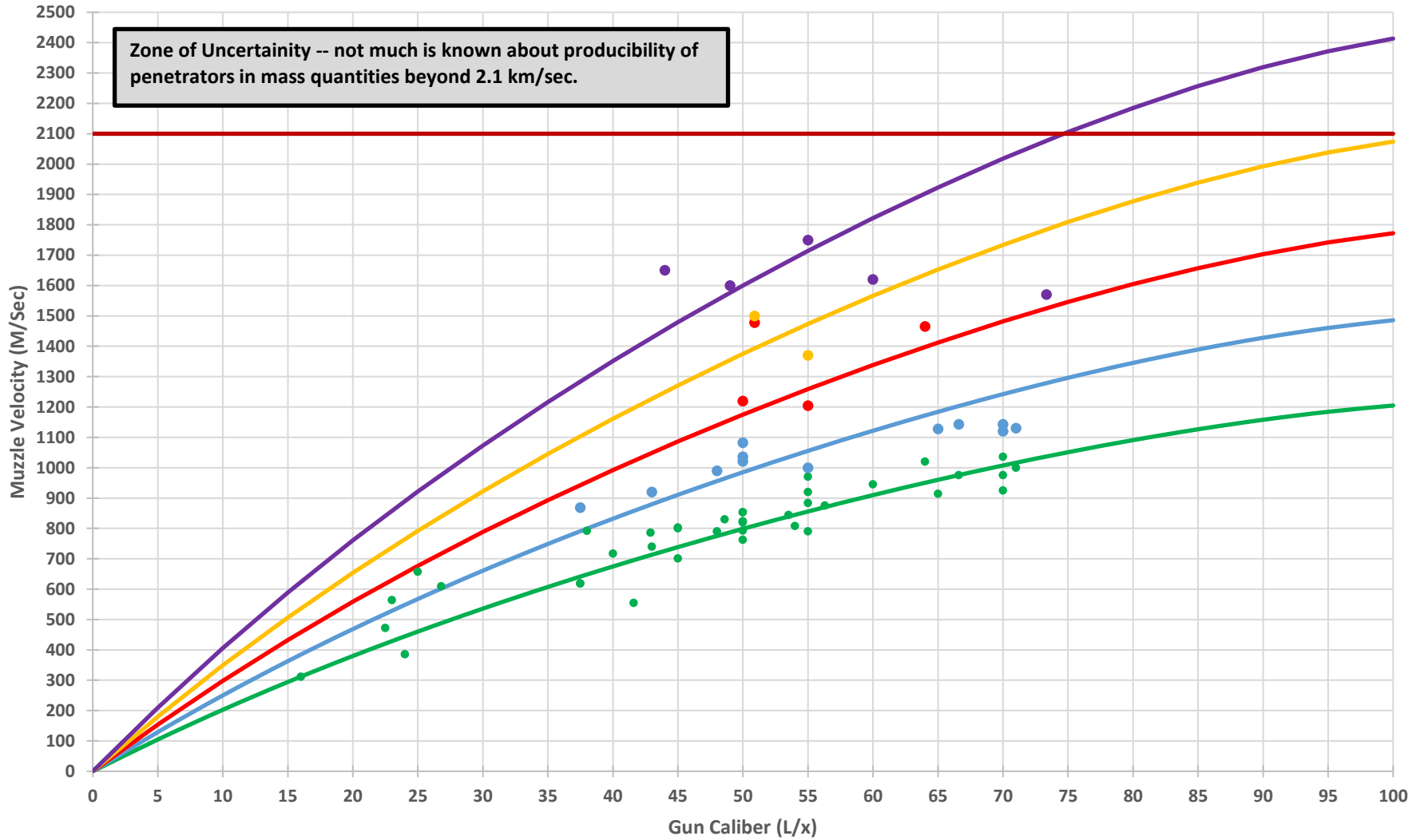


# Muzzle Velocity and Caliber



**Zone of Uncertainty -- not much is known about producibility of penetrators in mass quantities beyond 2.1 km/sec.**

- Actual AP/APC/HE
- German AP/HE Curve
- Actual APCR
- Est. APCR Curve
- Actual APDS
- Est. APDS Curve
- Actual APFSDS (Rifled)
- Est. APFSDS (Rifled) Curve
- Actual APFSDS (Smoothbore)
- Est. APFSDS (Smoothbore) Curve
- Zone of Unreliability

Baseline Curve %	Caliber (Lx)	APBC/HE Curve (Baseline)	APCR Curve (Estimated)	APDS Curve (Estimated)	APDFS (Rifled) Curve (Estimated)	APDFS (Smoothbore) Curve (Estimated)
0%	0	0	0	0	0	0
13%	5	105	129	154	180	210
25%	10	203	250	298	349	406
37%	15	294	363	433	506	589
48%	20	380	468	559	654	761
58%	25	460	567	677	792	922
67%	30	536	661	788	922	1,073
76%	35	607	749	893	1,045	1,216
84%	40	675	832	992	1,161	1,351
92%	45	738	911	1,086	1,271	1,479
<b>100%</b>	<b>50</b>	<b>799</b>	<b>985</b>	<b>1,175</b>	<b>1,375</b>	<b>1,600</b>
107%	55	856	1,055	1,259	1,473	1,714
114%	60	910	1,122	1,338	1,566	1,822
120%	65	960	1,184	1,412	1,653	1,923
126%	70	1,007	1,242	1,482	1,734	2,018
132%	75	1,051	1,296	1,546	1,809	2,105
137%	80	1,091	1,345	1,605	1,878	2,185
141%	85	1,127	1,389	1,657	1,939	2,257
145%	90	1,158	1,428	1,703	1,993	2,319
148%	95	1,184	1,460	1,742	2,038	2,372
151%	100	1,205	1,486	1,772	2,074	2,413

NOTE: Charts are based off using L50 entry as baseline and calculated using the percentage differences in the German AP/HE Curve to that L50 Baseline.

NOTE II: When introducing APDS/APDFS Sabot Rounds, subtract about 100~ m/sec from the velocity to account for the newness of the type (APDS in WW2, APDFS rounds in the late 1950s/early 1960s)

NOTE III: US Heavy Naval Guns generally have HE shells 60 to 100 m/sec faster than the AP shell for that gun. Use the APBC/HE curve as given for AP shells, and add 60-100 for HE shells.