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BPS Boojums in N=2 supersymmetric gauge theories

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We study 1/4 Bogomol'nyi-Prasad-Sommerfield (BPS) composite solitons of vortex strings, domain walls and boojums in N=2 supersymmetric Abelian gauge theories in four dimensions. We obtain both numerical and analytical solutions to the 1/4 BPS equations with the finite gauge coupling constant. We examine various configurations and clarify how the shape of the boojum depends on the coupling constants and moduli parameters. We find a semi-local boojum with a size moduli which appears when the semi-local string ends on the domain wall. Dyonic solutions are also obtained. When the configuration is extended to the dyonic case, the domain wall becomes an electric capacitor storing electric charges on its skin.

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