## Two-way repeated measures ANOVA R script

## Load packages

library(readxl)

library(xlsx)

library(plotrix)

## Read in eddy\_qc output (requires an excel file with the absolute motion, relative motion, and percentage of outlier slices

## (columns named "ABS\_MOTION", "REL\_MOTION", and "OUTLIERS" respectively) for each subject generated from the eddy\_qc

## output for the dataset

ces\_group\_db <- read\_excel("/path/to/eddy-qc/output.xlsx",sheet = "sheetName")

## Calculate two-way repeated measures ANOVA of eddy\_qc metrics

anova\_absMotion <- aov(ABS\_MOTION~SESSION\*GROUP+Error(SUBJECT/(SESSION)),data=ces\_group\_db)

anova\_relMotion <- aov(REL\_MOTION~SESSION\*GROUP+Error(SUBJECT/(SESSION)),data=ces\_group\_db)

anova\_outliers <- aov(OUTLIERS~SESSION\*GROUP+Error(SUBJECT/(SESSION)),data=ces\_group\_db)

## Create output file and write ANOVA results to it

sink(file="/path/to/output/anova\_results.txt")

summary(anova\_absMotion)

summary(anova\_relMotion)

summary(anova\_outliers)

sink(file=NULL)