	3231961
NL	41° 46' 17".03	91° 34' 26".35	241 m = 792 ft	-130861	-4762351	4226875
BR	48° 07' 52".80	119° 40' 55".34	255 m = 836 ft	-2111990	-3705411	4726841
OV	37° 13' 54".19	118° 16' 33".98	1207 m = 3961 ft	-2409087	-4478634	3838639
SC	17° 45' 30".57	64° 35' 02".61	16 m = 53 ft	2607802	-5488077	1932957
HN	42° 56' 00".96	71° 59' 11".69	309 m = 1014 ft	1446384	-4447966	4322328
MK	19° 48' 15".95	155° 27' 28".95	3720 m = 12203 ft	-5464066	-2494952	2148597

PT = Pie Town, NM
 FD = Fort Davis, TX
 OV = Owens Valley, CA
 MK = Mauna Kea, HI

KP = Kitt Peak, AZ
 NL = North Liberty, IA
 SC = Saint Croix, VI

LA = Los Alamos, NM
 BR = Brewster, WA
 HN = Hancock, NH