



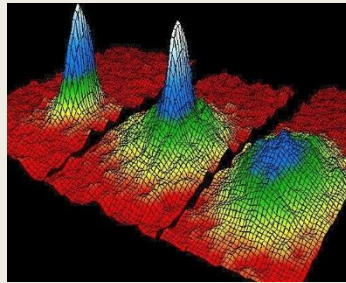
Distribution of profiles in relation to solitonic width for graphene in high power regime

XIX Meeting of Physics

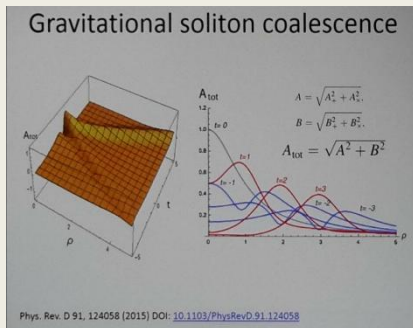
Solitons, present in nature



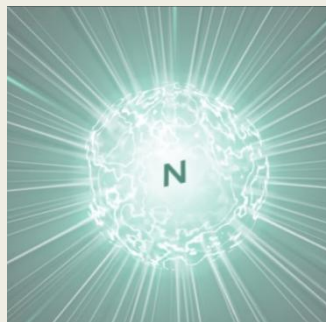
Surfing in Chicama/La Libertad-Perú



Bose-Einstein Condensate

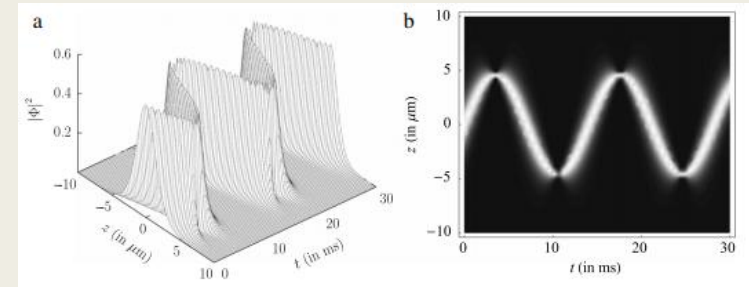


Gravitational wave

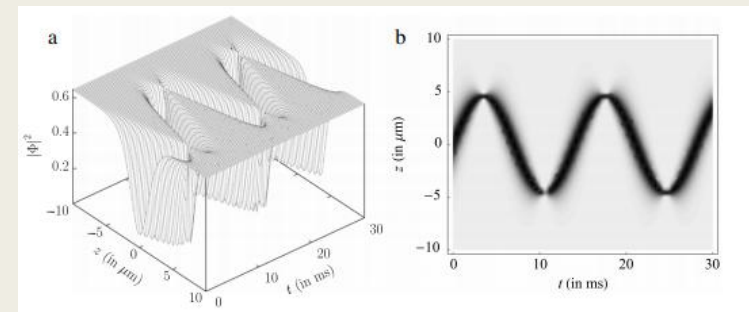


Magnetic monopole in Yang-Mills theory

Bright Soliton



Dark Soliton



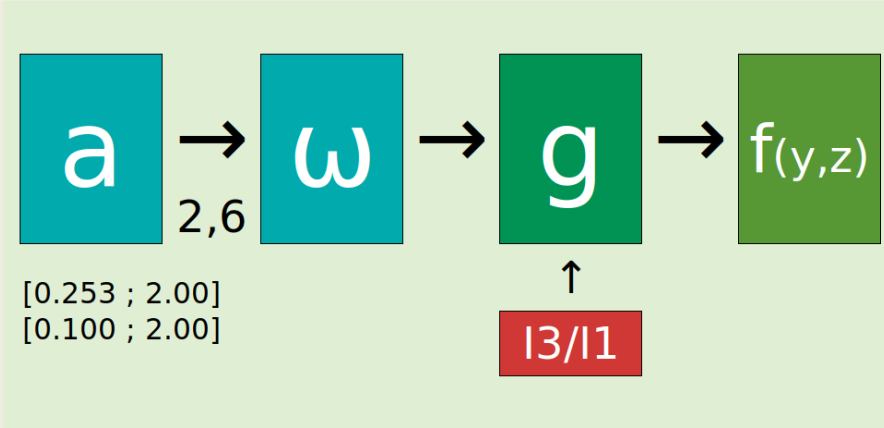
D. André Orna T¹, Rubén Bruna M²

¹Universidad Nacional Mayor de San Marcos. diego.orna@unmsm.edu.pe

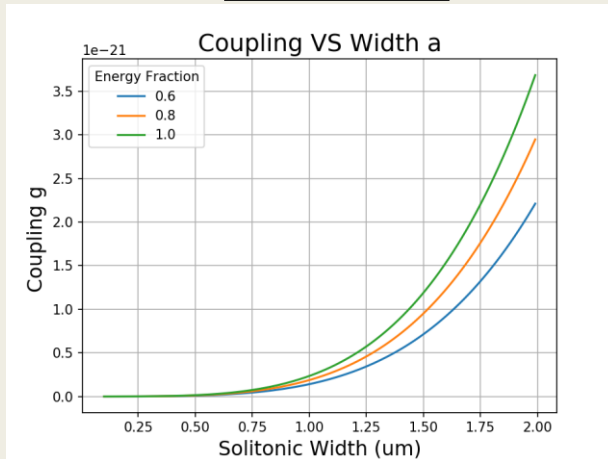
²Universidad Nacional Federico Villarreal. atomih@gmail.com



We do this:

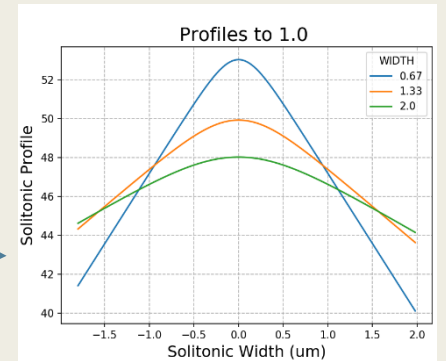
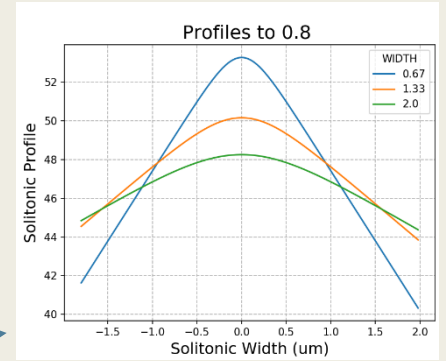
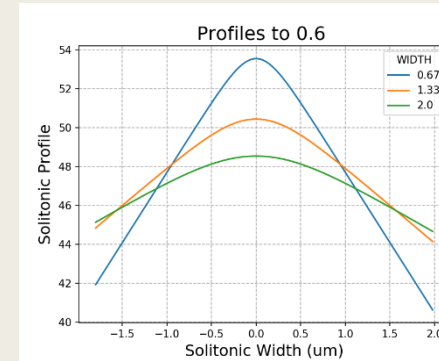


First result



proportional
 $g \propto a^4$

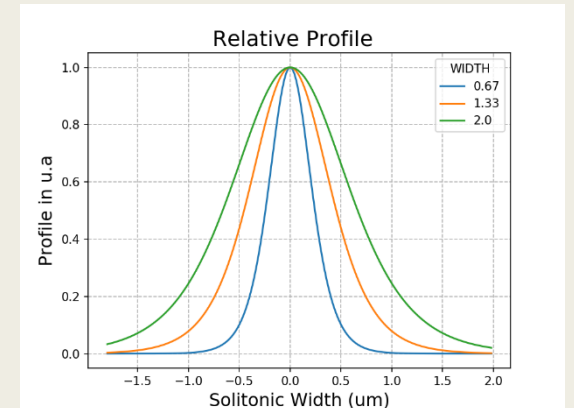
Second result

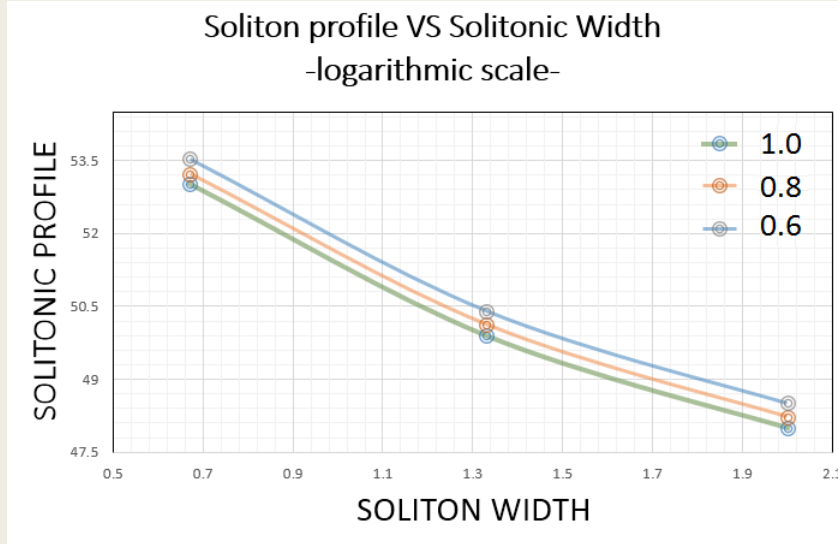


On a logarithmic scale.
The separations are remarkable

Third result

identical behavior





Width(um)	a=1.0	a=0.8	a=0.6
0.67	53.03	53.23	53.53
1.33	49.90	50.13	50.41
2.00	48.00	48.23	48.51

Application

Characterize the thickness of the material with non-linear susceptibility

$$\varepsilon = \frac{I_3}{I_1} = \frac{\int_{-d_{gr}/2}^{d_{gr}/2} dx |A(x)|^4}{\int_{-\infty}^{\infty} |A(x)|^2} = \frac{\Phi|_{-d_{gr}/2}^{+d_{gr}/2}}{constant}$$

