

# Trajectory-Based Dust Evolution in Disks: First Results from the RAPID simulation code

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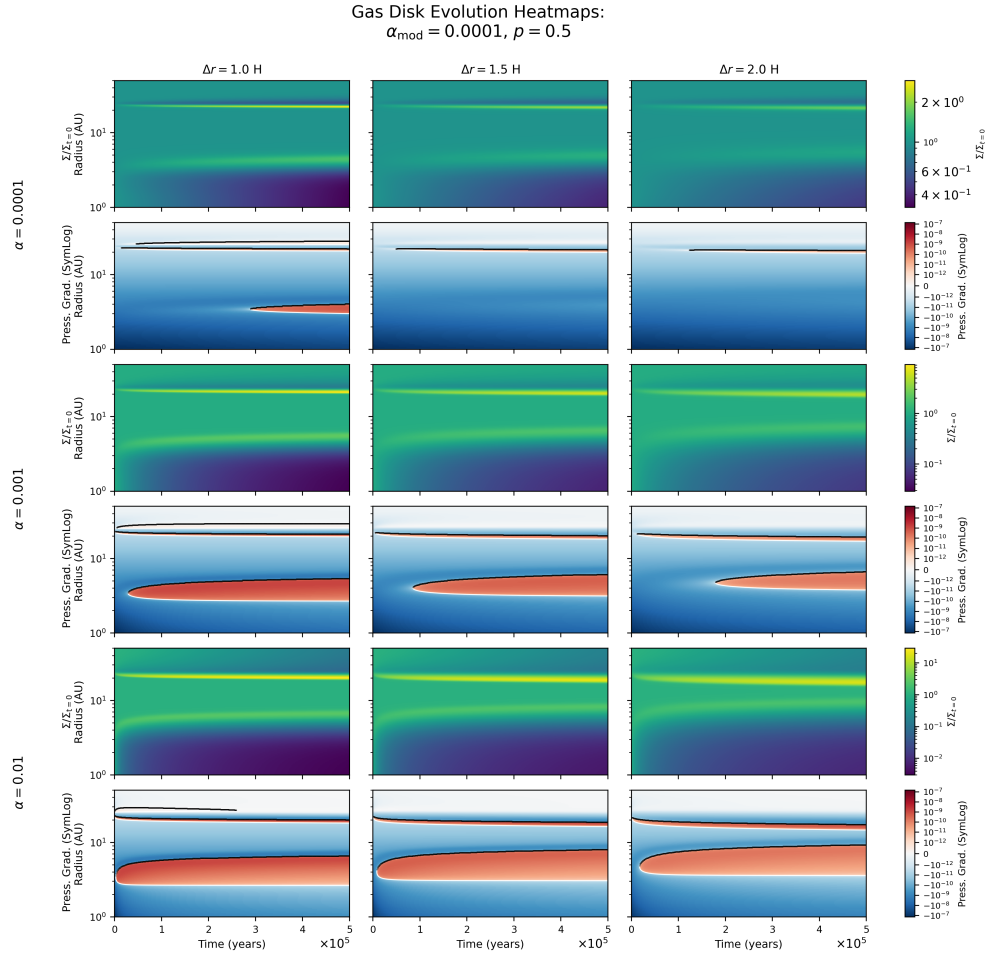
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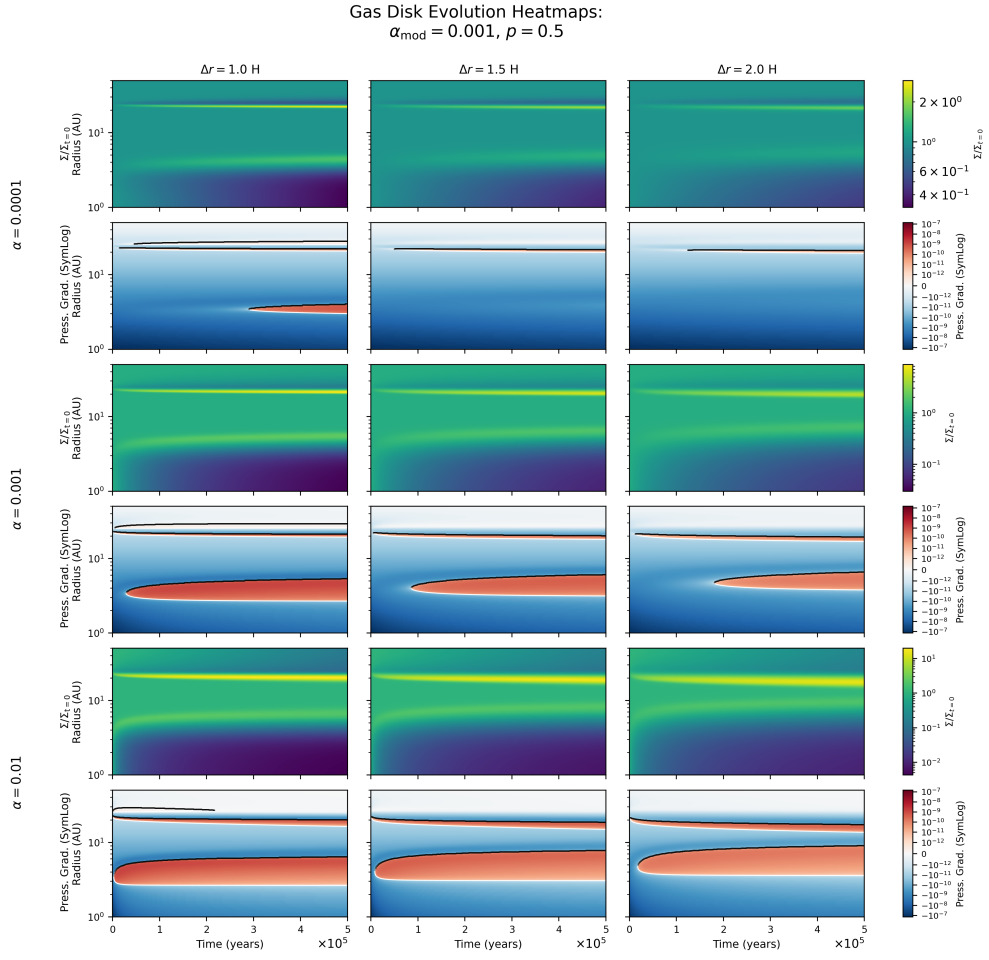
**Keywords:** keyword1, Keyword2, Keyword3, Keyword4

## 1 Supplementary Online Material for the Evolution of the Gas Component

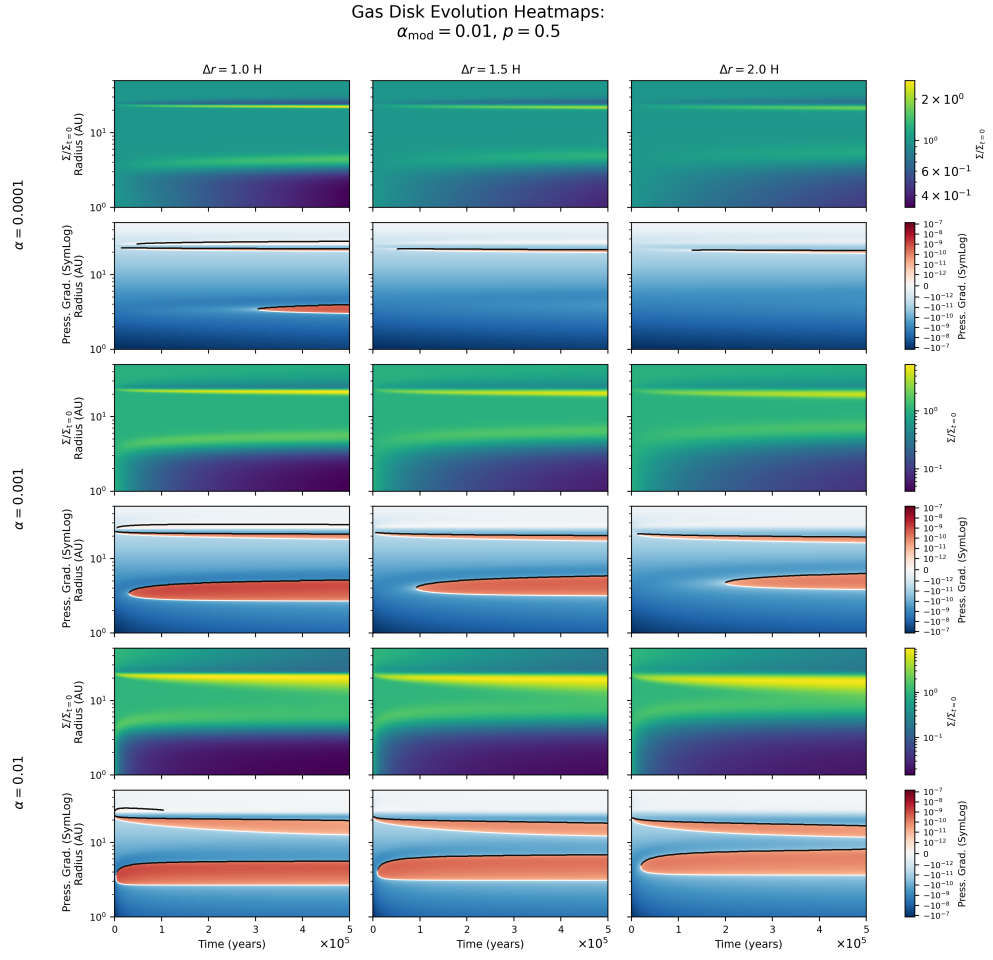
Figures [S1/1](#) – [S1/9](#) present the time evolution of the gaseous component of the disk, i.e., the density contrast ( $\Sigma/\Sigma_{t=0}$ ) and the pressure gradient on a SymLog scale.



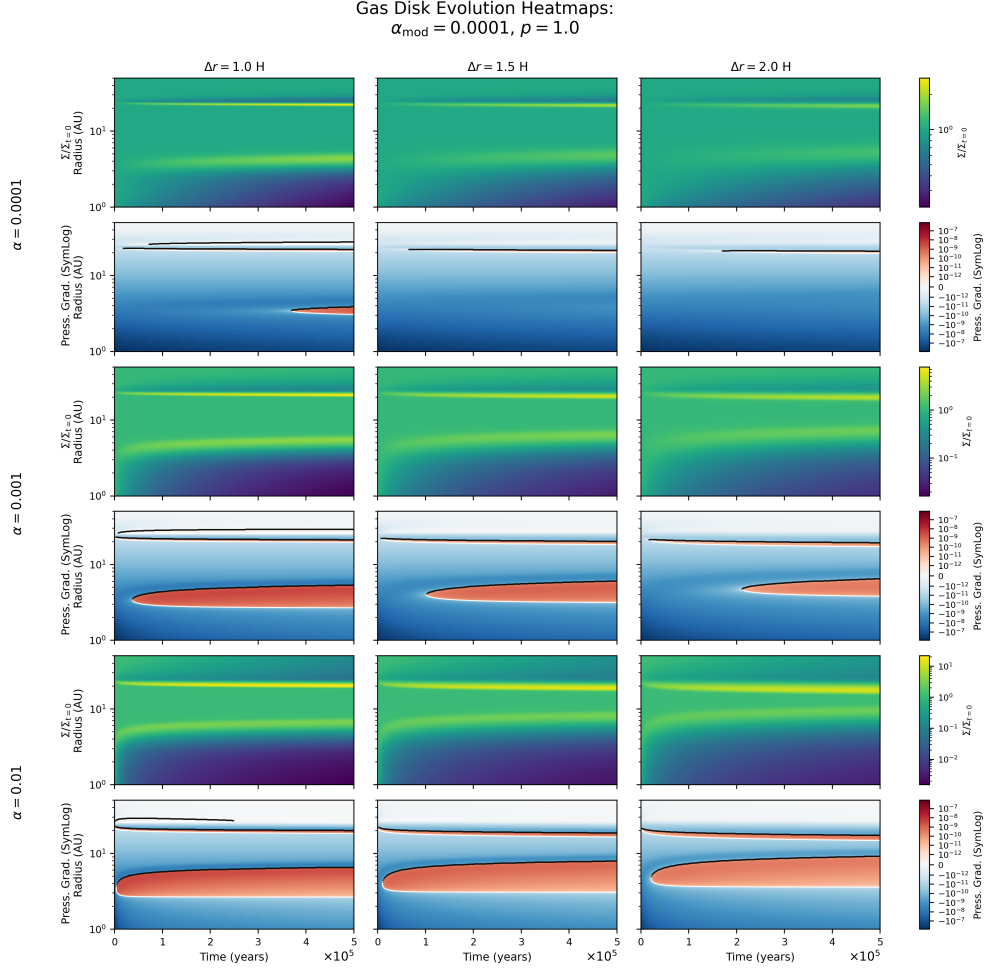
**Fig. S1/1** The evolution of  $\Sigma/\Sigma_{t=0}$  in the case of  $\alpha_{\text{mod}} = 0.0001$  and  $p = 0.5$ .



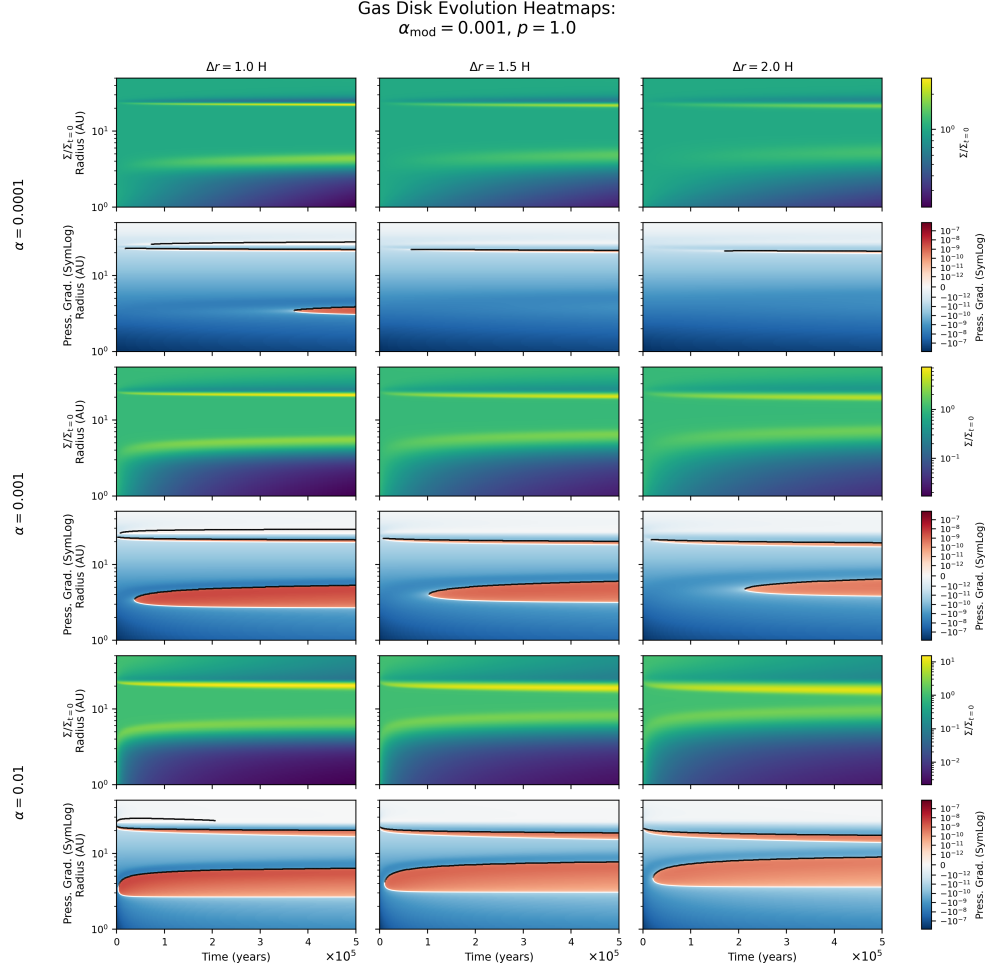
**Fig. S1/2** The evolution of  $\Sigma/\Sigma_{t=0}$  in the case of  $\alpha_{\text{mod}} = 0.001$  and  $p = 0.5$ .



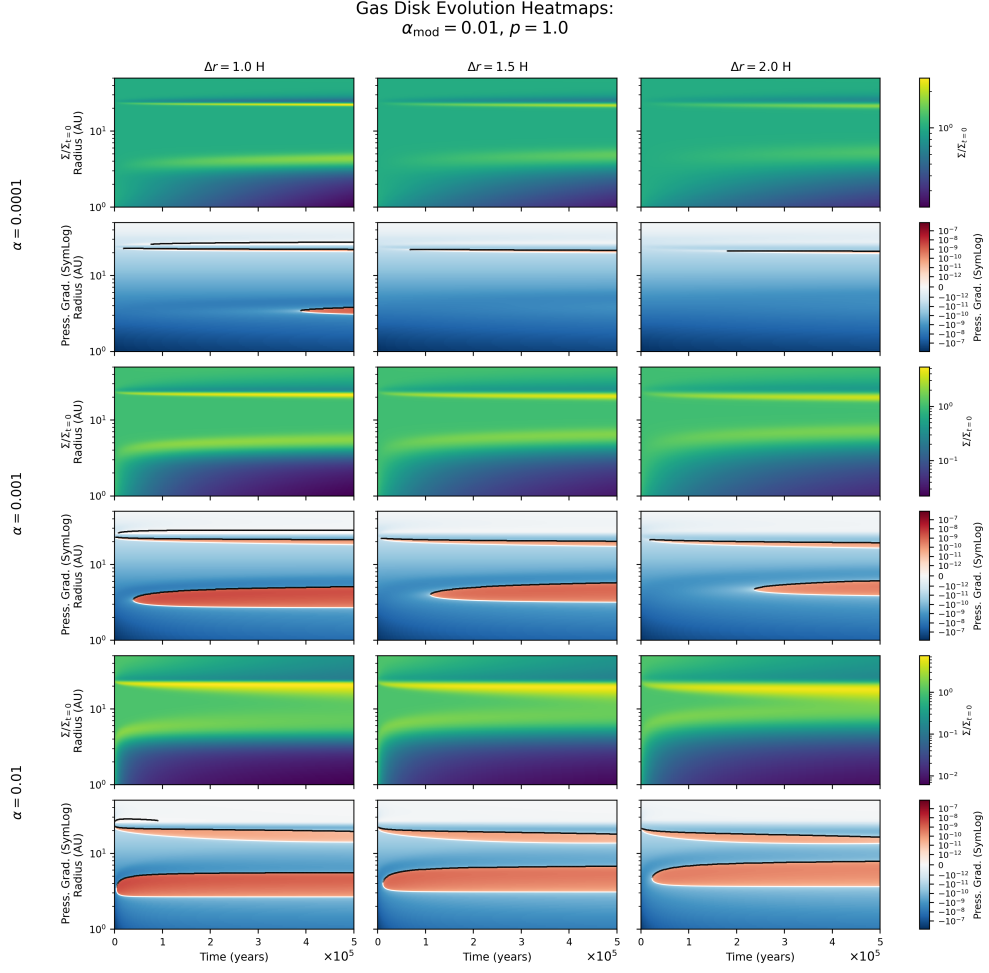
**Fig. S1/3** The evolution of  $\Sigma/\Sigma_{t=0}$  in the case of  $\alpha_{\text{mod}} = 0.01$  and  $p = 0.5$ .



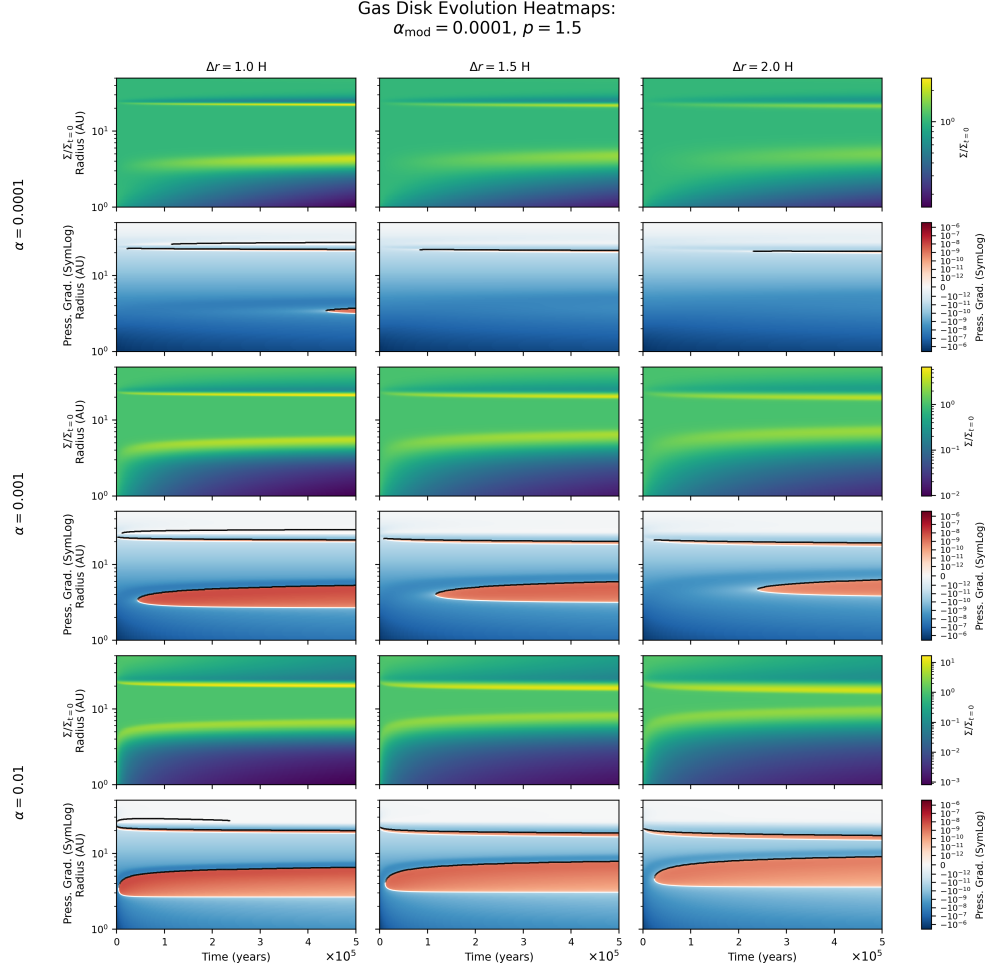
**Fig. S1/4** The evolution of  $\Sigma/\Sigma_{t=0}$  in the case of  $\alpha_{\text{mod}} = 0.0001$  and  $p = 1.0$ .



**Fig. S1/5** The evolution of  $\Sigma/\Sigma_{t=0}$  in the case of  $\alpha_{\text{mod}} = 0.001$  and  $p = 1.0$ .

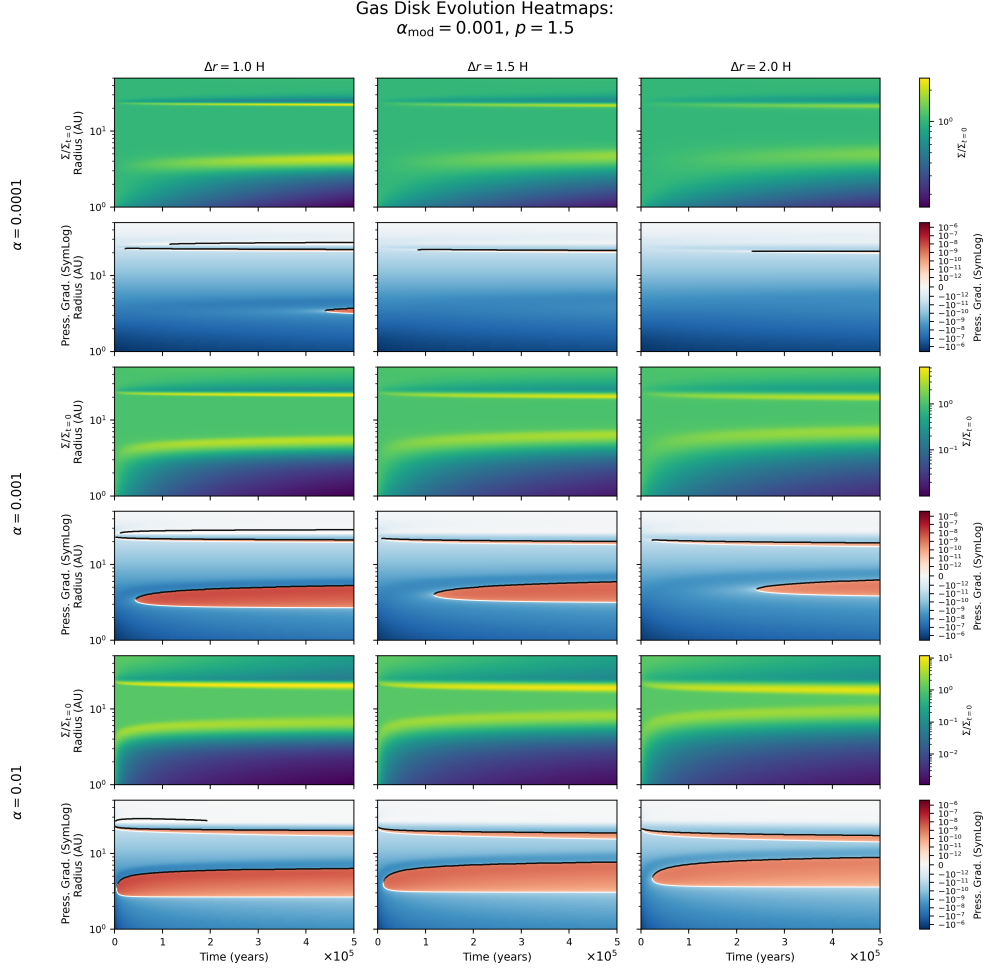


**Fig. S1/6** The evolution of  $\Sigma/\Sigma_{t=0}$  in the case of  $\alpha_{\text{mod}} = 0.01$  and  $p = 1.0$ .

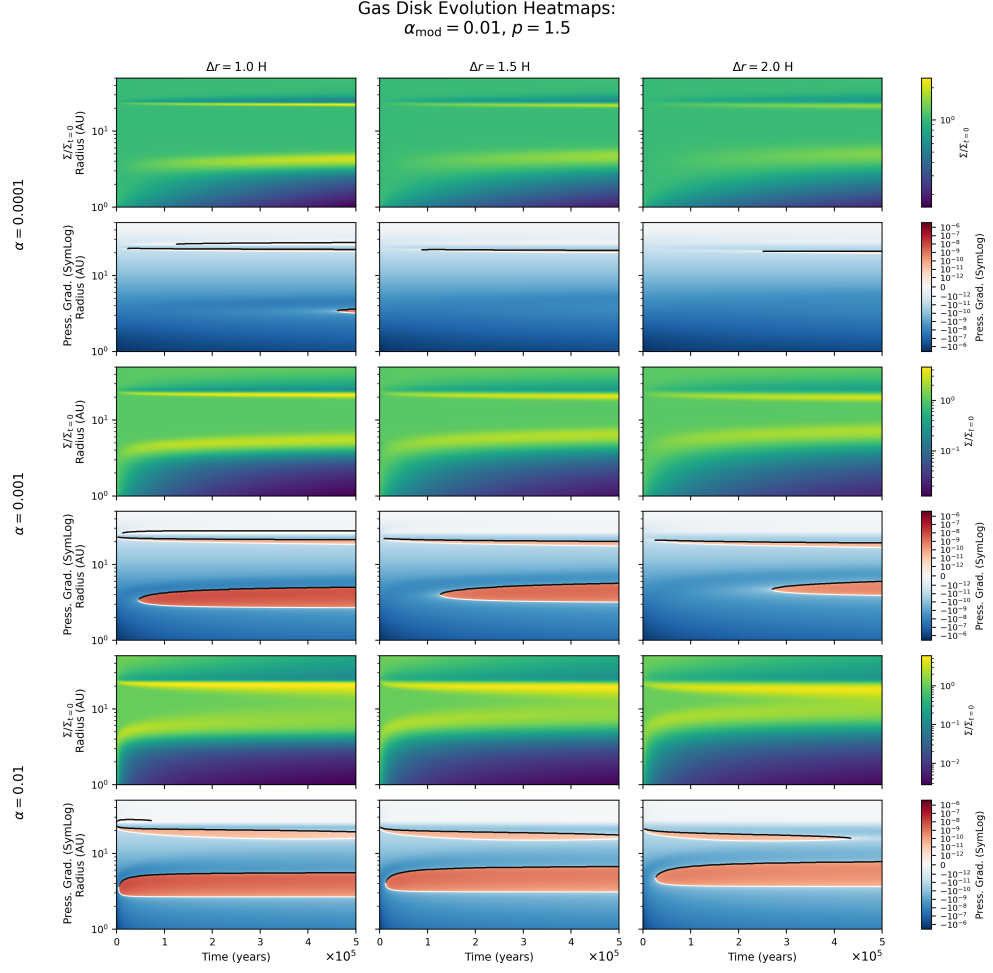


**Fig. S1/7** The evolution of  $\Sigma/\Sigma_{t=0}$  in the case of  $\alpha_{\text{mod}} = 0.0001$  and  $p = 1.5$ .





**Fig. S1/8** The evolution of  $\Sigma/\Sigma_{t=0}$  in the case of  $\alpha_{\text{mod}} = 0.001$  and  $p = 1.5$ .



**Fig. S1/9** The evolution of  $\Sigma/\Sigma_{t=0}$  in the case of  $\alpha_{\text{mod}} = 0.01$  and  $p = 1.5$ .