thode Electrode Na	Material	Design	Surface Treatment	Surface Roughness	Comments	Location	
Red	304SS	25deg S	DPP		Our benchmark electrode	LLGun: which one	
Green	304SS	25deg S	DPP			HGun3 (Tunnel)	
Purple	304SS	25deg (?)	ion implanted		damaged	On Shelf - EEL?	
Yellow	304SS	25deg S	DPP		Needs touch up. Has mechanical damage	On Shelf	
Gray	304SS	25deg S	DPP		Repolished due to FE from OldLLGun2, looks good	On Shelf	
unlabeled		39deg	looks to be DPP		Label says "from 2nd LLGun 11-12-08" I hope it wasn't from gun	On Shelf	
BTLLPEG	304SS	25deg PHAT	DPP			On Shelf? Can't find	
Chalco	304SS	25deg S	None		39deg modified to 25degS but w/small hole. Needs polishing	Ken's Desk	
Mauve	304SS	25deg w/Lip	EP (Alex Metal)		outside shop: mottled finish: don't know if vacuum arc remelt 304	On Shelf	
Taupe	304SS	25deg w/Lip	EP (Alex Metal)		outside shop: mottled finish: don't know if vacuum arc remelt 304	On Shelf	
UV	304SS	25deg S	EP (Alex Metal)		Our shop? Never HV processed in HV Chamber	On Shelf	
Xray	304SS	25deg S	EP (Alex Metal)		Our shop? Tooling marks still visible	On Shelf	
Gold	316LN SS	25deg S	SC to 800 grit, then EP Texas			On Shelf	
Silver	316LN SS	25deg S	SC to 800 grit: then DPP to 1um			On Shelf	
Magenta	Ti	25deg S	DPP			On Shelf	
Blue	Ti	25deg w/Lip	DPP		Maria C. to analyze (8/10/09)	On Shelf	
Orange	Ti	25deg S	DPP			**?**	LLGun?
White	Ti	25deg S	None		labeled : vacuum melt Dropped; needs polishing	On Shelf	
Nb1	SC Niobium	25deg S	BCPx2		Died, could not recover Ops at high voltage	On Shelf	
Nb2	SC Niobium	25deg S	BCPx1		Died, could not recover Ops at high voltage	On Shelf	
NbFG1	FG Niobium	25 deg S	BCPx1				
NbFG2	FG Niobium	25 deg S	EP (Peter K.)				

	What's inside HGun2	nothing?
Ti = Ti-Alloy drawings specify Titanium 6Al-4V	What's inside LLGun2	Orange?
304SS: should be vacuum arc remelt but we might not have always specified this for some of electrodes like UV, taupe, etc.	What's inside LLGun1	Red?

S = Standard

EP = electro polished
DPP = diamond paste polish
BCP = buffered chemical polished
SC = silicon carbide

What process will we adhere to when making and installing a new electrode inside a gun?
0) purchase high-quality material, e.g., vacuum arc remelt, get paperwork from vendor….
1) shop to manufacture, give us specified finish
2) degrease
3) SC to 800 grit, degrease
4) DPP to 1um, degrease…….or…….. 4) BCP or EP
5) Measure surface roughness
6) HPR
7) Vacuum degas at 900C for XX minutes
8) high voltage process in specified manner