

RIO BRAVO ENTERTAINMENT, LLC  
FM Translator K260BC  
Henly, TX  
PROPOSED: CH262FT, 100.3 MHz, 0.070 kW, 149.5m HAAT

ENGINEERING STATEMENT

This engineering statement was prepared for Rio Bravo Entertainment, LLC, licensee of FM translator K260BC in support of a minor change application to change frequency from 99.9 MHz to 100.3 Mhz with 0.070 kW ERP (main lobe) and change community of license to Henly, TX. This translator will be co-located at tower #1218246 with two three-bay Kathrein-Scala 3XCA5-FM/CP/RM/50N Yagi array antennas 110 meters above ground level, with main lobes at 120°T and 300°T.

ALLOCATION CONSIDERATIONS

Figure 1 is a portion of a USGS topographic map depicting the location of the proposed K260BC site. Figure 2A is an allocation map showing contours of K260BC-proposed and contours of allocation interest. Figure 2B shows the licensed and proposed K260BC 60 dBu contour overlap, as well as the 68 dBu of KASE-FM auxiliary (#2).

As shown in Figure 2A, none of the allocation contours of this proposal cause prohibitive overlap. While this translator is within the 60 dBu service contour of KASE-FM, it is noted that the KASE-FM (Auxiliary #2) 68 dBu contour, worst case, falls over the site and hence the K260BC 108 dBu contour shall not cause interference. Since a three-bay antenna is proposed at 110 meters AGL and considering the vertical plane pattern of the antenna, the 108 dBu contour will not reach ground level nor any building occupied by people. Hence no interference will be caused to KASE-FM.

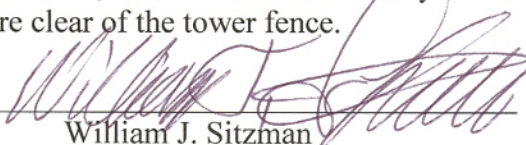
Figure 3A is a polar plot and tabulation of the horizontal pattern of the two Kathrein-Scala 3XCA5-FM/CP/RM/50N Yagi array antennas, while Figure 3B, Pages 1 to 3, is a tabulation and graph of the vertical pattern.

ENVIRONMENTAL CONSIDERATIONS

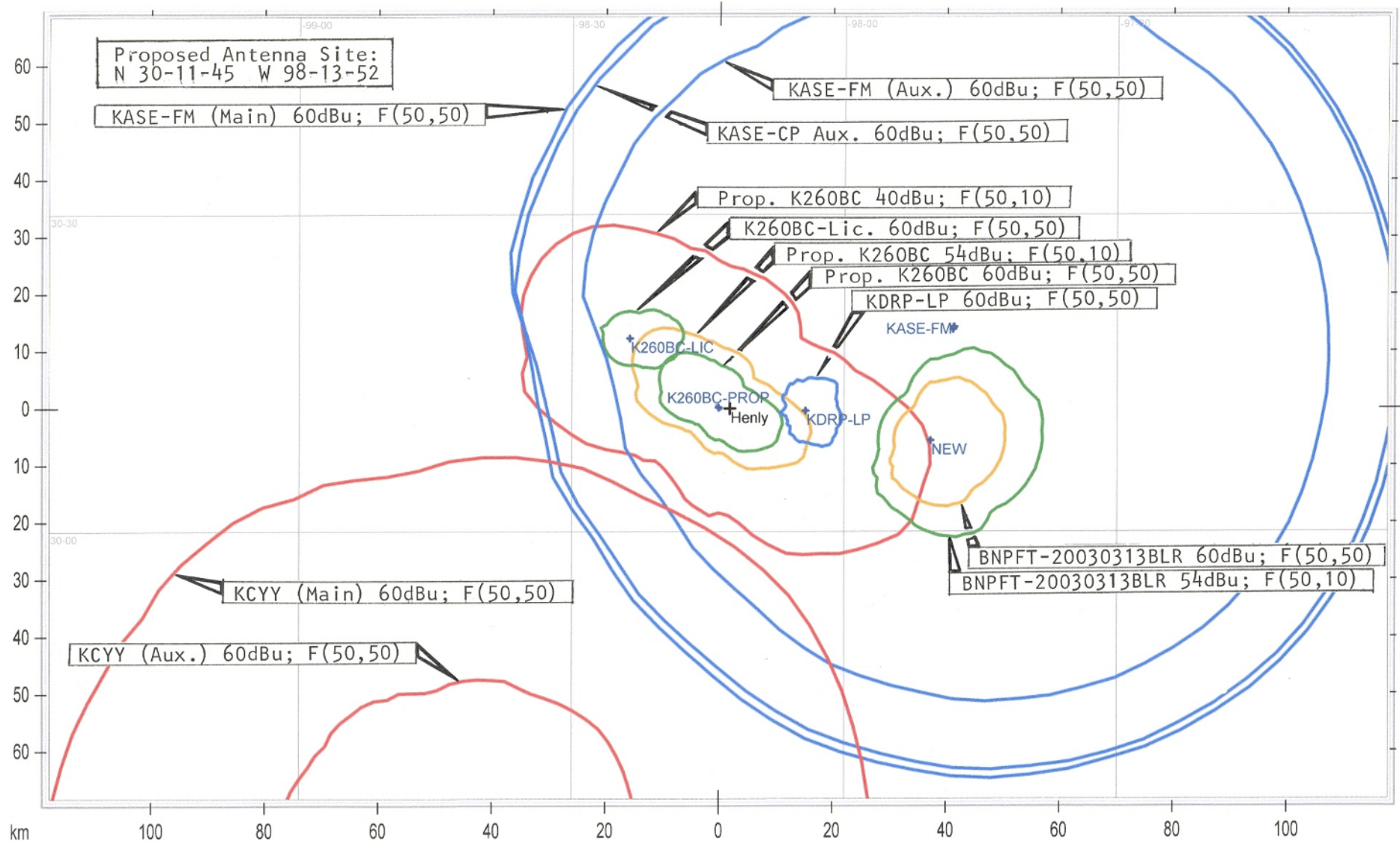
This was addressed in OET Bulletin #65, released August 1, 1997. Table B on Page 67 of the document depicts the ANSI/IEEE protection requirements. The maximum permissible exposure for uncontrolled environments in the 30 to 300 MHz band is a power density of 0.2 milliwatts per centimeter squared ( $\text{mw}/\text{cm}^2$ ). As a worst-case, power density is studied at points 2 meters above ground level contiguous to the FM translator tower and if not excessive at that elevation, it would certainly not be excessive below that elevation where the general public may have access.

Since this FM translator operates at 0.070 kW ERP with a 3-bay FM antenna 110 meters above ground level, the greatest radiofrequency power density 2 meters above ground level is defined by the field elevation pattern of the Kathrein-Scala antenna and produces a maximum power density of 0.000044 mw/cm<sup>2</sup> at that elevation. This is 0.022% of the 0.2 mw/cm<sup>2</sup> limit for an uncontrolled environment. There are appropriate RF warning signs on the tower fence. Should maintenance personnel need access to the tower, the FM translator facility will either reduce power or cease operation until workers are clear of the tower fence.

July 30, 2010

  
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Consulting Radio Engineer

# K260BC Ch262 (100.3 MHz) Allocation Map



## Facilities & Proposals Studied:

Ch. 259 (99.7):	None
Ch. 260 (99.9):	K260BC (Licensed): 50 w, -16m AAT
	KDRP-LP (Lic.): 17 w, 70m AAT
Ch. 261 (100.1):	NEW XLTR*: 170 w, 54m AAT
Ch. 262 (100.3):	K260BC (Proposed): 70 w, 150m AAT
	KCYY (Lic. Main): 98kW, 273m AAT
	KCYY (Lic. Aux.): 1.3kW, 220m AAT

Ch. 263 (100.5):	None
Ch. 264 (100.7):	KASE-FM (Lic. Main): 100 kW, 334m AAT
	KASE-FM (Lic. Aux.): 59 kW, 241m AAT
	KASE-FM (CP Aux.**): 72 kW, 362m AAT
Ch. 265 (100.9):	None

Key: \* = New Xltr. App. per BNPFT-20030313BLR  
 \*\* = KASE-FM Aux. CP per BXPB-20100204AAP



# K260BC Ch262 (100.3 MHz) Detailed Allocation Map

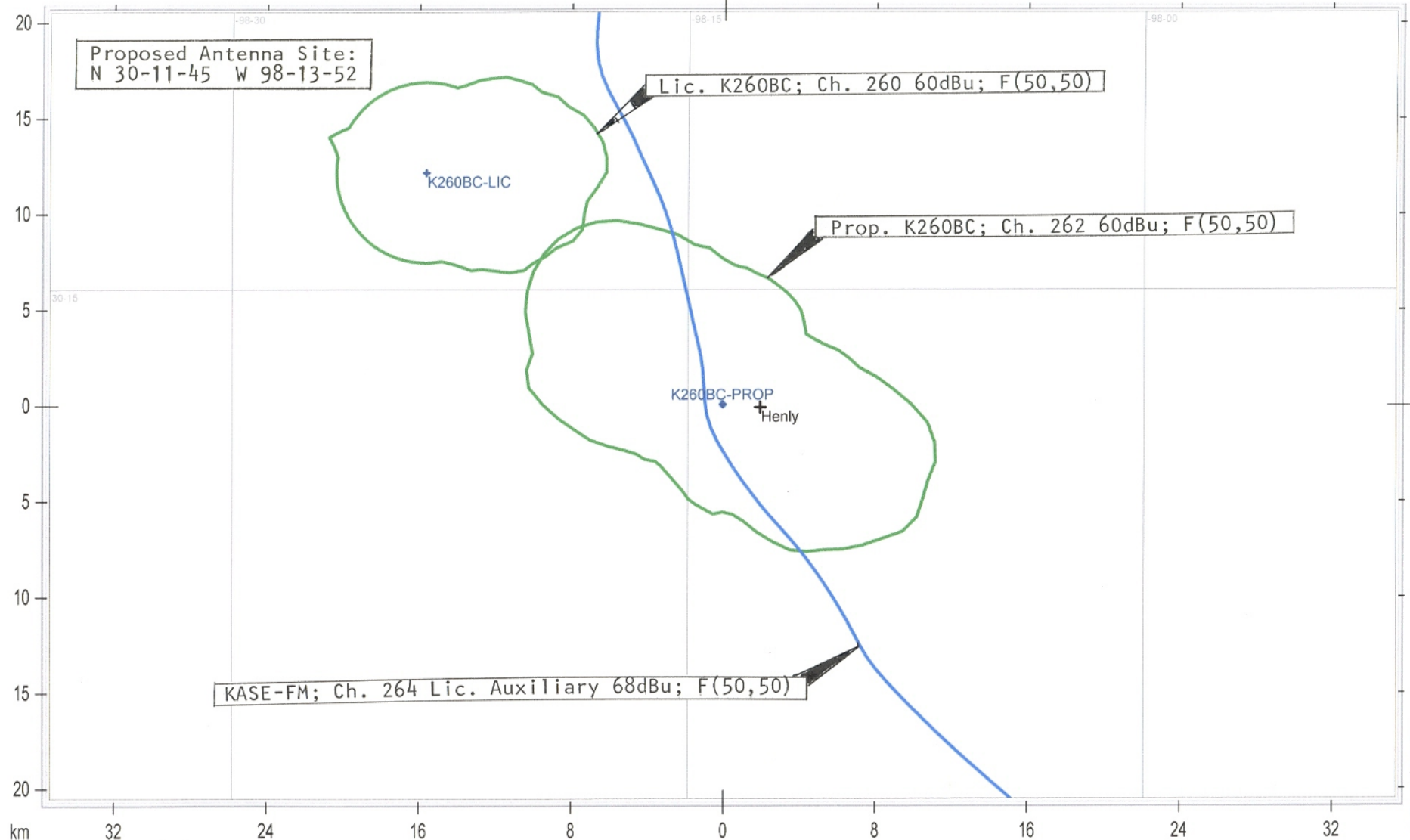
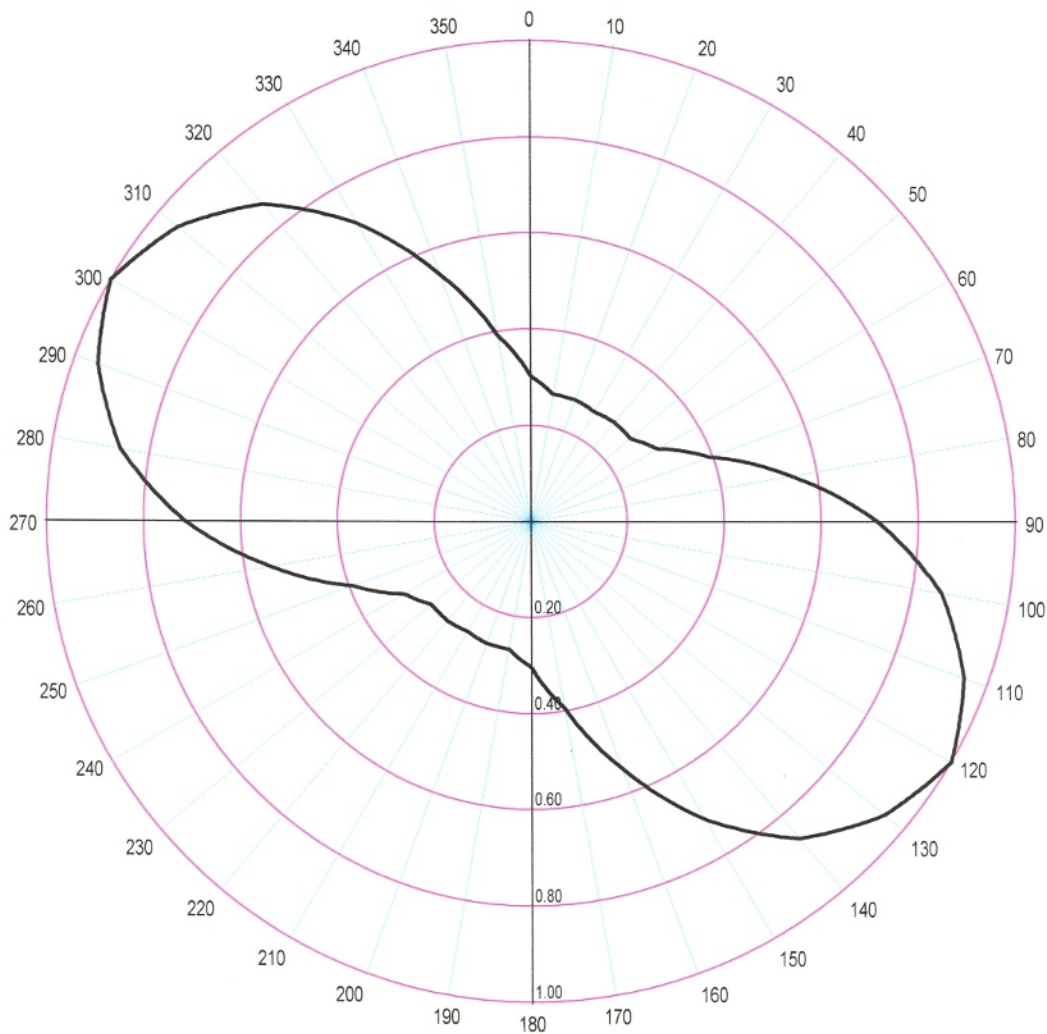


FIGURE 2B Amended

As shown, the proposed K260BC (Ch. 262; 100.3 MHz.) protected 60dBu F(50,50) contour includes a portion of the 60dBu F(50,50) service area of the licensed K260BC on Channel 260, 99.9 MHz. Also, as shown, the 68dBu; F(50,50) service contour of the licensed auxiliary facility for second-adjacent station KASE-FM, Austin, TX (per BLH-19940407KD) provides the most restrictive protection requirement for the proposed K260BC (on Channel 262) in relation to the KASE-FM main or auxiliary facilities. licensed, permitted or proposed. Compliance with the protection requirement for KASE-FM (Aux.) is addressed in the Engineering Statement.



Azim	Rel.FS	ERP [W]	dBk	Azim	Rel.FS	ERP [W]	dBk	Azim	Rel.FS	ERP [W]	dBk	Azim	Rel.FS	ERP [W]	dBk
0.0	0.303	6.427	-21.920	90.0	0.715	35.786	-14.463	180.0	0.303	6.427	-21.920	270.0	0.715	35.786	-14.463
5.0	0.286	5.726	-22.422	95.0	0.787	43.356	-13.630	185.0	0.286	5.726	-22.422	275.0	0.787	43.356	-13.630
10.0	0.269	5.065	-22.954	100.0	0.860	51.772	-12.859	190.0	0.269	5.065	-22.954	280.0	0.860	51.772	-12.859
15.0	0.269	5.065	-22.954	105.0	0.905	57.332	-12.416	195.0	0.269	5.065	-22.954	285.0	0.905	57.332	-12.416
20.0	0.270	5.103	-22.922	110.0	0.950	63.175	-11.995	200.0	0.270	5.103	-22.922	290.0	0.950	63.175	-11.995
25.0	0.267	4.990	-23.019	115.0	0.975	66.544	-11.769	205.0	0.267	4.990	-23.019	295.0	0.975	66.544	-11.769
30.0	0.264	4.879	-23.117	120.0	1.000	70.000	-11.549	210.0	0.264	4.879	-23.117	300.0	1.000	70.000	-11.549
35.0	0.267	4.990	-23.019	125.0	0.975	66.544	-11.769	215.0	0.267	4.990	-23.019	305.0	0.975	66.544	-11.769
40.0	0.270	5.103	-22.922	130.0	0.950	63.175	-11.995	220.0	0.270	5.103	-22.922	310.0	0.950	63.175	-11.995
45.0	0.269	5.065	-22.954	135.0	0.905	57.332	-12.416	225.0	0.269	5.065	-22.954	315.0	0.905	57.332	-12.416
50.0	0.269	5.065	-22.954	140.0	0.860	51.772	-12.859	230.0	0.269	5.065	-22.954	320.0	0.860	51.772	-12.859
55.0	0.286	5.726	-22.422	145.0	0.787	43.356	-13.630	235.0	0.286	5.726	-22.422	325.0	0.787	43.356	-13.630
60.0	0.303	6.427	-21.920	150.0	0.715	35.786	-14.463	240.0	0.303	6.427	-21.920	330.0	0.715	35.786	-14.463
65.0	0.348	8.477	-20.717	155.0	0.630	27.783	-15.562	245.0	0.348	8.477	-20.717	335.0	0.630	27.783	-15.562
70.0	0.393	10.811	-19.661	160.0	0.546	20.868	-16.805	250.0	0.393	10.811	-19.661	340.0	0.546	20.868	-16.805
75.0	0.469	15.397	-18.126	165.0	0.469	15.397	-18.126	255.0	0.469	15.397	-18.126	345.0	0.469	15.397	-18.126
80.0	0.546	20.868	-16.805	170.0	0.393	10.811	-19.661	260.0	0.546	20.868	-16.805	350.0	0.393	10.811	-19.661
85.0	0.630	27.783	-15.562	175.0	0.348	8.477	-20.717	265.0	0.630	27.783	-15.562	355.0	0.348	8.477	-20.717