

NavAid Service Volumes (DME, VOR and TACAN



Federal Aviation
Administration



Presented to: Aeronautical Charting Meeting

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BACKGROUND

- **VOR MON Program will implement new VOR service volumes to achieve the advertised VOR service above 5,000 feet AGL**
- **NextGen DME Program will implement new DME service volumes to achieve advertised DME-DME RNAV service**
- **Legacy service volumes will also be maintained**
- **New service volumes are frequency protected and evaluated for coverage**



DISCUSSION

- **Current DME, VOR and TACANs that are collocated facilities share the same service volume**
 - Identified as VOR/DME or VORTAC
- **New service volumes will be implemented differently for each NavAid**
 - A VOR/DME may have different service volumes for each NavAid
 - A VORTAC may have different service volumes for each NavAid

ACTIVITIES

- **New DME service volumes are primarily for DME-DME RNAV capability**
 - ARINC 424 adopted standards for these new service volumes and packing instructions so DME-DME aircraft can use them appropriately
- **A NASR change is pending to implement the different service volumes**

UPDATES

- **Changes to NASR have been developed**
 - An “SSV” field will be added to the TACAN/DME portion of the NavAid record
 - Functional Testing has completed
 - Integration and Regression Testing continues
- **NASR changes have a planned release date of 7/10/21**
 - Initial deployment will copy existing SSV values to the TACAN/DME SSV field
 - New service volumes may be populated as early as the next 56-day cycle

Current eNASR ADW VORTAC

NAVAID ADW					
General		Types		Navigation Use	
General Information					
NAS Use:	<input checked="" type="checkbox"/>	Monitor Category Code:	1	Auto Voice ID:	<input checked="" type="checkbox"/>
Low Altitude Nav On High Chart:	<input type="checkbox"/>	Public Use:	<input checked="" type="checkbox"/>	HIWAS:	<input type="checkbox"/>
Pitch:	<input type="checkbox"/>	Catch:	<input type="checkbox"/>	SUA ATCAA:	<input type="checkbox"/>
Responsible FSS:	DCA	NOTAM Accountability ID:	ADW	Simultaneous Voice:	<input type="checkbox"/>
Frequency MHz:	113.1	Voice Call:	NONE	Frequency Used For Approach Control:	<input type="checkbox"/>
Frequency Used For ATIS:	<input type="checkbox"/>	Altitude:	LOW	Class Code:	L - VORTACW
Phone:		Restriction:	<input type="checkbox"/>	Hours:	
Owner Code:	F	Owner Name:	FEDERAL AVIATION ADMIN	Operator Name:	FEDERAL AVIATION ADMIN
Operator Code:	F				
Magnetic Variation					
Variation:	10	Direction:	W	Source:	AVN-160
Year:	1995				
Domestic NAVAID					
High Altitude ARTCC:	ZDC	Low Altitude ARTCC:	ZDC		
International NAVAID					
Responsible Agency:		VFR Facility ID:		IFR Facility ID:	
Colocated Communication Outlet					
Comm Loc ID:		Type:		Associated FSS:	

Future eNASR ADW VORTAC

NAVAID ADW			
General Typ... Navigation Use			
General Information			
NAS Use:	<input checked="" type="checkbox"/>	Monitor Category Code:	1
Low Altitude Nav On High Chart:	<input type="checkbox"/>	Public Use:	<input checked="" type="checkbox"/>
Pitch:	<input type="checkbox"/>	Catch:	<input type="checkbox"/>
Responsible FSS:	DCA	NOTAM Accountability ID:	ADW
Frequency MHz:	113.1	Voice Call:	NONE
Frequency Used For ATIS:	<input checked="" type="checkbox"/>	Class Code:	L - VORTACW
Phone:		Restriction:	<input type="checkbox"/>
Owner Code:	F	Owner Name:	FEDERAL AVIATION ADMIN
		Auto Voice ID:	<input checked="" type="checkbox"/>
		HIWAS:	<input type="checkbox"/>
		SUA ATCAA:	<input type="checkbox"/>
		Simultaneous Voice:	<input type="checkbox"/>
		Frequency Used For Approach Control:	<input type="checkbox"/>
		VOR SSV?	LOW ALT (L)
		Hours:	
		Operator Name:	FEDERAL AVIATION ADMIN
Magnetic Variation			
Variation:	10		
Direction:	W		
Source:	AVN-160		
Year:	1995		
Domestic NAVAID			
High Altitude ARTCC:	ZDC		
Low Altitude ARTCC:	ZDC		
International NAVAID			
Responsible Agency:			
VFR Facility ID:			
IFR Facility ID:			
Colocated Communication Outlet			
Comm Loc ID:			
Type:			



Future eNASR ADW VORTAC (page 2)

NAVAID ADW

General Typ... Navigation Use

Non VOR Type

Identification Signal: Quadrant Identifier: Power Output: Fan Marker Shape:

Z Marker Available:

Bearing:

TACAN

Channel:	078X	Frequency:	Latitude:	38 - 48 - 25.99N	Longitude:	76 - 51 - 58.52W	
Status:	OPERATIONAL RESTRICTED	Status Date:	2018 - 02 - 06	Survey Date:	2012 - 04 - 13	Source:	AIR FORCE

DME SSV?: DME
HIGH
(DH)

DME

Channel: Frequency: Latitude: Longitude:

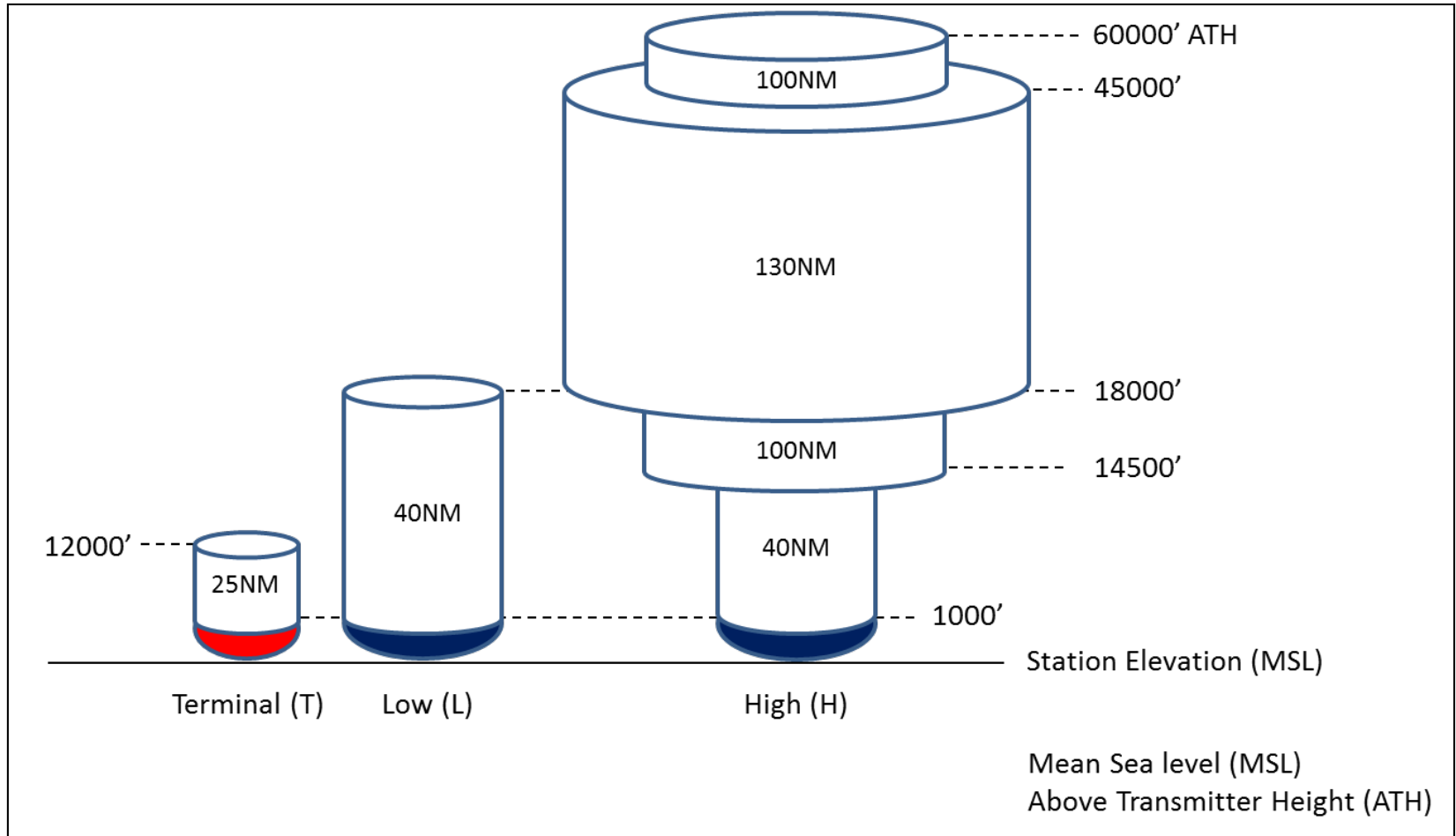


Future eNASR DCU VOR/DME (page 2)

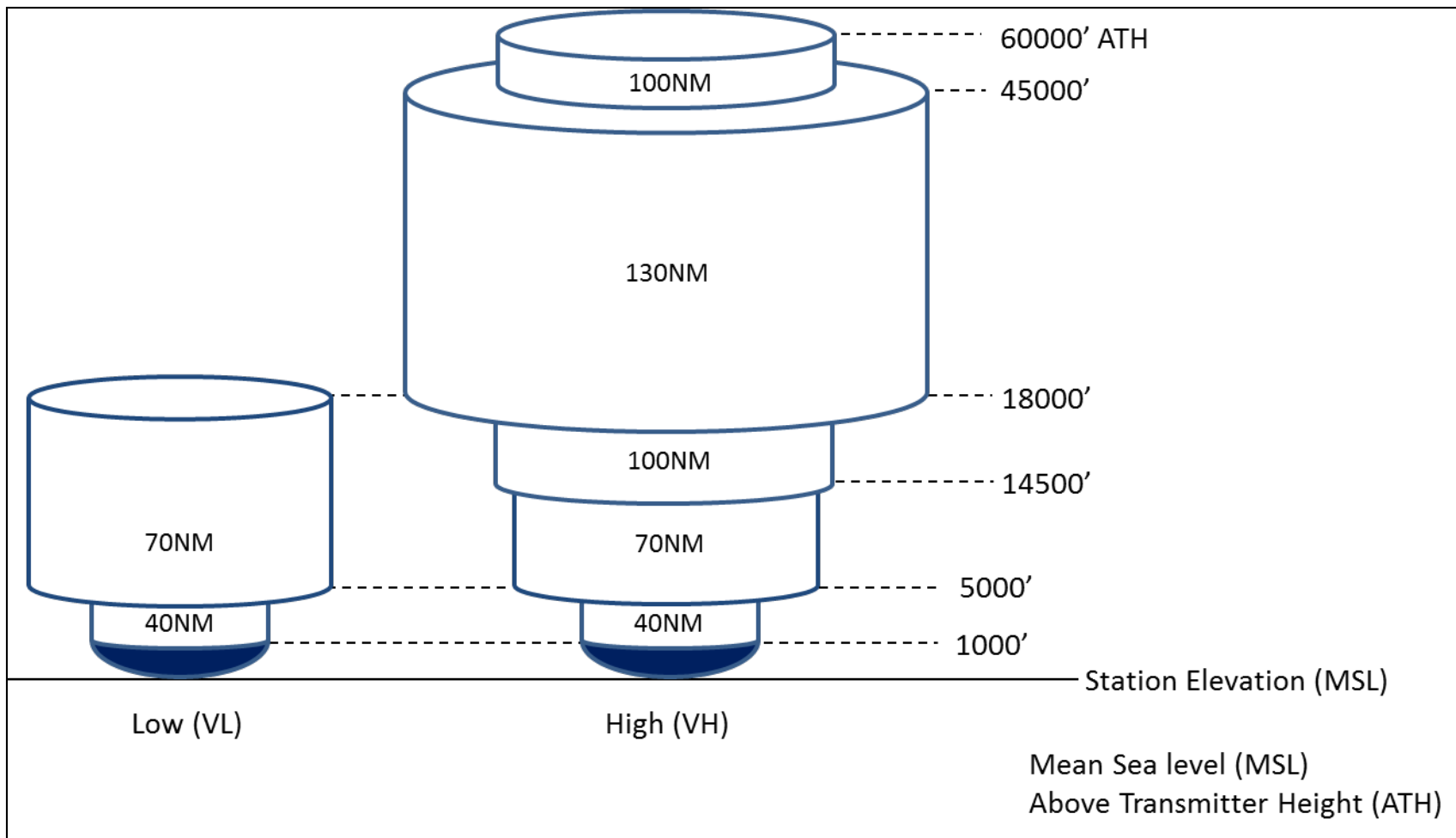
Identification Signal:	Quadrant Identifier:	Power Output:	Fan Marker Shape:
Z Marker Available: <input type="checkbox"/>	Bearing:		
TACAN			
Channel:	Frequency:	Latitude:	Longitude:
Status:	Status Date:	Survey Date:	Source:
DME SSV:			
DME			
Channel:	075X	Frequency:	Latitude: 34 - 38 - 53.9324N
			Longitude: 86 - 56 - 22.2459W
Status:	OPERATIONAL IFR	Status Date:	Survey Date: 2017 - 03 - 09
			Source: 3RD PARTY SURVEY
DME SSV:	LOW ALT (L)		



LEGACY SERVICE VOLUMES



NEW VOR SERVICE VOLUMES



NEW DME SERVICE VOLUMES

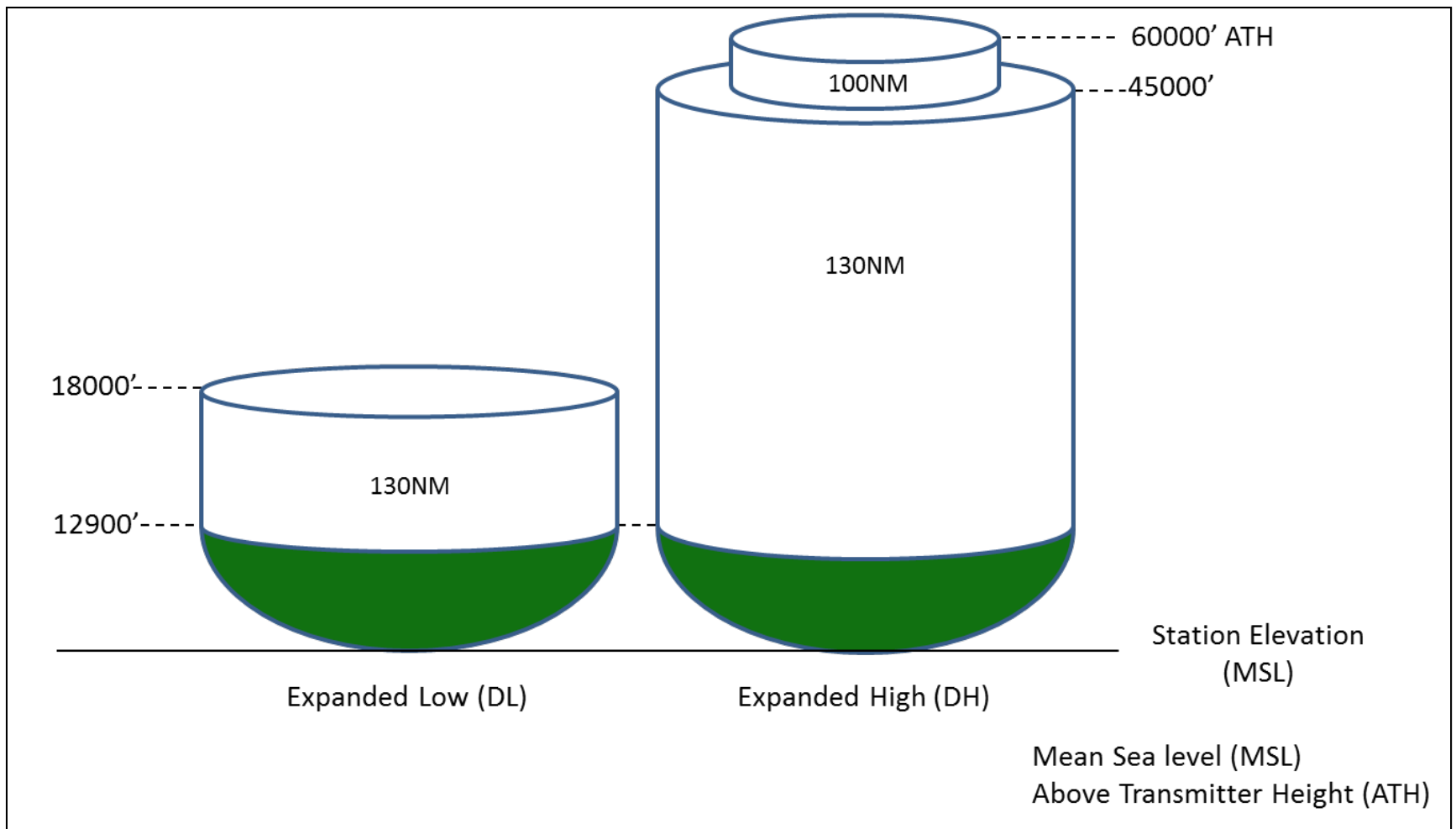


Chart Supplement Legend

RADIO CLASS DESIGNATIONS

VOR/DME/TACAN Standard Service Volume (SSV) Classifications

SSV Class	Altitudes	Distance (NM)
(T) Terminal	1000' to 12,000'	25
(L) Low Altitude	1000' to 18,000'	40
(H) High Altitude	1000' to 14,500'	40
	14,500' to 18,000'	100
	18,000' to 45,000'	130
	45,000' to 60,000'	100
(VL) VOR Low	1000' to 5,000'	40
	5000' to 18,000'	70
(VH) VOR High	1000' to 5,000'	40
	5,000' to 14,500'	70
	14,500' to 18,000'	100
	18,000' to 45,000'	130
	45,000' to 60,000'	100
(DL) DME Low	12,900' to 18,000'	130
(DH) DME High	12,900' to 45,000'	130
	45,000' to 60,000'	100

NOTE: Additionally, (H) facilities provide (L) and (T) service volume and (L) facilities provide (T) service. Altitudes are with respect to the station's site elevation. Coverage is not available in a cone of airspace directly above the facility.

NOTE: All elevations shown are with respect to the station's site elevation (AGL). Coverage is not available in a cone of airspace directly above the facility.

NOTE: In some cases local conditions (terrain, buildings, trees, etc.) may require that the service volume be restricted. The public shall be informed of any such restriction by a Notice to Airmen (NOTAM).

The term VOR is, operationally, a general term covering the VHF omnidirectional bearing type of facility without regard to the fact that the power, the frequency protected service volume, the equipment configuration, and operational requirements may vary between facilities at different locations.

Chart Supplement A/FD airport entry

RADIO AIDS TO NAVIGATION. NOTAM FILE ORL. VHF/DF etc FSS.

(H) (DL) VORTAC 112.2 MCO Chan 59 N28°32.55' W81°20.12' at fld. 1110/8E.

(H) TACAN Chan 29 CBU (109.2) N28°32.65' W81°21.12' at fld. 1115/8E.

HERNY NDB (LOM) 221 OR N28°37.40' W81°21.05' 177° 5.4 NM to fld.

ILS/DME 108.5 I-ORL Chan 22 Rwy 18. Class IIE. LOM HERNY NDB.

ASR/PAR (1200-0400Z±)

Enroute Chart NAVAID Box

