

DVB-T Transmitting Antenna

BJERKREIM

Type No. **759 13481**

TECHNICAL DATA

Constructional features 40 antenna panels 75010175
(10 bays with 4 panels each)

Frequency range 470 ... 862 MHz

Operating channels 23 – 26 – 27 – 30 – 34 – 37 – 68

Polarization..... horizontal

Nominal impedance..... 50 Ω

Gain (referred to antenna input) $\downarrow\downarrow$ 14,6..... $\downarrow\downarrow$ 14,7..... $\downarrow\downarrow$ 14,8..... $\downarrow\downarrow$ 15,1 dB_d

VSWR $\leq 1,1$ at PAL channels
..... $\leq 1,2$ at DTT channels

Input power (maximum)..... 7x 2,5 kW DTT or
..... 2 kW+1 kW PAL+ 3x 2,5 kW DTT

Input connector 2x 3 1/8"EIA

29.08.2006

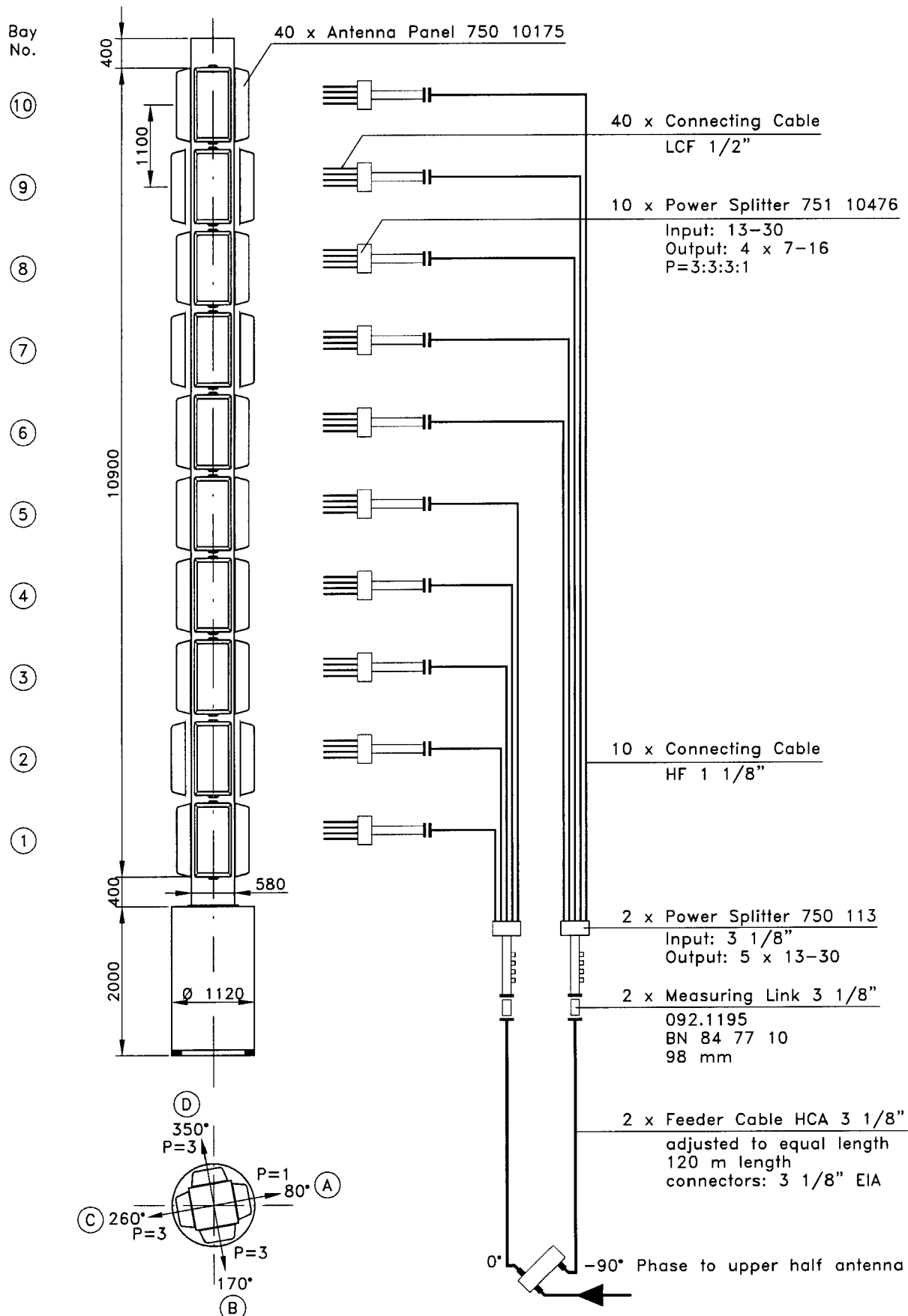
KATHREIN
BCA-Ob

DVB Transmitting Antenna

BJERKREIM

Type No.

759 13481



Bay No. 2, 7, 9 : 70 mm front offset

KATHREIN

Day

26.07.2006

Name

BCA-Ob

DVB Transmitting Antenna
BJERKREIM

Type No.

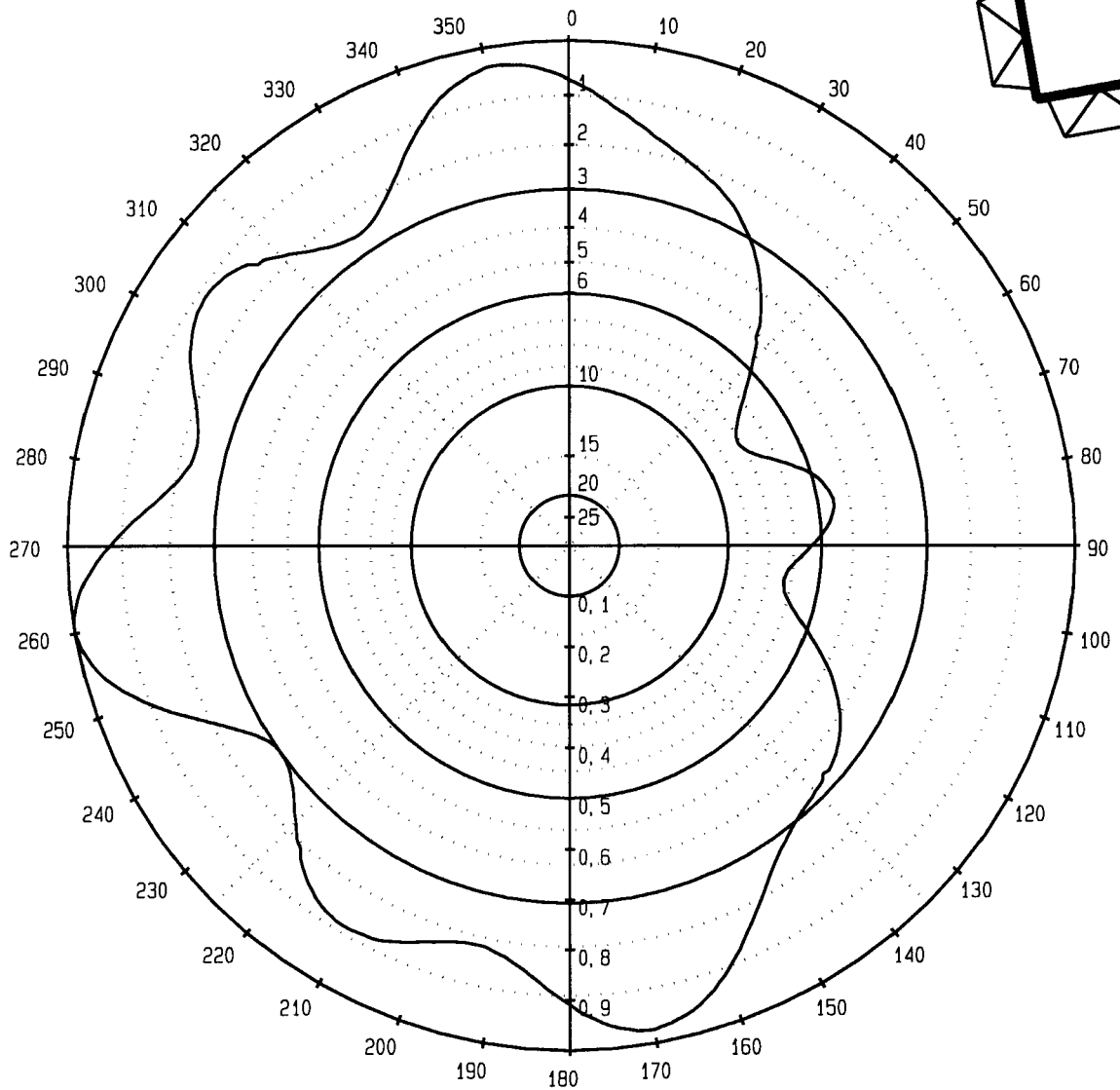
759 13481

Sheet: 109

CABLE LIST

f₀= 850,00 MHz

Pieces	Cable No.	Phases			Length [mm]	Cable type	Connectors
					I ₀ = 2.300	k= 0,88	
10	A		0		2.300	LCF 1/2"Cu2Y	2x 7-16
10	B		0		2.300	(914.590)	(092.1470)
10	D		0		2.300		
1	C10		36		2.269		
1	C9		28		2.276		
1	C8		20		2.283		
1	C7		12		2.290		
1	C6		4		2.297		
1	C5		-4		2.303		
1	C4		-12		2.310		
1	C3		-20		2.317		
1	C2		-28		2.300		
1	C1		-36		2.331		
		Total length=			91.976		
					I ₀ = 13.300	k= 0,92	
1	10		278	90	12.968	HF 1 1/8"Cu2Y	2x 13-30
1	9		154	90	13.080	(914.533)	(092.1172)
1	8		215	90	13.025		beide Stecker
1	7		162	90	13.073		durchbohren
1	6		292	90	12.955		
1	5		141		13.173		
1	4		116		13.195		
1	3		93		13.216		
1	2		0		13.300		
1	1		17		13.285		
		Total length=			131.270		
10.06.2006		DVB Transmitting Antenna					Type No.
KATHREIN		BJERKREIM					759 13481
BCA-Ob							



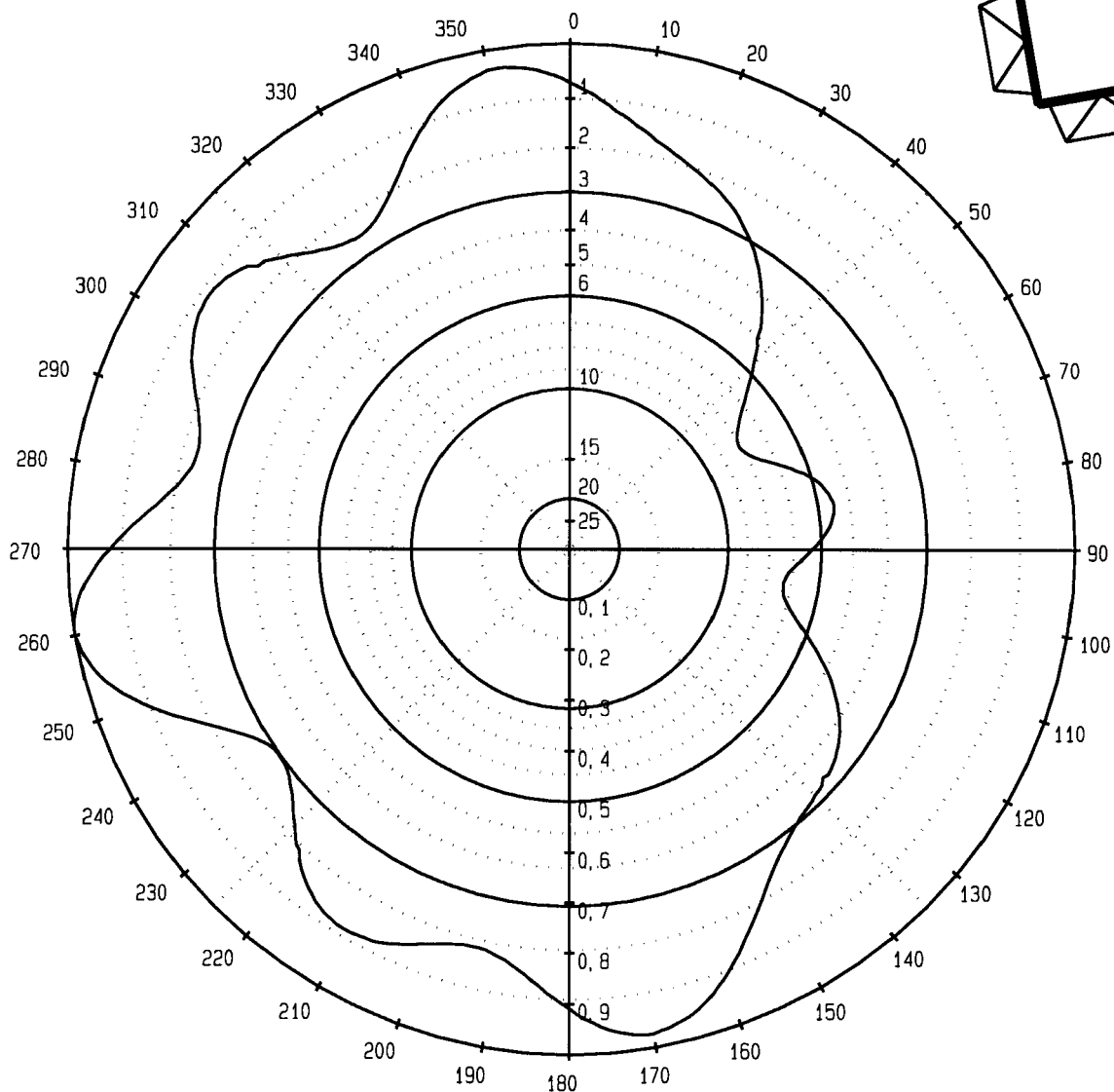
frequency in MHz 490.000
 down-tilt in ° .0
 max / mean in dB 2.30

antenna type: 772419B			4 disk panel on mast 600; offset +15						cable design frequency:			850.000 MHz			
bay	height	v-feed	power	cab-ph	fix-ph	panel	azipos	azidir	radius	tanoff	radoff	tilt	power	cab-ph	fix-ph
1	0		1.0	0	0	1	80.0	80.0	.0	-15.0	.0	.0	1.0	0	0
						2	170.0	170.0	.0	-15.0	.0	.0	3.0	0	0
						3	260.0	260.0	.0	-15.0	.0	.0	3.0	0	0
						4	350.0	350.0	.0	-15.0	.0	.0	3.0	0	0

Channel 23 at -1,2 degrees elevation

KATHREIN Rosenheim Germany	DVB Transmitting Antenna BJERKREIM	Typ Nr. 75913481
		B1.:

simulation with typical exactness of +/- 8% of max signal



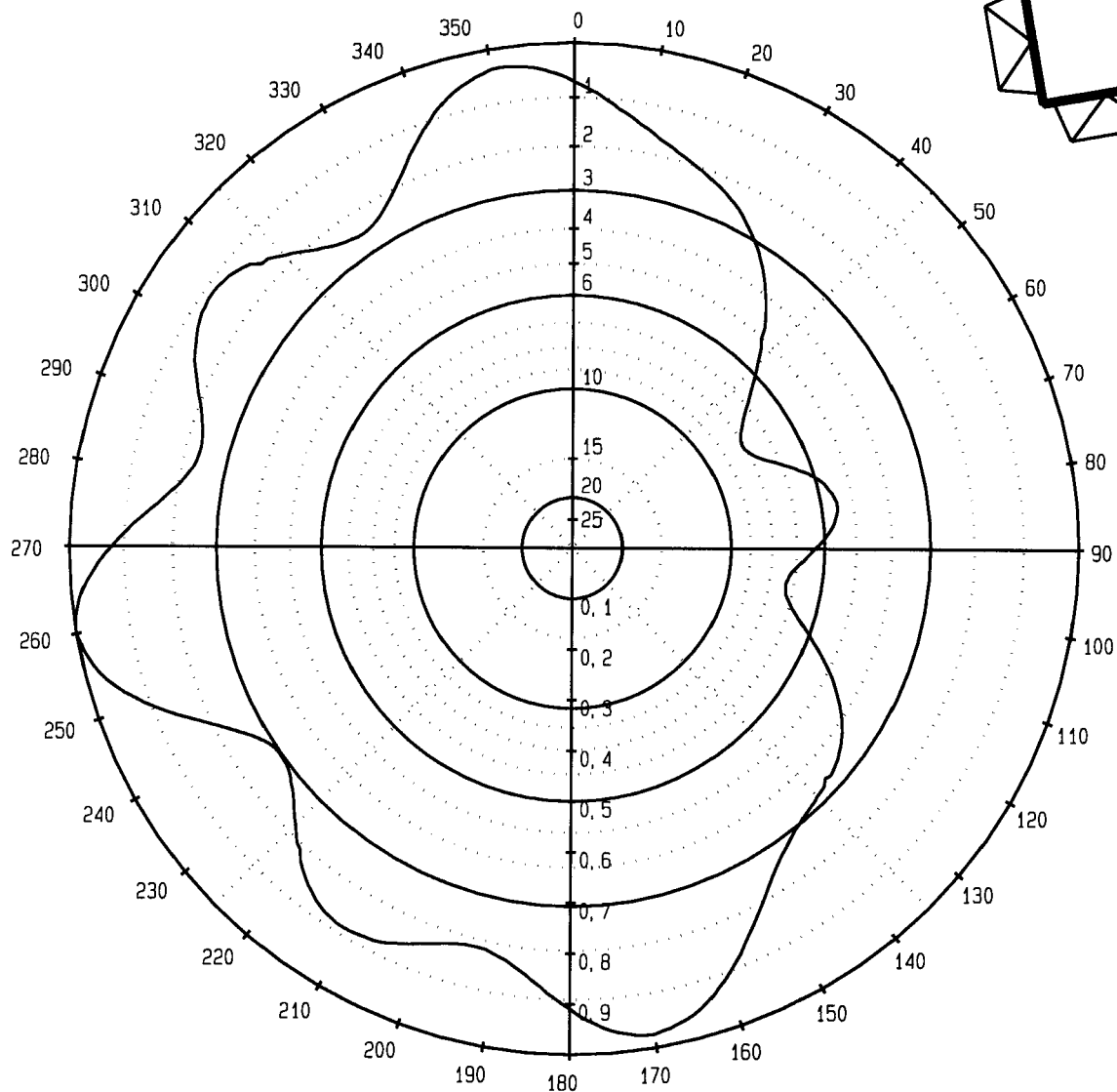
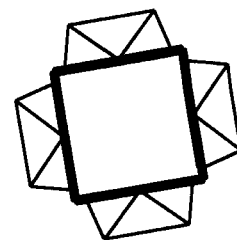
frequency in MHz 514.000
 down-tilt in ' .0
 max / mean in dB 2.30

antenna type: 772419B									4 disk panel on mast 600; offset +15			cable design frequency: 850.000 MHz			
bay	height	v-feed	power	cab-ph	fix-ph	panel	azipos	azidir	radius	tanoff	radoff	tilt	power	cab-ph	fix-ph
1	0	1.0		0	0	1	80.0	80.0	.0	-15.0	.0	.0	1.0	0	0
						2	170.0	170.0	.0	-15.0	.0	.0	3.0	0	0
						3	260.0	260.0	.0	-15.0	.0	.0	3.0	0	0
						4	350.0	350.0	.0	-15.0	.0	.0	3.0	0	0

Channel 26 at -1,2 degrees elevation

KATHREIN Rosenheim Germany BCA/Ob 29.8. 6 19: 4	DVB Transmitting Antenna BJERKREIM	Typ Nr. 75913481
		B1.:

simulation with typical exactness of +/- 8% of max signal



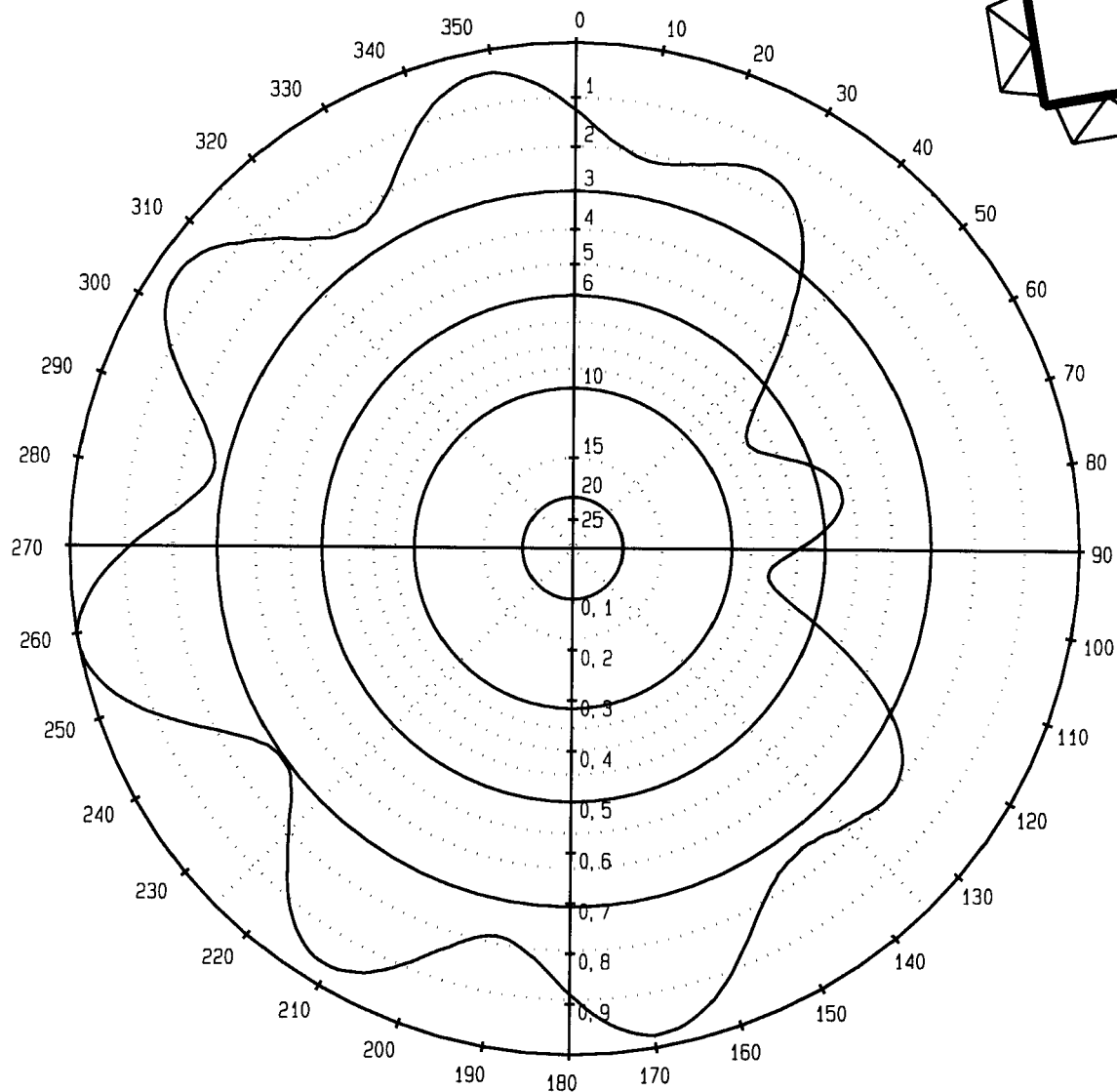
frequency in MHz 522.000
 down-tilt in .0
 max / mean in dB 2.30

antenna type: 772419B 4 disk panel on mast 600; offset +15										cable design frequency: 850.000 MHz				
bay height	v-feed	power	cab-ph	fix-ph	panel	azipos	azidir	radius	tanoff	radoff	tilt	power	cab-ph	fix-ph
1	0	1.0	0	0	1	80.0	80.0	.0	-15.0	.0	.0	1.0	0	0
					2	170.0	170.0	.0	-15.0	.0	.0	3.0	0	0
					3	260.0	260.0	.0	-15.0	.0	.0	3.0	0	0
					4	350.0	350.0	.0	-15.0	.0	.0	3.0	0	0

Channel 27 at -1,2 degrees elevation

<div>KATHREIN Rosenheim Germany</div>	DVB Transmitting Antenna	Typ Nr.
BCA/Ob 29.8. 6 19: 4		75913481
	BJERKREIM	B1.:

simulation with typical exactness of +/- 8% of max signal



frequency in MHz 546.000
 down-tilt in ' .0
 max / mean in dB 2.08

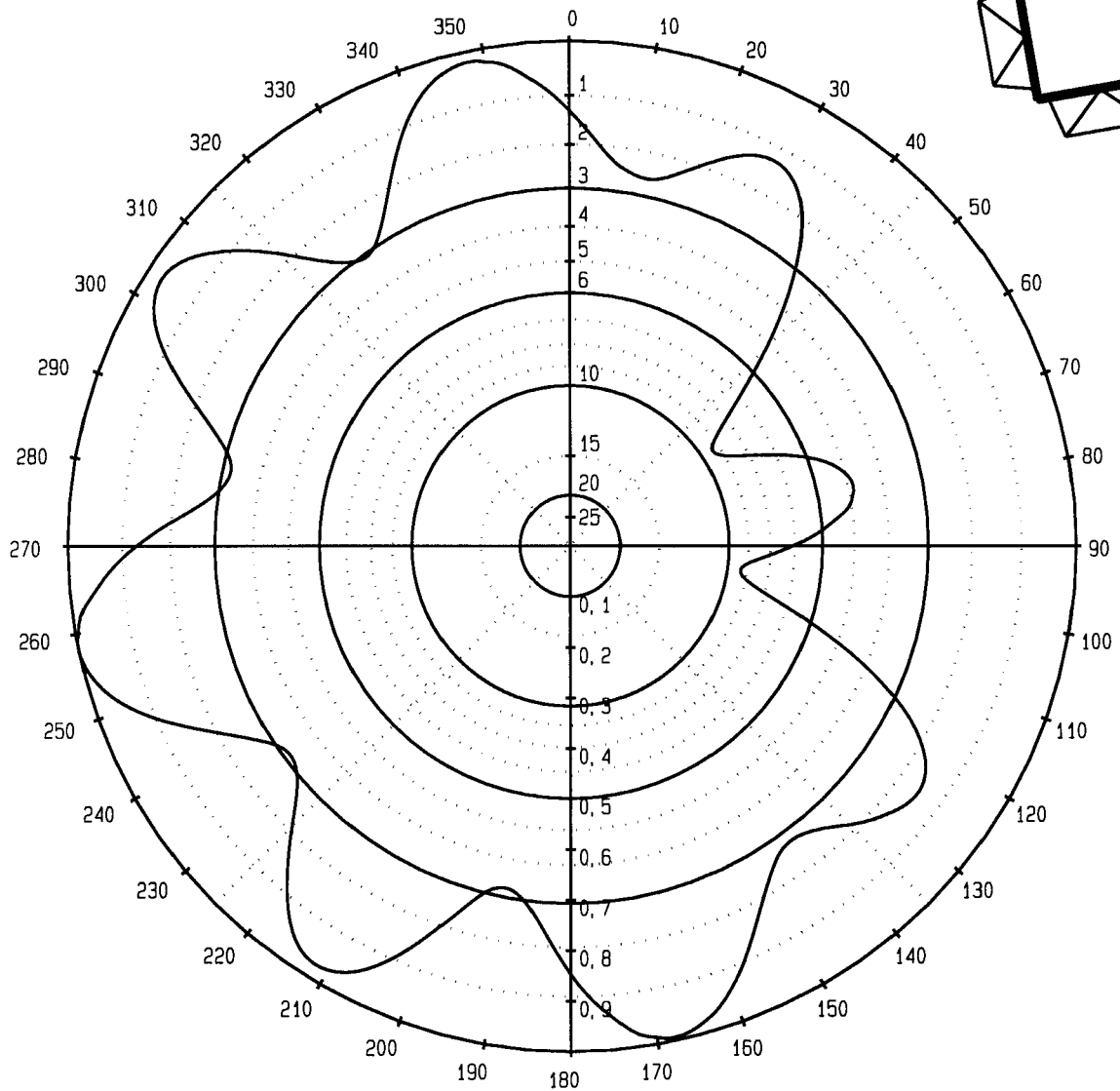
antenna type: 772419B 4 disk panel on mast 600; offset +15 cable design frequency: 850.000 MHz

bay height	v-feed	power	cab-ph	fix-ph	panel	azipos	azidir	radius	tanoff	radoff	tilt	power	cab-ph	fix-ph
1	0	1.0	0	0	1	80.0	80.0	.0	-15.0	.0	.0	1.0	0	0
					2	170.0	170.0	.0	-15.0	.0	.0	3.0	0	0
					3	260.0	260.0	.0	-15.0	.0	.0	3.0	0	0
					4	350.0	350.0	.0	-15.0	.0	.0	3.0	0	0

Channel 30 at -1,2 degrees elevation

KATHREIN Rosenheim Germany BCA/Ob 29.8. 6 19: 6	DVB Transmitting Antenna BJERKREIM	Typ Nr. 75913481
		Bl.:

simulation with typical exactness of +/- 8% of max signal



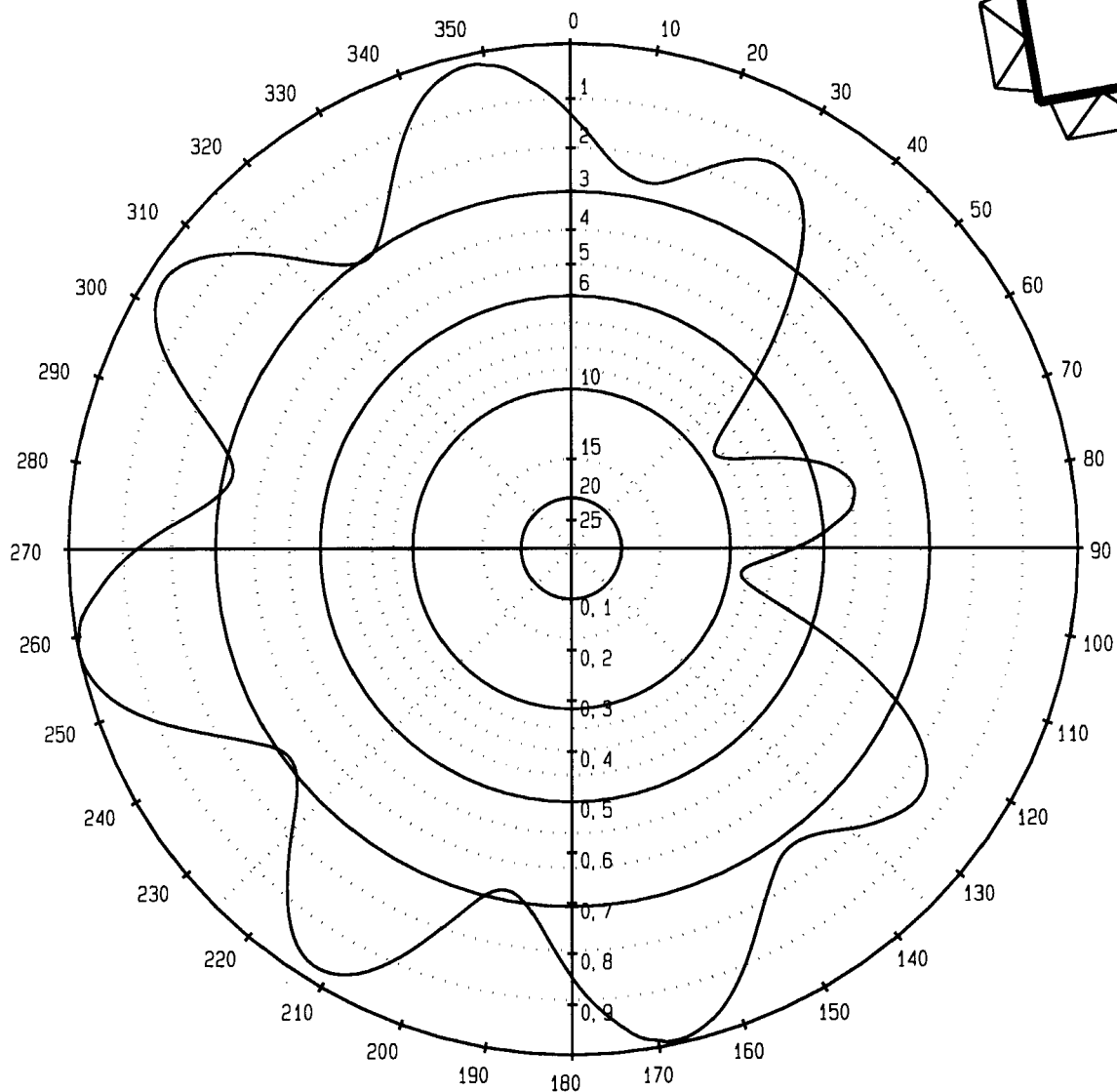
frequency in MHz 578.000
down-tilt in ' .0
max / mean in dB 2.15

antenna type: 772419B			4 disk panel on mast 600; offset +15						cable design frequency:			850.000 MHz			
bay	height	v-feed	power	cab-ph	fix-ph	panel	azipos	azidir	radius	tanoff	radoff	tilt	power	cab-ph	fix-ph
1	0		1.0	0	0	1	80.0	80.0	.0	-15.0	.0	.0	1.0	0	0
						2	170.0	170.0	.0	-15.0	.0	.0	3.0	0	0
						3	260.0	260.0	.0	-15.0	.0	.0	3.0	0	0
						4	350.0	350.0	.0	-15.0	.0	.0	3.0	0	0

Channel 34 at -1,2 degrees elevation

KATHREIN Rosenheim Germany		DVB Transmitting Antenna BJERKREIM	Typ Nr. 75913481
BCA/Ob	29.8. 6 19: 3		B1.:

simulation with typical exactness of +/- 8% of max signal



frequency in MHz 602.000
 down-tilt in ° .0
 max / mean in dB 2.15

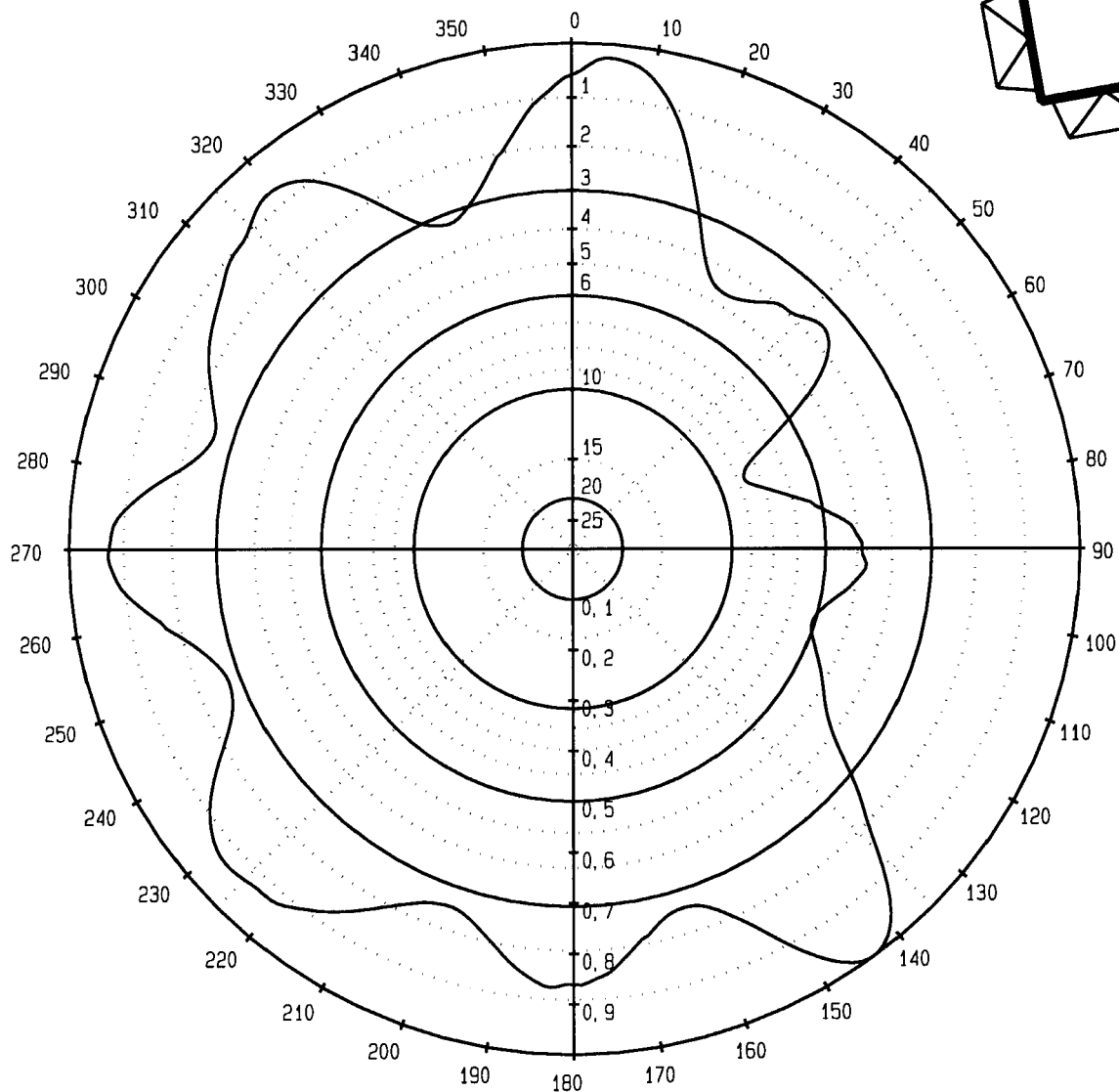
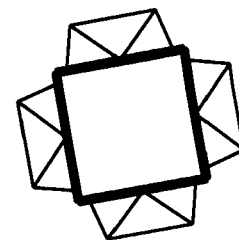
antenna type: 772419B 4 disk panel on mast 600; offset +15 cable design frequency: 850.000 MHz

bay	height	v-feed	power	cab-ph	fix-ph	panel	azipos	azidir	radius	tanoff	radoff	tilt	power	cab-ph	fix-ph
1	0	1.0	0	0	1	80.0	80.0	.0	-15.0	.0	.0	1.0	0	0	
2	170.0	170.0	.0	-15.0	.0	.0	3.0	0	0						
3	260.0	260.0	.0	-15.0	.0	.0	3.0	0	0						
4	350.0	350.0	.0	-15.0	.0	.0	3.0	0	0						

Channel 37 at -1,2 degrees elevation

KATHREIN Rosenheim Germany BCA/Ob 29.8. 6 19: 2	DVB Transmitting Antenna BJERKREIM	Typ Nr. 75913481
		Bl.:

simulation with typical exactness of +/- 8% of max signal



frequency in MHz 850.000
 down-tilt in ' .0
 max / mean in dB 2.32

antenna type: 772419B 4 disk panel on mast 600; offset +15									cable design frequency: 850.000 MHz						
bay	height	v-feed	power	cab-ph	fix-ph	panel	azipos	azidir	radius	tanoff	radoff	tilt	power	cab-ph	fix-ph
1	0	1.0		0	0	1	80.0	80.0	.0	-15.0	.0	.0	1.0	0	0
						2	170.0	170.0	.0	-15.0	.0	.0	3.0	0	0
						3	260.0	260.0	.0	-15.0	.0	.0	3.0	0	0
						4	350.0	350.0	.0	-15.0	.0	.0	3.0	0	0

Channel 68 at -1,2 degrees elevation

KATHREIN Rosenheim Germany BCA/Ob 29.8. 6 18:59	DVB Transmitting Antenna BJERKREIM	Typ Nr. 75913481
		Bl.:

simulation with typical exactness of +/- 8% of max signal

VERTICAL PATTERN

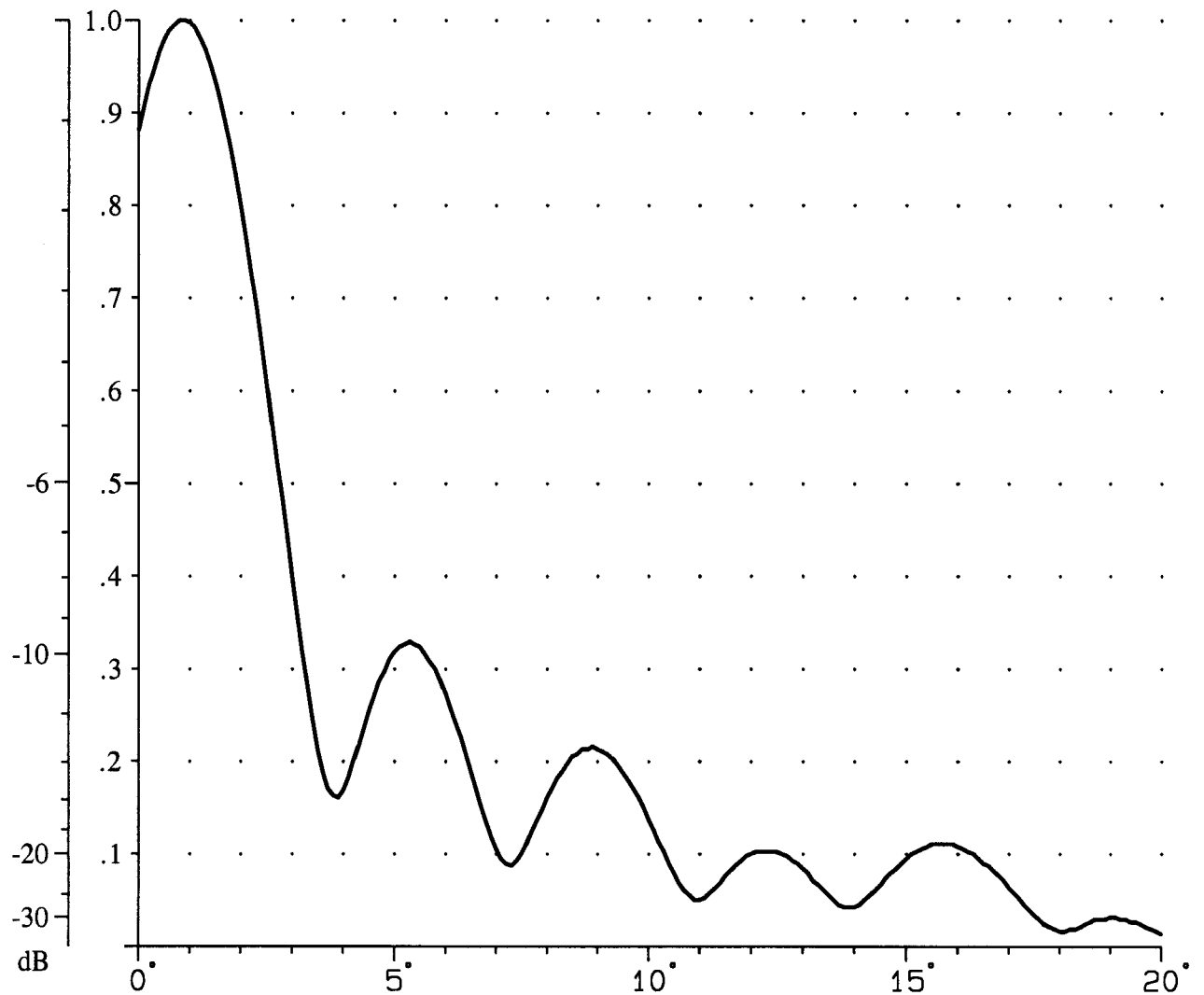
Frequency: 490.00 MHz

Amplitude pattern: 181

No.	Distance (mm)	Rad.offset (mm)	Phase (°)	Power (times)
10	1100	0	122.1 -90	1.00
9	1100	70	50.7 -90	1.00
8	1100	0	85.8 -90	1.00
7	1100	70	55.3 -90	1.00
6	1100	0	130.2 -90	1.00
5	1100	0	81.3	1.00
4	1150	0	66.9	1.00
3	1100	0	53.6	1.00
2	1100	70	0.0	1.00
1	0	0	9.8	1.00

Omni-dir: 12.84 dB

const.
Comp= 67 %



29-08-2006	DVB Transmitting Antenna Channel 23 BJERKREIM Directions 80°+170°+350°	Type No.
KATHREIN BCA-Ob		75913481-1

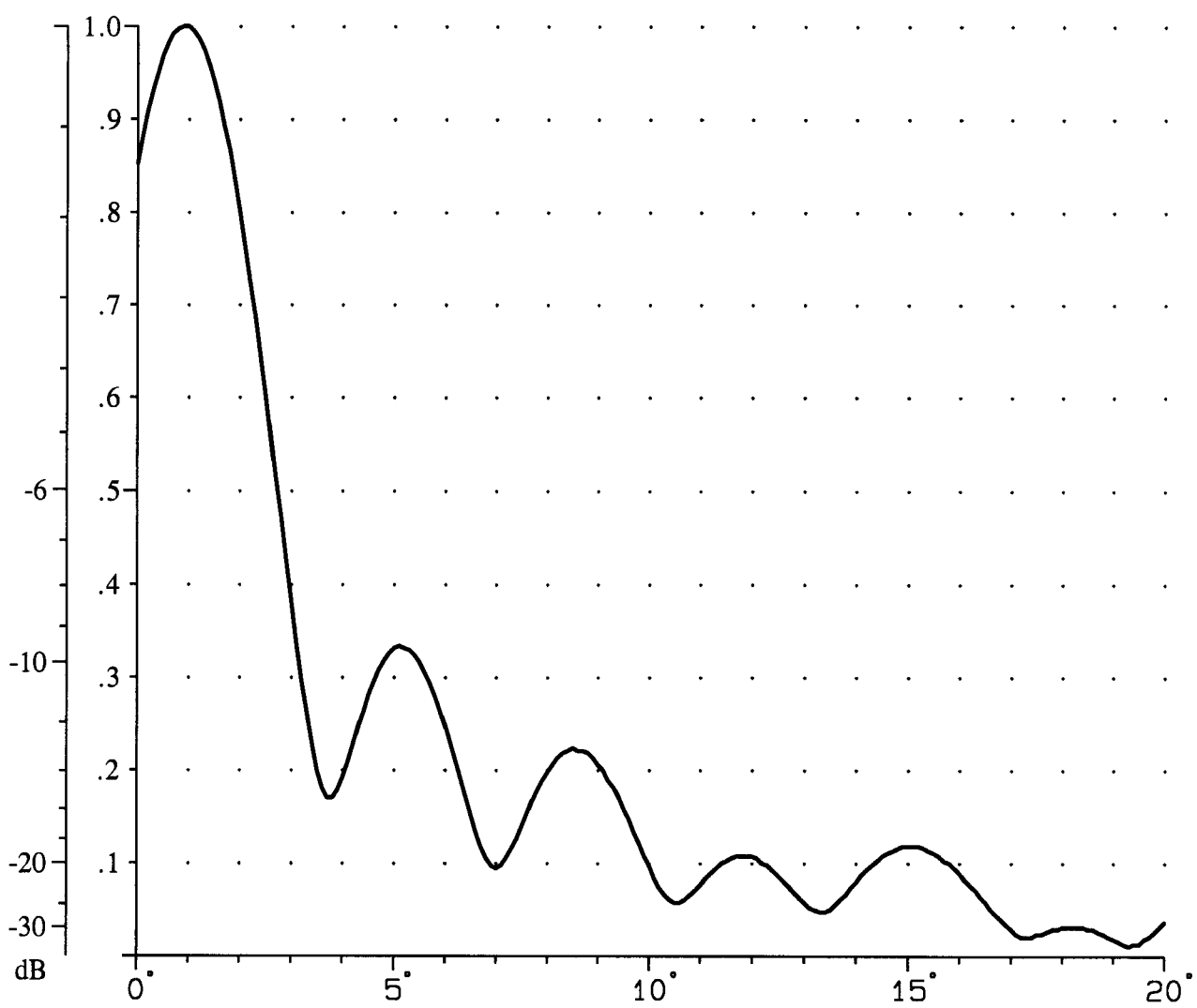
VERTICAL PATTERN

Frequency: 514.00 MHz
Amplitude pattern: 181

No.	Distance (mm)	Rad.offset (mm)	Phase (°)	Power (times)
10	1100	0	132.5 -90	1.00
9	1100	70	57.5 -90	1.00
8	1100	0	94.4 -90	1.00
7	1100	70	62.4 -90	1.00
6	1100	0	141.0 -90	1.00
5	1100	0	85.3	1.00
4	1150	0	70.1	1.00
3	1100	0	56.2	1.00
2	1100	70	0.0	1.00
1	0	0	10.3	1.00

Omni-dir: 12.91 dB

const.
Comp= 73 %



29-08-2006	DVB Transmitting Antenna Channel 26 BJERKREIM Directions 80°+170°+350°	Type No.
KATHREIN BCA-Ob		75913481-1

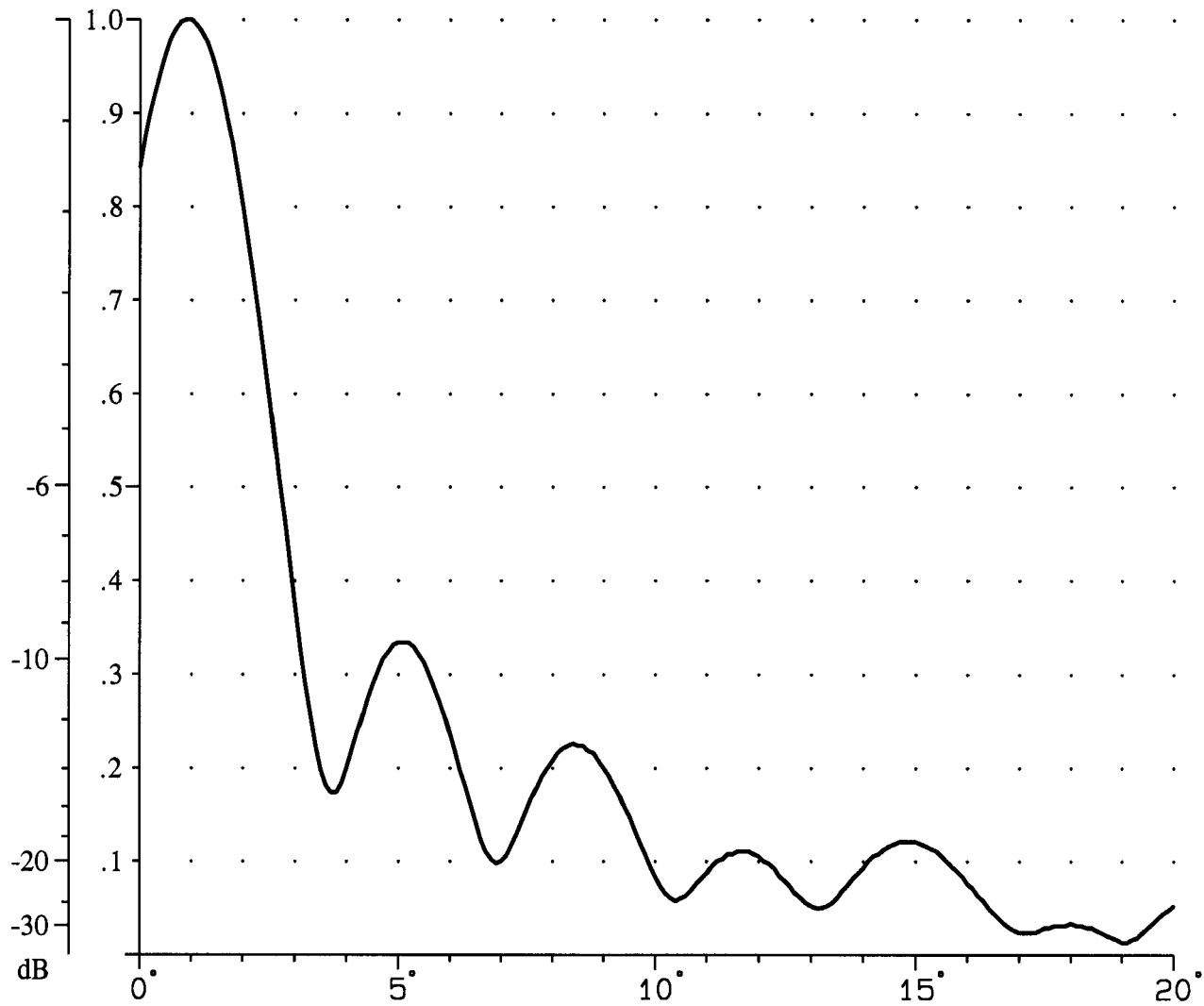
VERTICAL PATTERN

Frequency: 522.00 MHz
Amplitude pattern: 181

No.	Distance (mm)	Rad.offset (mm)	Phase (°)	Power (times)
10	1100	0	136.0 -90	1.00
9	1100	70	59.8 -90	1.00
8	1100	0	97.3 -90	1.00
7	1100	70	64.8 -90	1.00
6	1100	0	144.6 -90	1.00
5	1100	0	86.6	1.00
4	1150	0	71.2	1.00
3	1100	0	57.1	1.00
2	1100	70	0.0	1.00
1	0	0	10.4	1.00

Omni-dir: 12.92 dB

const.
Comp= 75 %



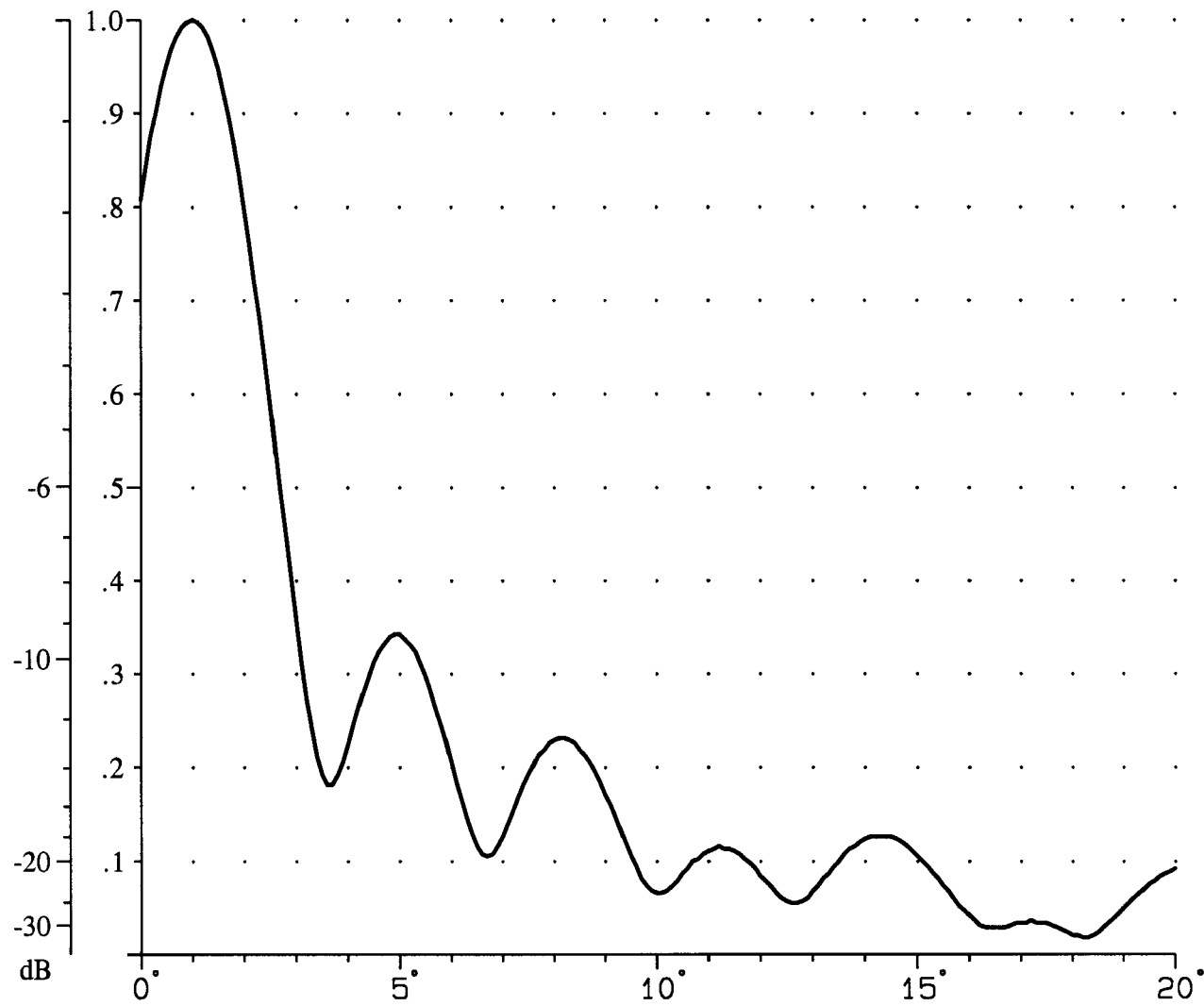
29-08-2006	DVB Transmitting Antenna Channel 27 BJERKREIM Directions 80°+170°+350°	Type No.
KATHREIN BCA-Ob		75913481-1

VERTICAL PATTERN

Frequency:		546.00 MHz				
Amplitude pattern:		182				
No.	Distance (mm)	Rad.offset (mm)	Phase (°)		Power (times)	
10	1100	0	146.4	-90	1.00	
9	1100	70	66.7	-90	1.00	
8	1100	0	105.9	-90	1.00	
7	1100	70	71.9	-90	1.00	
6	1100	0	155.4	-90	1.00	
5	1100	0	90.6		1.00	
4	1150	0	74.5		1.00	
3	1100	0	59.7		1.00	
2	1100	70	0.0		1.00	
1	0	0	10.9		1.00	

Omni-dir: 13.01 dB

const.
Comp= 81 %



29-08-2006	DVB Transmitting Antenna Channel 30 BJERKREIM Directions 80°+170°+350°	Type No.
KATHREIN BCA-Ob		75913481-1

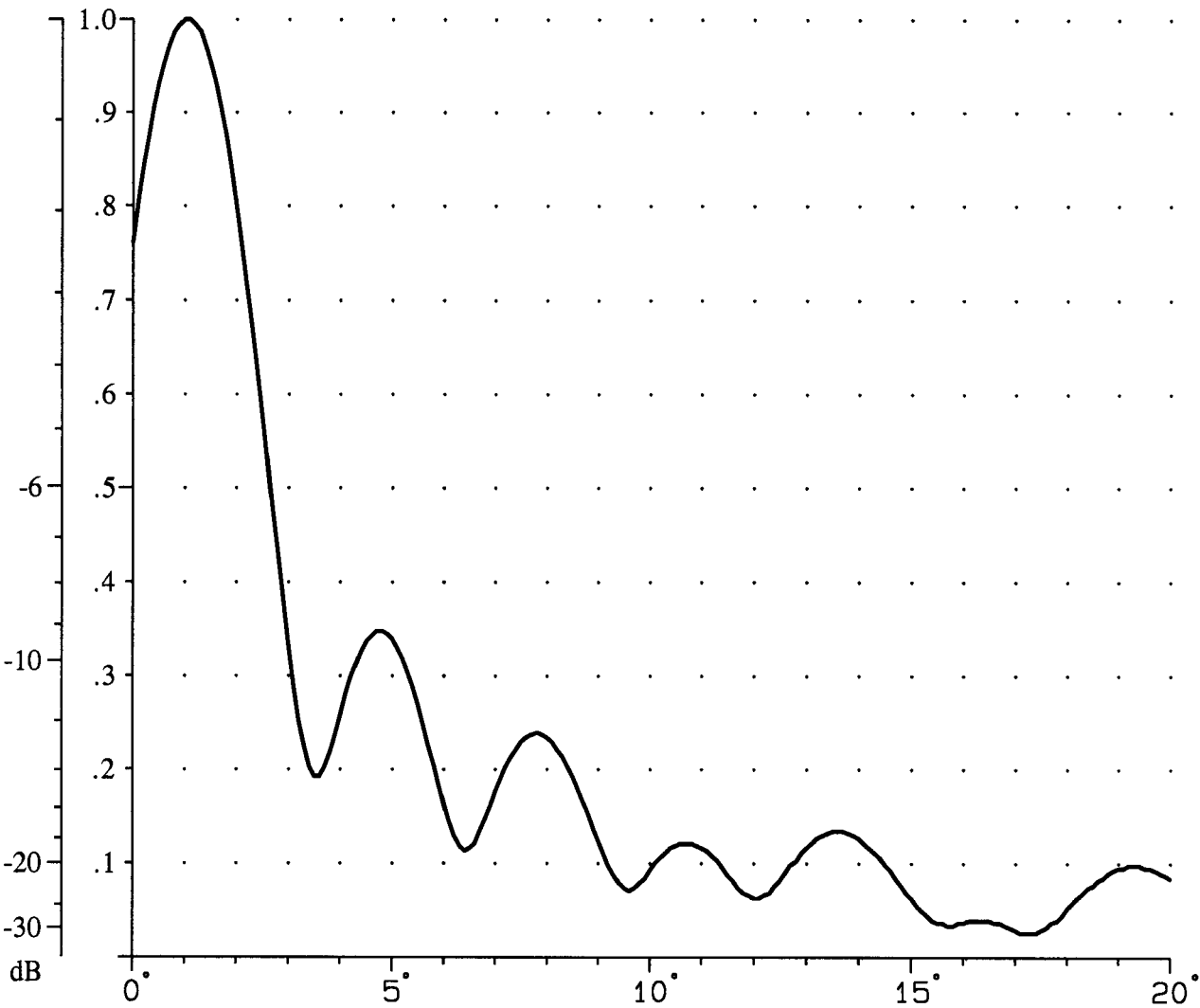
VERTICAL PATTERN

Frequency: 578.00 MHz
Amplitude pattern: 183

No.	Distance (mm)	Rad.offset (mm)	Phase (°)	Power (times)
10	1100	0	160.2 -90	1.00
9	1100	70	75.9 -90	1.00
8	1100	0	117.4 -90	1.00
7	1100	70	81.4 -90	1.00
6	1100	0	169.8 -90	1.00
5	1100	0	95.9	1.00
4	1150	0	78.9	1.00
3	1100	0	63.2	1.00
2	1100	70	0.0	1.00
1	0	0	11.6	1.00

Omni-dir: 13.21 dB

const.
Comp= 87 %



29-08-2006	DVB Transmitting Antenna Channel 34 BJERKREIM Directions 80°+170°+350°	Type No.
KATHREIN BCA-Ob		75913481-1

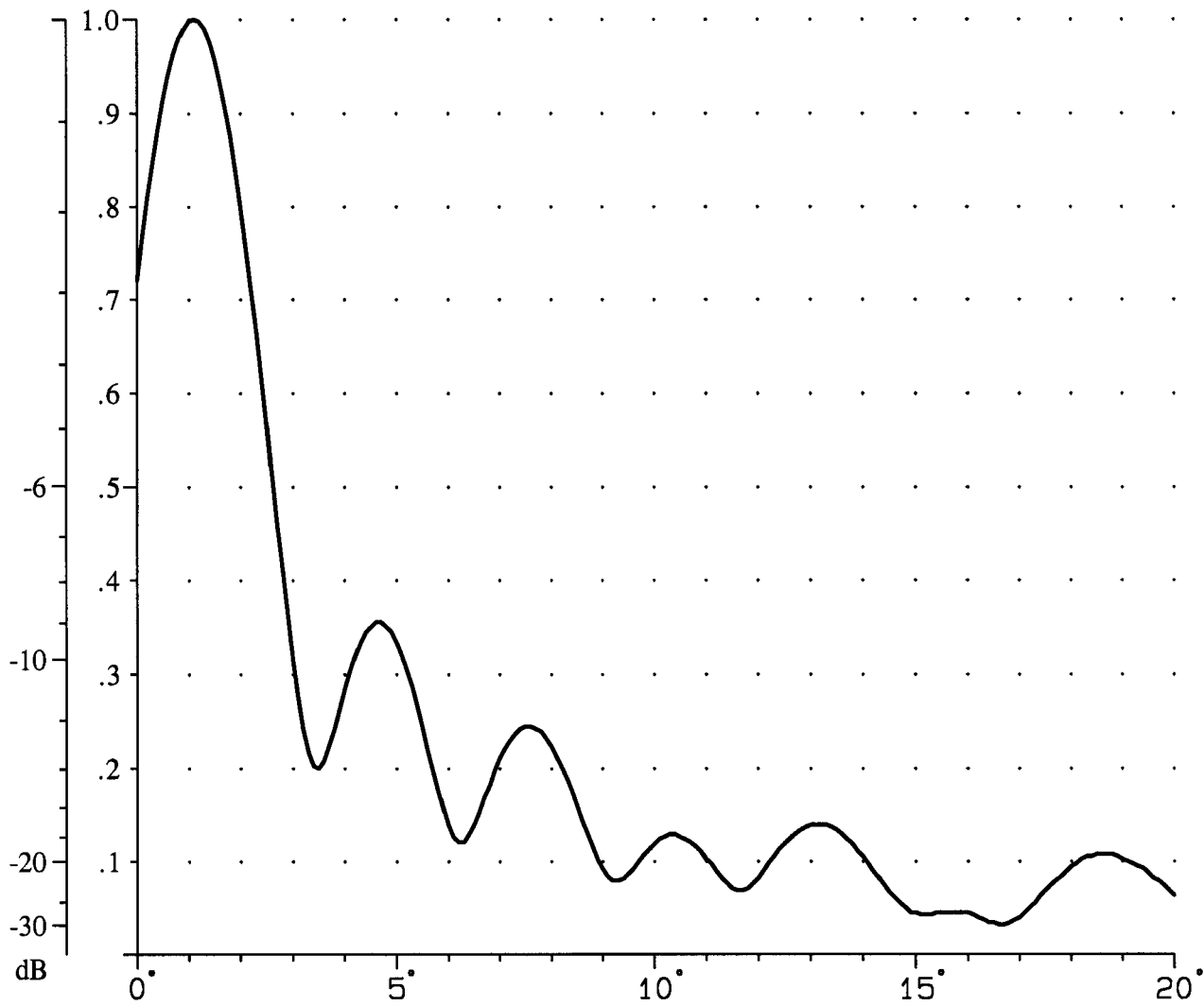
VERTICAL PATTERN

Frequency: 602.00 MHz
Amplitude pattern: 183

No.	Distance (mm)	Rad.offset (mm)	Phase (°)	Power (times)
10	1100	0	170.6 -90	1.00
9	1100	70	82.8 -90	1.00
8	1100	0	126.0 -90	1.00
7	1100	70	88.5 -90	1.00
6	1100	0	180.5 -90	1.00
5	1100	0	99.9	1.00
4	1150	0	82.2	1.00
3	1100	0	65.9	1.00
2	1100	70	0.0	1.00
1	0	0	12.0	1.00

Omni-dir: 13.16 dB

const.
Comp= 90 %



29-08-2006	DVB Transmitting Antenna Channel 37 BJERKREIM Directions 80°+170°+350°	Type No.
KATHREIN BCA-Ob		75913481-1

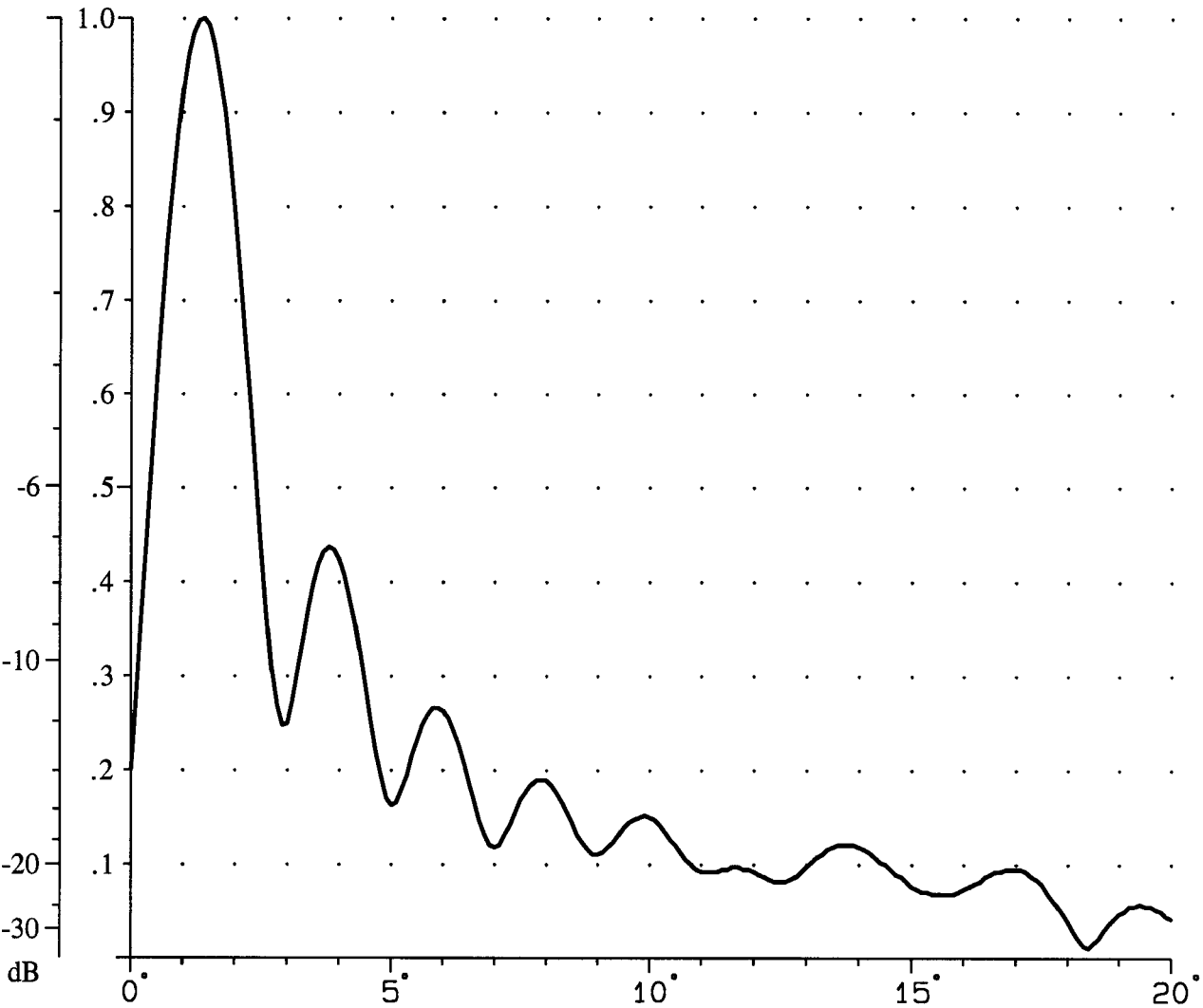
VERTICAL PATTERN

Frequency: 850.00 MHz
Amplitude pattern: 188

No.	Distance (mm)	Rad.offset (mm)	Phase (°)	Power (times)
10	1100	0	278.0 -90	1.00
9	1100	70	154.0 -90	1.00
8	1100	0	215.0 -90	1.00
7	1100	70	162.0 -90	1.00
6	1100	0	292.0 -90	1.00
5	1100	0	141.0	1.00
4	1150	0	116.0	1.00
3	1100	0	93.0	1.00
2	1100	70	0.0	1.00
1	0	0	17.0	1.00

Omni-dir: 13.42 dB

const.
Comp= 72 %



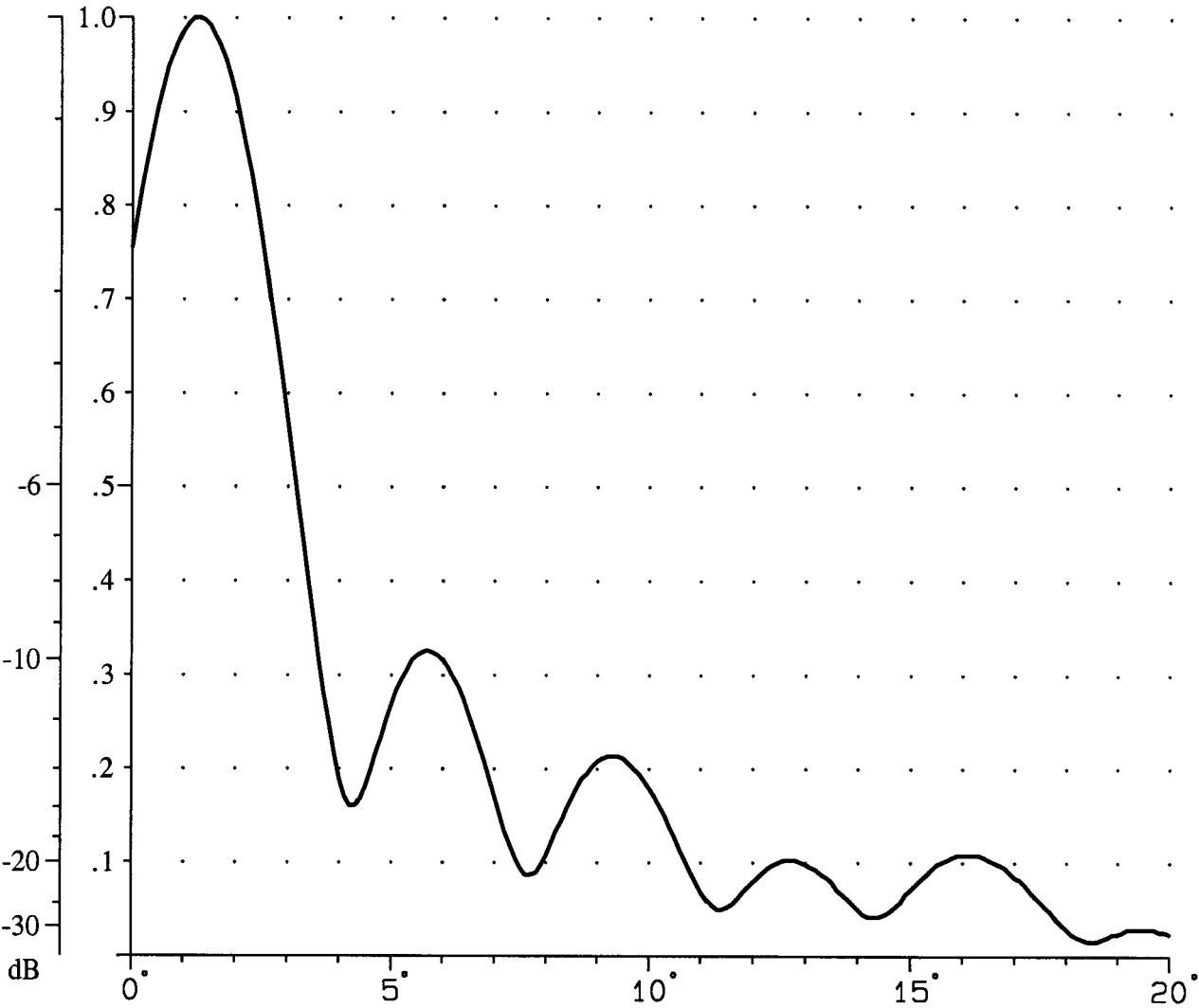
29-08-2006	DVB Transmitting Antenna Channel 68 BJERKREIM Directions 80°+170°+350°	Type No.
KATHREIN BCA-Ob		75913481-1

VERTICAL PATTERN

Frequency: 490.00 MHz
Amplitude pattern: 181

No.	Distance (mm)	Rad.offset (mm)	Phase (°)		Power (times)
10	1100	0	142.9	-90	1.00
9	1100	70	66.8	-90	1.00
8	1100	0	97.4	-90	1.00
7	1100	70	62.2	-90	1.00
6	1100	0	132.5	-90	1.00
5	1100	0	79.0		1.00
4	1150	0	60.0		1.00
3	1100	0	42.1		1.00
2	1100	70	-16.1		1.00
1	0	0	-11.0		1.00

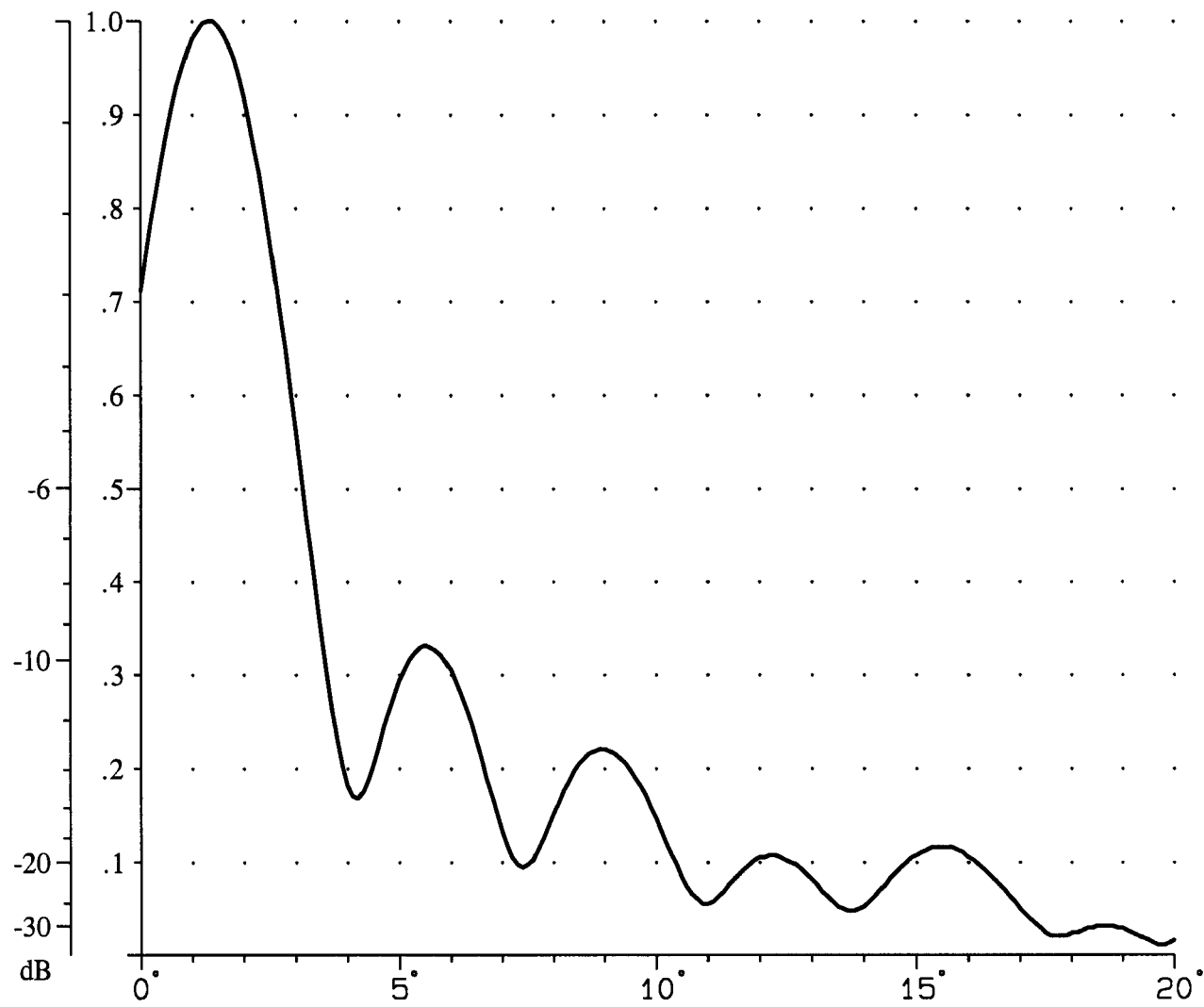
const.
Comp= 83 %



29-08-2006	DVB Transmitting Antenna Channel 23 BJERKREIM Direction 260°	Type No.
KATHREIN BCA-Ob		75913481-2

VERTICAL PATTERN

Frequency:		514.00 MHz				
Amplitude pattern:		181				
No.	Distance (mm)	Rad.offset (mm)	Phase (°)		Power (times)	
10	1100	0	154.3	-90	1.00	
9	1100	70	74.5	-90	1.00	
8	1100	0	106.5	-90	1.00	
7	1100	70	69.6	-90	1.00	
6	1100	0	143.4	-90	1.00	
5	1100	0	82.8		1.00	
4	1150	0	62.9		1.00	
3	1100	0	44.1		1.00	
2	1100	70	-16.9		1.00	
1	0	0	-11.5		1.00	
const.						
Comp= 87 %						



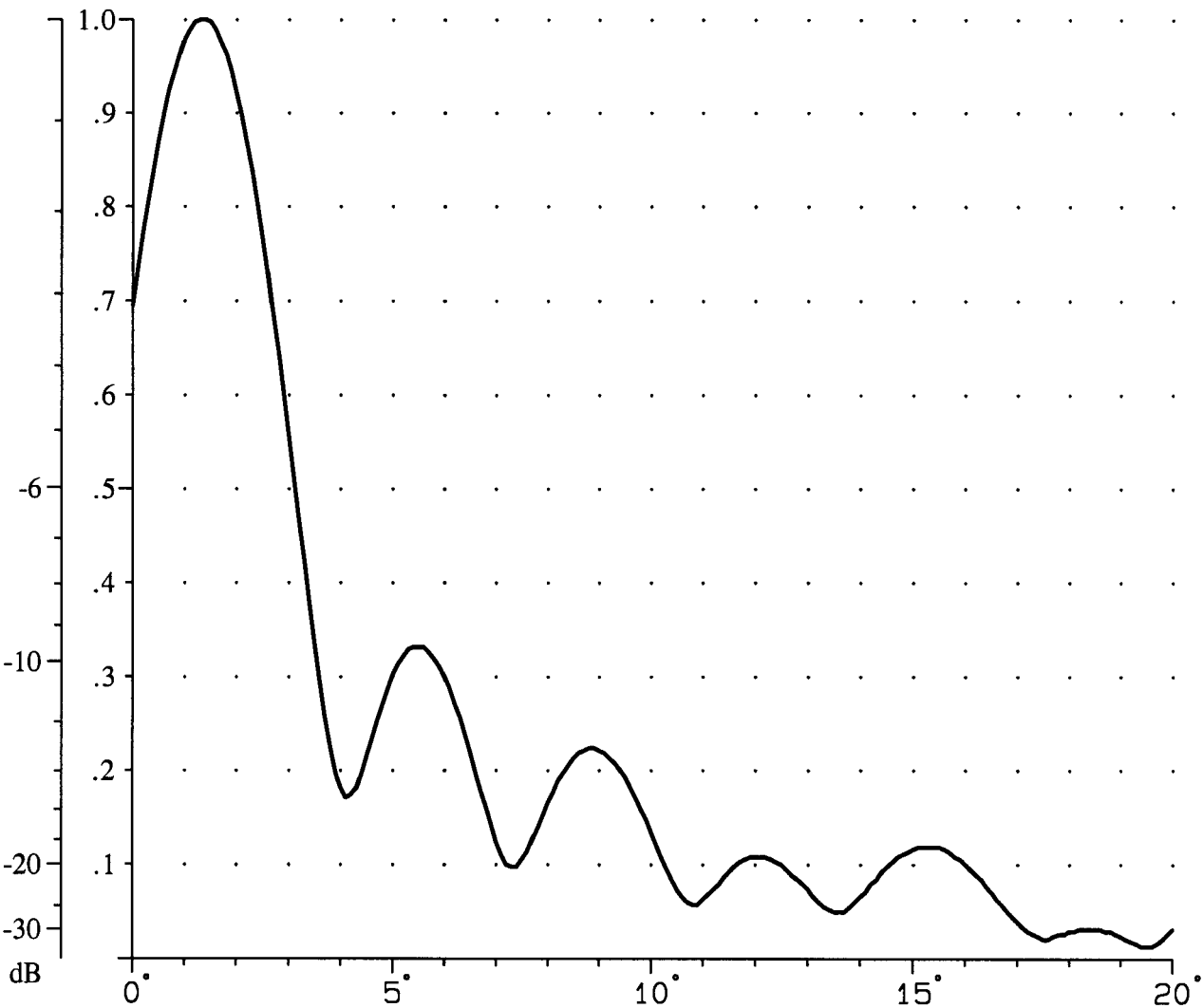
29-08-2006	DVB Transmitting Antenna Channel 26 BJERKREIM Direction 260°	Type No.
KATHREIN BCA-Ob		75913481-2

VERTICAL PATTERN

Frequency: 522.00 MHz
Amplitude pattern: 181

No.	Distance (mm)	Rad.offset (mm)	Phase (°)	Power (times)
10	1100	0	158.1 -90	1.00
9	1100	70	77.0 -90	1.00
8	1100	0	109.6 -90	1.00
7	1100	70	72.1 -90	1.00
6	1100	0	147.0 -90	1.00
5	1100	0	84.1	1.00
4	1150	0	63.9	1.00
3	1100	0	44.8	1.00
2	1100	70	-17.2	1.00
1	0	0	-11.7	1.00

const.
Comp= 88 %



29-08-2006	DVB Transmitting Antenna Channel 27 BJERKREIM Direction 260°	Type No.
KATHREIN BCA-Ob		75913481-2

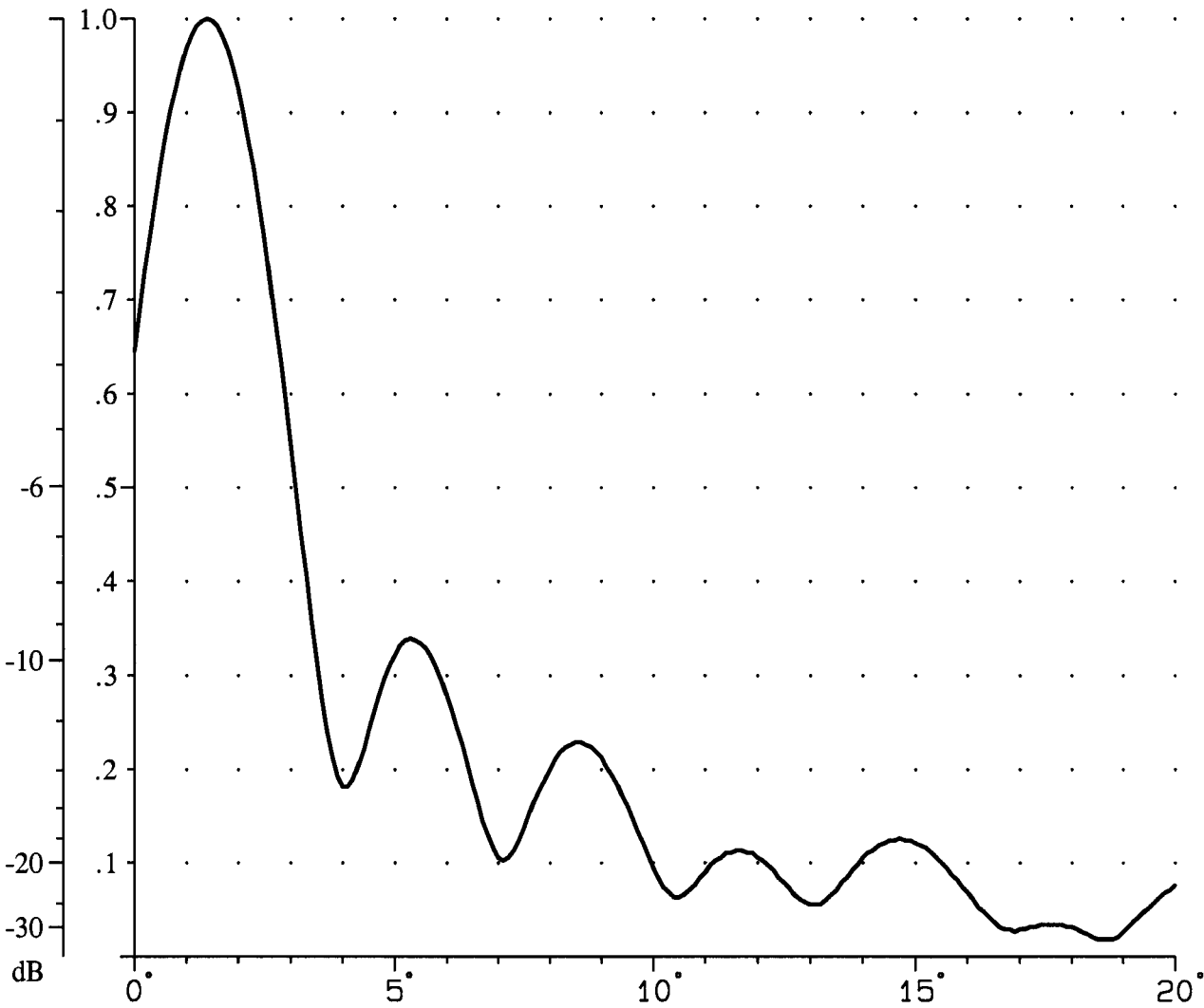
VERTICAL PATTERN

Frequency: 546.00 MHz

Amplitude pattern: 182

No.	Distance (mm)	Rad.offset (mm)	Phase (°)		Power (times)
10	1100	0	169.5	-90	1.00
9	1100	70	84.7	-90	1.00
8	1100	0	118.8	-90	1.00
7	1100	70	79.6	-90	1.00
6	1100	0	157.9	-90	1.00
5	1100	0	88.0		1.00
4	1150	0	66.8		1.00
3	1100	0	46.9		1.00
2	1100	70	-18.0		1.00
1	0	0	-12.2		1.00

const.
Comp= 90 %

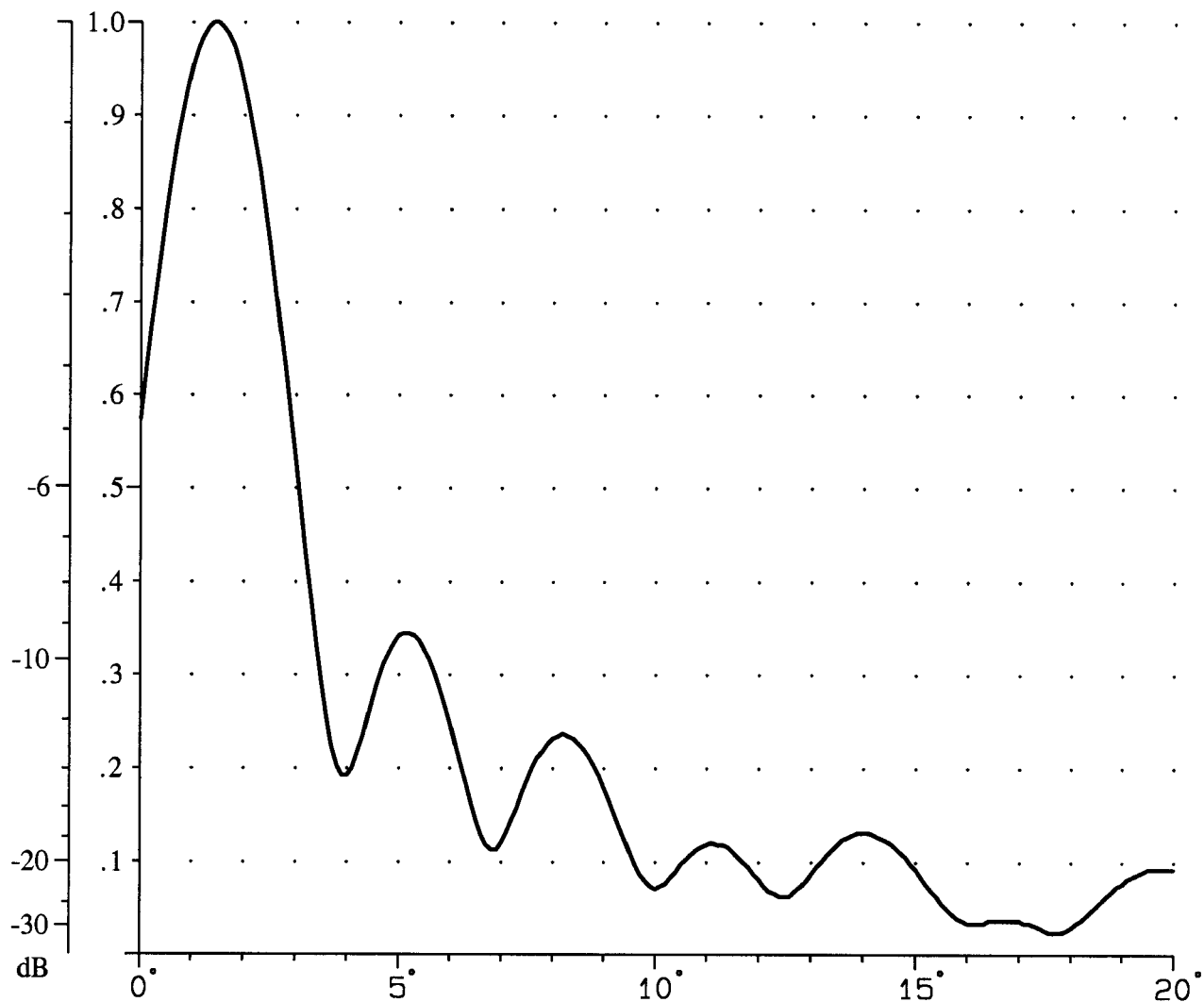


29-08-2006	DVB Transmitting Antenna Channel 30 BJERKREIM Direction 260°	Type No.
KATHREIN BCA-Ob		75913481-2

VERTICAL PATTERN

Frequency:		578.00 MHz				
Amplitude pattern:		183				
No.	Distance (mm)	Rad.offset (mm)	Phase (°)		Power (times)	
10	1100	0	184.7	-90	1.00	
9	1100	70	95.0	-90	1.00	
8	1100	0	131.0	-90	1.00	
7	1100	70	89.5	-90	1.00	
6	1100	0	172.5	-90	1.00	
5	1100	0	93.2		1.00	
4	1150	0	70.7		1.00	
3	1100	0	49.6		1.00	
2	1100	70	-19.0		1.00	
1	0	0	-12.9		1.00	

const.
Comp= 91 %



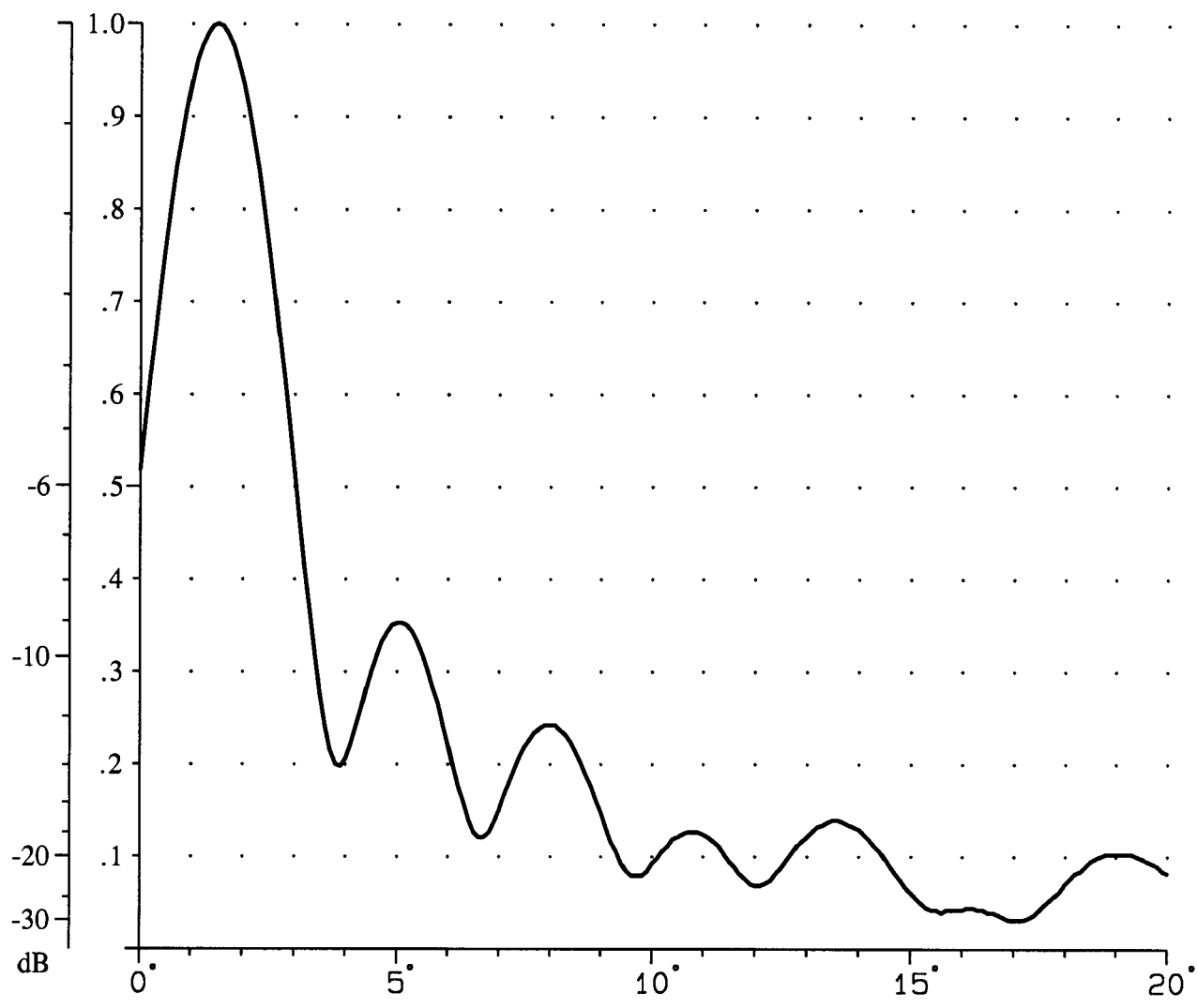
29-08-2006	DVB Transmitting Antenna Channel 34 BJERKREIM Direction 260°	Type No.
KATHREIN BCA-Ob		75913481-2

VERTICAL PATTERN

Frequency: 602.00 MHz
Amplitude pattern: 183

No.	Distance (mm)	Rad.offset (mm)	Phase (°)	Power (times)
10	1100	0	196.1 -90	1.00
9	1100	70	102.6 -90	1.00
8	1100	0	140.2 -90	1.00
7	1100	70	97.0 -90	1.00
6	1100	0	183.4 -90	1.00
5	1100	0	97.0	1.00
4	1150	0	73.7	1.00
3	1100	0	51.7	1.00
2	1100	70	-19.8	1.00
1	0	0	-13.5	1.00

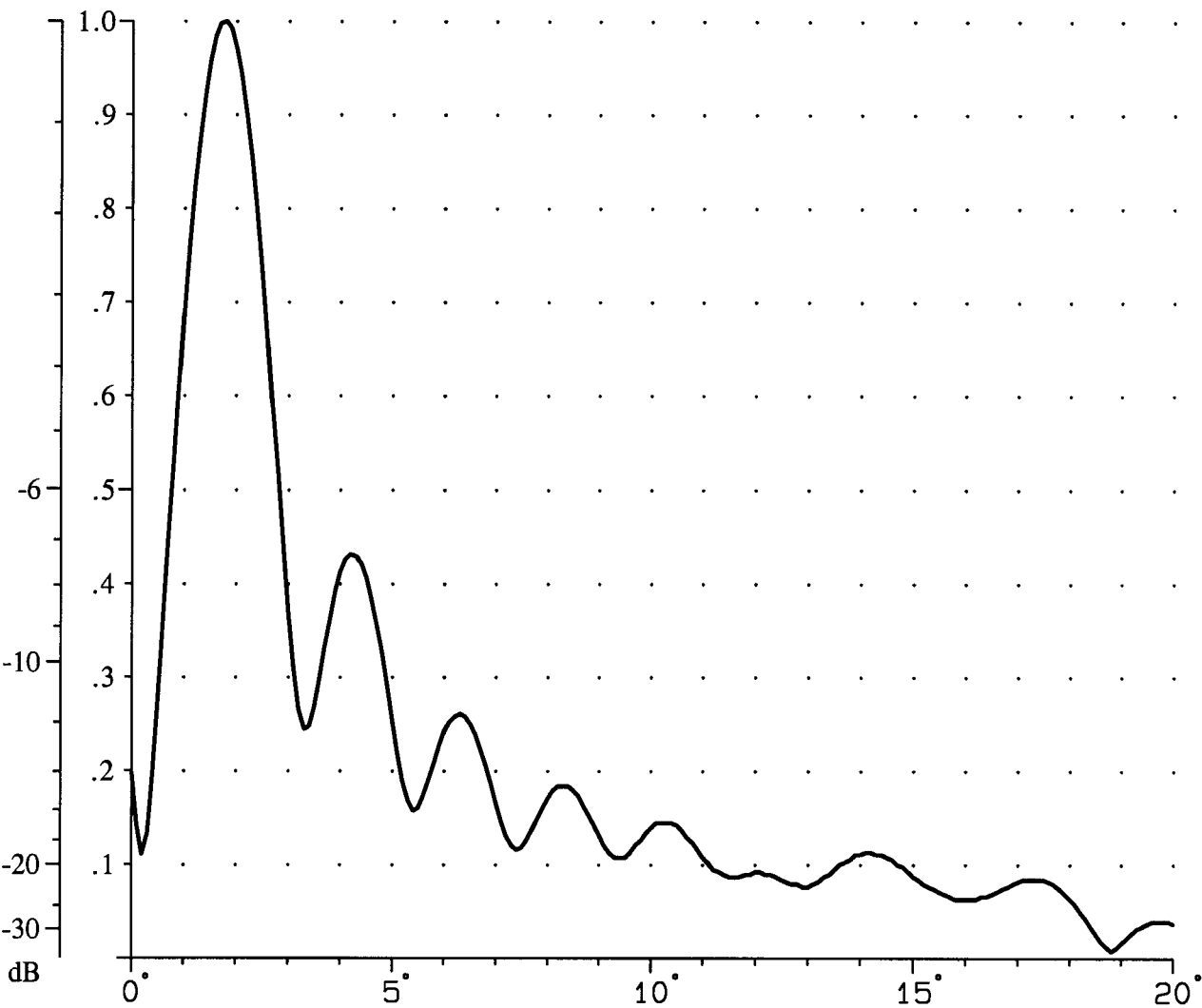
const.
Comp= 91 %



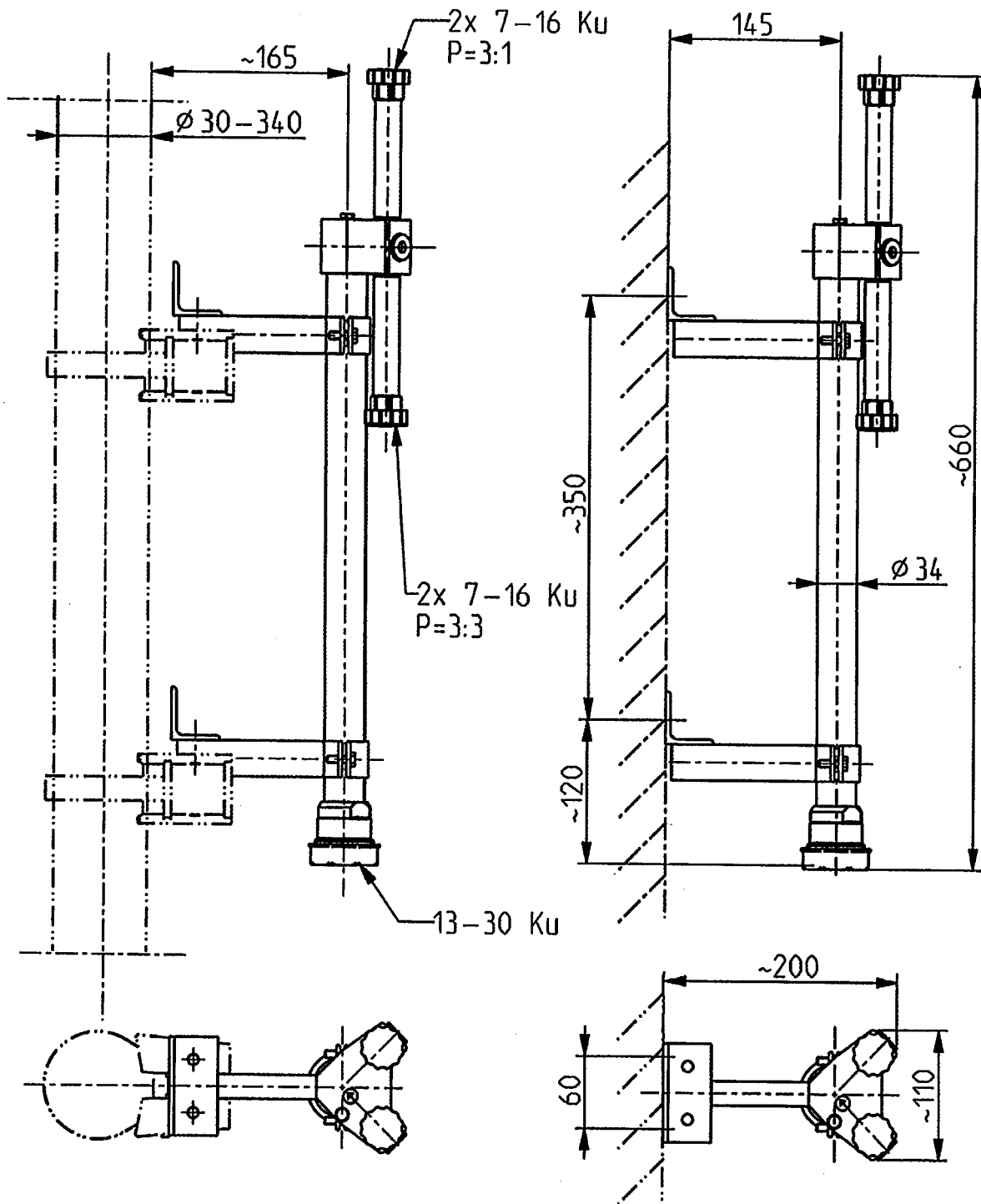
29-08-2006	DVB Transmitting Antenna Channel 37 BJERKREIM Direction 260°	Type No.
KATHREIN BCA-Ob		75913481-2


VERTICAL PATTERN

Frequency:		850.00 MHz			
Amplitude pattern:		188			
No.	Distance (mm)	Rad.offset (mm)	Phase (°)		Power (times)
10	1100	0	314.0	-90	1.00
9	1100	70	182.0	-90	1.00
8	1100	0	235.0	-90	1.00
7	1100	70	174.0	-90	1.00
6	1100	0	296.0	-90	1.00
5	1100	0	137.0		1.00
4	1150	0	104.0		1.00
3	1100	0	73.0		1.00
2	1100	70	-28.0		1.00
1	0	0	-19.0		1.00
const.					
Comp= 66 %					

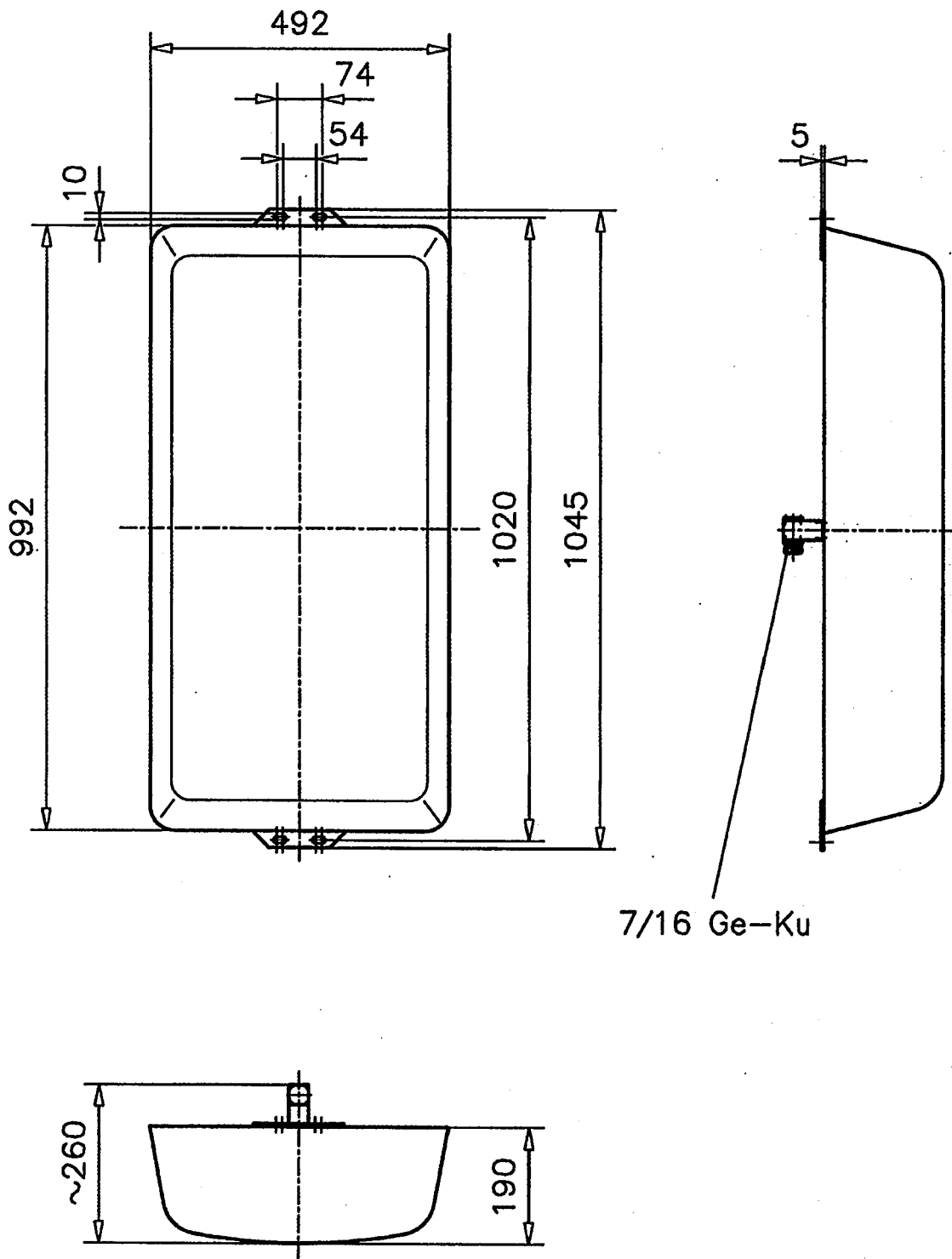


29-08-2006	DVB Transmitting Antenna Channel 68 BJERKREIM Direction 260°	Type No.
KATHREIN BCA-Ob		75913481-2







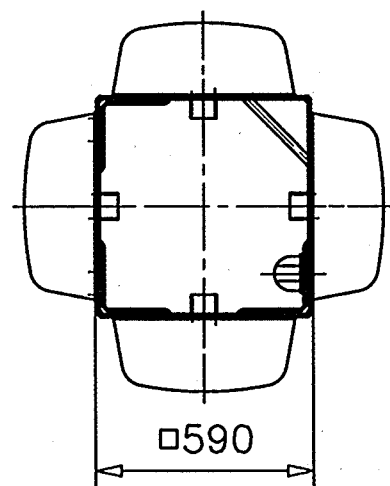
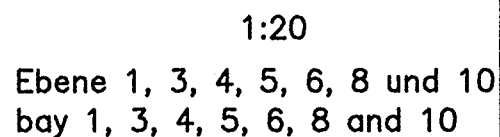
Modell	75110476 _ANT _VERT				Oberfl. RAL 7001 Silbergrau, Seidenm. Feinstruktur n. 936836		(mm²)
Status	In Arbeit				1		
Zeichnung	75110476 _ANT _VERT						
Status	In Arbeit				0		
					Allgemein- toleranz	Teilegewicht (g)	Material:
							

		Freimaßtoleranz	Rohgew. %	Oberfl.	
		Tag	Name		
Bearb.				Ant. Vert.	
Gepr.		21.9.83	<i>Licht</i>		
C	6504/6272 8.8.90			750 113	
b	6/AT 6051 27.5.86				
a	2 neu erst. 21.9.83				
Ausgabe		Anderung	Tag	Name	Blatt
					1
		KATHREIN-Werke KG			f/MHz: 470 - 860
		82 Rosenheim 2			

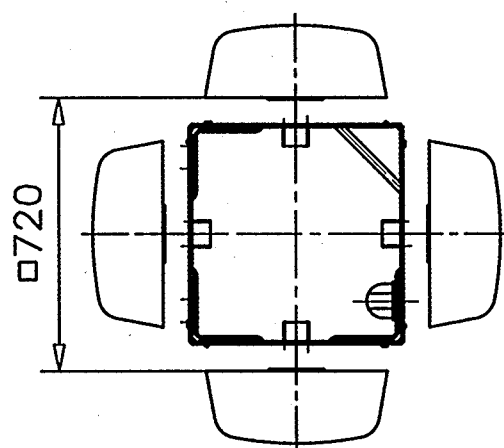


920409 M8x35 DIN933 ER (4x)
926156 A8,4 DIN125 ER (4x)
924130 M8 DIN934 ER (8x)

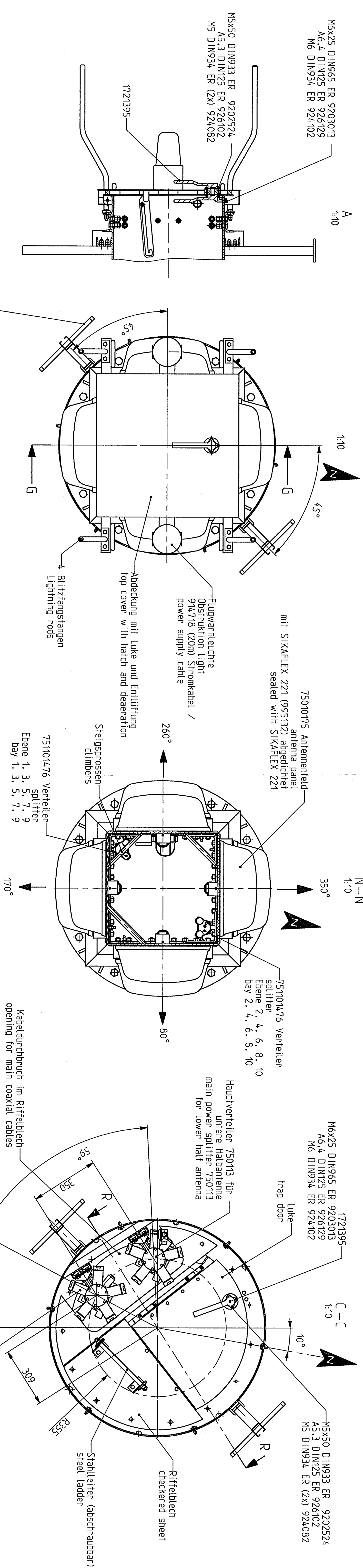
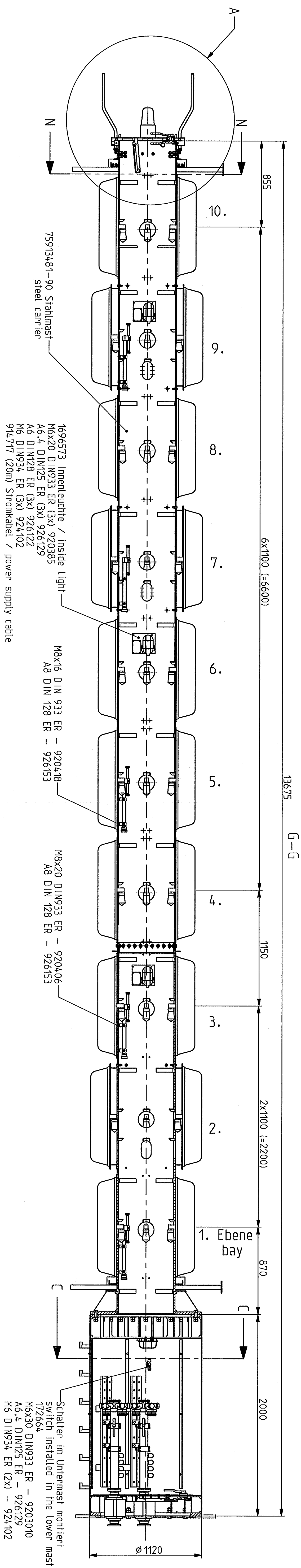
				Allgemein- toleranz	Rohgewicht ca. 9,5 kg	Oberfl.: steingrau RAL 7030				
					Tag	Name	Richtantenne Directional Antenna			Maßstab
			Bearb.	02.05.06	Heinrich H. 					1:10
			Gep.r.	02.05.06	Seebacher					
							750 10175			Blatt
										1
Aus- gabe	Aenderung	Tag	Name	KATHREIN 83022 Rosenheim			f/MHz: 470 – 860			



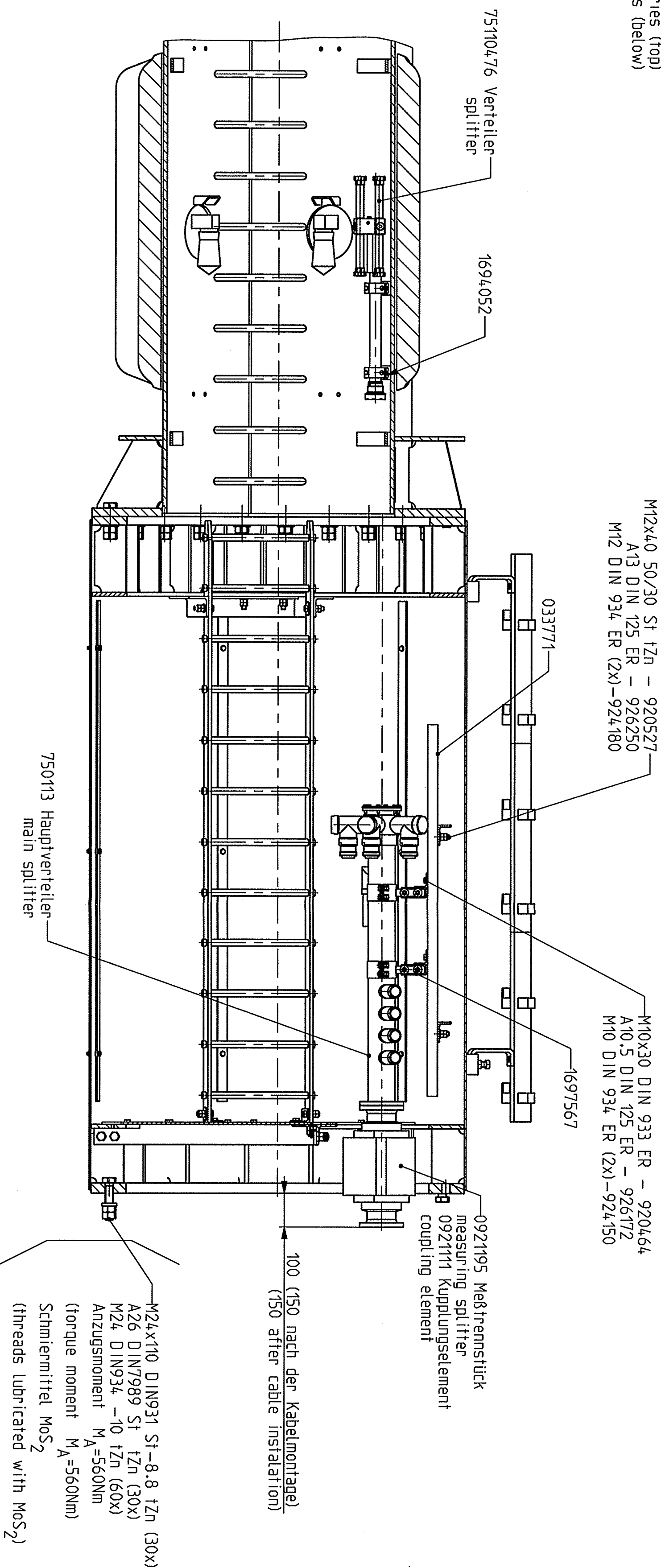
1:20
Ebene 2, 7 und 9
bay 2, 7 and 9



CAD generated



Endsperrle (oben) 07122053 / Top End Stop Spring activated
 Steigsperrle (oben) 07122054 / Bottom End Stop spring activated
 Befestigungsbügel (oben) 07122055 / fixing accessories (top)
 Befestigungsbügel (unten) 07122056 / fixing accessories (below)



Zubehör / accessoires:	
1x	Verkabelung/cabling
1x	Verpackungsaufkleber/packaging sticker
400x	Kabelbinder/cable strap
100x	Kabelbinder/cable strap

ER = stainless steel
tzn = hot dip galvanized

[illegible]

