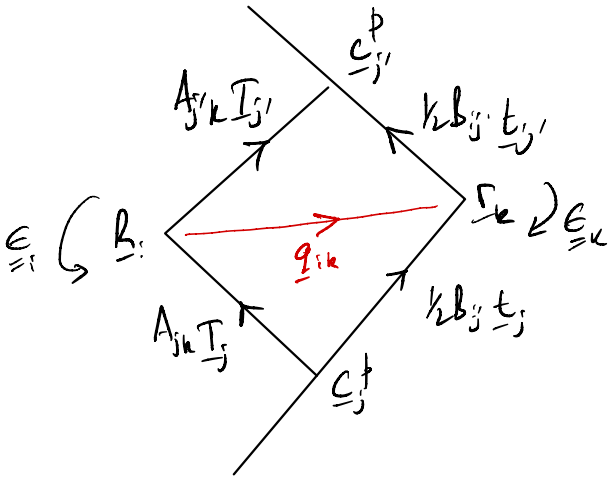
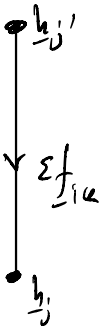
Peripheral kites V2.

24.3.22





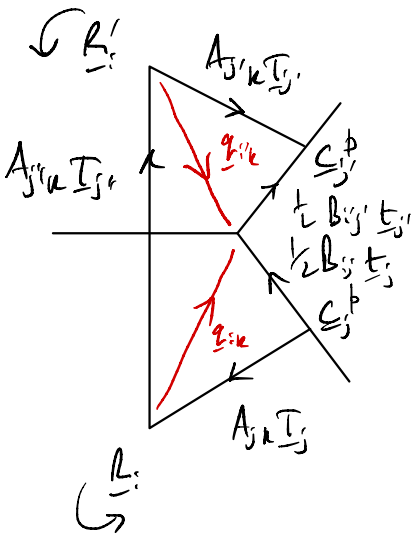
Associate $\underline{h}_{j'}$ with 

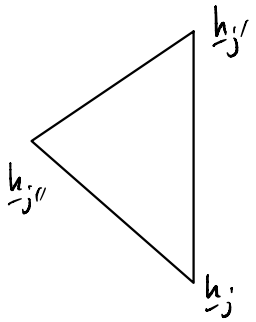
and $\underline{h}_j$ with 

$$\underline{q}_{ik} = \underline{r}_k - \underline{R}_i = A_{j'k}\underline{T}_{j'} - \tfrac{1}{2}B_{j'}\underline{t}_{j'}$$
$$= -A_{jk}\underline{T}_j + \tfrac{1}{2}B_j\underline{t}_j$$

$$\left(\mathrm{div}^{\vee}\underline{h}\right)_k = \frac{1}{\epsilon_k}\left(\left[-A_{j'k}\,\underline{\epsilon}_k\cdot\underline{T}_{j'} - \frac{1}{2}B_{j'}\,\underline{\epsilon}_i\,\underline{t}_{j'}\right]\cdot\underline{h}_{j'} + \left[-\frac{1}{2}B_j\,\underline{\epsilon}_i\,\underline{t}_j - A_{jk}\,\underline{\epsilon}_k\cdot\underline{T}_j\right]\cdot\underline{h}_j\right)$$

$$= \frac{1}{\epsilon_k}\,\epsilon_i\,\underline{q}_{ik}\cdot\left(\underline{h}_{j'} - \underline{h}_j\right)$$





$$\underline{q}_{i'k} = A_{j'k}\underline{T}_{j'} - \tfrac{1}{2}B_{j'}\underline{t}_{j'}$$

$$\underline{q}_{ik} = -A_{jk}\underline{T}_j + \tfrac{1}{2}B_j\underline{t}_j$$

$$\left(\mathrm{div}^{\vee}\underline{h}\right)_k = \frac{1}{\epsilon_k}\left[-A_{j''k}\,\epsilon_k\,\underline{T}_{j''}\cdot\underline{h}_{j''} + \left(-A_{j'k}\epsilon_k\,\underline{T}_j - \frac{1}{2}B_{j'}\,\epsilon_i\,\underline{t}_{j'}\right)\cdot\underline{h}_{j'} + \left(-\frac{1}{2}B_j\,\epsilon_i\,\underline{t}_j - A_{jk}\,\epsilon_k\,\underline{T}_j\right)\cdot\underline{h}_j\right]$$

$$= \frac{1}{\epsilon_k}\left[-A_{j''k}\,\epsilon_k\,\underline{T}_{j''}\cdot\underline{h}_{j''} + \epsilon_i\,\underline{q}_{i'k}\cdot\underline{h}_{j'} - \epsilon_i\,\underline{q}_{ik}\cdot\underline{h}_j\right]$$

Likewise $\mathrm{CURL}^{\vee}\underline{h} = \frac{1}{\epsilon_k}\left[\underline{q}_{ik}\cdot\left(\underline{h}_j - \underline{h}_{j'}\right)\right]$ for one kite

$$\mathrm{CURL}^{\vee}\underline{h} = \frac{1}{\epsilon_k}\left[A_{j''k}\,\underline{T}_{j''}\cdot\underline{h}_{j''} + \underline{q}_{ik}\cdot\underline{h}_{j'} - \underline{q}_{ik}\,\underline{h}_j\right]$$ for two kites.