Calefaction

Godot Game Jam, June 15-18, 2018, Timothy Hornick @Xydium

# Description

Calefaction is a 2D, top-down combination of maze traversal and projectile avoidance. The player moves through a tile-map while dodging melee and ranged attacks from a variety of stationary and mobile enemies. Score is determined by the amount of time taken to complete the level and the amount of damage taken in the process. All movement increases the temperature of the level, with the speed of movement controlling the rate of temperature increase. The temperature, which decays slowly over time, controls the difficulty of the enemies through several factors: enemy movement speed, projectile size, projectile speed, and rate of fire. The player’s goal is to balance speed (and thus time taken to complete the level) with the difficulty incurred by moving too quickly.

# Technical Design

Window Size: 960px by 540px

Resolution: 480px by 270px (2x pixel scaling)

Tile Size: 30px by 30px (16 by 9 tiles onscreen)

Character size: 20px by 20px

Player Health: 100 hp

Player Move Speed: 5px/s to 15px/s

Player Acceleration: 5px/s2

# Thermal Recoloring

The tiles and background will shift from an icy-blue to a red-hot color as temperature increases. The background around the tile-map will be procedurally generated fog. The tile-map itself will have tiles which are recolored by varying modulation in a shader. Pixels that are grayscale will be multiplied with the temperature modulation. On top of recolored tiles, there will be a fog effect when the temperature is low, and a distortion effect when the temperature is high.