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Title: Complete spacelike CMC hypersurfaces in a Lorentzian space form

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Let $x : M^n \rightarrow \overline{M}_1^{n+1}(c)$ be a complete spacelike hypersurface immersed into a Lorentzian space form, where $\overline{M}_1^{n+1}(c)$ is a Lorentz–Minkowski space $\mathbb{L}^{n+1} = \mathbb{R}_1^{n+1}$, a de Sitter space $\mathbb{S}_1^{n+1} \subset \mathbb{R}_1^{n+2}$ or an anti-de Sitter space $\mathbb{H}_1^{n+1} \subset \mathbb{R}_2^{n+2}$, according to $c = 0$, $c = 1$ or $c = -1$, respectively. Let $\phi = \langle x, a \rangle$ and $\psi = \langle \vec{H}, a \rangle$, where \vec{H} is the mean curvature vector field of M^n and a is a fixed nonzero vector in the corresponding pseudo-Euclidean space. We prove that if M^n has constant mean curvature (CMC), and $\phi = \lambda\psi$, for some real number λ , then M^n is a spacelike isoparametric hypersurface of $\overline{M}_1^{n+1}(c)$. Furthermore, it is either a totally umbilical hypersurface or a hyperbolic cylinder.

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