

# Freedman 原論文に学ぶ

## 資料 1 (by 山田裕一)

### Casson-handle の構成 と Kirby diagram

研究集会「Casson-Freedman 理論 研究会」(2009年10月)の参考のために作成しました.<sup>1</sup> 集会後に一部 修正しました.

修正点 (10月22日, 2009年)

- Casson handle の signed tree 表示では edge に符号が付く.  
(旧版では vertex に符号をつけていた.)

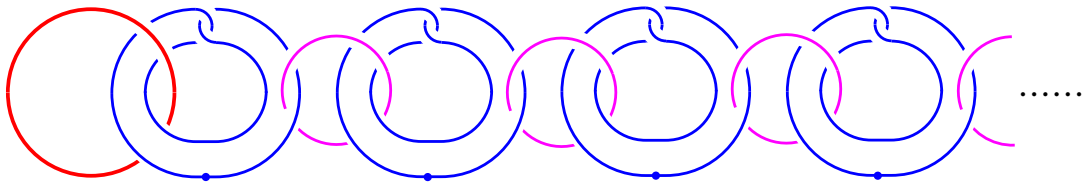


Figure 1: Diagram of the simplest CH

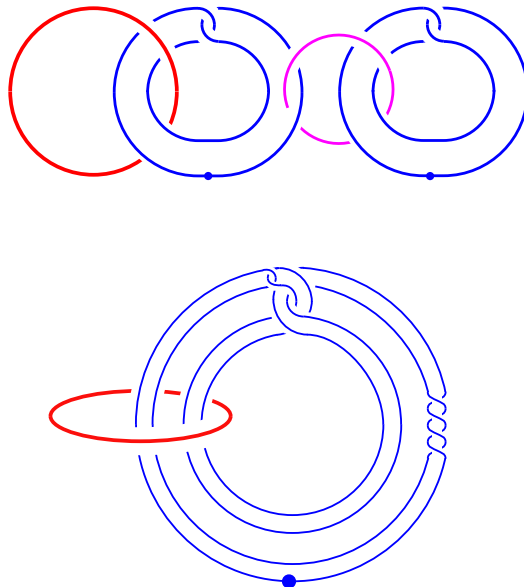


Figure 2: 2nd Whitney tower  $\leftrightarrow$  Whitehead link  $W_2$

<sup>1</sup>This work was supported by KAKENHI (Grant-in-Aid for Scientific Research) No. 21540072.

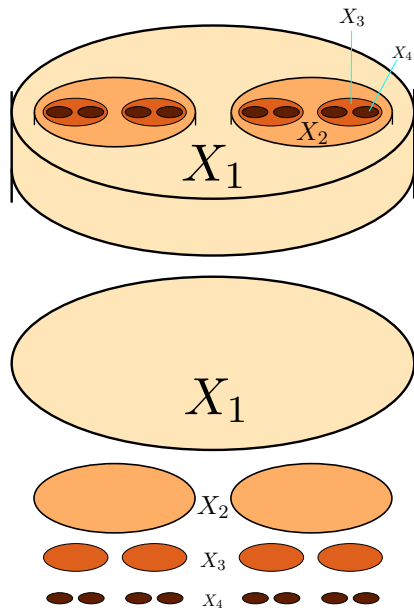
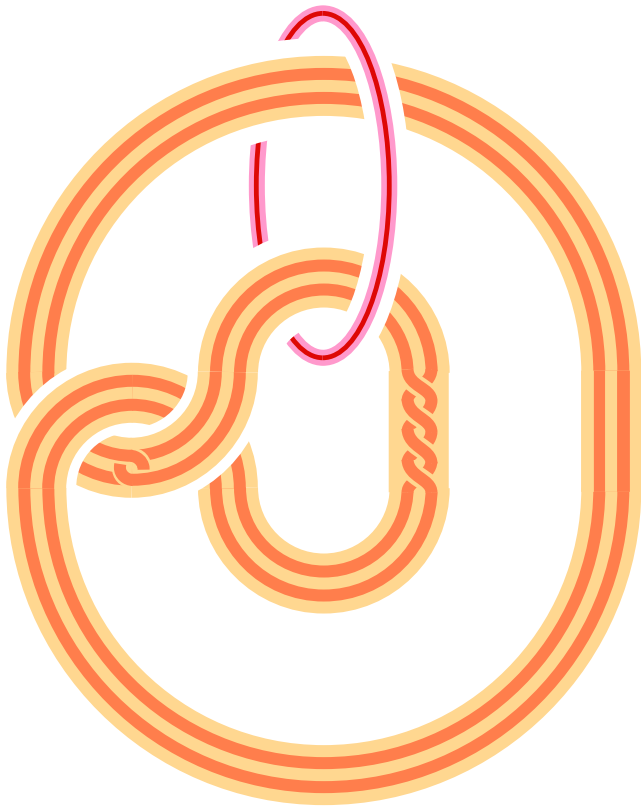


Figure 3: Whitehead link  $W_n$  (一般化して  $X_n$ )

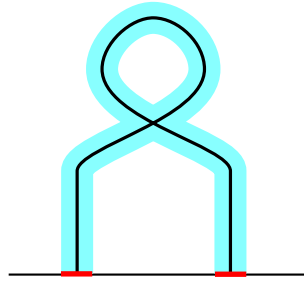


Figure 4: The 1st Whitney Tower

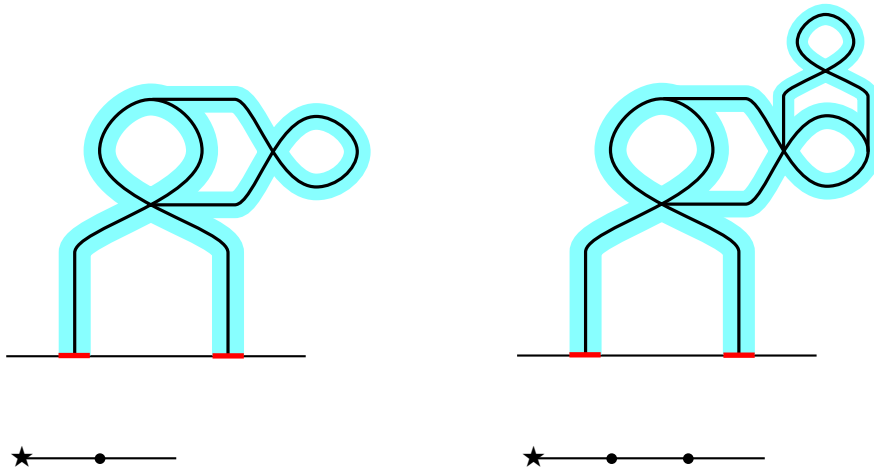


Figure 5: The 2nd/3rd Whitney Tower

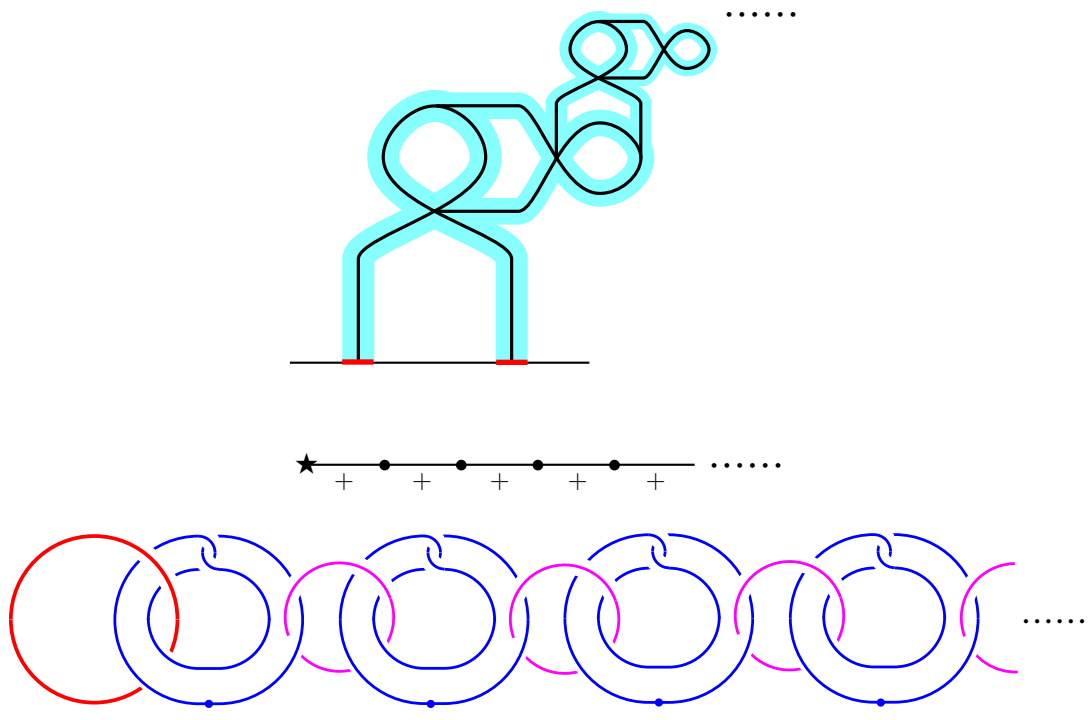


Figure 6: The simplest CH (with signs)

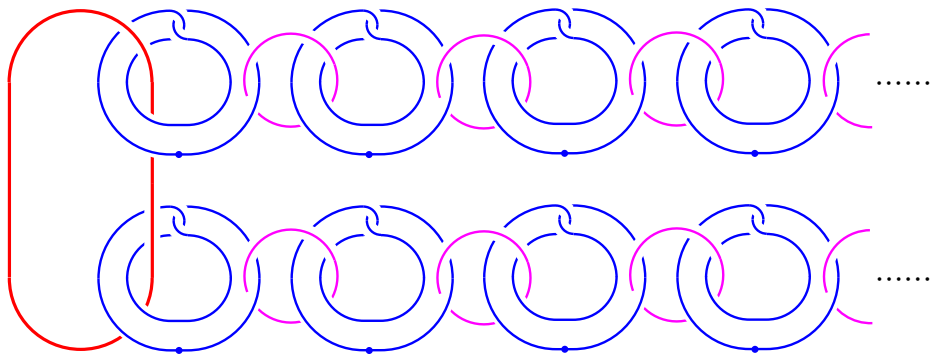
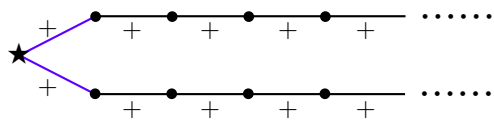
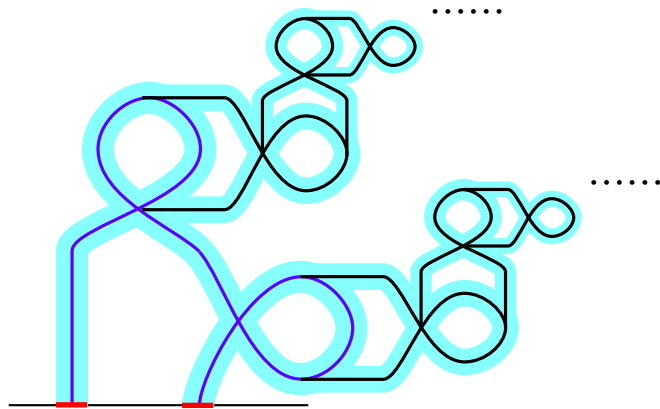


Figure 7: Another Type CH その 1

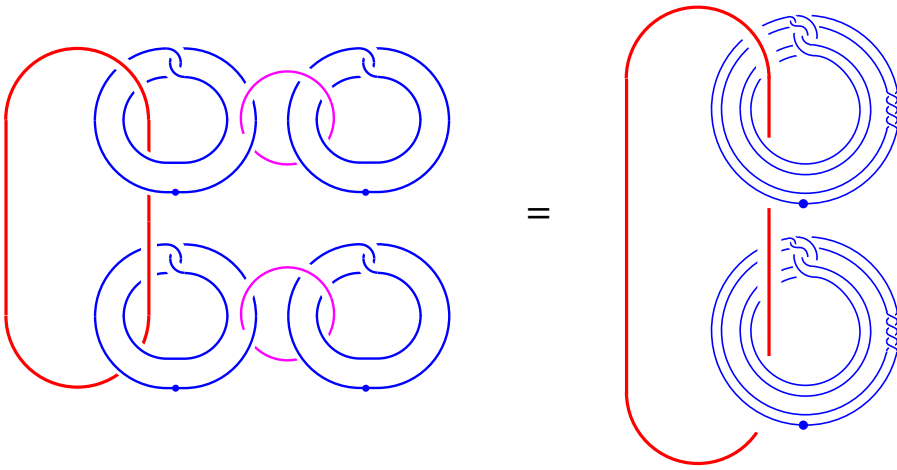


Figure 8: Another Type CH その1 (2階までの変形) p.396

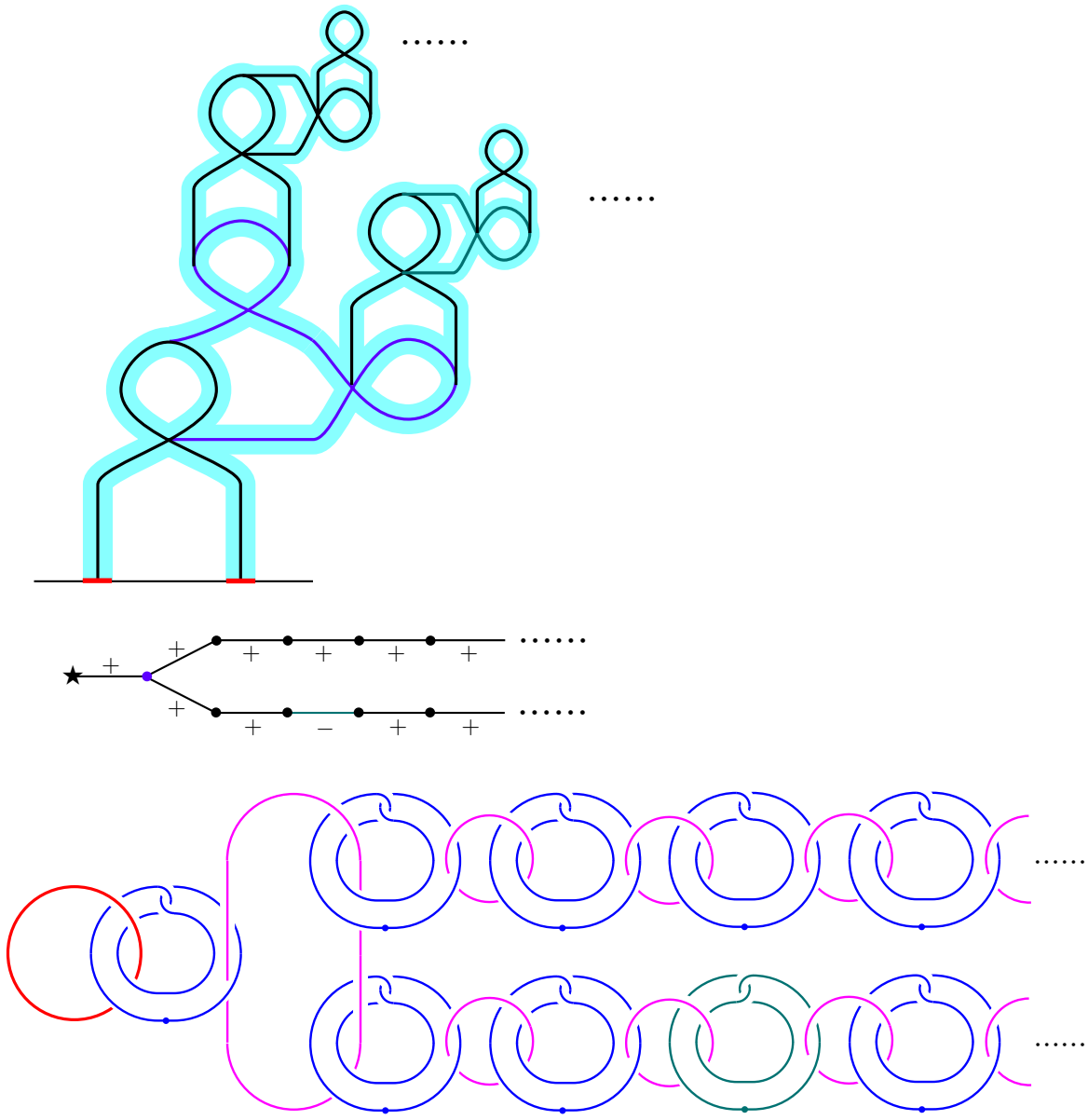


Figure 9: Another Type CH その2