⑥ Note. $${}'E_2^{0,1} \xrightarrow{d_2^{①}} {}'E_2^{2,0} \xrightarrow{d_2^{②}} {}'E_2^{4,0-2+1} \cong 0$$

$$\operatorname{coker} d_2 = \frac{{}'E_2^{2,0}}{\operatorname{Im} d_2^{①}} = \frac{\ker d_2^{②}}{\operatorname{Im} d_2^{①}} = {}'E_3^{2,0}$$

$$\underset{\substack{\parallel \\ 0}}{{}'E_3^{-1,2}} \longrightarrow {}'E_3^{2,0} \xrightarrow{d_3} {}'E_3^{5,0-3+1} \cong 0$$

$$\Rightarrow \quad {}'E_4^{2,0} = {}'E_3^{2,0} = \operatorname{coker} d_2 \quad \Rightarrow \quad \operatorname{coker} d_2 = {}'E_\infty^{2,0}$$

⑦ Note, from $\;{}'\mathbb{F}^2\mathbb{H}^2 / {}'\mathbb{F}^3\mathbb{H}^2 \cong {}'E_\infty^{2,0}$

$$\Rightarrow \quad 0 \longrightarrow {}'\mathbb{F}^3\mathbb{H}^2 \longrightarrow {}'\mathbb{F}^2\mathbb{H}^2 \longrightarrow {}'E_\infty^{2,0} \longrightarrow 0$$

Since ${}'\mathbb{F}^3\mathbb{H}^2 = 0$ by note ④, $\quad {}'\mathbb{F}^2\mathbb{H}^2 \cong {}'E_\infty^{2,0} = \operatorname{coker} d_2$.

Then $${}'E_2^{0,1} \longrightarrow {}'E_2^{2,0} \longrightarrow {}'\mathbb{F}^2\mathbb{H}^2 \longrightarrow 0$$

⑧ Note $$0 \longrightarrow {}'\mathbb{F}^2\mathbb{H}^2 \longrightarrow \mathbb{H}^2 \longrightarrow \mathbb{H}^2/{}'\mathbb{F}^2\mathbb{H}^2 \longrightarrow 0$$

Then
$$\begin{tikzcd}
{}'E_2^{0,1} \arrow[r] & {}'E_2^{2,0} \arrow[r, "g"] \arrow[dr, "g"'] & \mathbb{H}^2 \arrow[r, "f"] & \mathbb{H}^2/{}'\mathbb{F}^2\mathbb{H}^2 \arrow[r] & 0 \\
& & {}'\mathbb{F}^2\mathbb{H}^2 \arrow[u, hook] & &
\end{tikzcd}$$

is exact, for clearly $f \circ g = 0$.
if $x \in \ker f$, $\quad x \in {}'\mathbb{F}^2\mathbb{H}^2 \Rightarrow \exists\ y \in {}'E_2^{2,0}$
s.t $g(y) = x$. $\quad \Rightarrow \ker f \subset \operatorname{im} g$.

Let $G = \mathbb{H}^2/{}'\mathbb{F}^2\mathbb{H}^2$.

$$\Rightarrow \quad {}'E_2^{0,1} \longrightarrow {}'E_2^{2,0} \longrightarrow \mathbb{H}^2 \longrightarrow G \longrightarrow 0. \quad \cdots (**)$$

Combining (**) with (*), we get

$$0 \to {}'E_2^{1,0} \longrightarrow \mathbb{H}^1 \longrightarrow {}'E_2^{0,1} \xrightarrow{d_2} {}'E_2^{2,0} \longrightarrow \mathbb{H}^2 \longrightarrow G \to 0.$$