## **HUB** (working tidal)

An astrophysics fable, HUB centers on a family of galaxies trying to reverse the Big Bang, after a member sets it off. This musical follows a teenager and their dog running away from home. SPT0615-JD, a galaxy, and Gravity, their tidal force, journey away from the center of the universe. The story explores Hubble's Law and the Big Crunch Theory. In astrophysics, galaxies follow Hubble's Law: to distance from the center. It is not unlike a human being. We want to get out and explore. The analogy is expressed through these personifications and clothed like astronomers. The set has a dome home to represent the center, the stage is space, and the fourth wall is the edge. The universe is told through the human experience.

The galactic siblings begin their routine by staring out with their monoculars ("Bounce"). Singularity nurtures them and their tidal dogs, but a child is missing at the table ("Crunch"). JD is still looking out. They just want to go to the edge of the universe ("Cutting Edge"). However, Singularity speaks of its perils and sends them to bed ("Grounded"). Eager for a voyage anyways, JD finds Singularity's BB Taser stashed under their rug. JD deems the fabric of spacetime to be as sturdy ("Sweep under the Rug"). Later, Singularity assesses each of their child's black-hole hearts ("Hinge"). With this being the final straw, JD shoots Singularity and takes their eye. Then, JD flees with Gravity to the edge, but the edge keeps distancing from them. It is like a rolled-up rug that JD keeps rolling away ("Big Bang").

Heartbroken, Singularity kicks out their children ("Depth") and has them spend eternity trying to roll back the edge. The siblings blame one another for kickstarting the universe. Triangulum, Andromeda, and Milky Way stay together but keep their distance. Others try to quit and go home ("Time is Relative"). But they face Singularity's attack dogs, who ensure that no siblings merge. Soon, Milky Way develops a tumor called the Solar System. Despite Triangulum's objections, Andromeda comes to the aid of Milky Way and merges. Before the dogs could pounce, Milky Way emits flares of light that scare them off ("Fabric").

A trillion years pass, and JD and Gravity are still traversing space. They find time to play fetch, which goes on too long and Gravity catches on JD's fugue. Through a stellar speech, Gravity explains that the point of return is far-fetched ("Far-Fetched").

From the center, Singularity observes their children through a telescope ("Wrong Space"). The edge is on the cosmic horizon.

In the following act, most siblings have huddled together. They reach JD and Gravity. JD rejects them and races to the edge. While scoping the space, Triangulum sees Singularity again. Singularity calls off the dogs. The siblings make their way home ("Spacetime").

At last, JD and Gravity make it to the edge. With the enduring love from their siblings, JD decides to head back, taking the edge with them ("Edge"). When they return, JD tries to give back Singularity's eye. They do not forgive JD. After giving Gravity one last hug, JD jumps off the edge ("Dropout"). In these millennia of grief, the siblings hold each other close ("Center"). Singularity chooses to take in their eye, restoring their depth perception. Singularity looks beyond. JD is among an audience. To the eye of the beholder, it is a space filled with Galaxies. JD has found their center ("Hearts are in the Right Place").

Gravity returns with a wolfpack in JD's honor. They surround the family ("Working Tidal"). Singularity and their Galaxies sit at their table in their center, as the tidal forces consume them ("Big Crunch"). In the darkness, a bang is seen and heard again ("Big Bounce").