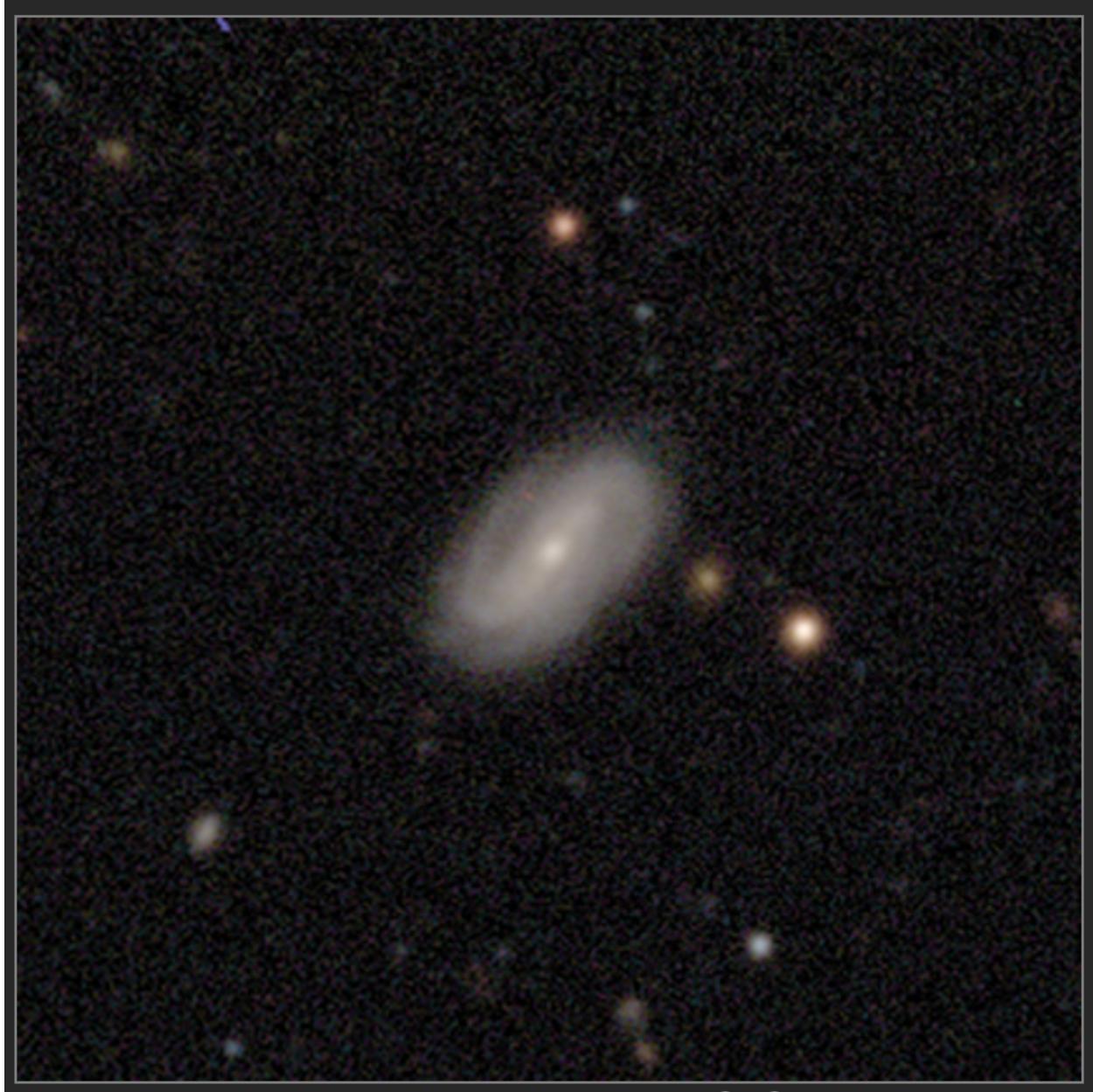


Problem 3

Galaxy 1



1. Is the galaxy simply smooth and rounded, with no sign of a disk?

Smooth / Features or Disk / Star or Artifact

2. Could this be a disk viewed edge-on?

Yes - Edge On Disk / No - Something Else

3. Is there a bar feature through the centre of the galaxy?

No Bar / Weak Bar / Strong Bar

4. Is there any sign of a spiral arm pattern?

Yes / No

5. How tightly wound do the spiral arms appear?

Tight / Medium / Loose

6. How many spiral arms are there?

1 / 2 / 3 / 4 / More than 4 / Can't tell

7. Is there a central bulge? If so, how large is it compared with the galaxy?

No Bulge / Small / Moderate / Large / Dominant

8. Is the galaxy merging or disturbed?

Merging / Major Disturbance / Minor Disturbance / None

9. Do you see any of these rare features?

Ring / Lens or arc / Irregular / Dust lane / Overlapping / Something Else / Nothing Unusual

Hubble type estimation: SBb

Galaxy 2



1. Is the galaxy simply smooth and rounded, with no sign of a disk?

Smooth / Features or Disk / Star or Artifact

2. Could this be a disk viewed edge-on?

Yes - Edge On Disk / No - Something Else

3. Is there a bar feature through the centre of the galaxy?

No Bar / Weak Bar / Strong Bar

4. Is there any sign of a spiral arm pattern?

Yes / No

5. Is there a central bulge? If so, how large is it compared with the galaxy?

No Bulge / Small / Moderate / Large / Dominant

6. Is the galaxy merging or disturbed?

Merging / Major Disturbance / Minor Disturbance / None

7. Do you see any of these rare features?

Ring / Lens or arc / Irregular / Dust lane / Overlapping / Something Else / Nothing Unusual

Hubble type estimation: E0

Galaxy 3



1. Is the galaxy simply smooth and rounded, with no sign of a disk?

Smooth / Features or Disk / Star or Artifact

2. Could this be a disk viewed edge-on?

Yes - Edge On Disk / No - Something Else

3. Is there a bar feature through the centre of the galaxy?

No Bar / Weak Bar / Strong Bar

4. Is there any sign of a spiral arm pattern?

Yes / No

5. Is there a central bulge? If so, how large is it compared with the galaxy?

No Bulge / Small / Moderate / Large / Dominant

6. Is the galaxy merging or disturbed?

Merging / Major Disturbance / Minor Disturbance / None

7. Do you see any of these rare features?

Ring / Lens or arc / Irregular / Dust lane / Overlapping / Something Else / Nothing Unusual

Hubble type estimation: S0