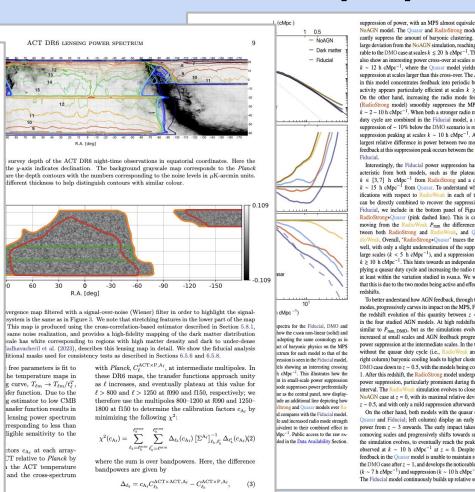


full manuscript of research paper



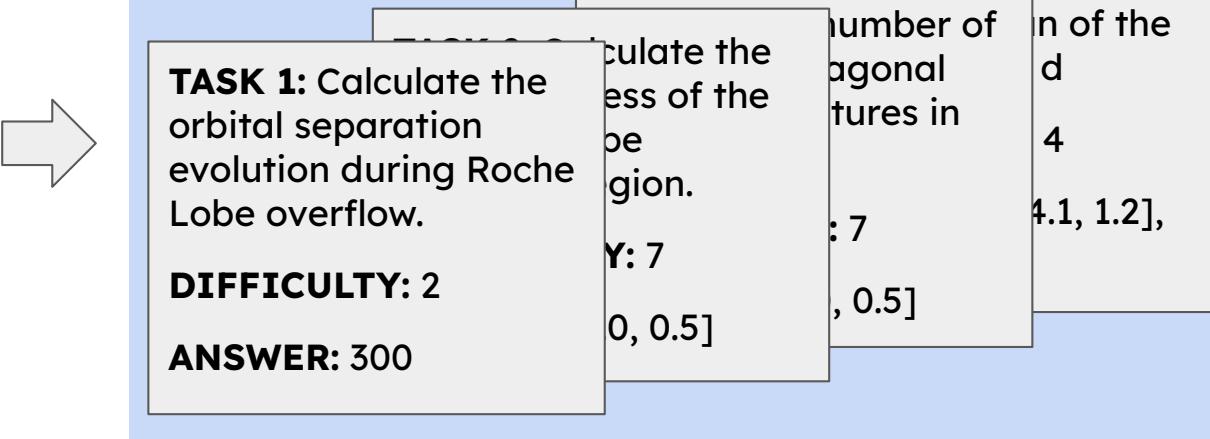
dataset access

NGC1300-0.89seas_MAPS.fits	ngc	Safe	1,42 GB	LFS
hslp_phangs-jwst_jwst_miri_ngc1300_f1000w_vipopl_im...	hslp	Safe	154 MB	LFS
hslp_phangs-jwst_jwst_miri_ngc1300_f1130w_vipopl_im...	hslp	Safe	154 MB	LFS
hslp_phangs-jwst_jwst_miri_ngc1300_f2100w_vipopl_im...	hslp	Safe	154 MB	LFS
hslp_phangs-jwst_jwst_miri_ngc1300_f770w_vipopl_im...	hslp	Safe	154 MB	LFS
hslp_phangs-jwst_jwst_mircam_ngc1300_f200w_vipopl_im...	hslp	Safe	2,66 GB	LFS
hslp_phangs-jwst_jwst_mircam_ngc1300_f300w_vipopl_im...	hslp	Safe	433 MB	LFS
hslp_phangs-jwst_jwst_mircam_ngc1300_f330m_vipopl_im...	hslp	Safe	433 MB	LFS
hslp_phangs-jwst_jwst_mircam_ngc1300_f360m_vipopl_im...	hslp	Safe	433 MB	LFS

execution specs

- needs GPU time?
- needs Python?
- needs astropy?

objective, author-written tasks



LLM agent in code execution environment

AGENT: I see - the samples are under the 'posterior_samples' subgroup. Let's access that.

```
# Check available keys in GW200105
print("Checking available keys in GW200105...")
with h5py.File(gw200105_path, 'r') as f:
    model = 'C01:Combined_PHM_high_spin'
```

AGENT: Now I have a good understanding of the file structure. Let's load all the event data and start implementing the hierarchical Bayesian model.

```
class HierarchicalModel:  
    def __init__(self, event_samples, spin_model="ZS", mass_model="1C",  
beta=0):  
        """  
        Initialize the hierarchical model.  
        """
```

