Analysing MaxQuant Output with R

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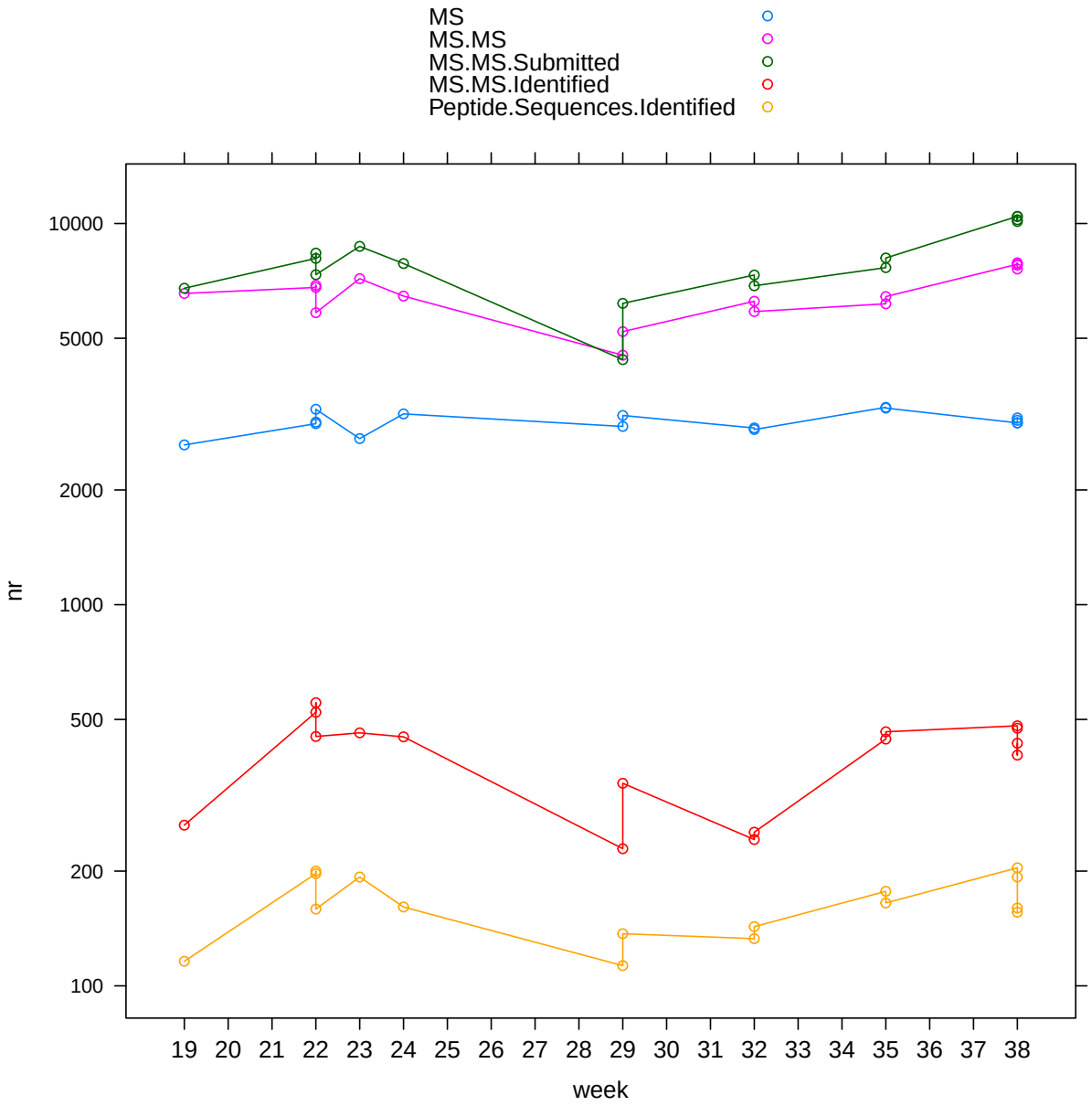
Prepare mrm table

- nr of assigned spectra (MS2) / versus total spectra
- How many H/L target peptides are identified
- Ratio among H/L of the target peptides
- Intensity of heavy or light over the runs

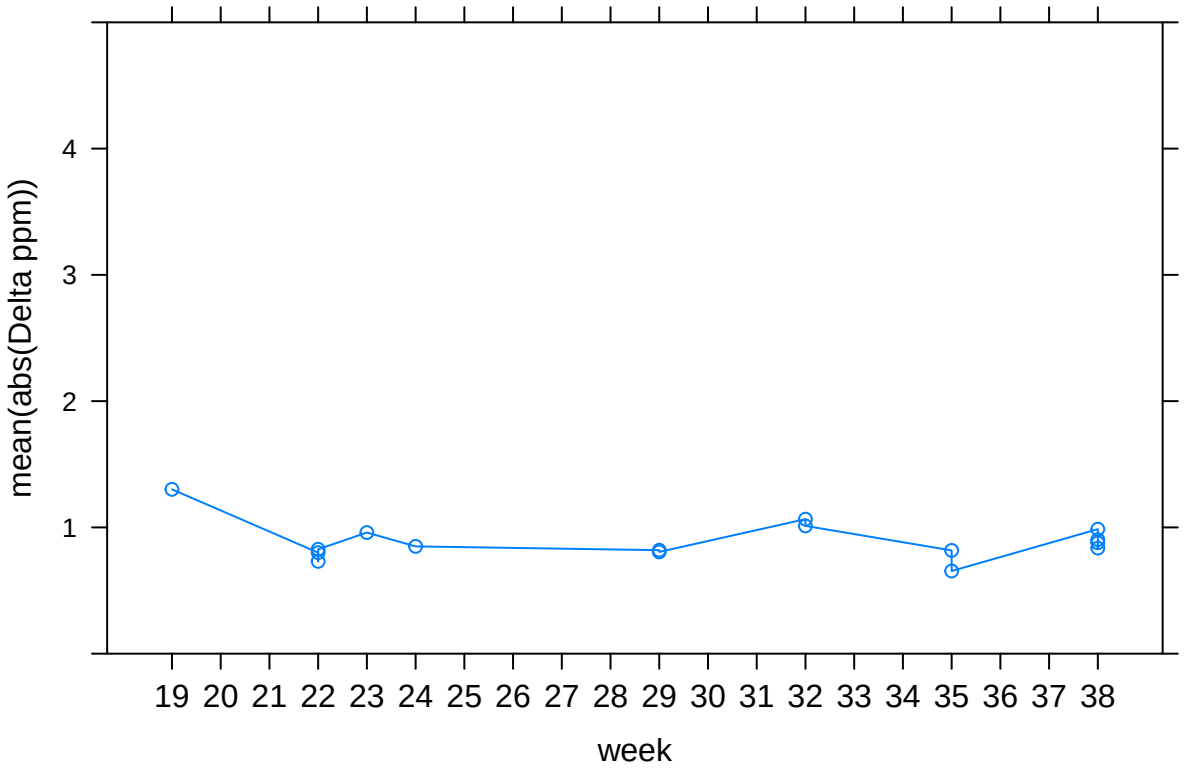
Dump maxquant txt files into sqlite database

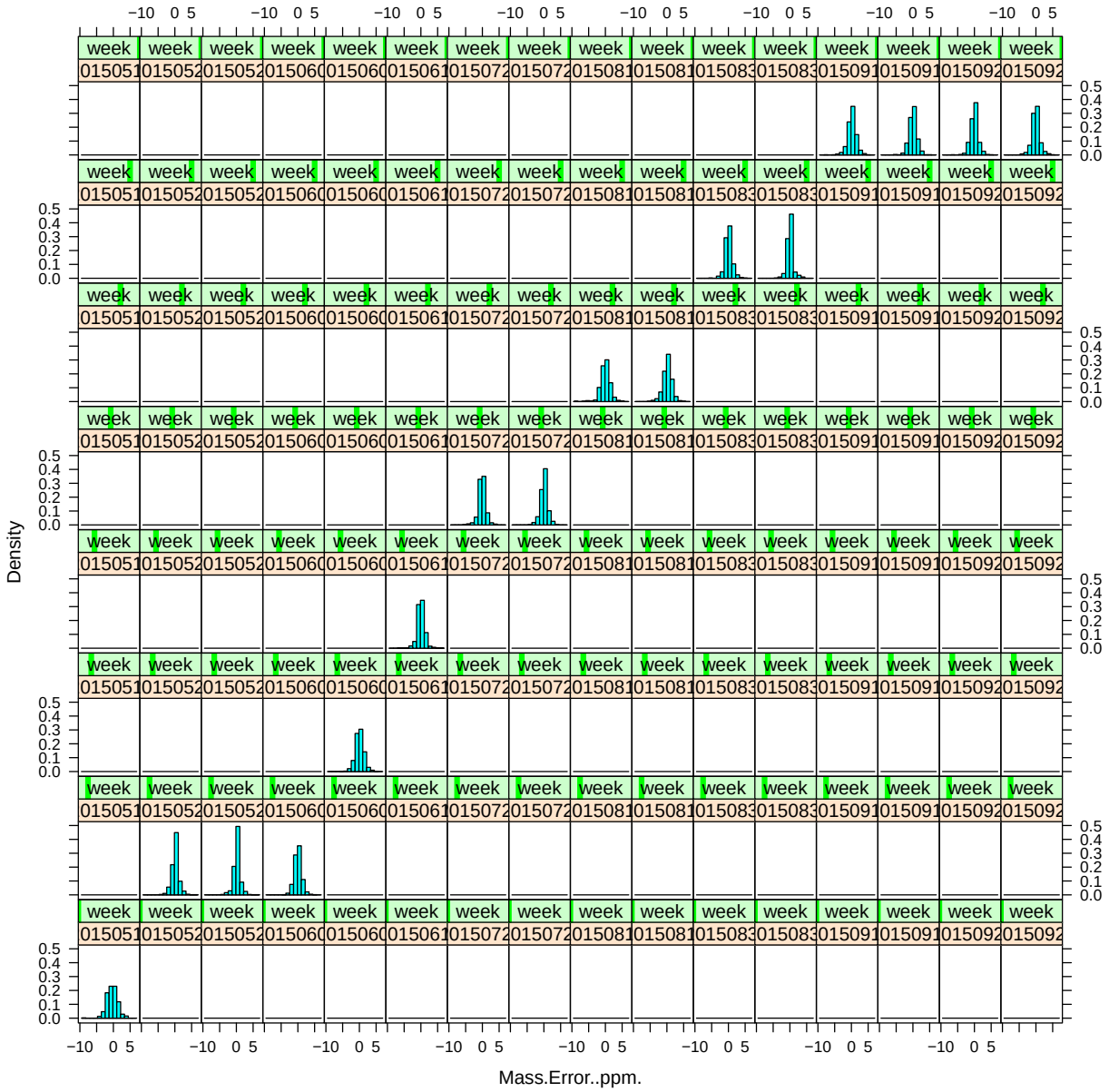
Take a look at the summary table



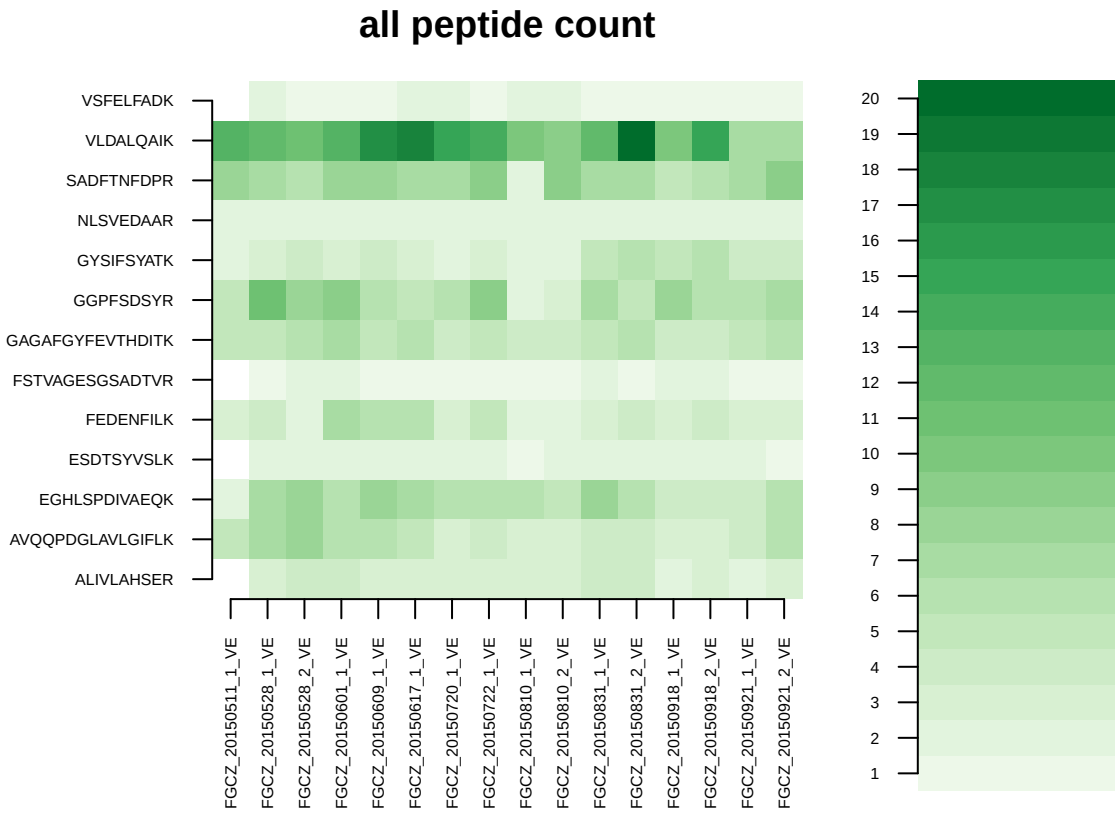
Peptide Evidence

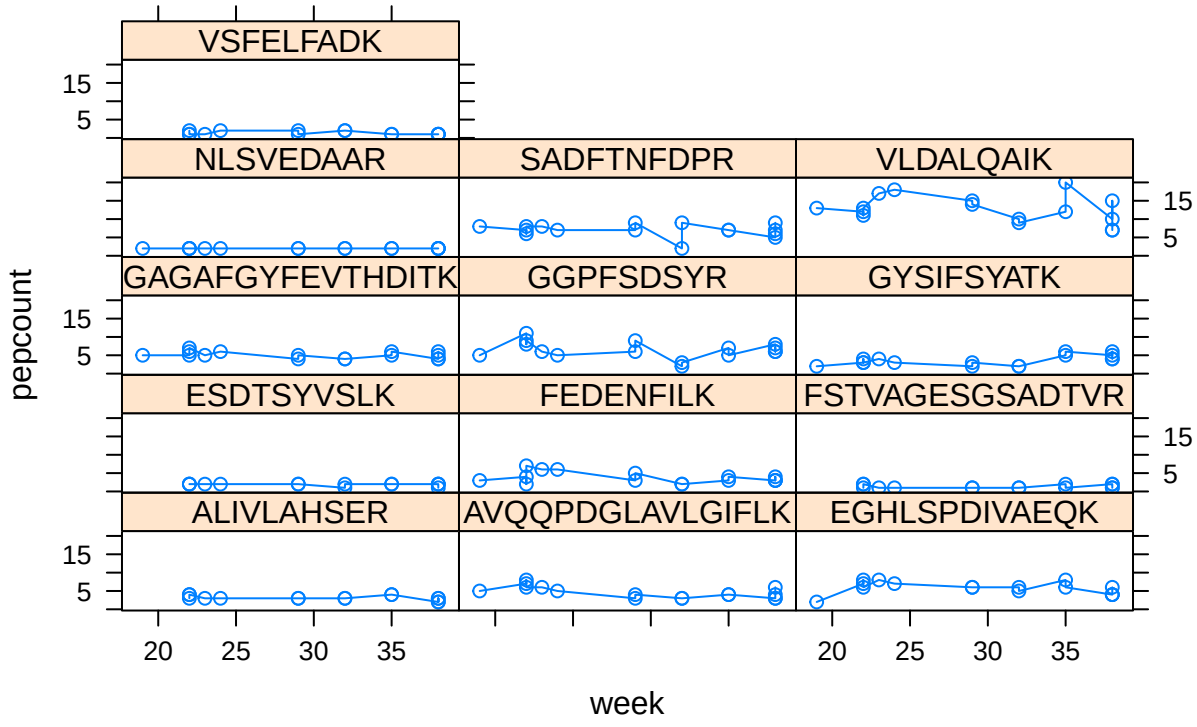
Looking at measurement error

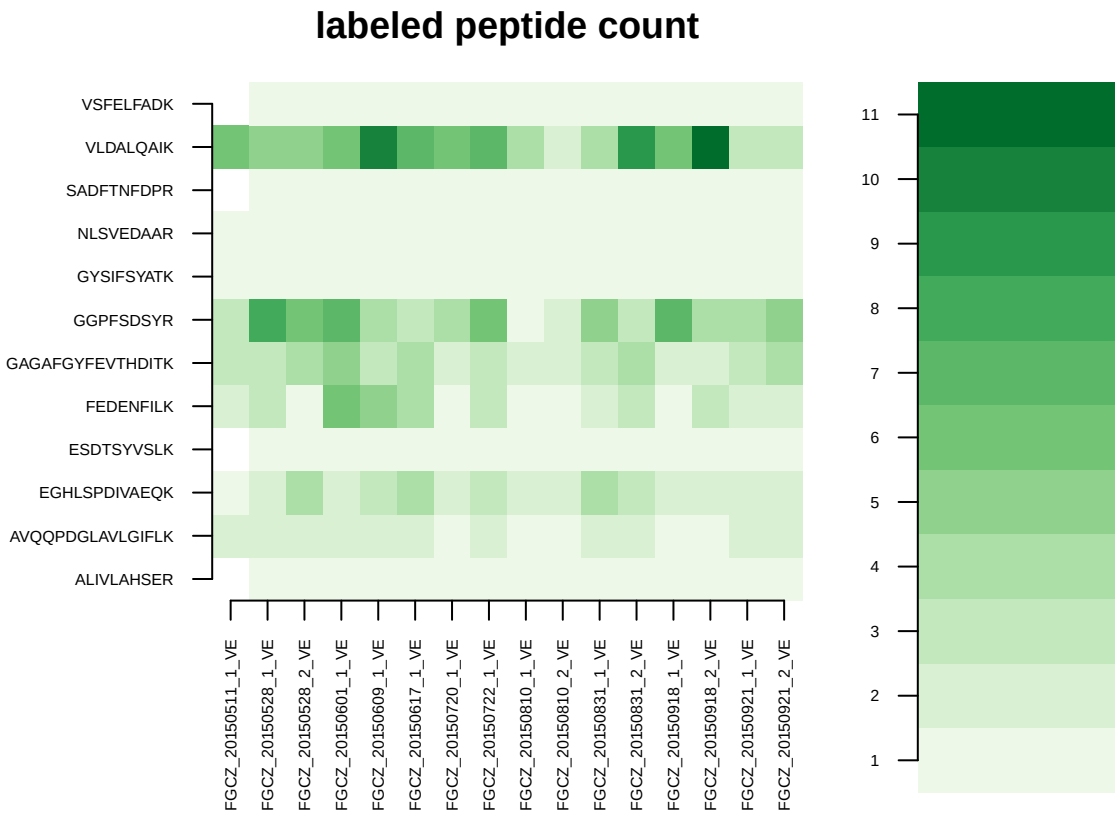


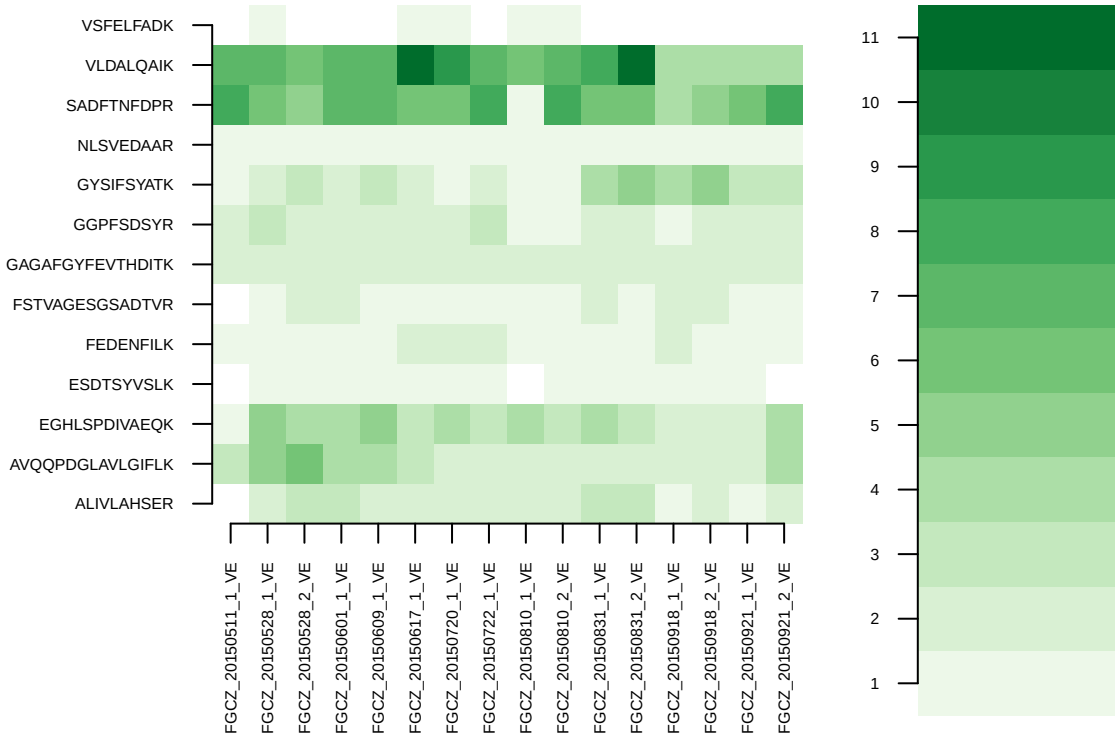

week
015051
015052
015061
015072
015081
015083
015091
015092
Density
Mass.Error..ppm.
−10 0 5
0.0
0.1
0.2
0.3
0.4
0.5

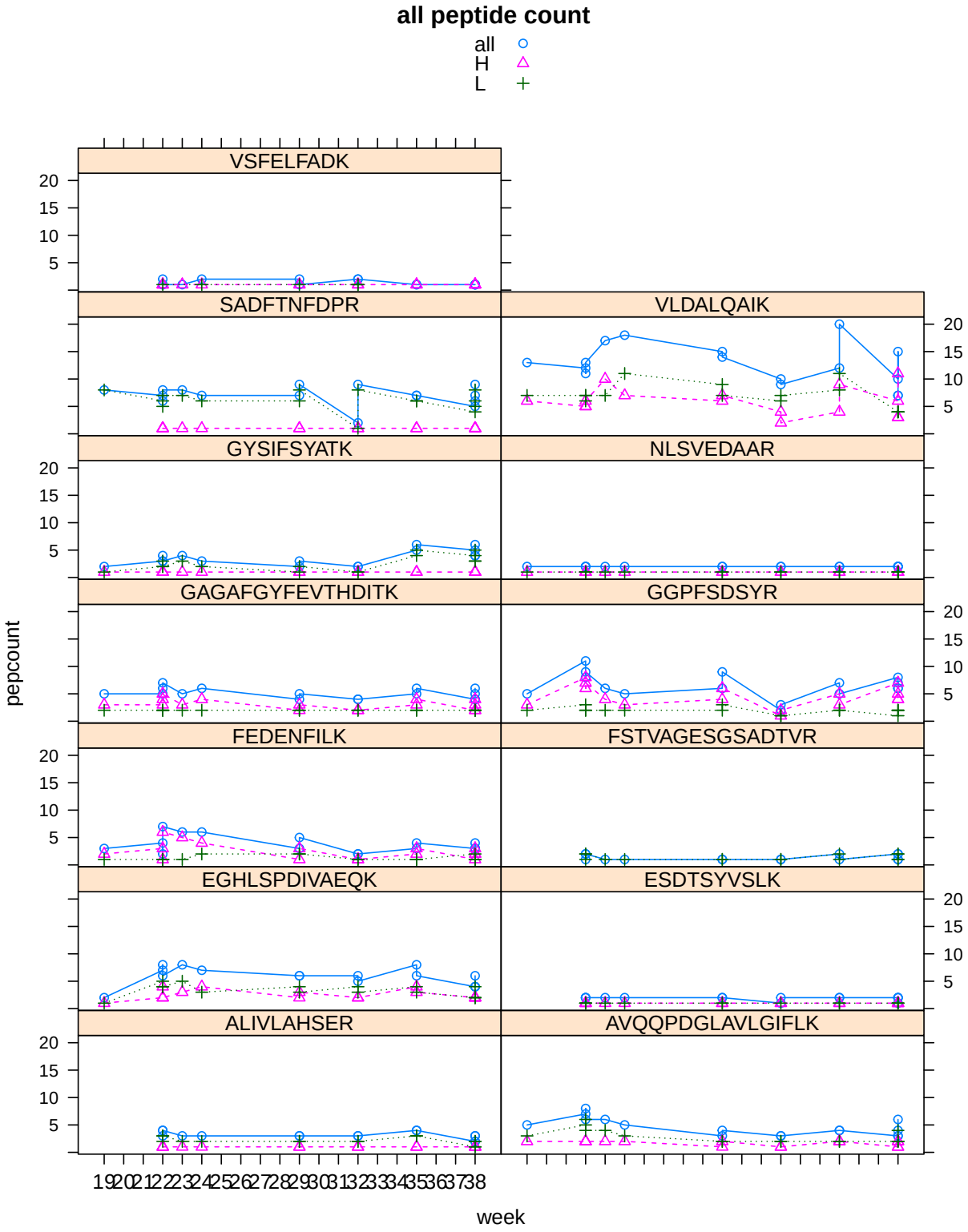
Looking at peptide counts



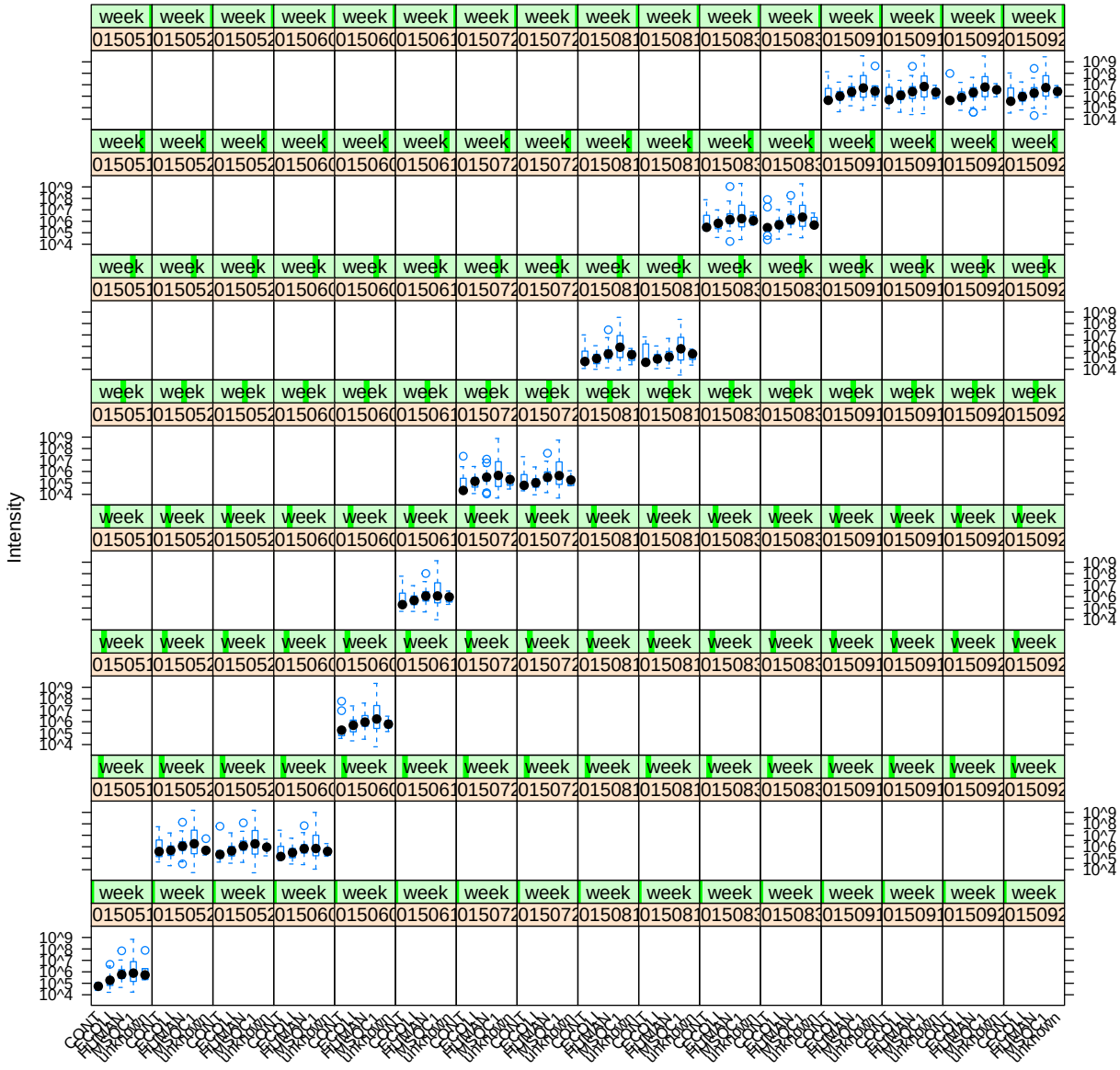

all peptide count
VSFELFADK
NLSVEDAAR
SADFTNFDPR
VLDALQAIK
GAGAFGYFEVTHDITK
GGPFSDSYR
GYSIFSYATK
ESDTSYVSLK
FEDENFILK
FSTVAGESGSADTVR
ALIVLAHSER
AVQQPDGLAVLGIFLK
EGHLSPDIVAEQK
pepcount
15
5
20
25
30
35
week

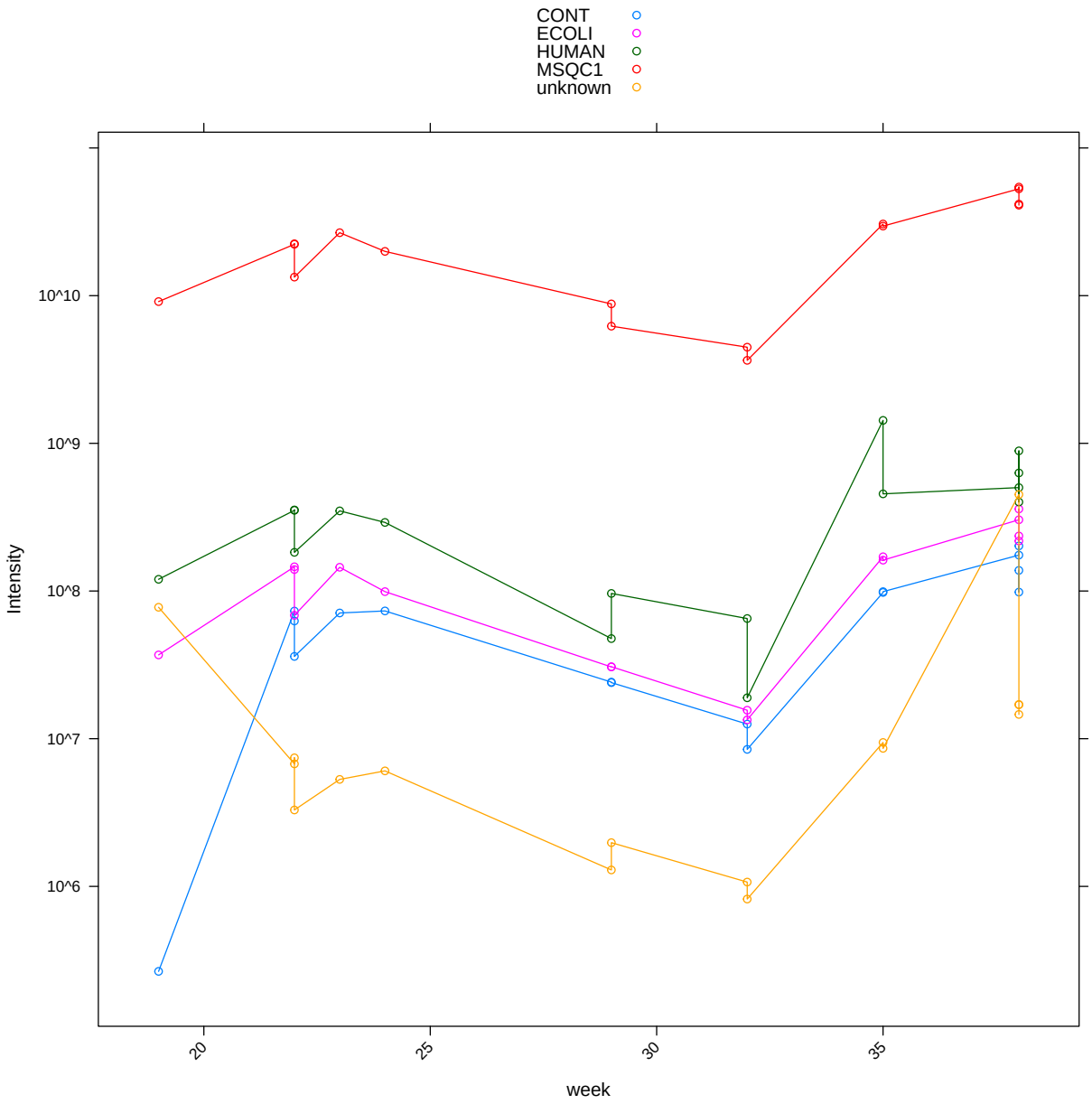

labeled peptide count
VSFELFADK
VLDALQAIK
SADFTNFDPR
NLSVEDAAR
GYSIFSYATK
GGPFSDSYR
GAGAFGYFEVTHDITK
FEDENFILK
ESDTSYVSLK
EGHLSPDIVAEQK
AVQQPDGLAVLGIFLK
ALIVLAHSER
FGCZ_20150511_1_VE
FGCZ_20150528_1_VE
FGCZ_20150528_2_VE
FGCZ_20150601_1_VE
FGCZ_20150609_1_VE
FGCZ_20150617_1_VE
FGCZ_20150720_1_VE
FGCZ_20150722_1_VE
FGCZ_20150810_1_VE
FGCZ_20150810_2_VE
FGCZ_20150831_1_VE
FGCZ_20150831_2_VE
FGCZ_20150918_1_VE
FGCZ_20150918_2_VE
FGCZ_20150921_1_VE
FGCZ_20150921_2_VE
11
10
9
8
7
6
5
4
3
2
1


not labeled peptide count
VSFELFADK
VLDALQAIK
SADFTNFDPR
NLSVEDAAR
GYSIFSYATK
GGPFSDSYR
GAGAFGYFEVTHDITK
FSTVAGESGSADTVR
FEDENFILK
ESDTSYVSLK
EGHLSPDIVAEQK
AVQQPDGLAVLGIFLK
ALIVLAHSER
FGCZ_20150511_1_VE
FGCZ_20150528_1_VE
FGCZ_20150528_2_VE
FGCZ_20150601_1_VE
FGCZ_20150609_1_VE
FGCZ_20150617_1_VE
FGCZ_20150720_1_VE
FGCZ_20150722_1_VE
FGCZ_20150810_1_VE
FGCZ_20150810_2_VE
FGCZ_20150831_1_VE
FGCZ_20150831_2_VE
FGCZ_20150918_1_VE
FGCZ_20150918_2_VE
FGCZ_20150921_1_VE
FGCZ_20150921_2_VE
11
10
9
8
7
6
5
4
3
2
1

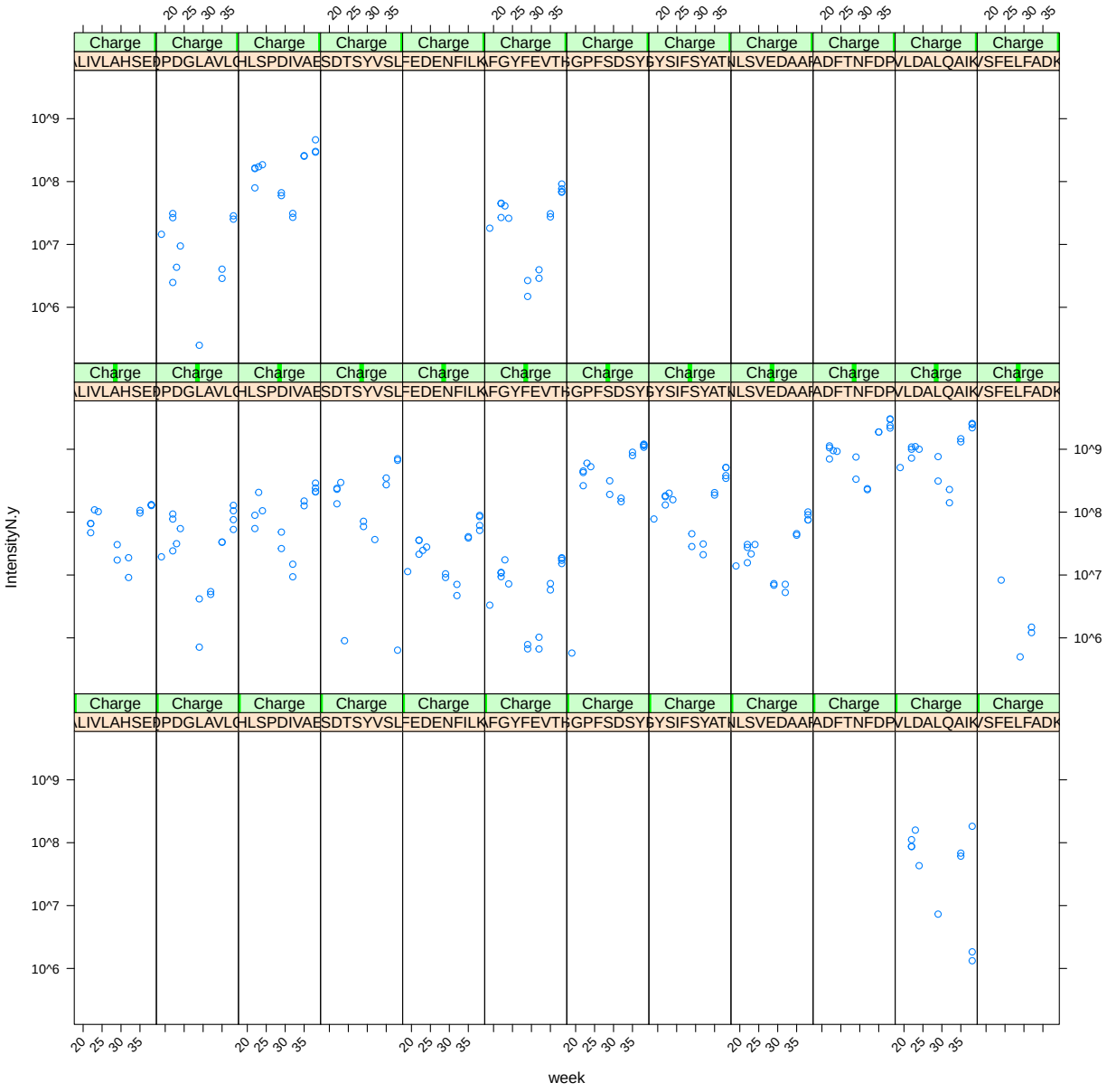

all peptide count
all
H
L
VSFELFADK
SADFTNFDPR
VLDALQAIK
GYSIFSYATK
NLSVEDAAR
GAGAFGYFEVTHDITK
GGPFSDSYR
FEDENFILK
FSTVAGESGSADTVR
EGHLSPDIVAEQK
ESDTSYVSLK
ALIVLAHSER
AVQQPDGLAVLGIFLK
pepcount
week

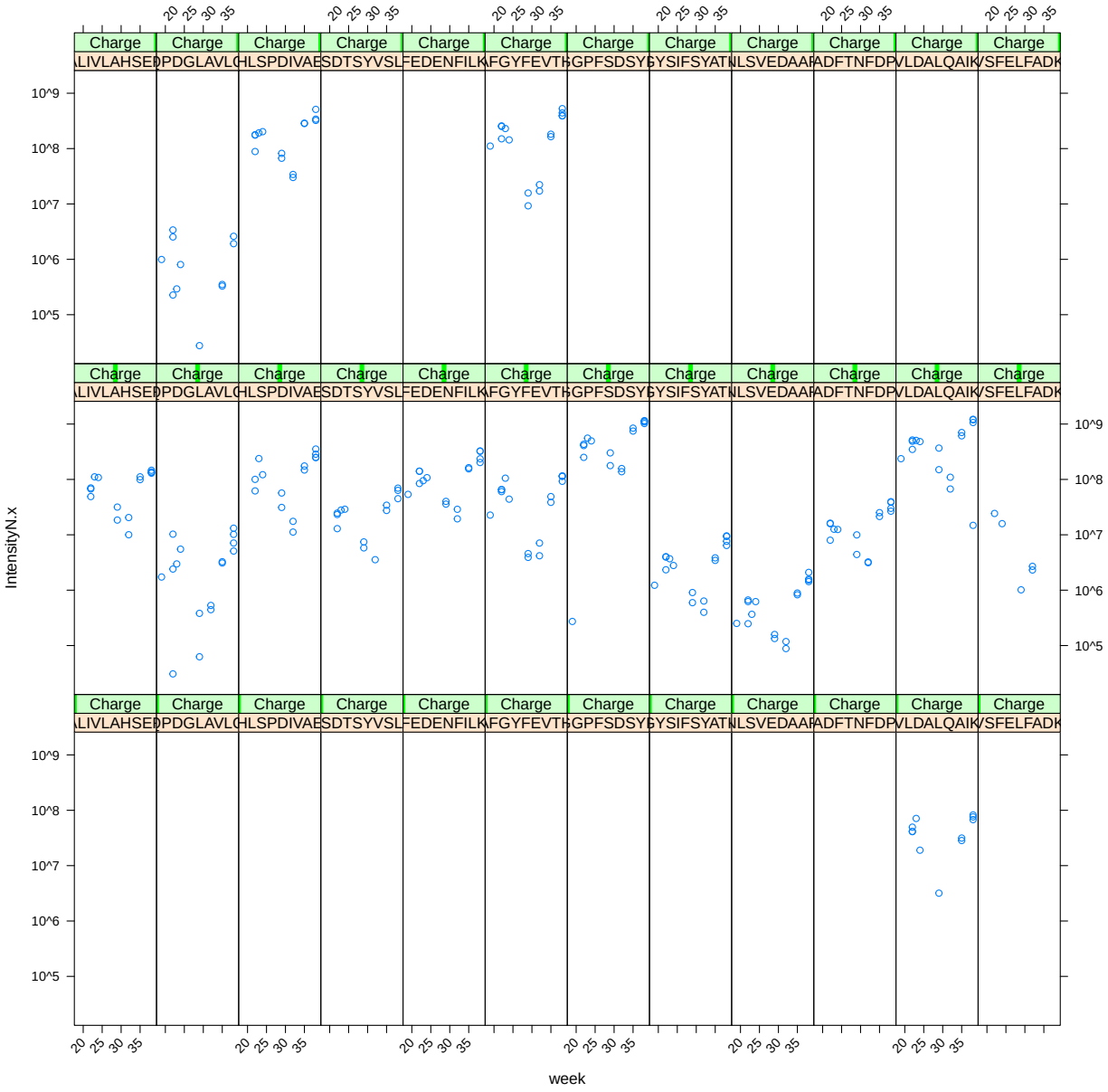
Look at Intensities (by species)

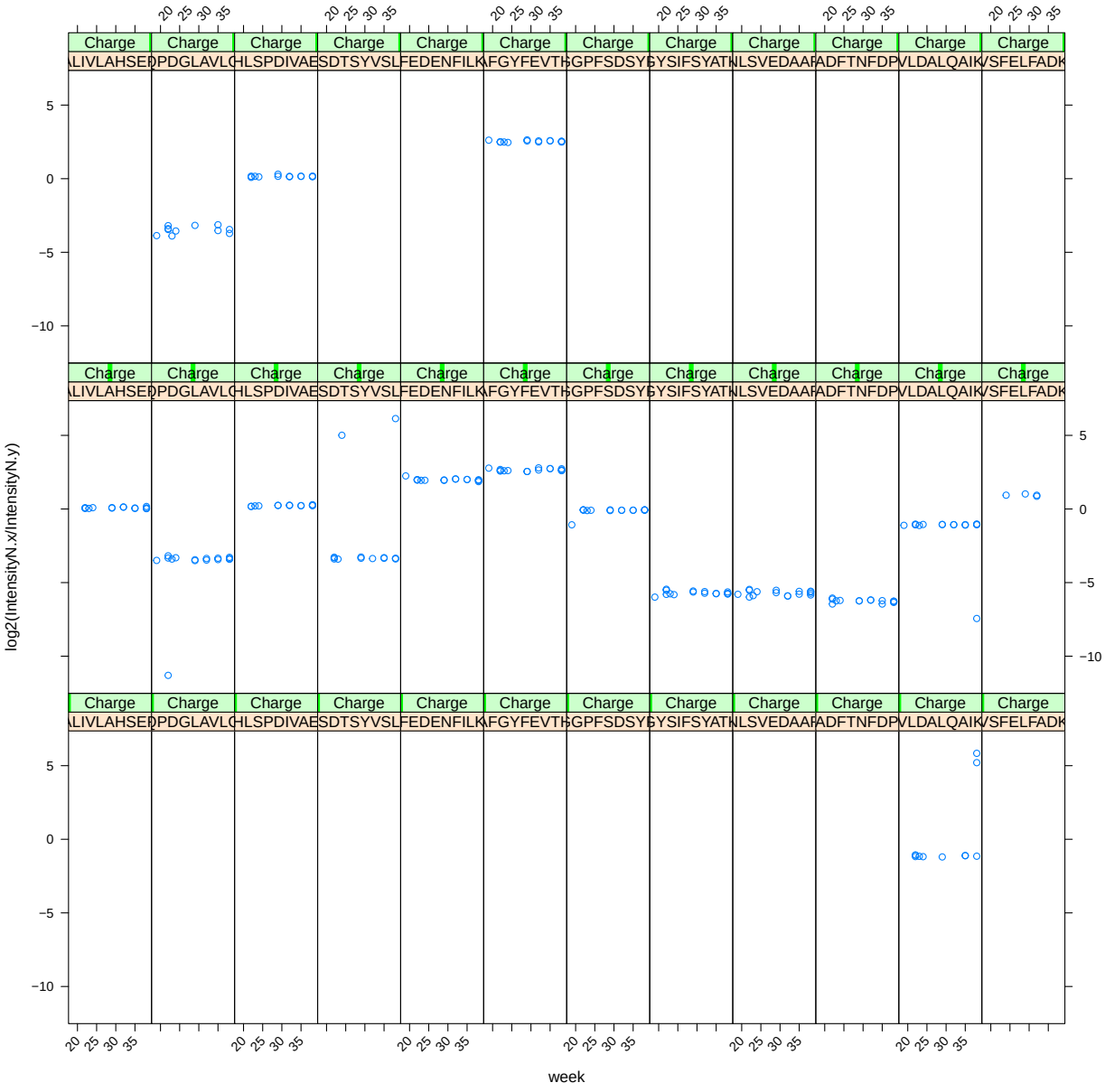


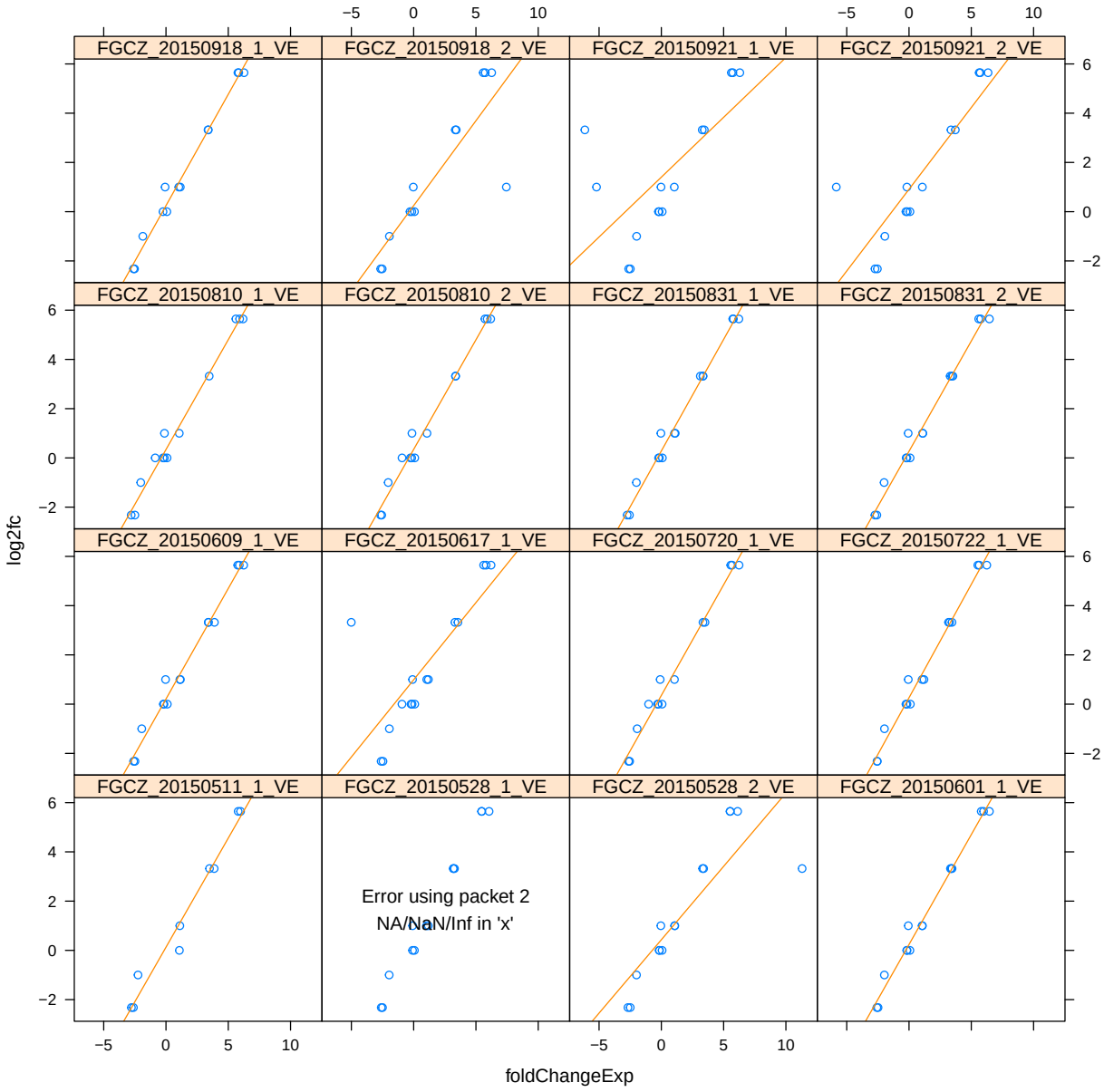

CONT
ECOLI
HUMAN
MSQC1
unknown
Intensity
10^10
10^9
10^8
10^7
10^6
20
25
30
35
week

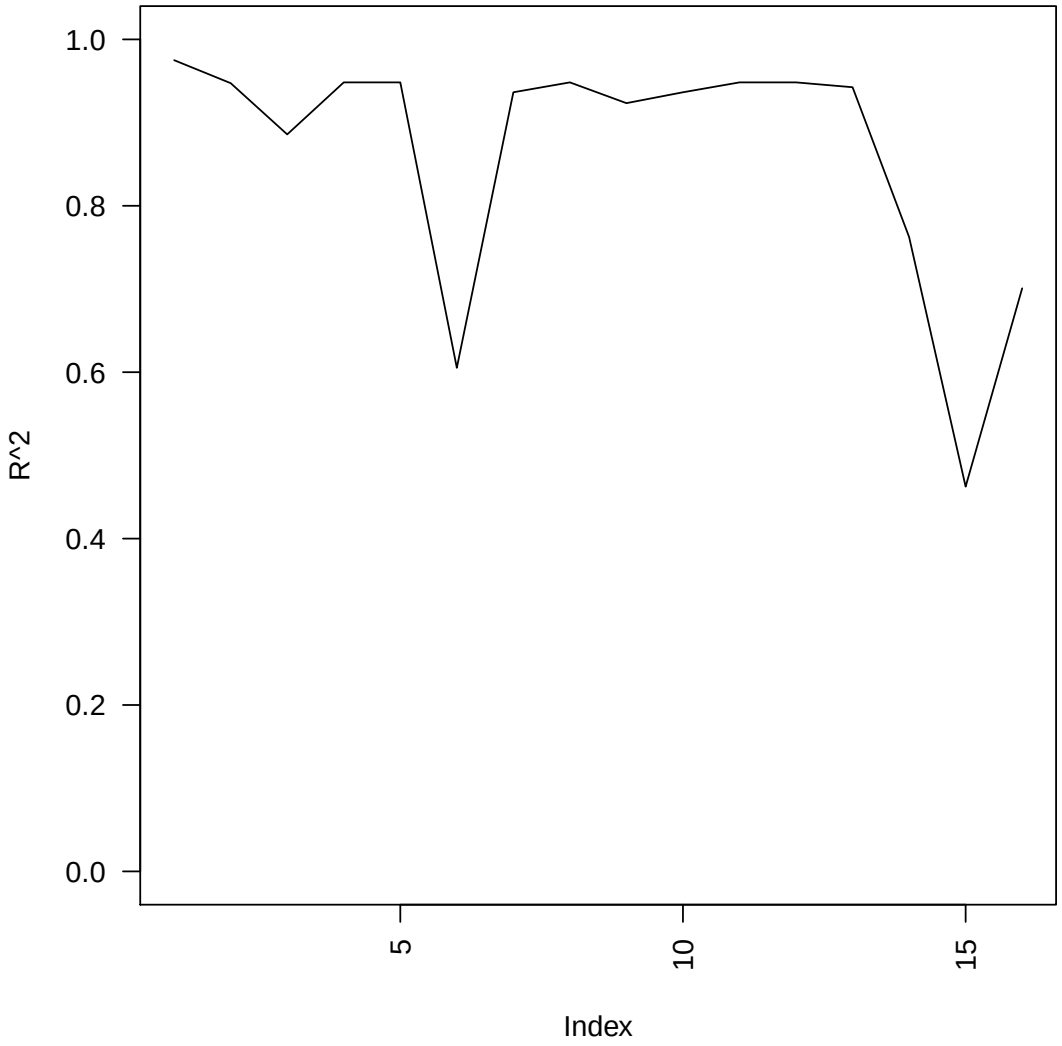
Looking at Intensities




Charge
IntensityN.x
10^9
10^8
10^7
10^6
10^5
20
25
30
35
week


Charge
log2(IntensityN.x/IntensityN.y)
week
20
25
30
35
5
0
−5
−10


FGCZ_20150918_1_VE
FGCZ_20150918_2_VE
FGCZ_20150921_1_VE
FGCZ_20150921_2_VE
FGCZ_20150810_1_VE
FGCZ_20150810_2_VE
FGCZ_20150831_1_VE
FGCZ_20150831_2_VE
FGCZ_20150609_1_VE
FGCZ_20150617_1_VE
FGCZ_20150720_1_VE
FGCZ_20150722_1_VE
FGCZ_20150511_1_VE
FGCZ_20150528_1_VE
FGCZ_20150528_2_VE
FGCZ_20150601_1_VE
Error using packet 2
NA/NaN/Inf in 'x'
log2fc
foldChangeExp


1.0
0.8
0.6
0.4
0.2
0.0
R^2
5
10
15
Index