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Beyond of the Poincaré Chern-Simons hypergravity, in (2+1) dimensions.

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We study the minimal coupling of Chern-Simons gravity based on the Maxwell symmetry with massless spin-5/2 gauge fields, in three dimensions. It is shown the simplest hyper-Maxwell super-algebra and its corresponding Chern-Simons gravity, which contains a massless spin-2 fields which is coupled with a massless Majorana fermion spin-5/2. For certain combinations of osp(1/4) and sp(4) algebras, we find two different alternatives for hypersymmetric extensions of the Maxwell algebra, using the Inönü-Wigner contraction procedure. The hyper-Maxwell Chern-Simons actions was constructed for each case, which show interactions of non-propagating spin-4 fields with one or two spin-5/2 gauge fields.

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