A Kazdan-Warner type identity for the σ_k curvature on locally conformally flat manifolds

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This article appeared in *C. R. Acad. Sci. Paris, Ser.* I 342(2006), pp. 475–478. Lines 2–5 of **Remark 4** contain an inadvertent mis-statement. The sentences there should read

For the Christoffel-Minkowski problem, one looks for a convex hypersurface whose k^{th} elementary symmetric function of the principal radii at its point with normal vector ν is $CW_k(\nu)$. Let $u(\nu)$ denote the support function of the surface, then $CW_k(\nu) = \sigma_k(u_{ab}(\nu)+u(\nu)\delta_{ab})$, and $A_{ab} := u_{ab}(\nu) + u(\nu)\delta_{ab}$ satisfy the conclusion in (ii). Thus it follows from (4) that

$$\int_{\mathbf{S}^n} \nu_i CW_k(\nu)\mathbf{dvol}_{\mathbf{S^n}}(\nu) = \int_{\mathbf{S^n}} \nu_\mathbf{i}\sigma_\mathbf{k}(\mathbf{u_{ab}}(\nu)+\mathbf{u}(\nu)\delta_\mathbf{ab})\mathbf{dvol}_{\mathbf{S^n}}(\nu) = -\frac{\mathbf{1}}{\mathbf{n}}\int_{\mathbf{S^n}} \langle \nabla\nu_\mathbf{i}, \nabla\sigma_\mathbf{k}\rangle \mathbf{dvol}_{\mathbf{S^n}}(\nu) = \mathbf{0},$$

for $k < n$. ....