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Ferro-Orbitally Ordered Stripes in Systems with Alternating Orbital Order

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We establish a novel mechanism of stripe formation in doped systems with alternating t_{2g} orbital order. The stripe takes the form of a ferro-orbitally ordered domain wall separating domains with staggered order and allowing for deconfined motion of holes along the stripe. At a finite level of hole concentration this gives rise to the stability of this solitonic type of stripes, while we show that the phase change of the staggered order plays a minor role in orbitally ordered systems. These results shed new light on the physics of doped materials in which orbital degeneracy is present.