```
nav2_core::Controller
                Δ
cl nav2z::backward
 _local_planner::BackwardLocal
             Planner
- nh
- name

    backwardsPlanPath

    costmapRos

goalMarkerPublisher_
- planPub
- k_rho
- k_alpha
-k betta
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linear_mode_rho_error
- linear
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alpha_offset

    betta_offset_

- max_linear_x_speed
- max_angular_z_speed- yaw_goal_tolerance_
xy_goal_tolerance

    carrot_distance

- carrot_angular_distance
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transform tolerance

    waitingTimeout

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    goalReached

- initialPureSpinningStage
- straightBackwardsAndPure
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        _obstacle_checking_
- inGoalPureSpinningState
waiting
- currentCarrotPoseIndex
+ BackwardLocalPlanner()
+ ~BackwardLocalPlanner()
+ configure()
+ activate()
+ deactivate()
+ cleanup()
+ setPlan()
+ computeVelocityCommands()
+ isGoalReached()
+ setSpeedLimit()
- updateParameters()

    findInitialCarrotGoal()

updateCarrotGoal()
- resamplePrecisePlan()
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publishGoalMarker()
computeCurrentEuclideanAnd
AngularErrorsToCarrotGoal()
- checkGoalReached()
- checkCurrentPoseInGoalRange()
resetDivergenceDetection()
- divergenceDetectionUpdate()
```

- checkCarrotHalfPlainConstraint()

generateTrajectory()computeNewPositions()