Looking into possible conversions of PM into AM due to off-optimal setting of the SB frequencies. When we look into the power transmission of a cavity:

$$I_{\text{transmitted}} = I_0 \frac{1}{1 + F * \sin^2(\frac{\delta}{2})} \tag{1}$$

with

$$\delta = 2\pi \frac{\Delta s}{\lambda} + \Delta\phi \tag{2}$$

We can then express off-optimal SB frequencies ($\Delta f \neq 0$) in terms of $\Delta\phi$: The phase that the off-optimal SB accumulates with regard to the optimal SB.

$$\Delta\phi = \frac{\omega}{c} L = \frac{2\pi(1\,\text{kHz})}{3\text{E}8\frac{\text{m}}{\text{s}}} 21.2\,\text{m} = 4.44E - 4\,\text{rad} \tag{3}$$

$$\Rightarrow \frac{\delta}{2} = 2.2201E - 4\,\text{rad} \tag{4}$$

For a finesse $F = 1548$ this leads to

$$\Delta I_{\text{transmitted}} = 1 - \frac{1}{1 + 1548\sin^2(2.2201E - 4)} = 7.63E - 5\frac{\Delta f}{1\,\text{kHz}} \tag{5}$$

Now all the power here is from the 11 MHz SB ($m_{\text{PM}} = 0.17$) => $m_{\text{AM}} = 0.17 * 7.65E - 5 = 1.30\text{E} - 5$. Also we learn

$$\frac{m_{\text{PM}_{11\,\text{MHz}}}}{m_{\text{AM}_{11\,\text{MHz}}}} = \frac{0.17}{7.63E - 5} = 2228\frac{1\,\text{kHz}}{\Delta f} \tag{6}$$

The 55 MHz SB is generated by multiplying the 11 MHz SB by 5. So the accumulated phase $\Delta\phi$ and therefor $\delta/2$ are also multiplied by 5. This leads to

$$\frac{m_{\text{PM}_{55\,\text{MHz}}}}{m_{\text{AM}_{55\,\text{MHz}}}} = \frac{0.19}{0.001904} = 99.80\frac{1\,\text{kHz}}{\Delta f} \tag{7}$$