Odd near-surface glider values

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Introduction

I've noticed something odd in the near-surface salinity and temperature values for glider sea019, mission m44. The code block below will be self-explanatory to R users; for others, I'm just reading the data using a function in the `oceanglider` package, skipping the first point (dated in 2009) and then plotting 2000 points that follow, to show a few yos. I put a vertical red line at a time just before the first ascent, as judged by eye based on the pressure timeseries (top panel below).

Discussion

1. Why is the first point dated in 2009?
2. What explains the variation of S and T at the stat of ascent patterns, e.g. just to the right of the red line on the graphs? During that interval, S varies over a range that is much larger than the range over the profile that follows, and T varies over half the range displayed in the rest of the journey up the water column. The conductivity signal does not show an odd pattern, which makes me thik the S oddness results from the T oddness. But what causes that?

Methods and results

```
library(oce)
```

```
## Loading required package: testthat
```

```
## Loading required package: gsw
```

```
library(oceanglider)
```

```
## Loading required package: knitr
```

```
g <- read.glider.seaexplorer.delayed("/data/glider/sea019/m54/all_data")
look <- 2:2001
t <- g[["time"]][look]
p <- g[["pressure"]][look]
T <- g[["temperature"]][look]
S <- g[["salinity"]][look]
C <- g[["conductivity"]][look]
par(mfcol=c(2, 2))
oce.plot.ts(t, p, type="p")
tline <- numberAsPOSIXct(1532442701) # by clicking mouse
abline(v=tline, col="red")
oce.plot.ts(t, T, type="p", drawTimeRange=FALSE)
abline(v=tline, col="red")
oce.plot.ts(t, S, type="p", drawTimeRange=FALSE)
abline(v=tline, col="red")
oce.plot.ts(t, C, type="p", drawTimeRange=FALSE)
abline(v=tline, col="red")
```

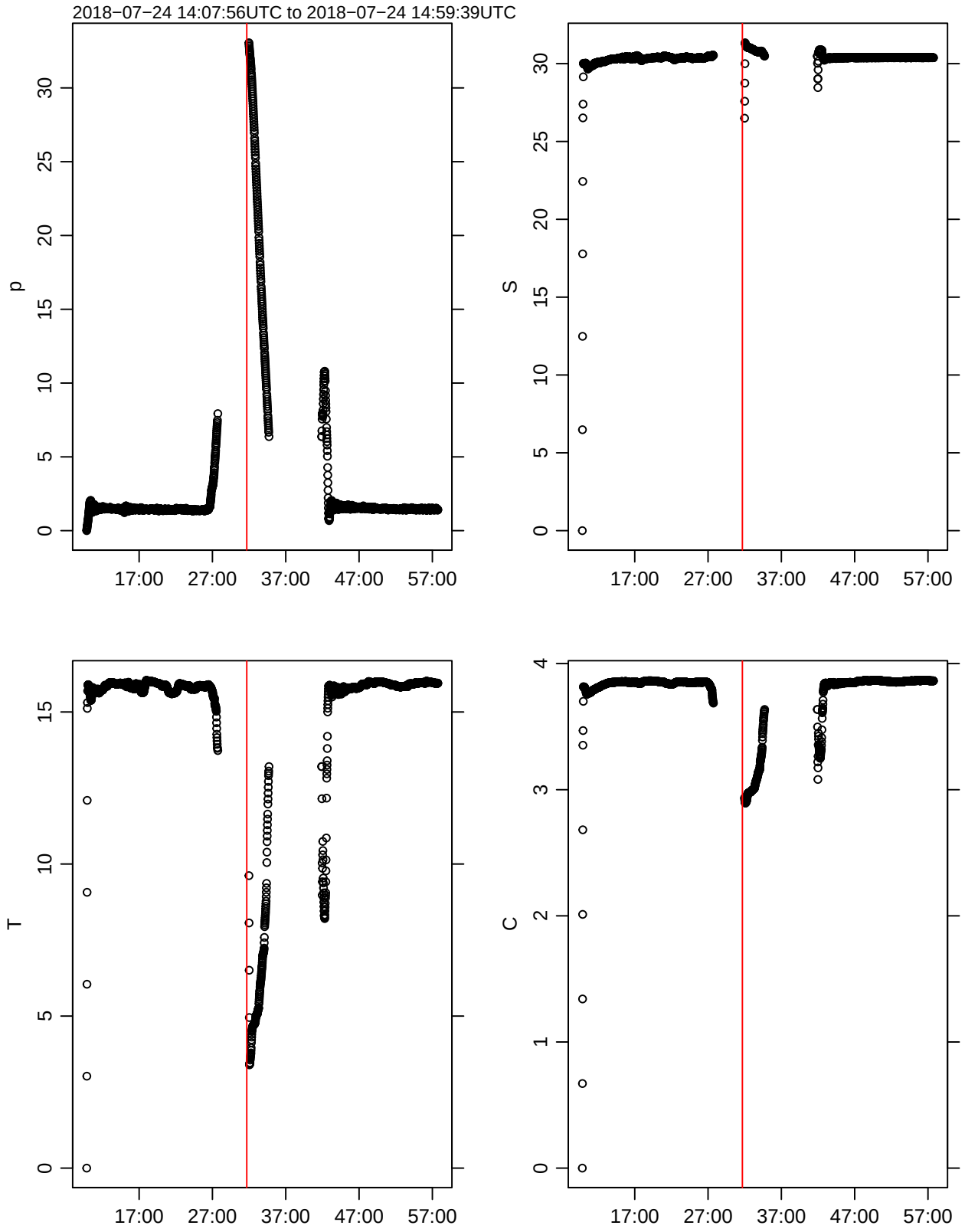

Figure 1: Some early data for sea019/m54.