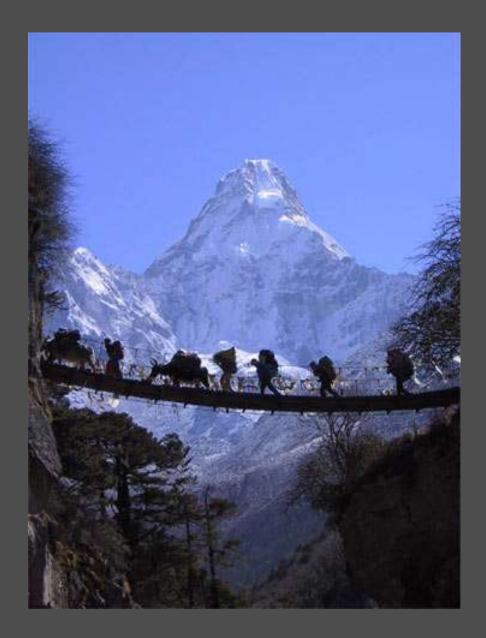
What is the highest gradient that we believe, today, can be used to build CLIC?

Base discussion on:

- HDS concept which is near ideal
- 'Classical' fatigue analysis and existing 10⁸ cycle data
- CTFII high-gradient test results
- Include all quantities that we will eventually have to face







Nominal	150 MV/m
$CuZr \sigma_{150} / \sigma_{fatigue}$	$1.09^{-1/2}$
Engineering margin	$0.8^{\frac{1}{2}}$
	128 MV/m



CTFII molybdenum	420 MV/m
Avoid melting	0.95
Conditioning overhead	0.95
Pulse length t ^{0.1}	0.8
HDS E_{surf}/E_{acc}	1/2.73
	111 MV/m



a is currently too low: estimate 1.5 to 1.75

H _{surface}	E _{surface}
128 MV/m	111 MV/m
.95 ²	0.9
116 MV/m	100 MV/m

To go higher in gradient,

- Smaller a/λ
- Shorter pulse