

2) 水質（常時観測）

- 1) 観測目的

ダム撤去により環境が変化すると予測されるダム上下流において、出水時の水の濁り等の現在の発生状況を把握することを目的とする。
- 2) 観測項目

次の4つの項目を観測する。①水温、②pH、③DO、④濁度
- 3) 観測時期・頻度

4月1日～3月31日の1年間において、1時間毎とする。

4) 観測方法

各観測項目の観測方式及び測定範囲を下表に示す。

観測項目	観測方式	測定範囲
水温	半導体センサ	-5～50℃
pH	固定電解液ガラス電極方式	0～14
DO	ガルバニ電極方式	0～20mg/L
濁度	積分球方式及び透過光方式	0～2000FTU

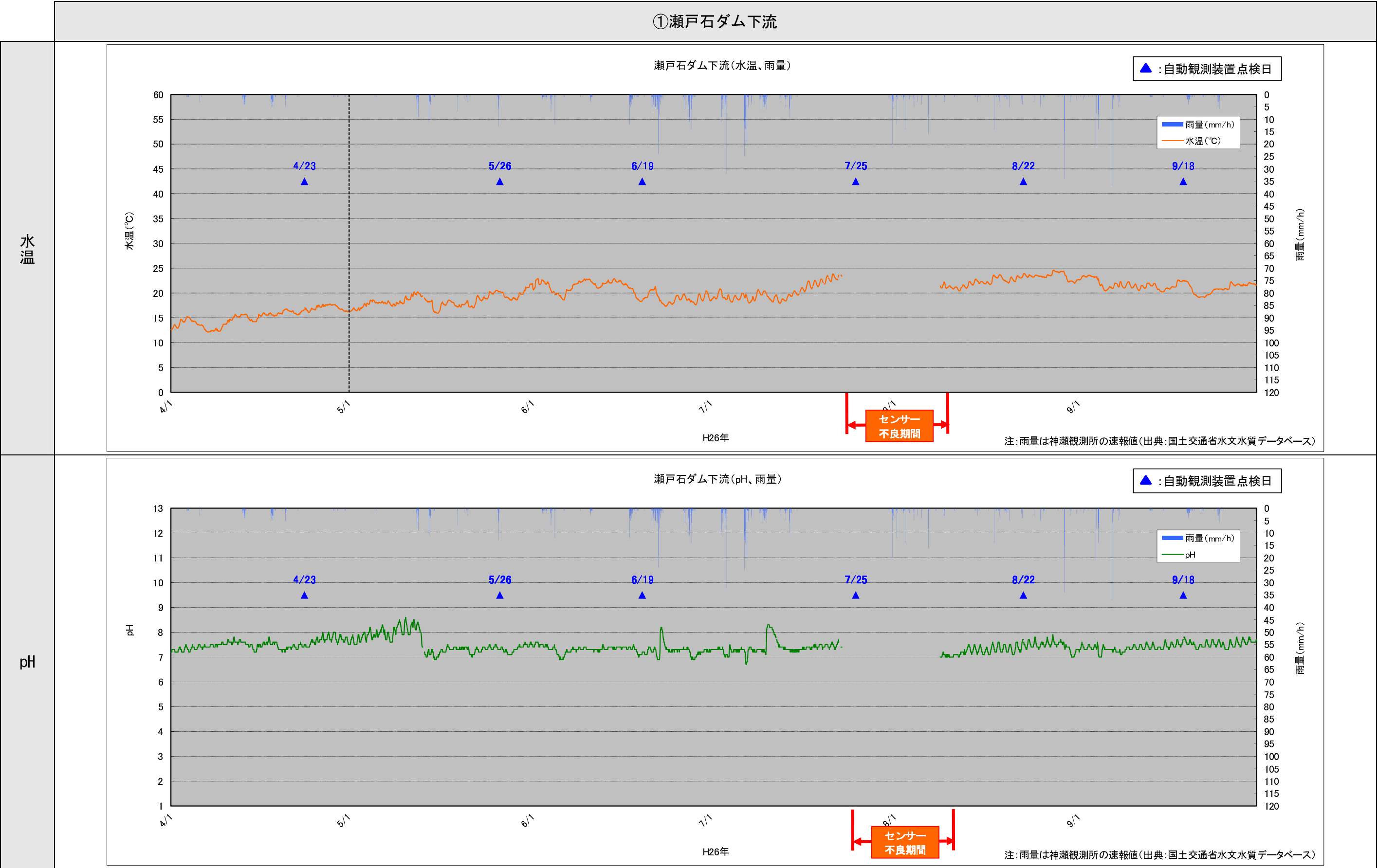
5) 観測地点

次の3地点で観測した。①瀬戸石ダム下流、②道の駅坂本、③横石

The map illustrates the river course with several labeled zones and observation points. Key features include:
- **Observation Points (Yellow Labels):** ①瀬戸石ダム下流 (downstream of Setaishi Dam), ②道の駅坂本 (Sakamoto Station), and ③横石 (Yokishi).
- **Dams:** 瀬戸石ダム (Setaishi Dam) and 貫瀬ダム (Kanusai Dam).
- **Flow Zones (Blue Labels):** 下流流水区間 (downstream flow zone), 上流流水区間 (upstream flow zone), 第1流水回復区間 (1st flow recovery zone), 第2流水回復区間 (2nd flow recovery zone), 百済木川流水回復区間 (Hyakusakikawa flow recovery zone), and 百済木川流水区間 (Hyakusakikawa flow zone).
- **Other Labels:** 透坪塚 (Tohiraoka), 流氷区間 (ice zone), and 流氷回復区間 (ice recovery zone).
- **Scale and Orientation:** A scale bar at the bottom right indicates 0, 1, and 2 km, accompanied by a north arrow.

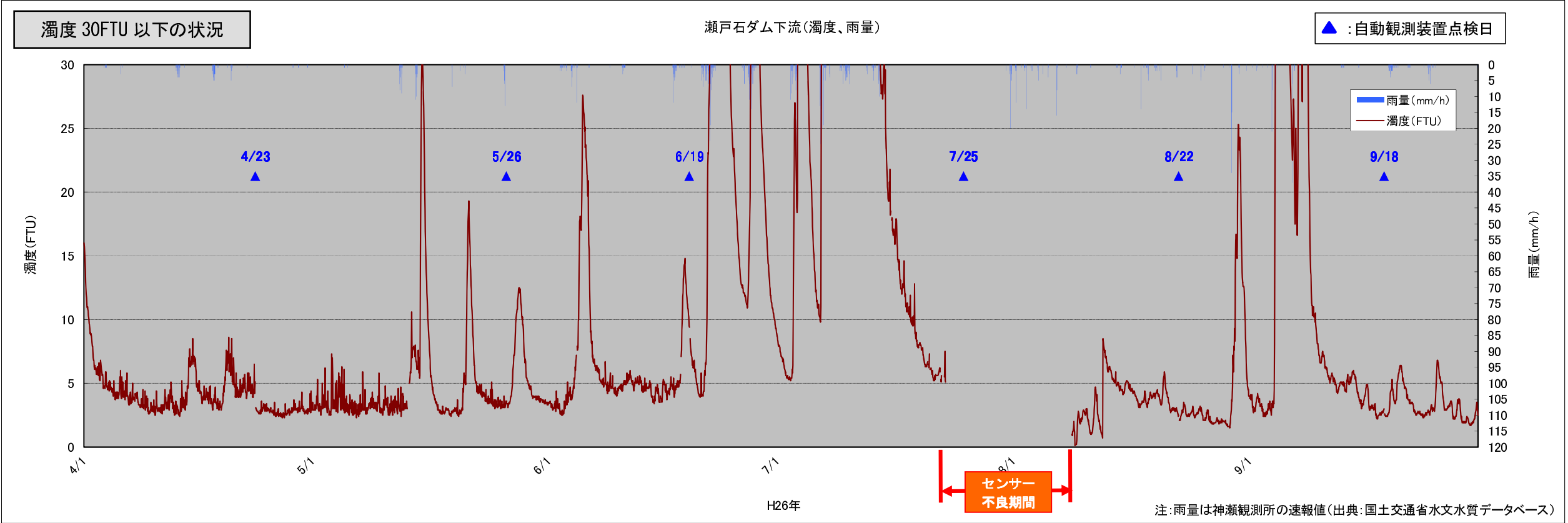
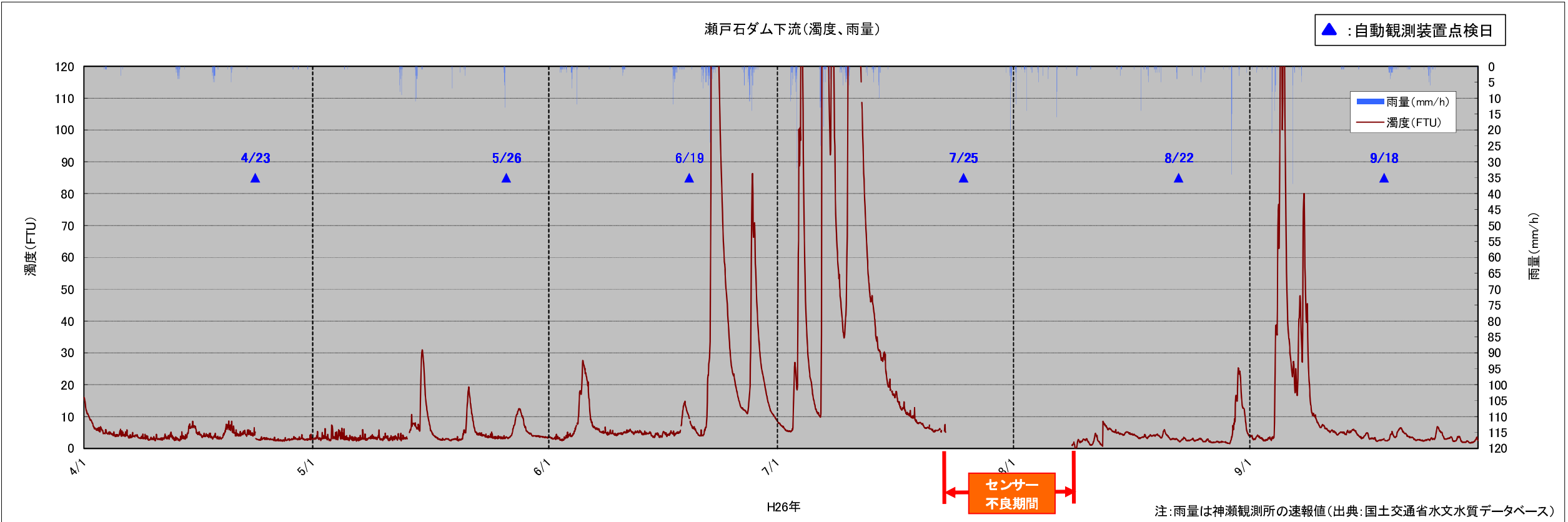
※この地図は、国土地理院発行の2万5千分の1地形図(坂本、中津道)を背景図として使用したものである。

6) 観測結果



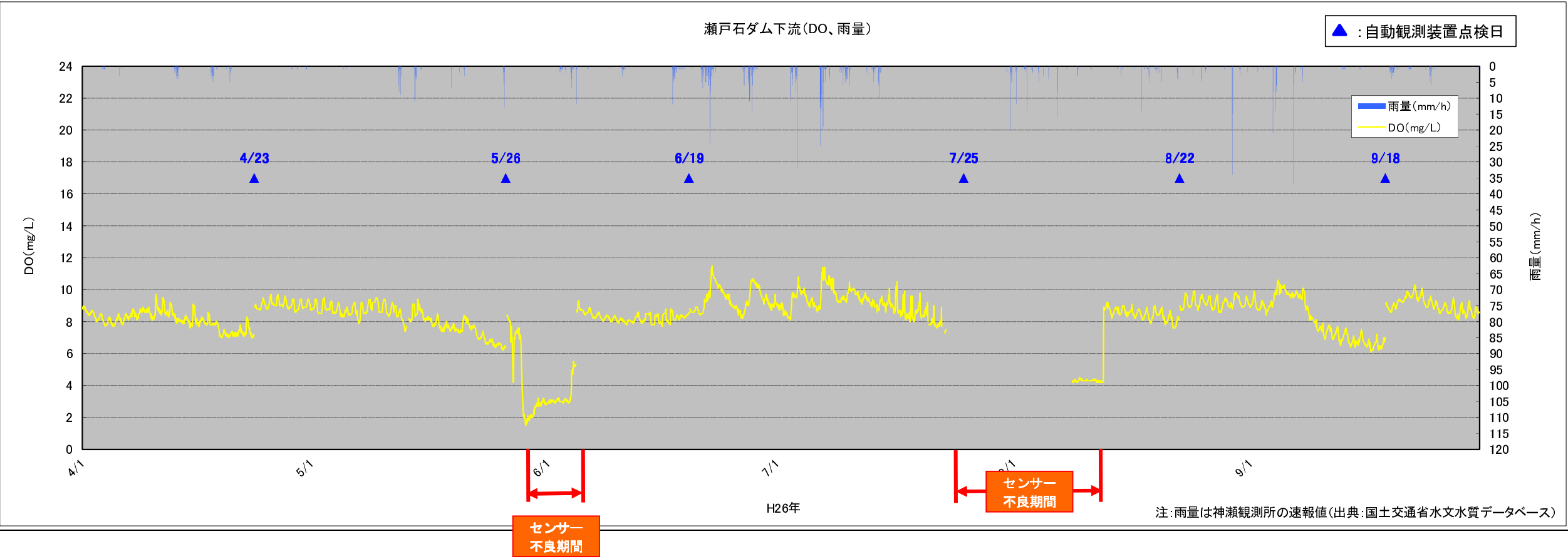
①瀬戸石ダム下流

濁度



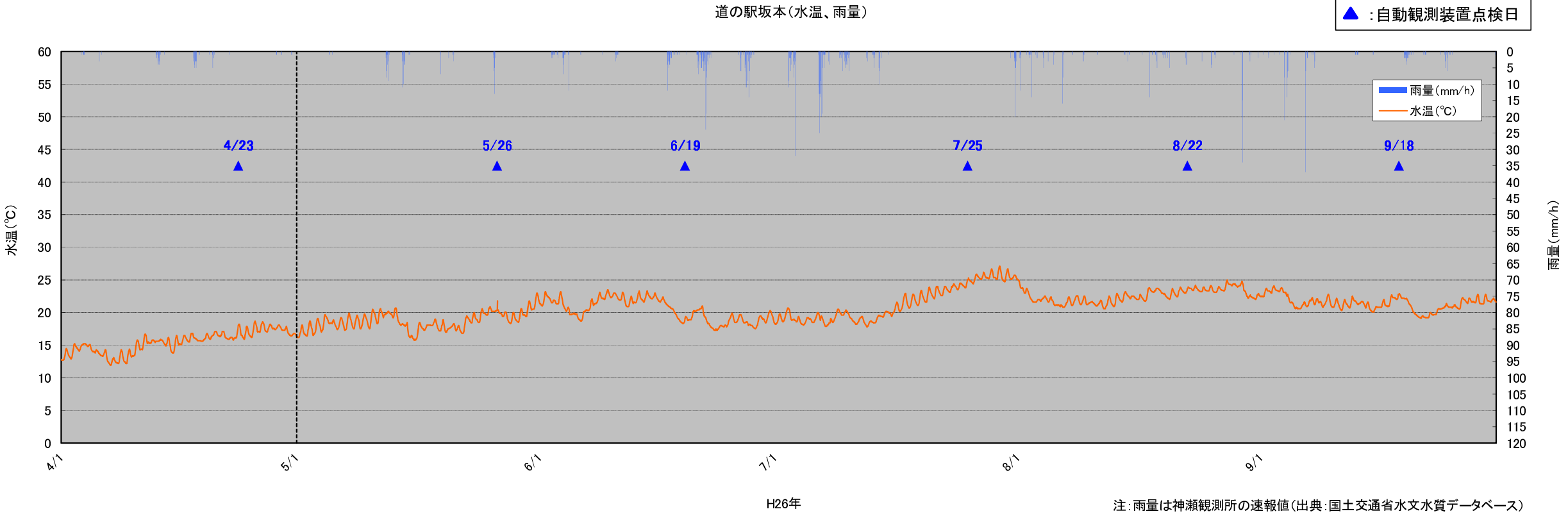
①瀬戸石ダム下流

DO

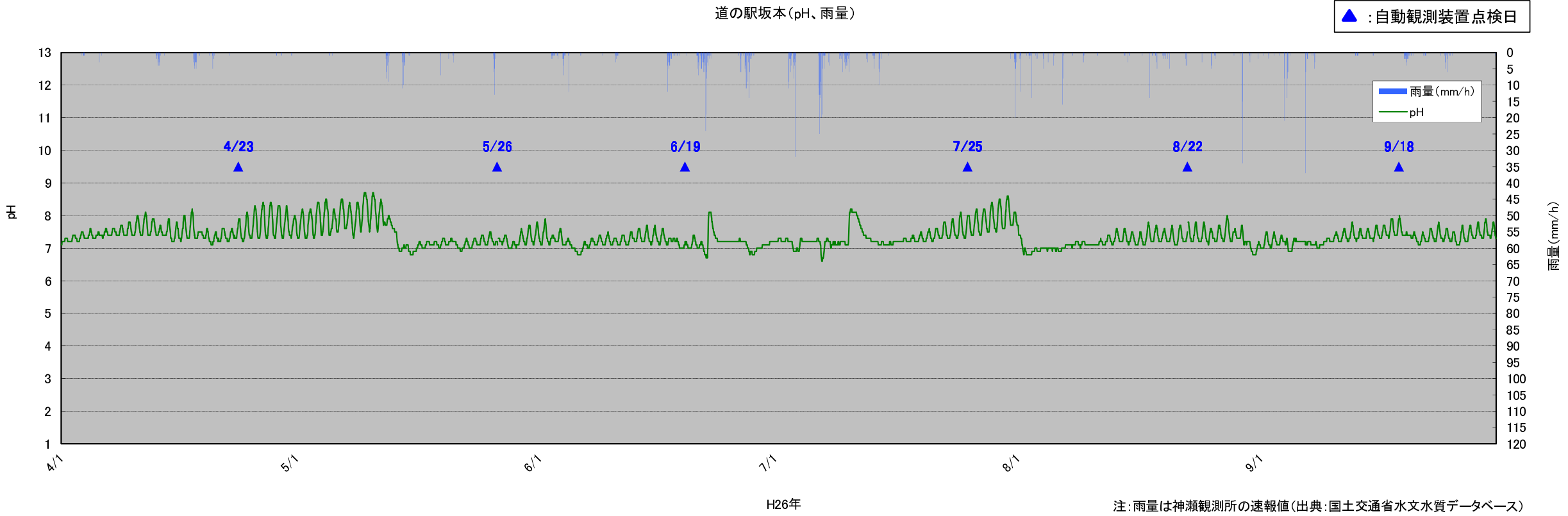


②道の駅坂本

水温

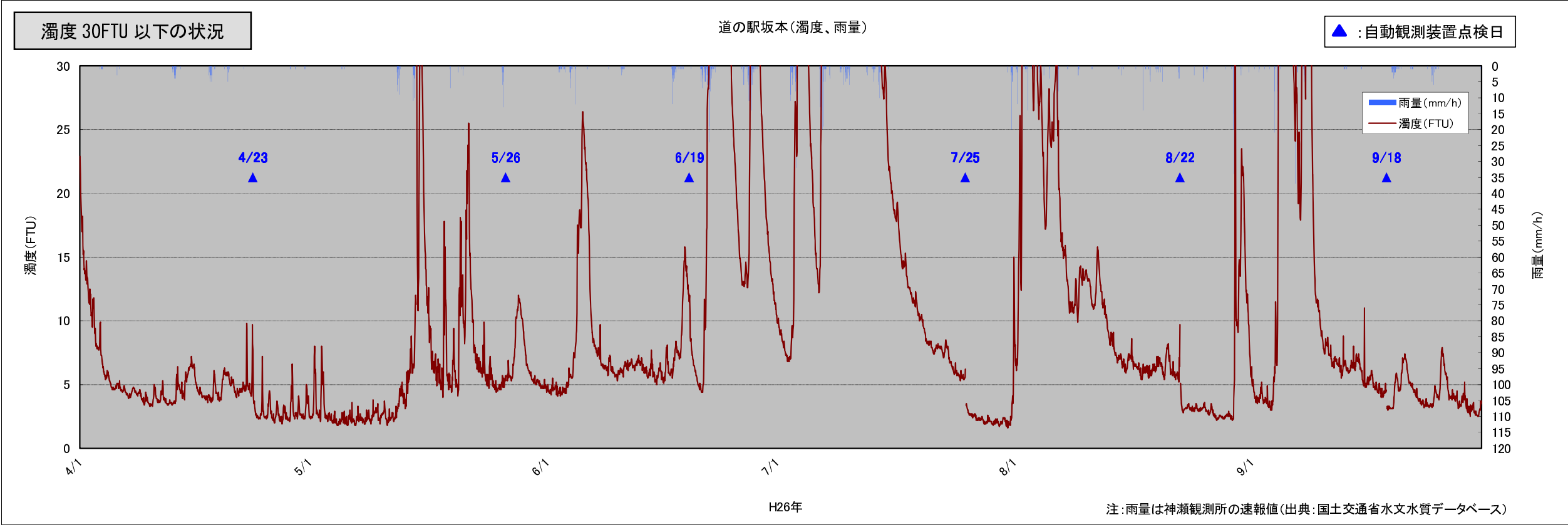
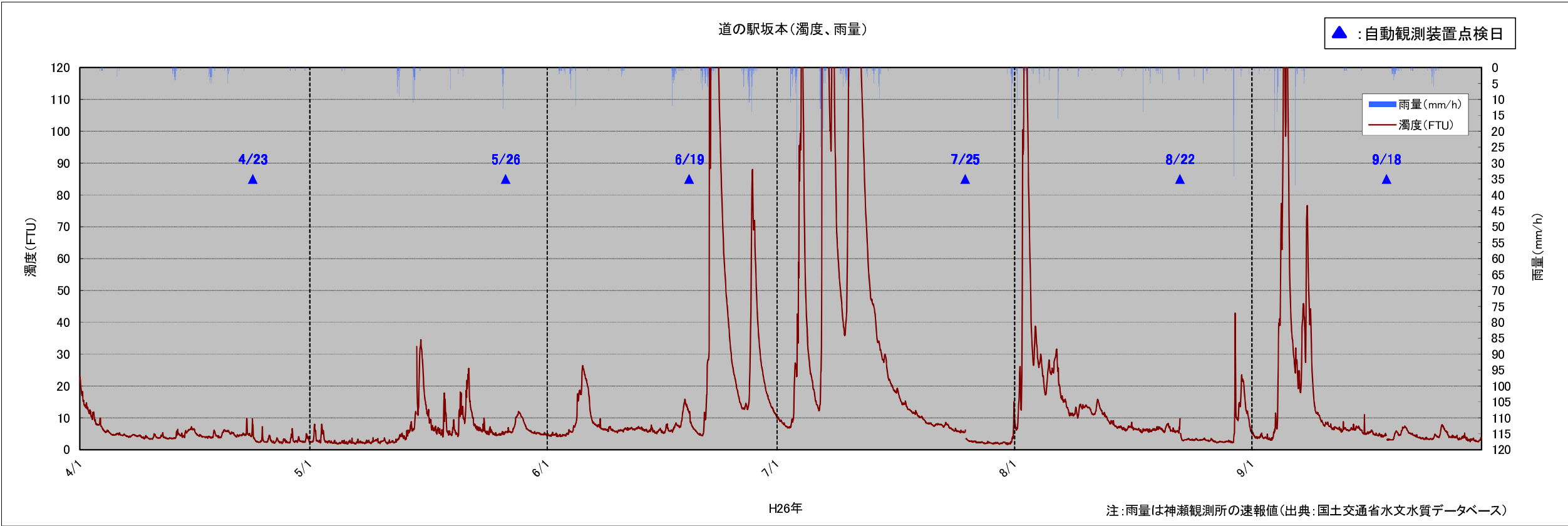


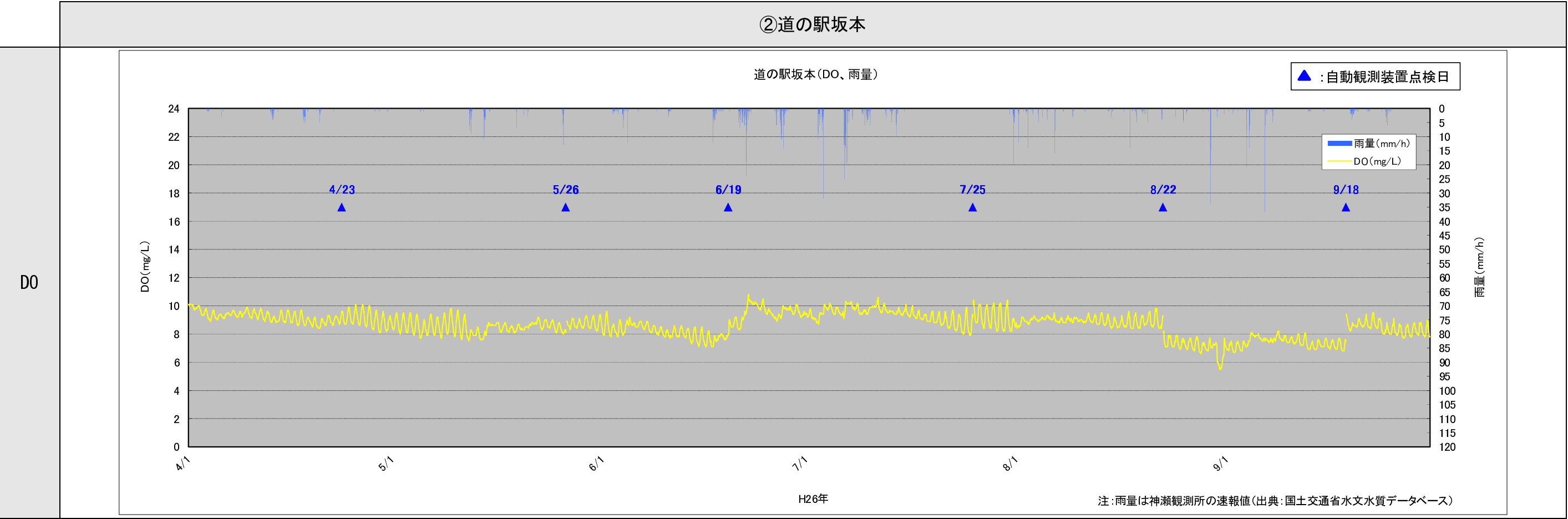
pH



②道の駅坂本

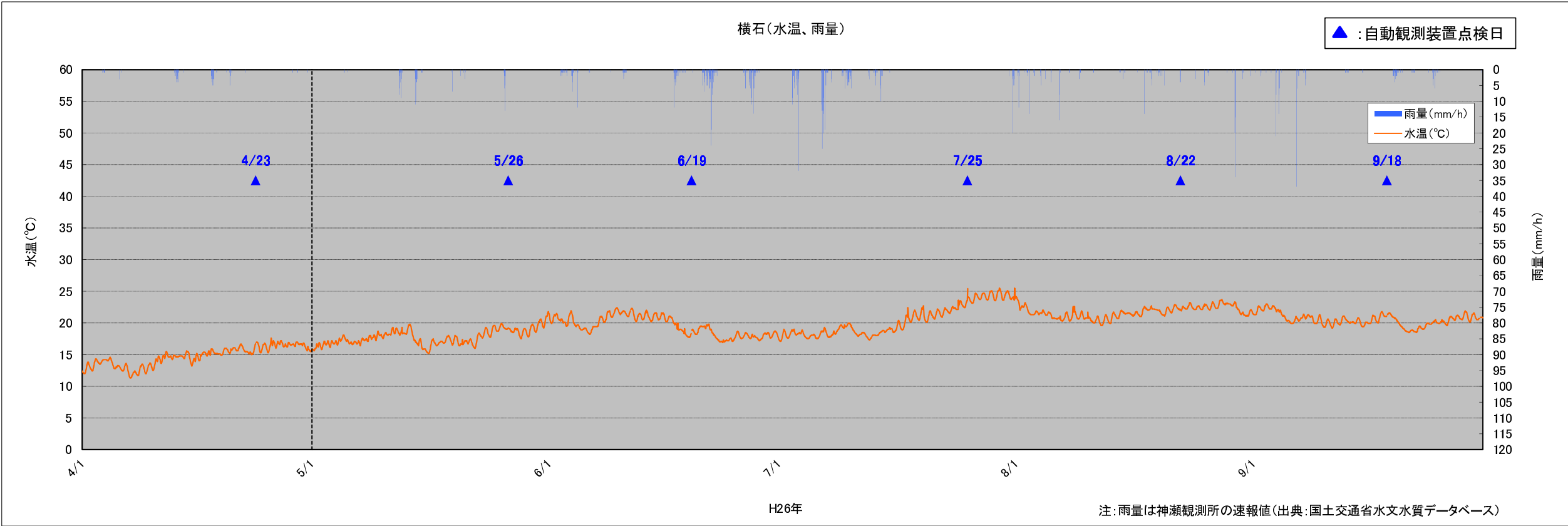
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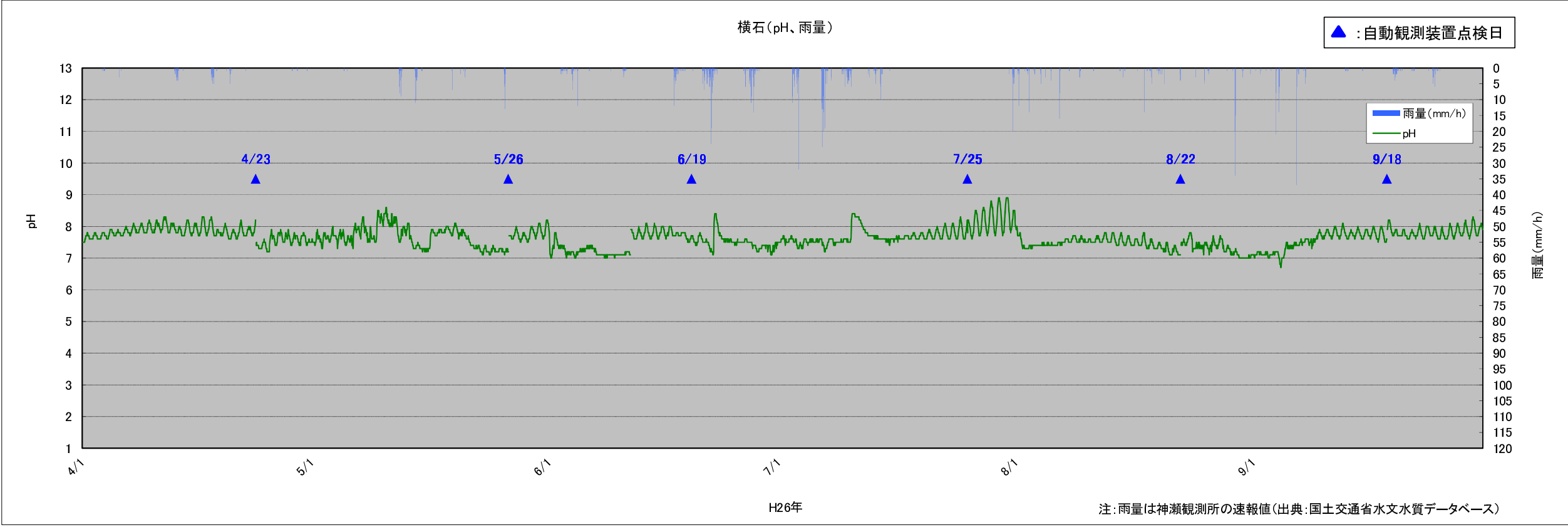


③横石

水温

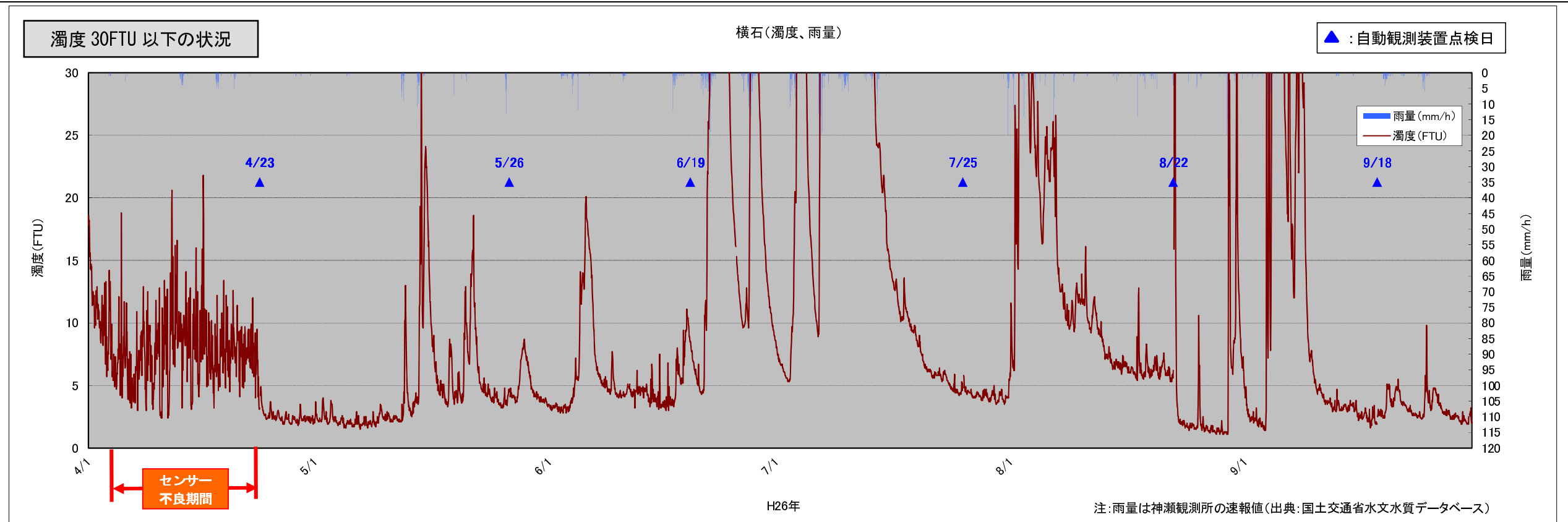
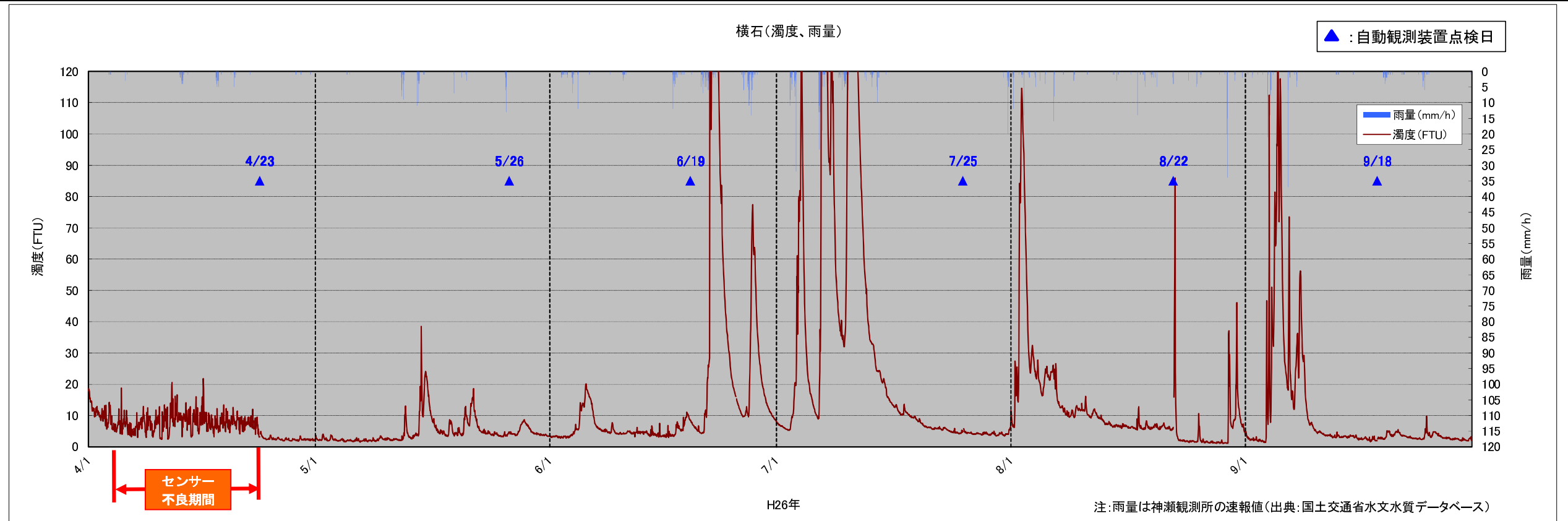


pH



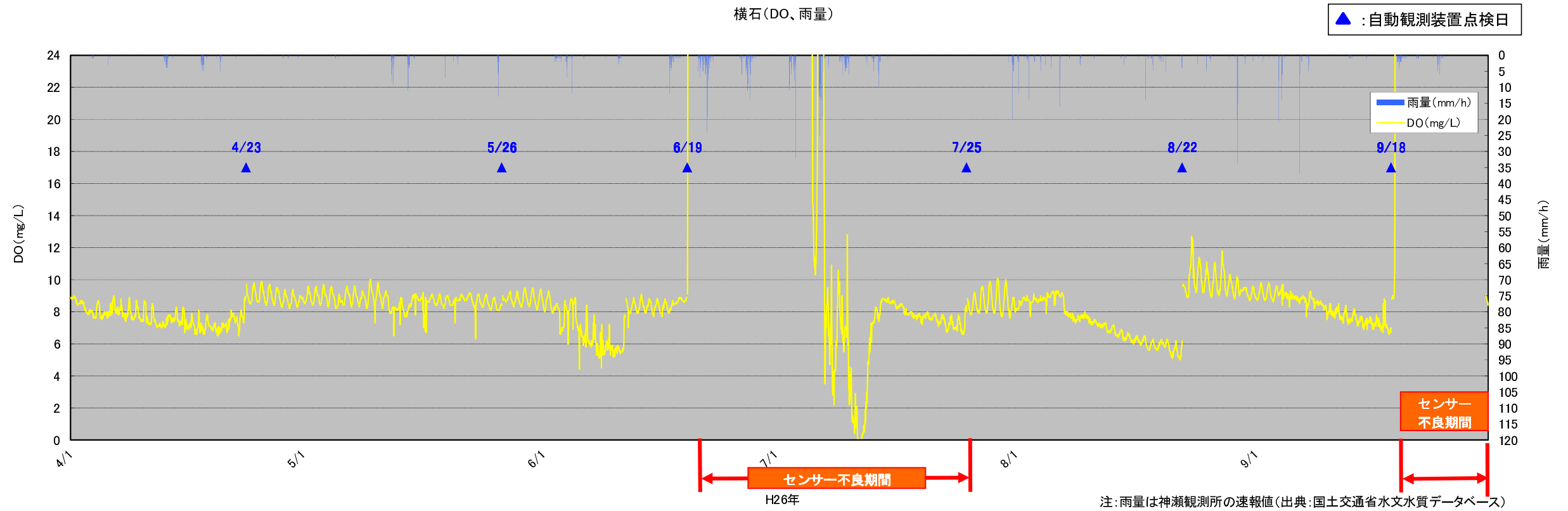
③横石

濁度



③横石

DO



7) 出水時の流量と濁度（FTU）の時間的な変化について（H21～26年）

瀬戸石ダム下流

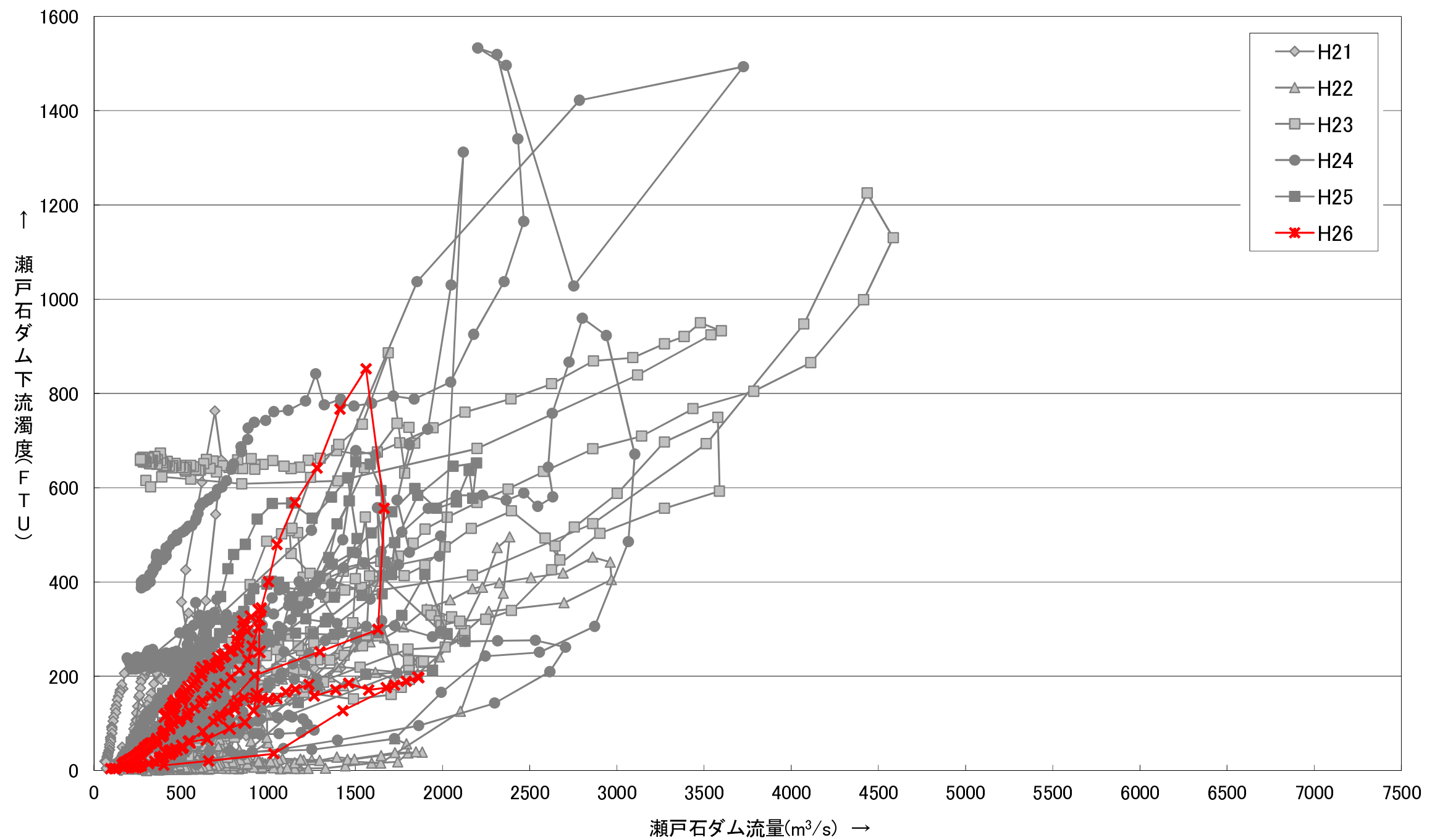
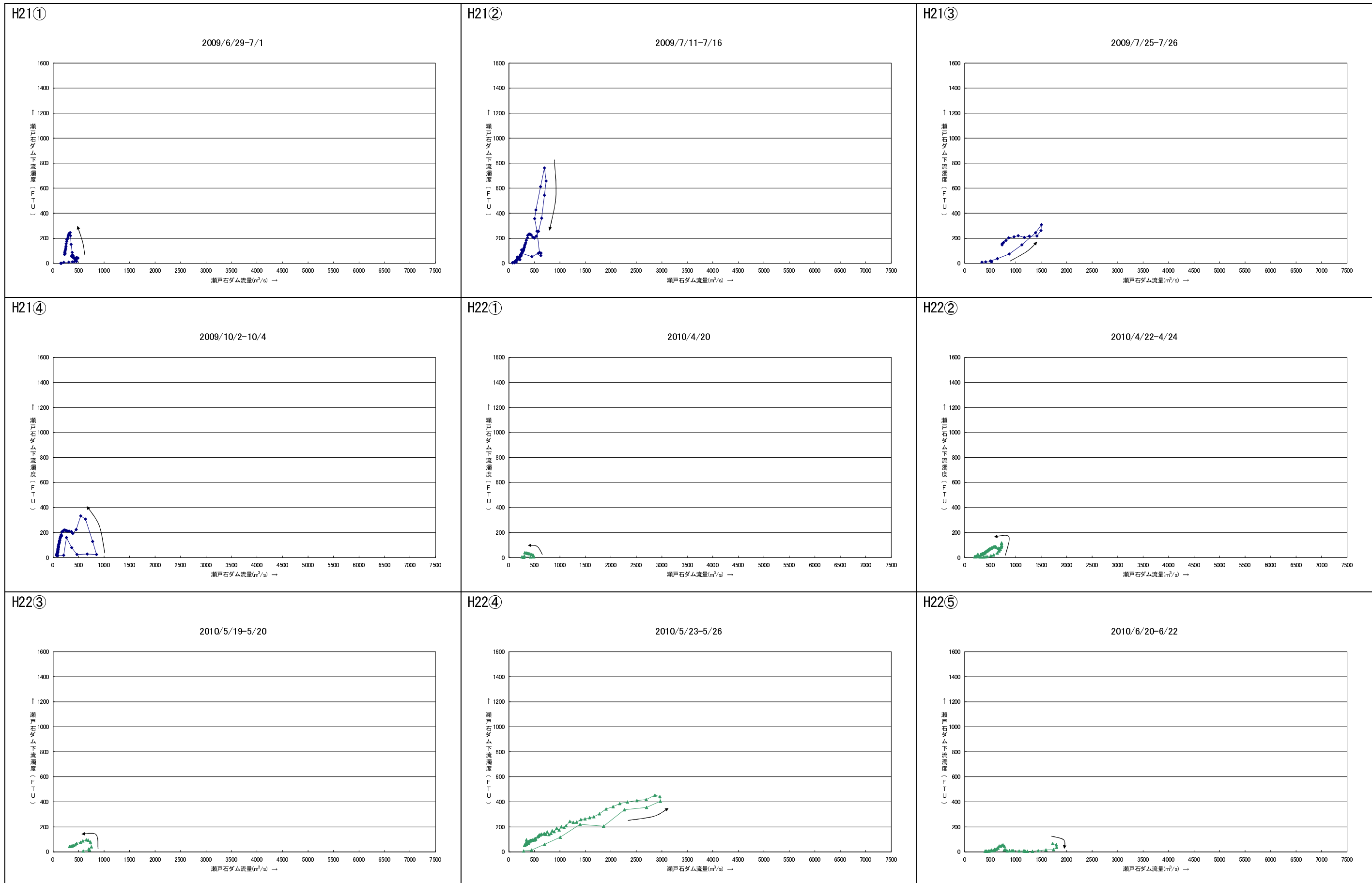
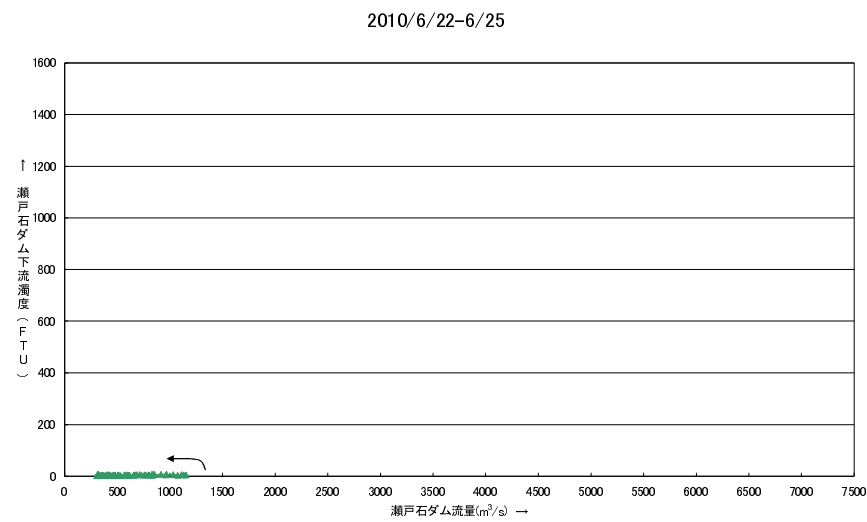


図 出水時の流量と濁度（FTU）の時間的な変化（瀬戸石ダム下流）

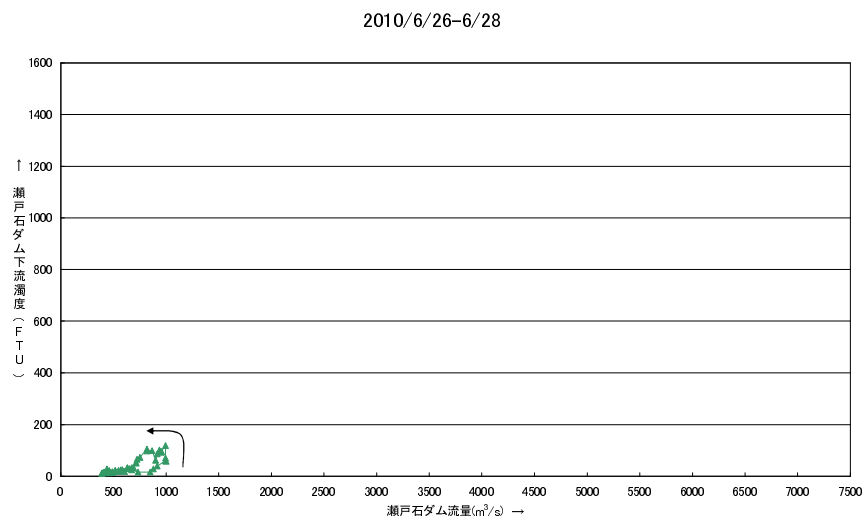
○瀬戸石ダム下流



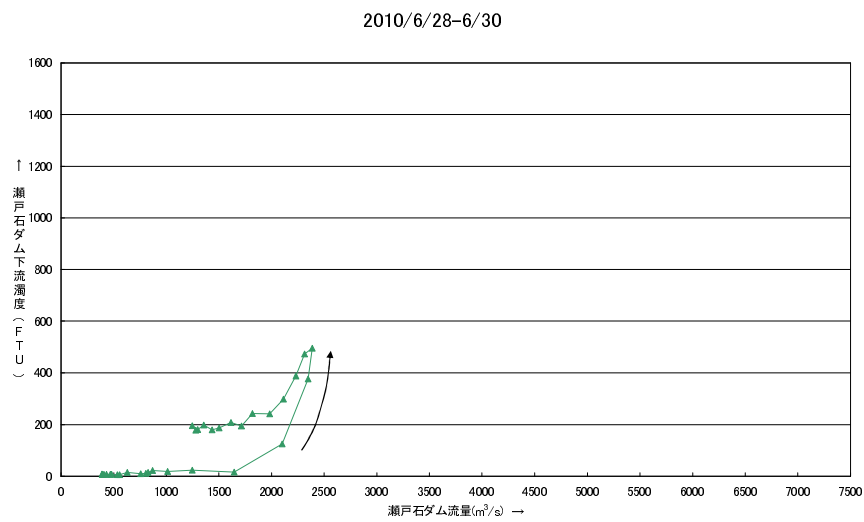
H22⑥



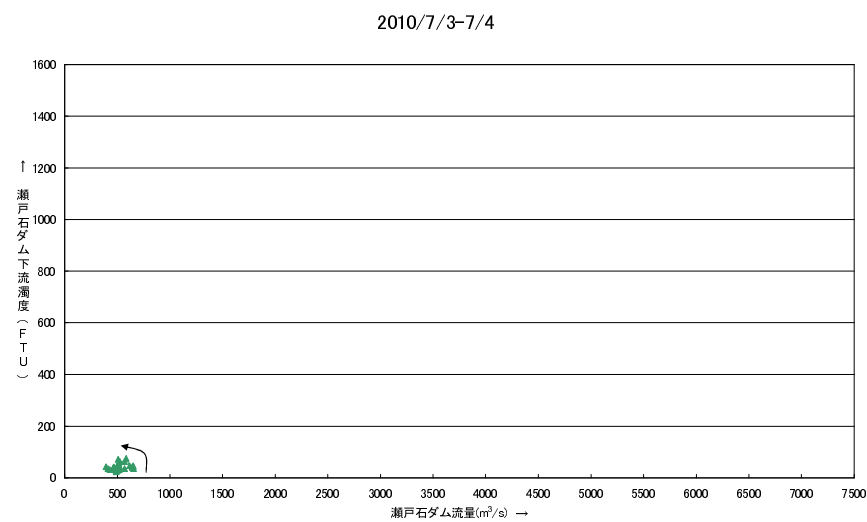
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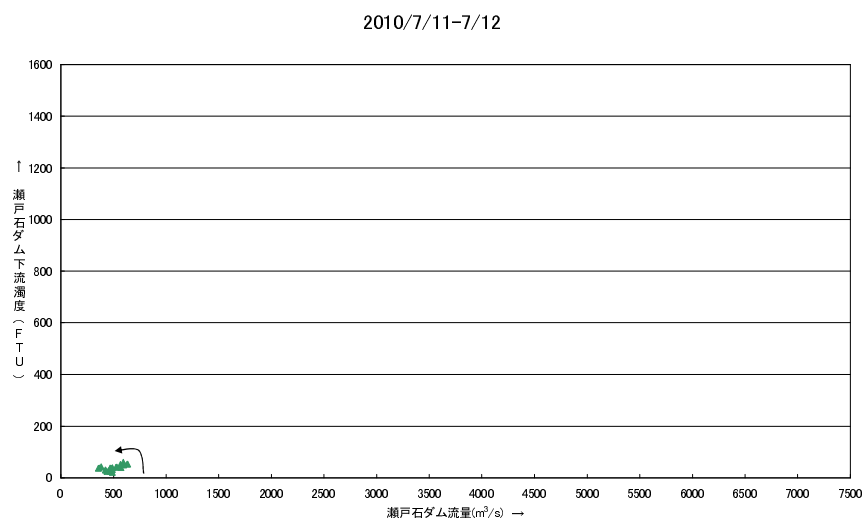
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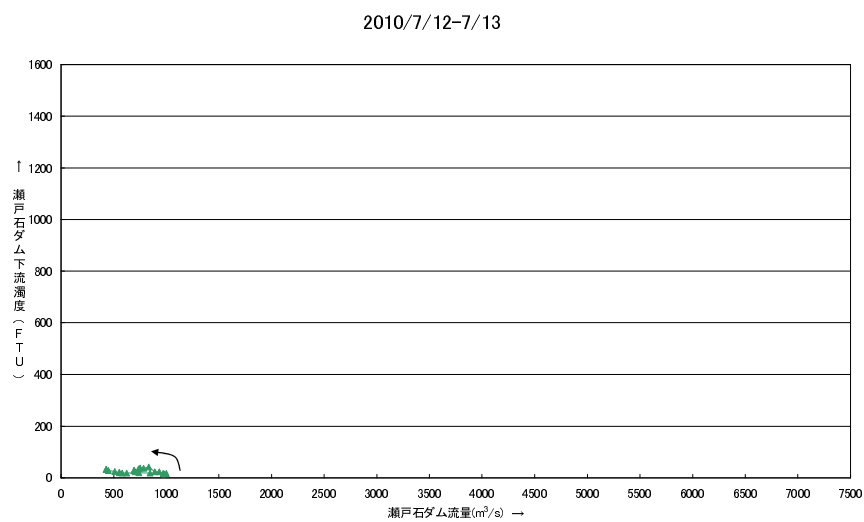
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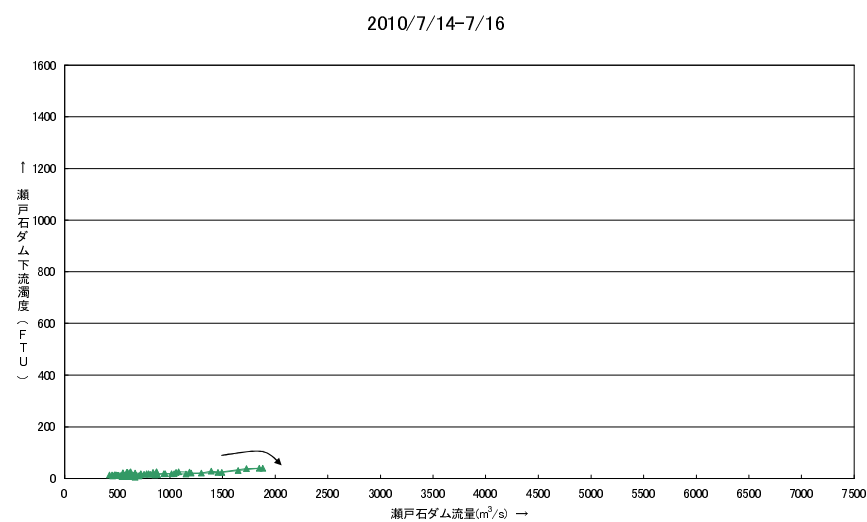
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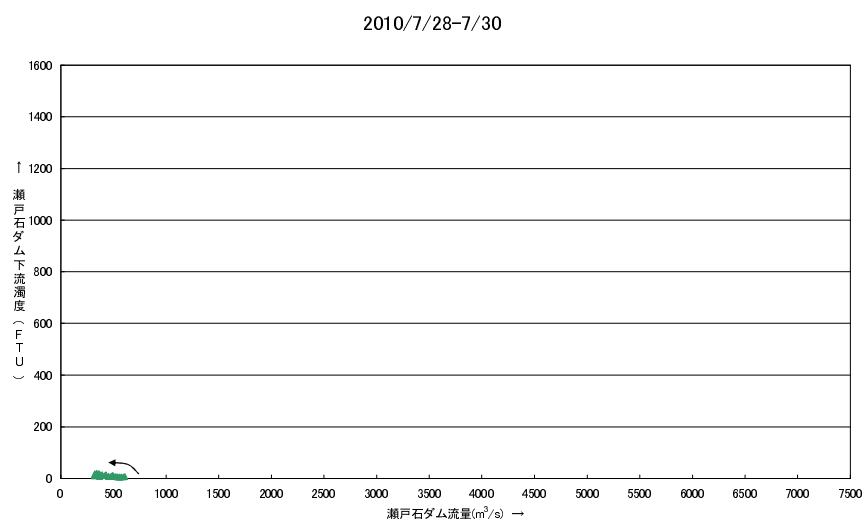
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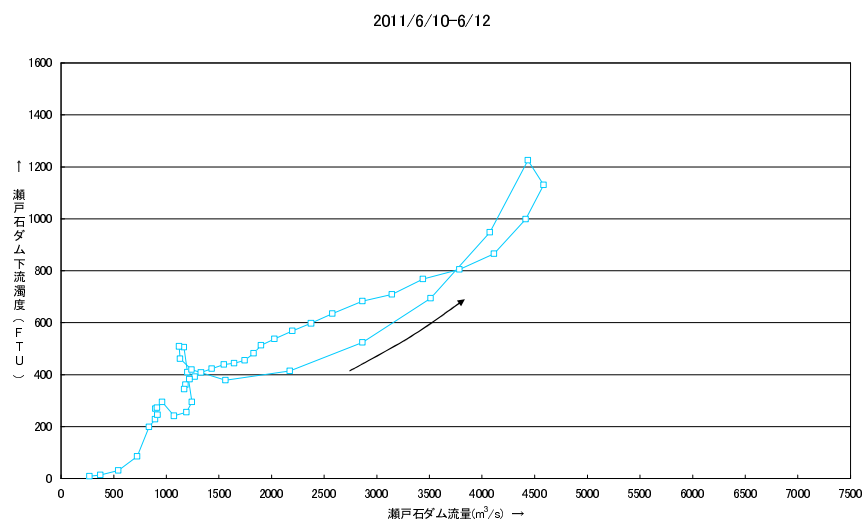
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H22⑬

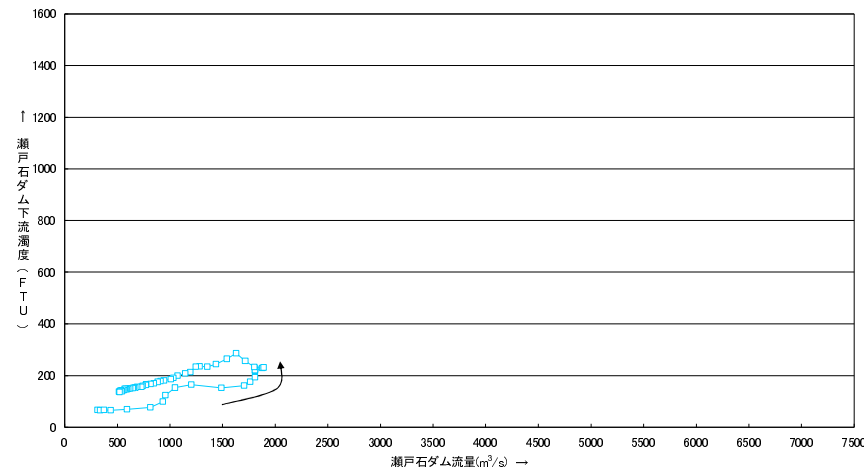


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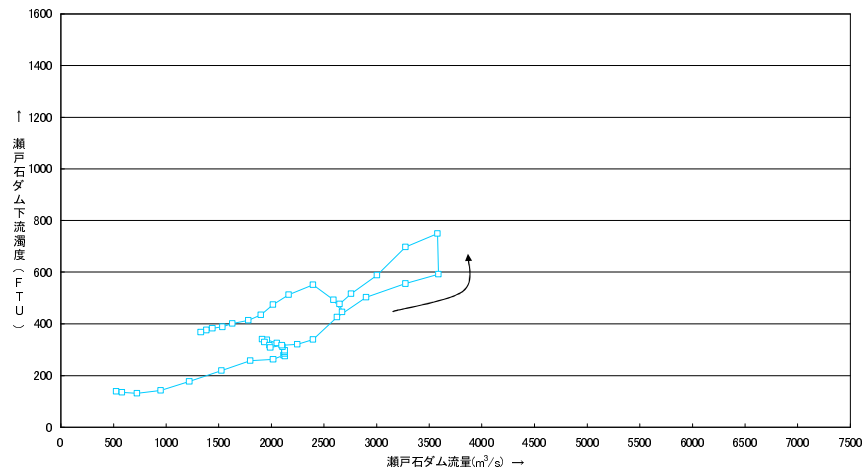
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2011/6/15-6/18



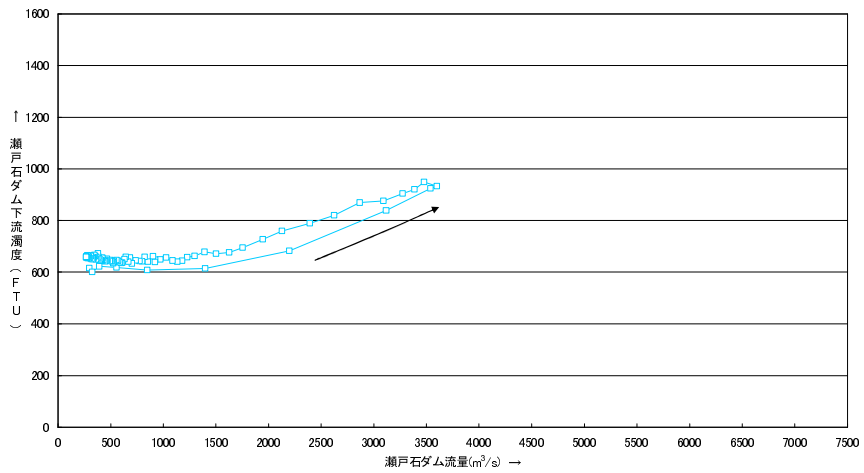
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2011/6/18-6/20



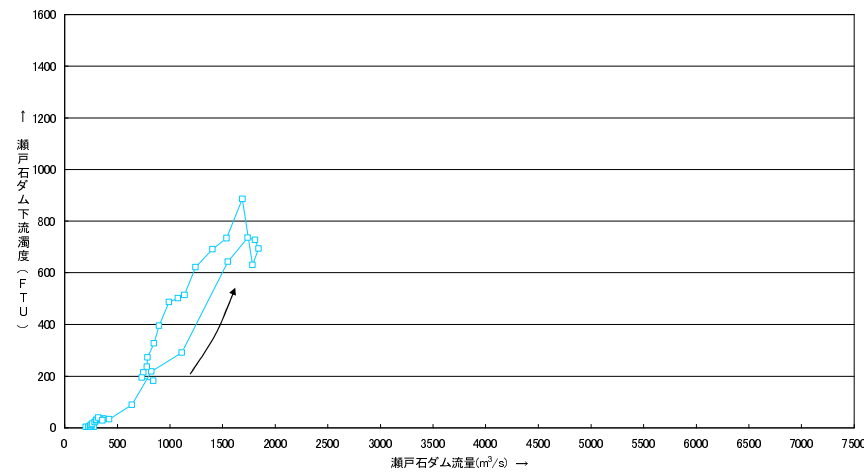
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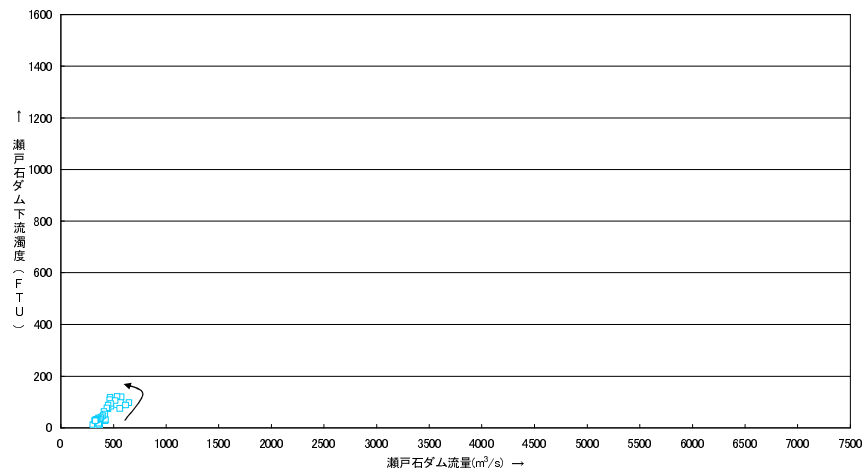
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2011/8/14-8/16



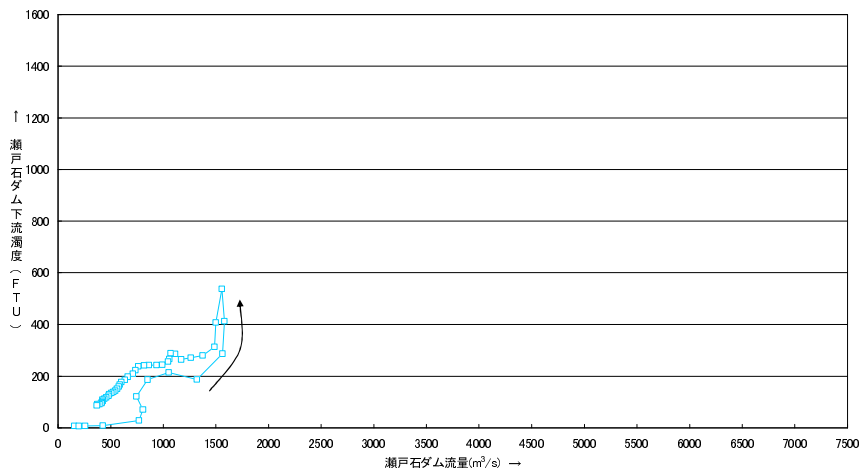
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2011/8/21-8/23



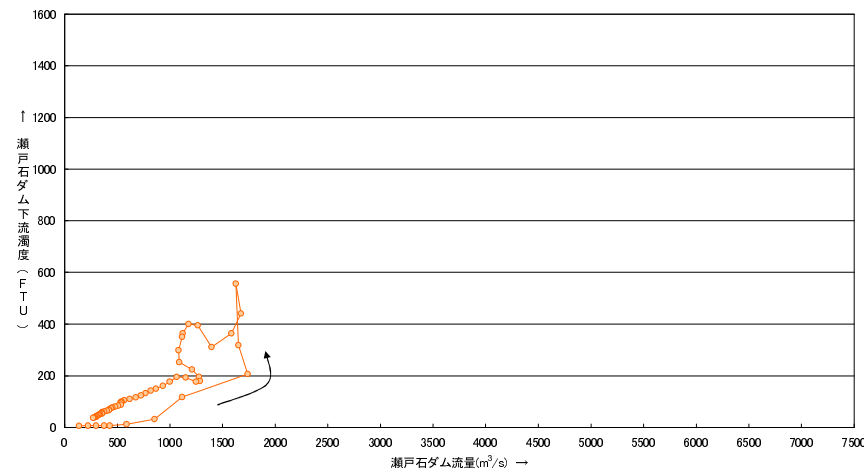
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2011/9/20-9/22



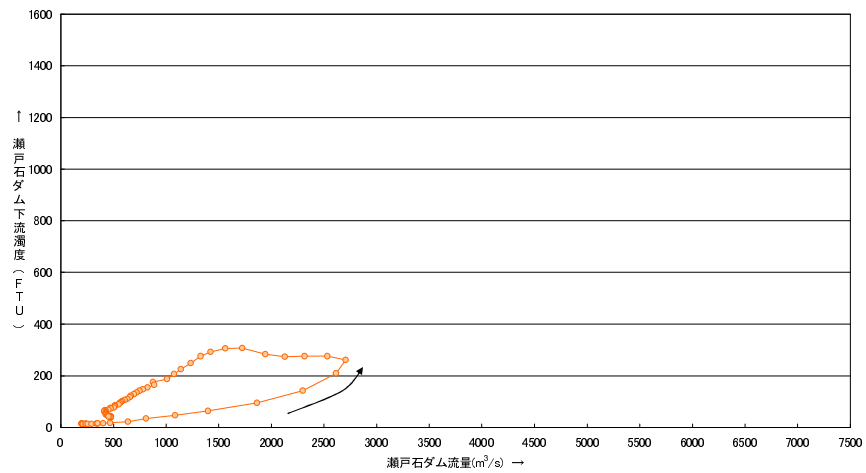
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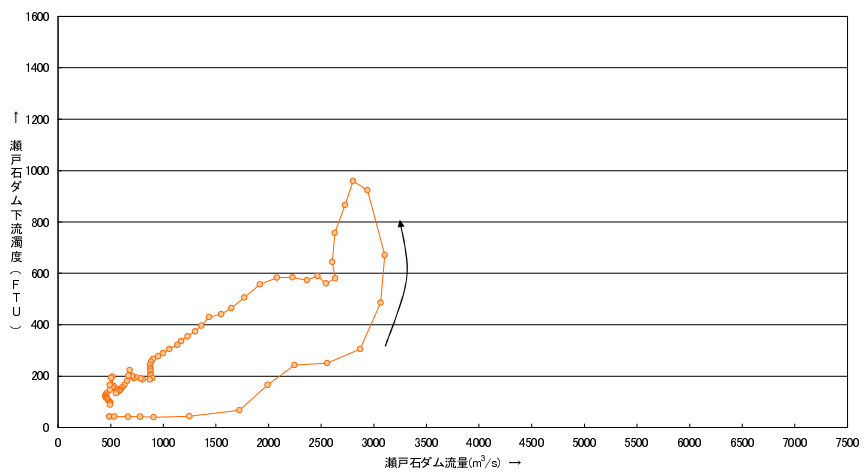
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2012/6/21-6/23



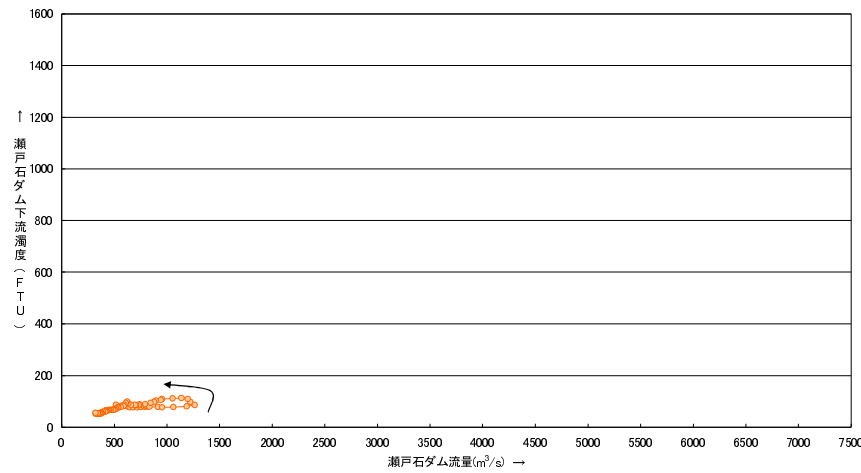
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2012/6/24-6/27



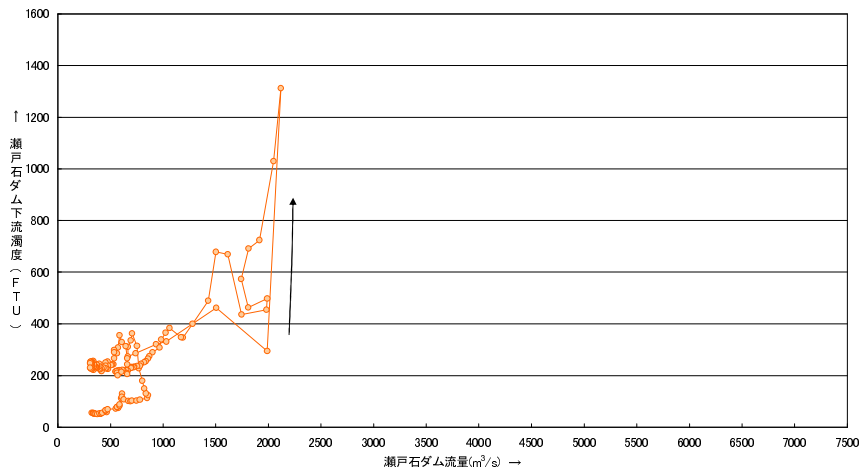
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2012/6/27-6/30



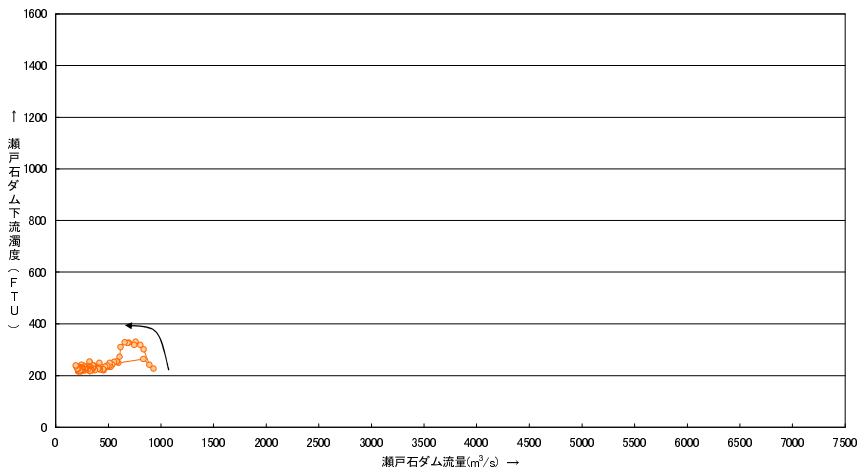
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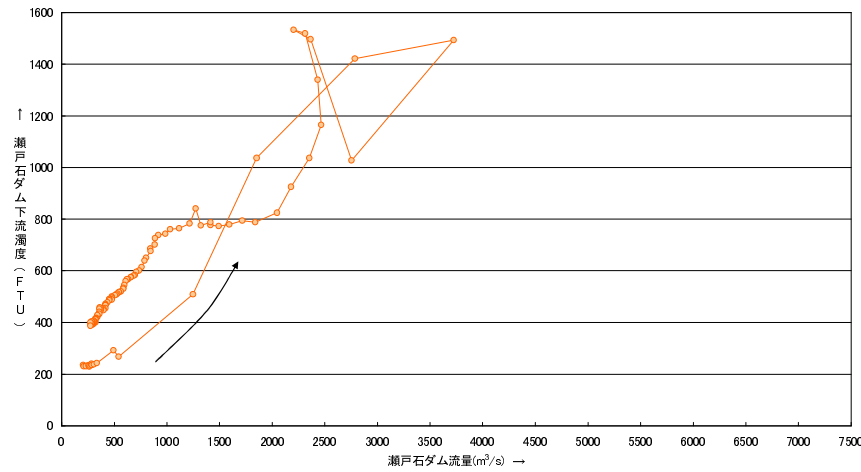
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2012/7/7-7/11



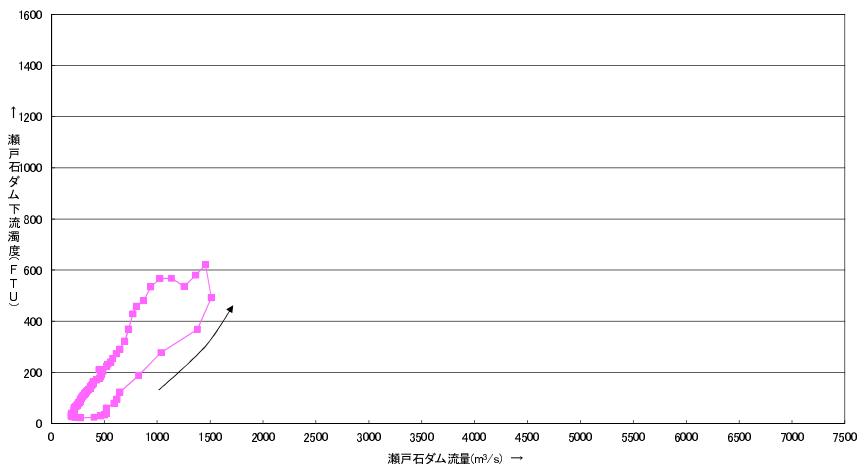
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2012/7/11-7/16



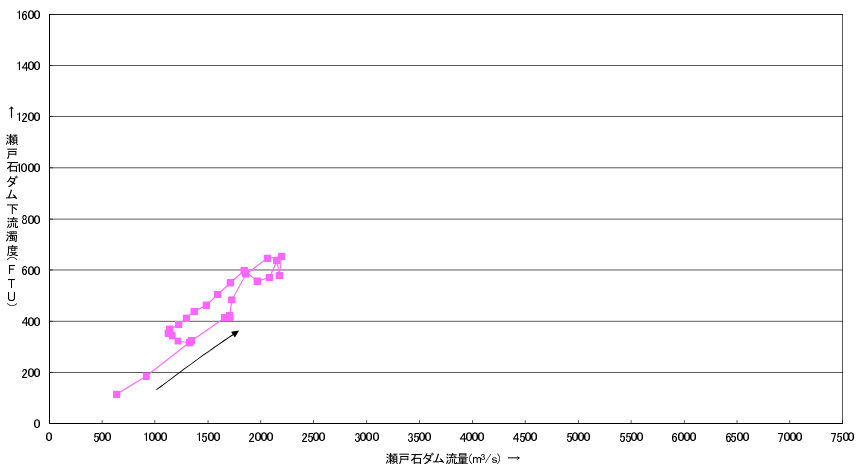
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2013/6/25-6/29



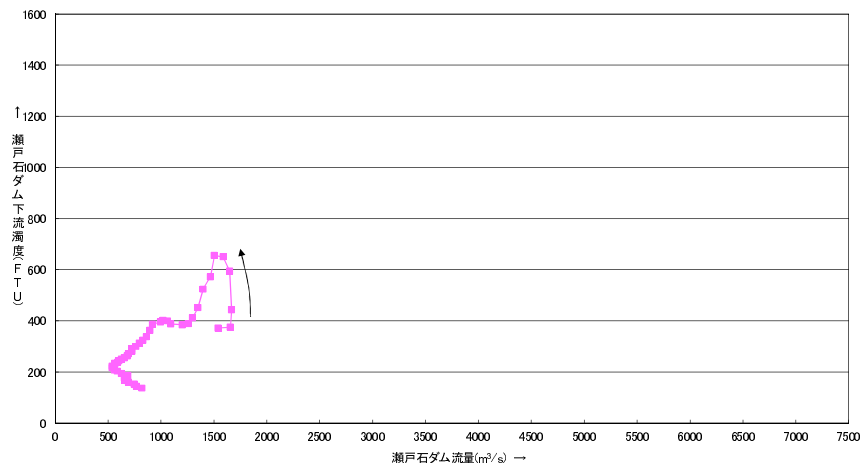
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2013/9/1-9/2



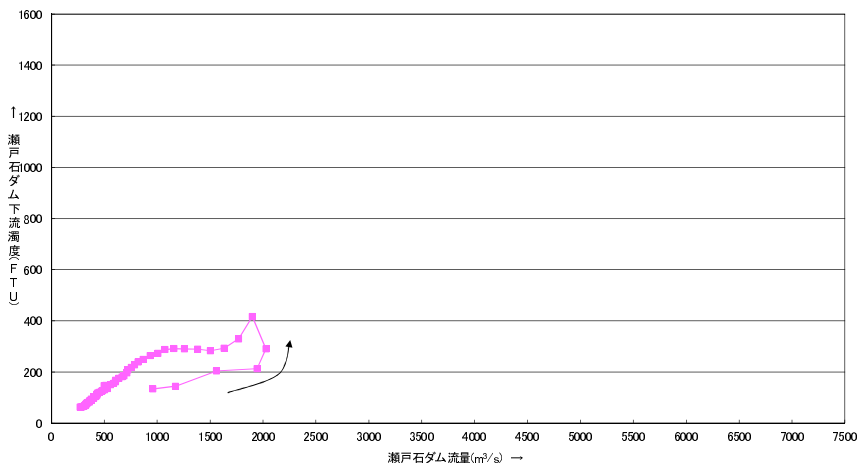
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2013/9/2-9/4



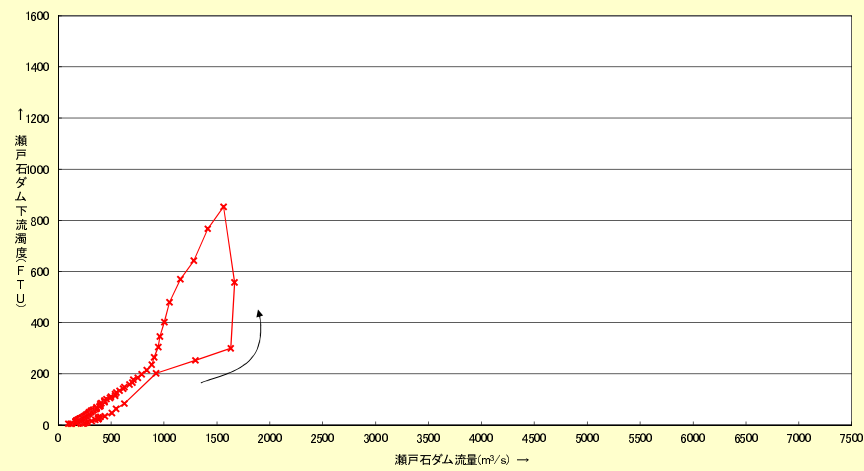
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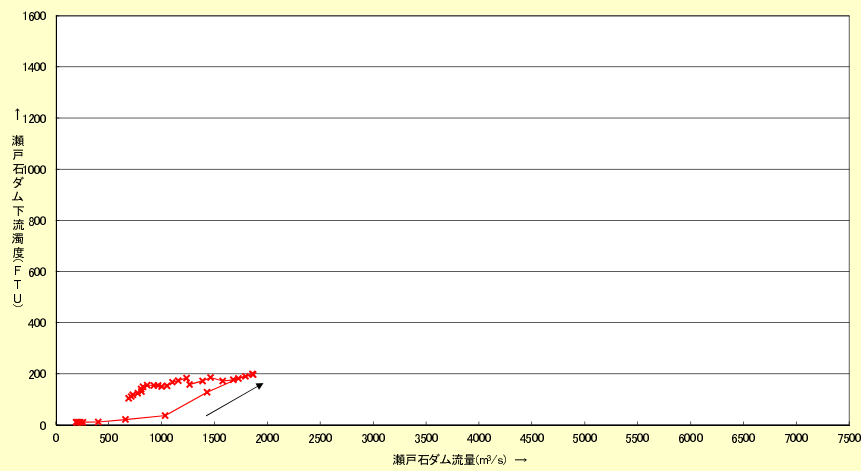
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2014/6/21-6/26



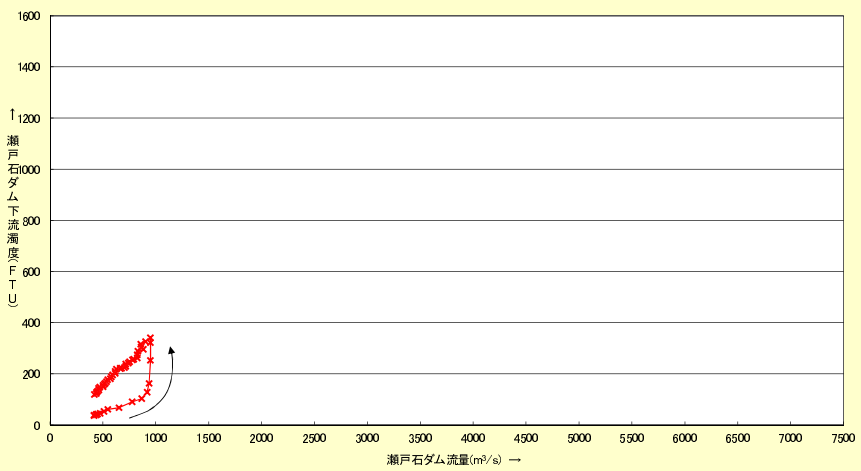
H26②

2014/7/6-7/7



H26③

2014/7/9-7/11



道の駅坂本

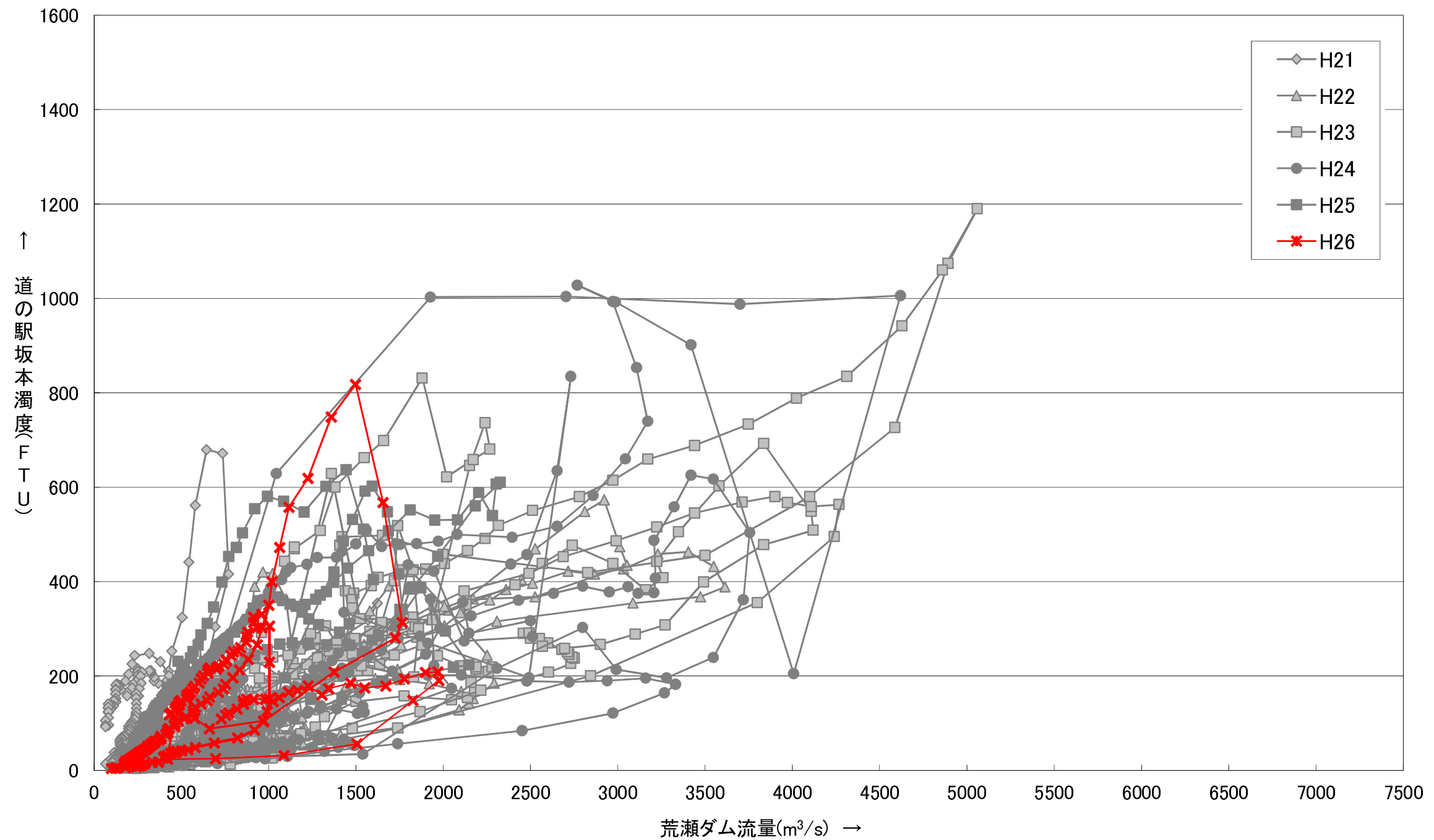
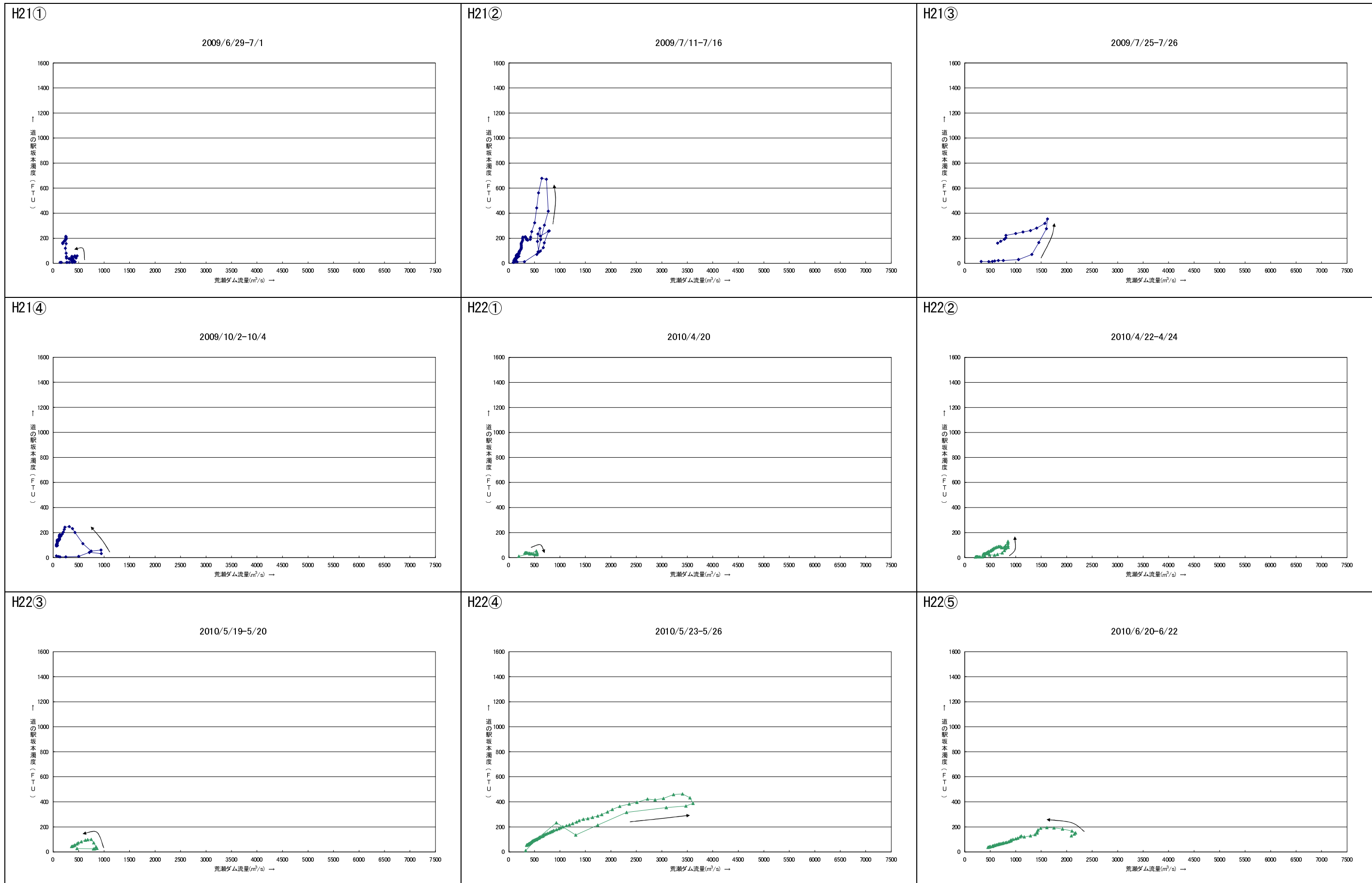


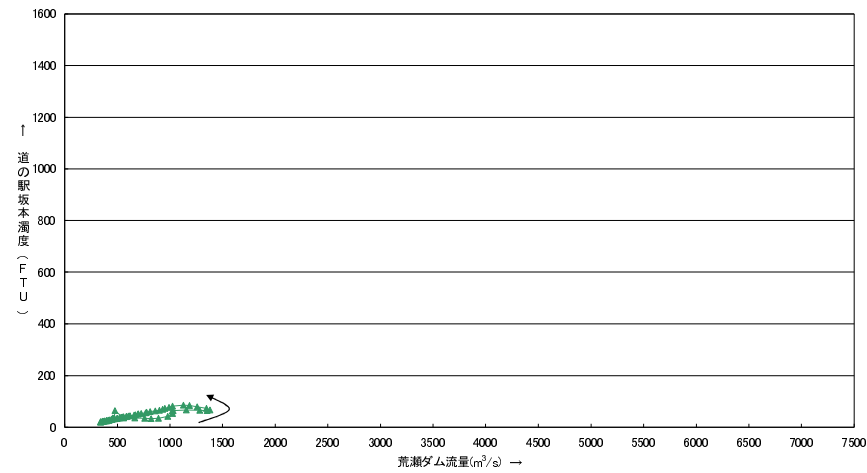
図 出水時の流量と濁度 (FTU) の時間的な変化 (道の駅坂本)

○道の駅坂本



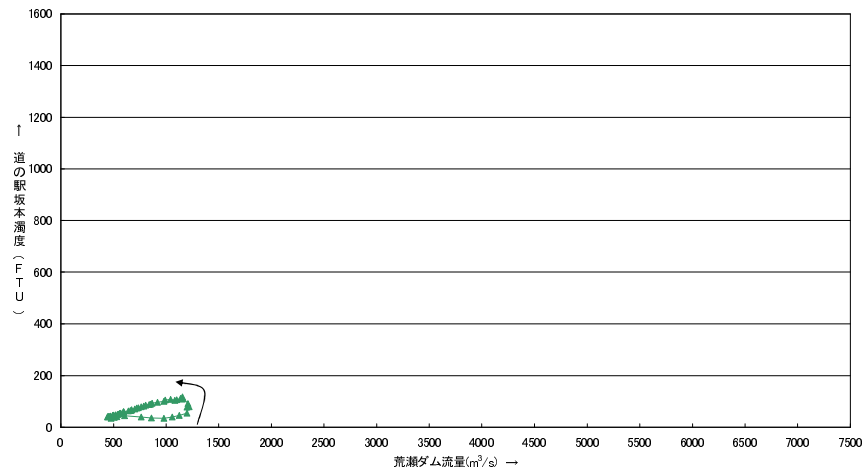
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2010/6/22-6/25



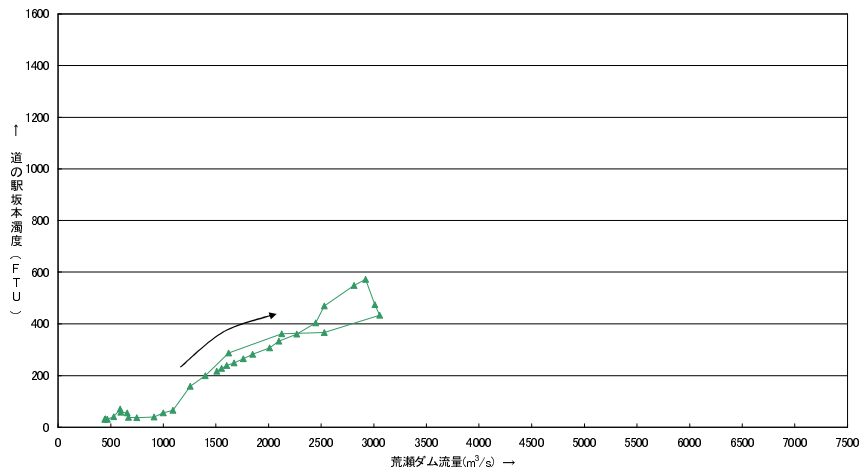
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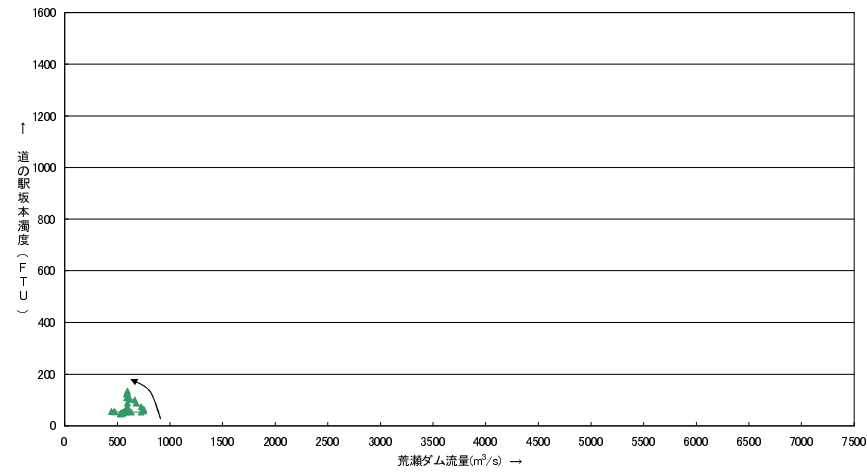
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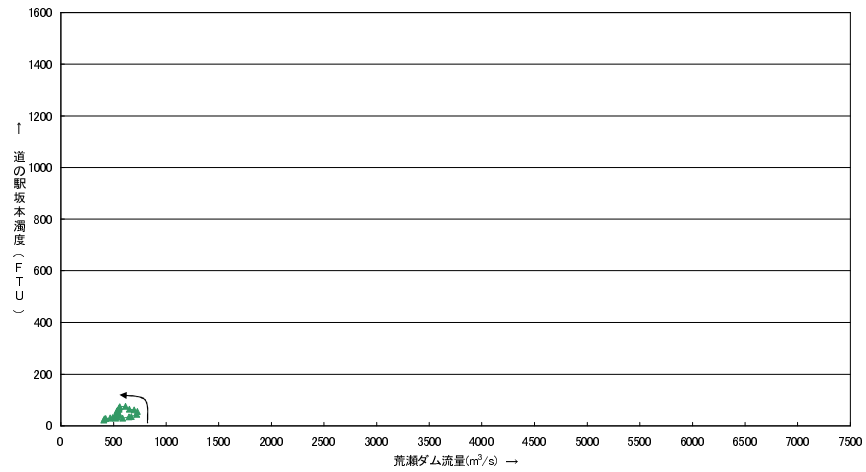
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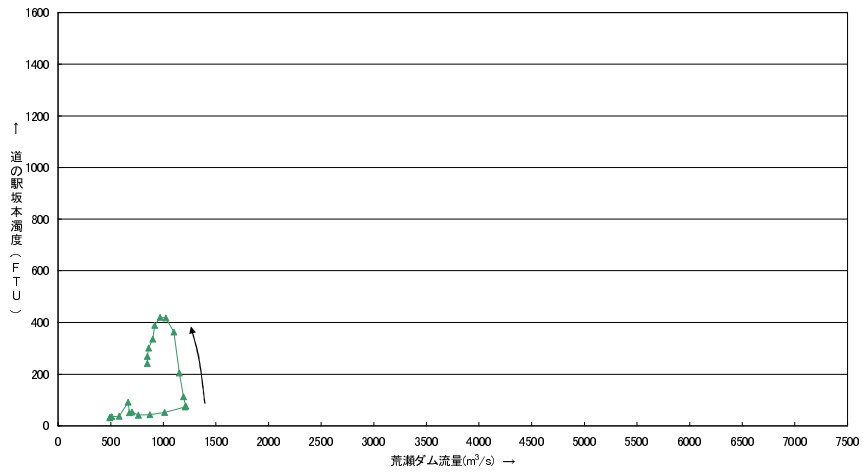
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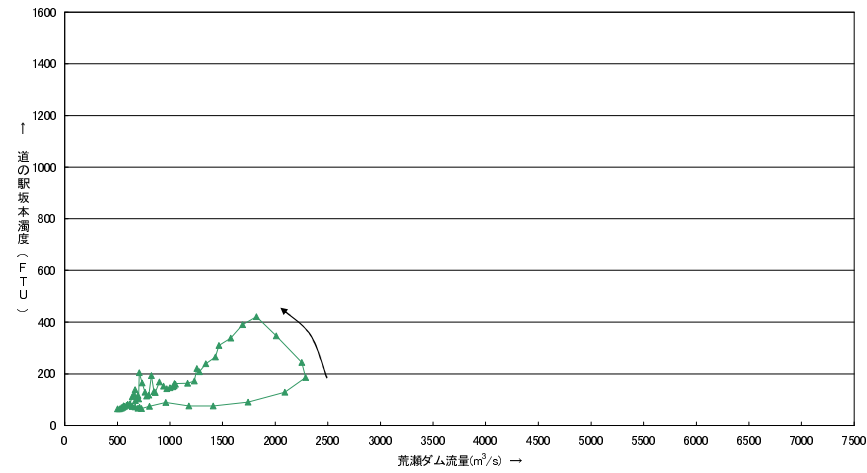
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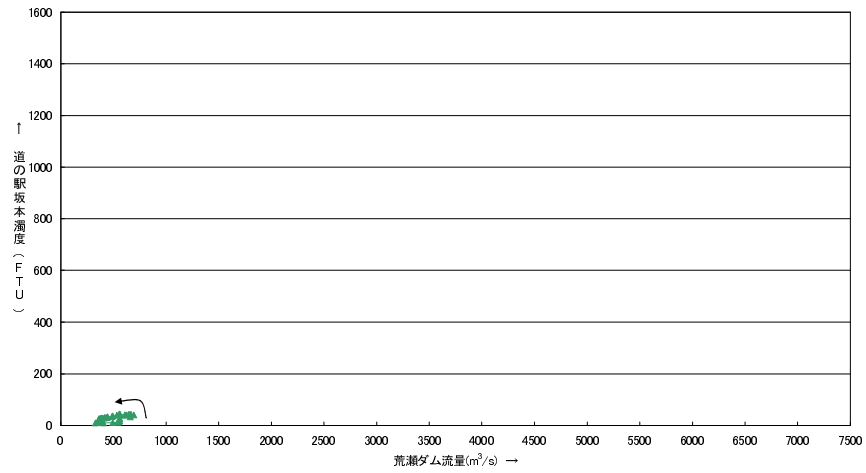
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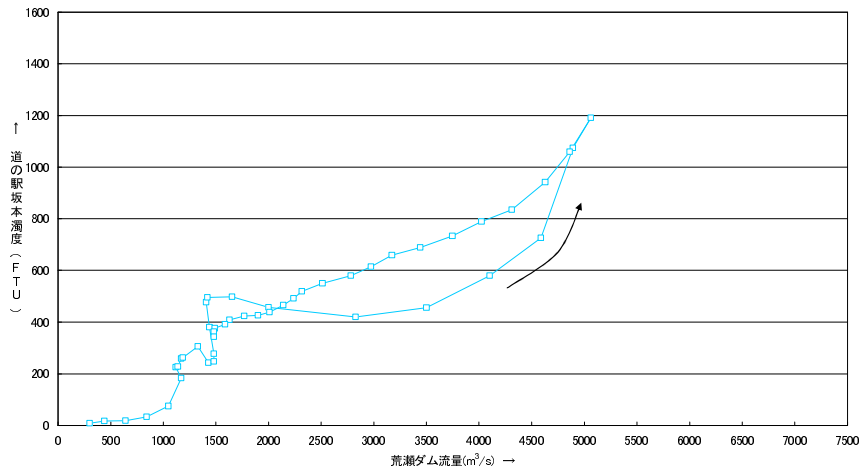
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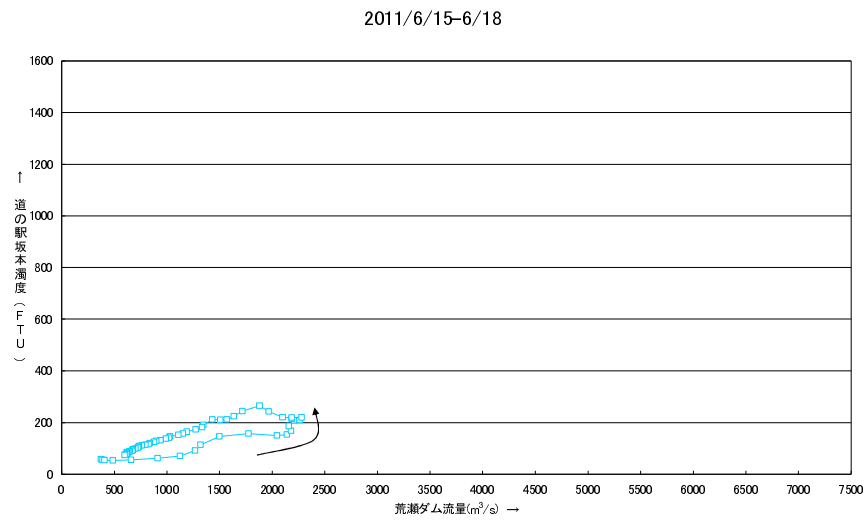


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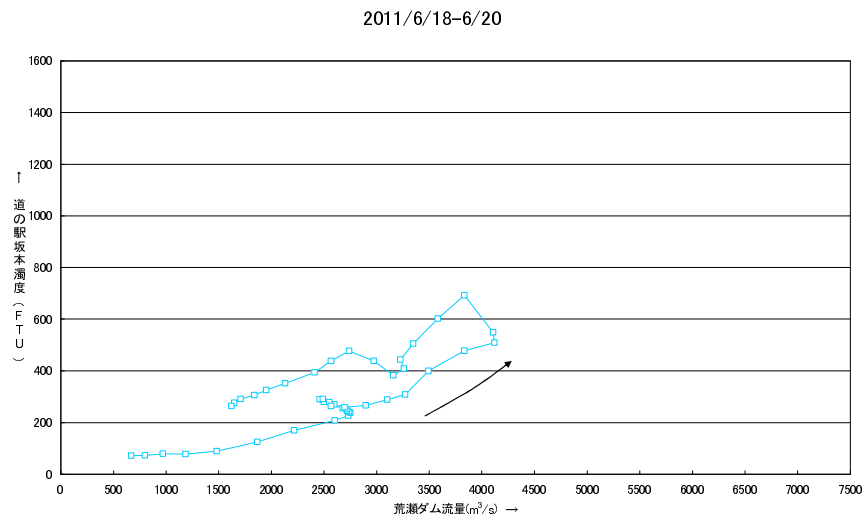
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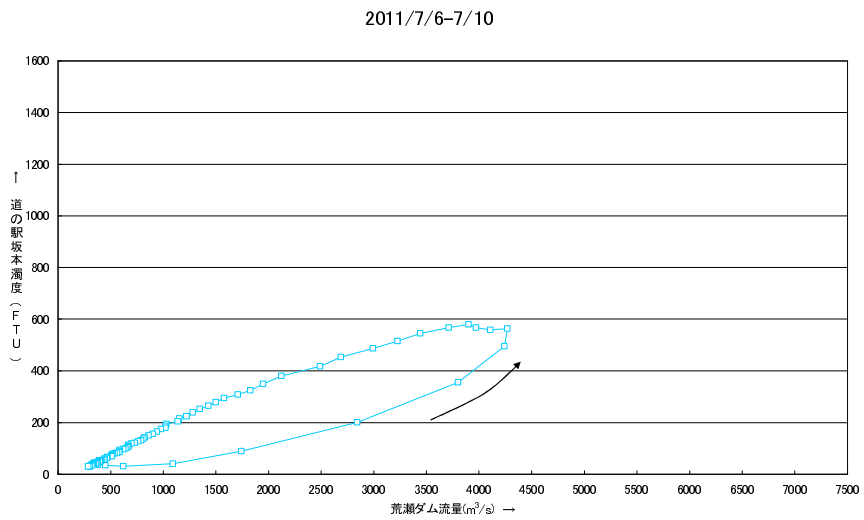
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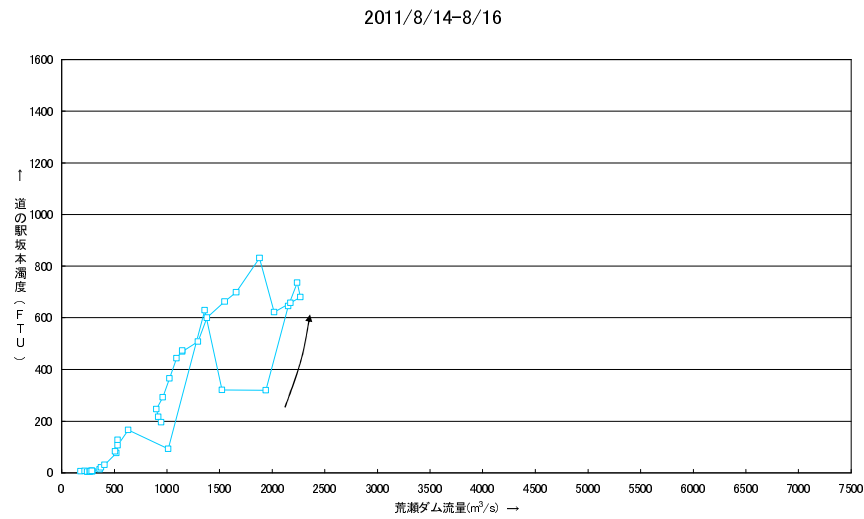
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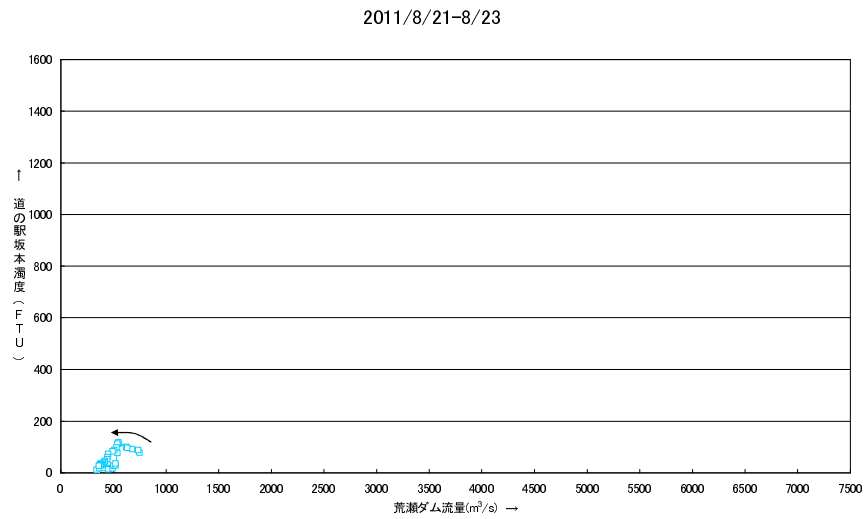
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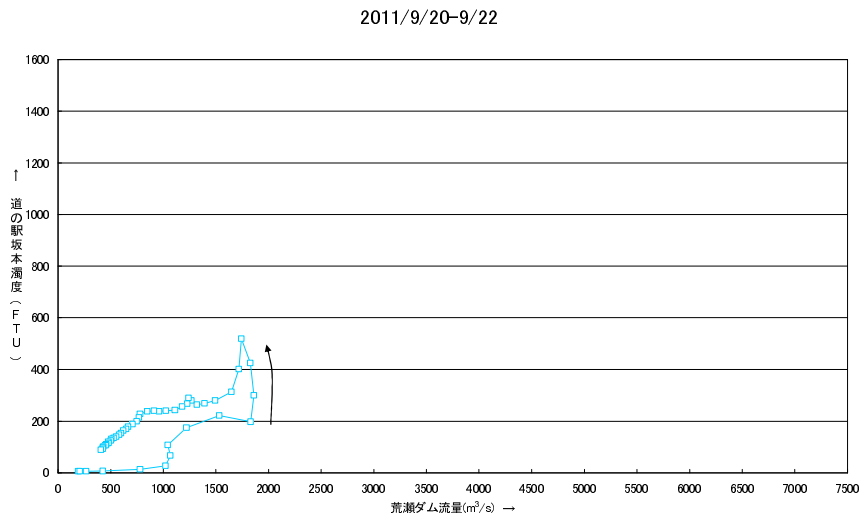
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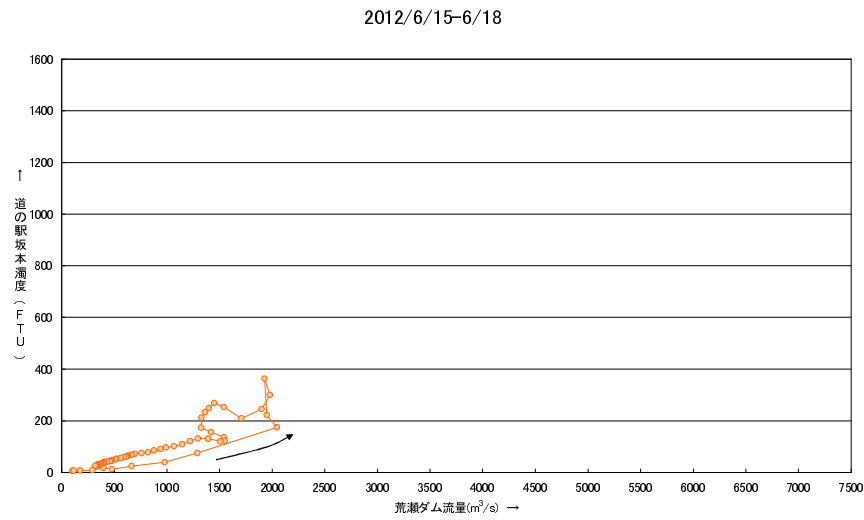
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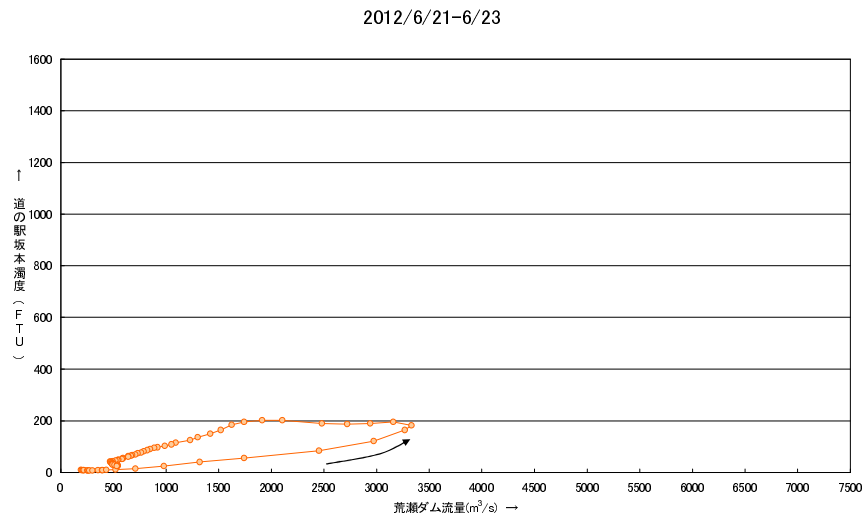
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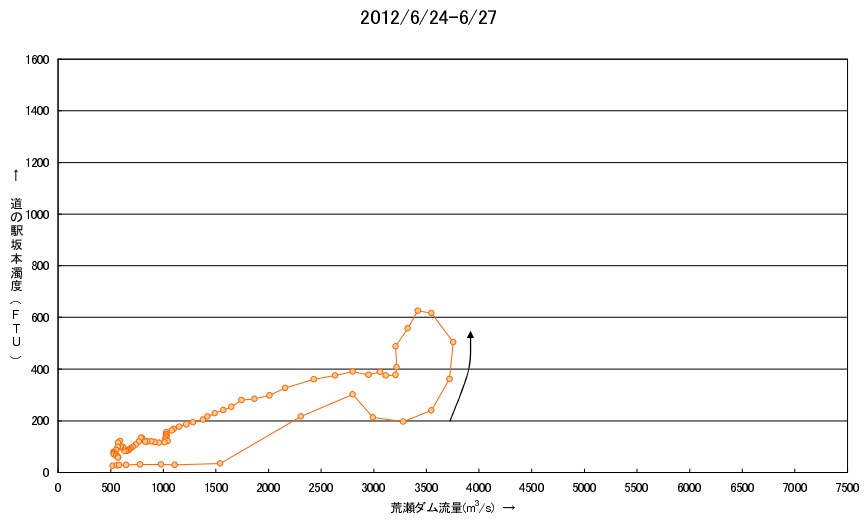
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H24②

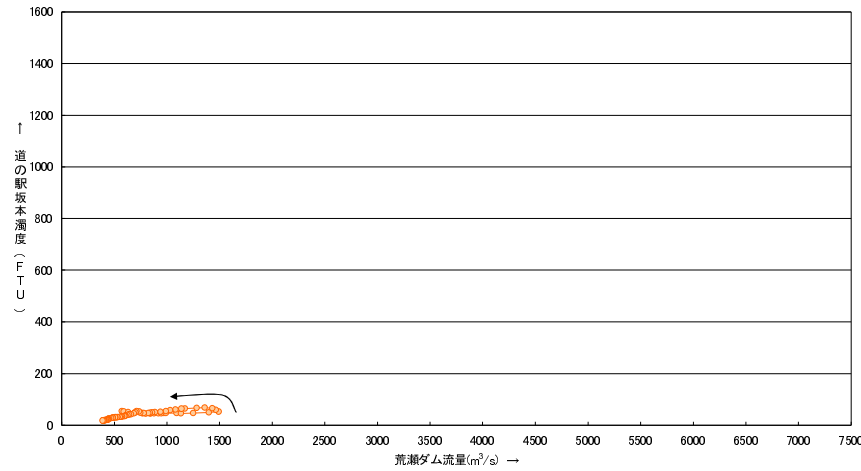


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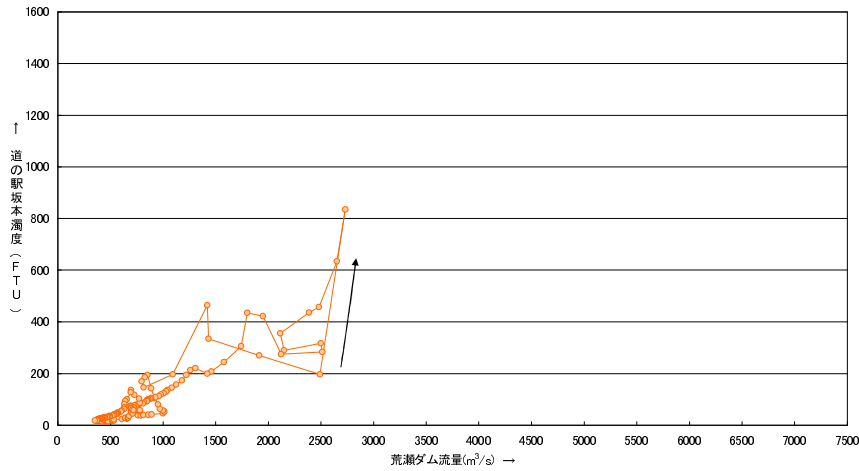
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2012/6/27-6/30



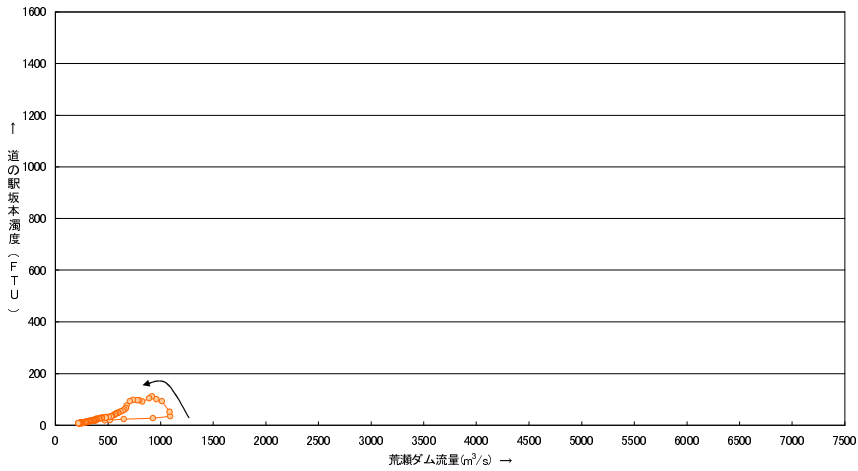
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2012/6/30-7/7



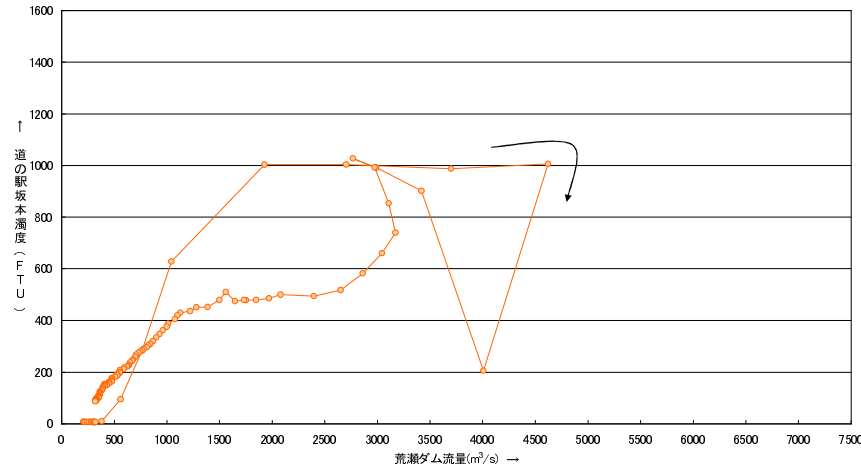
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2012/7/7-7/11



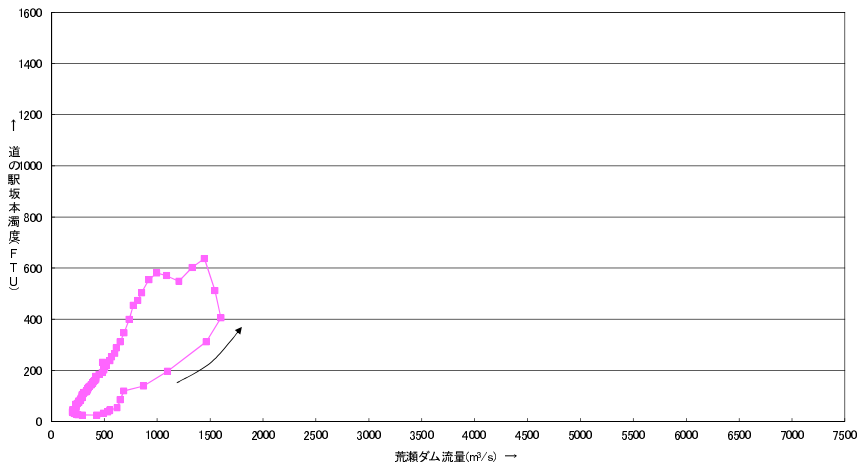
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2012/7/11-7/16



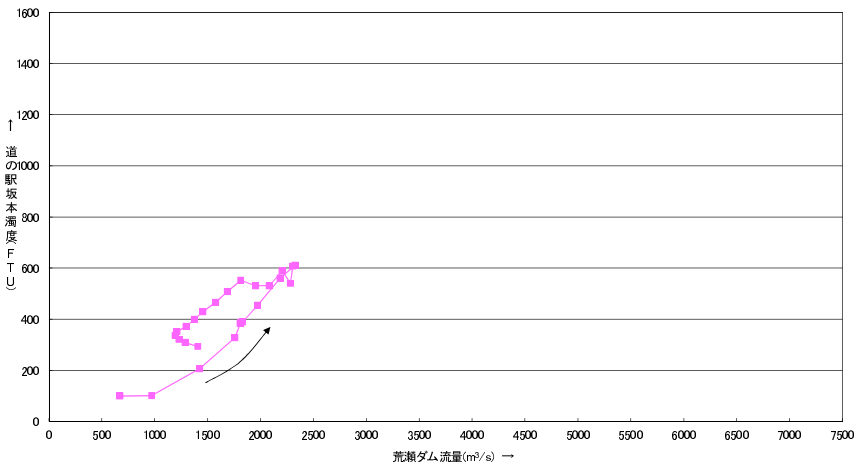
H25①

2013/6/25-6/29



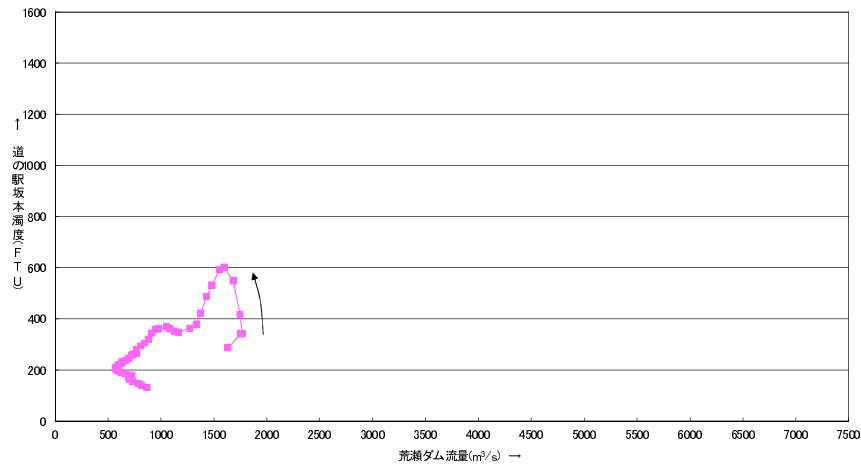
H25②

2013/9/1-9/2



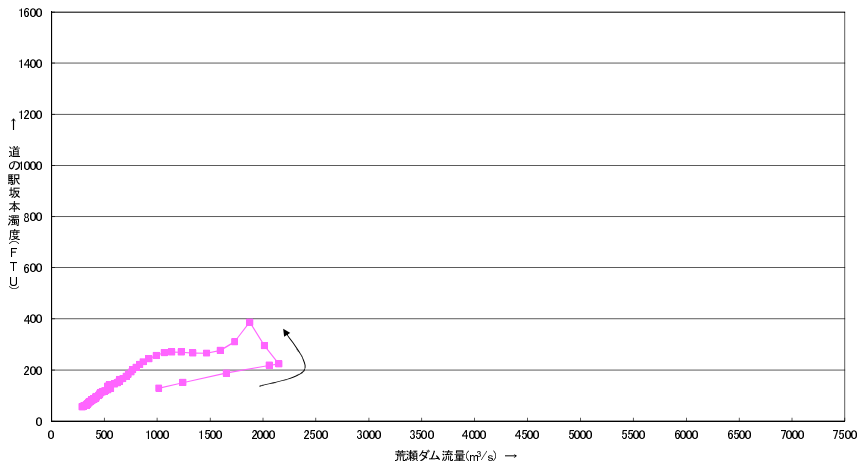
H25③

2013/9/2-9/4



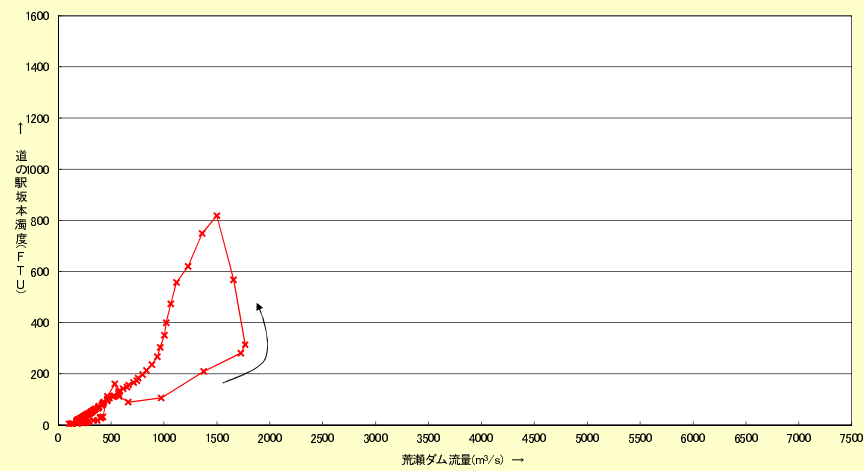
H25④

2013/9/4-9/6



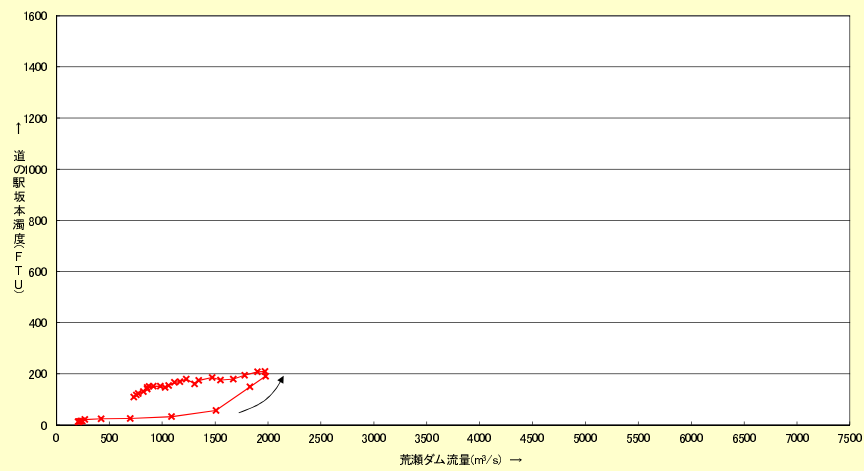
H26①

2014/6/21-6/26



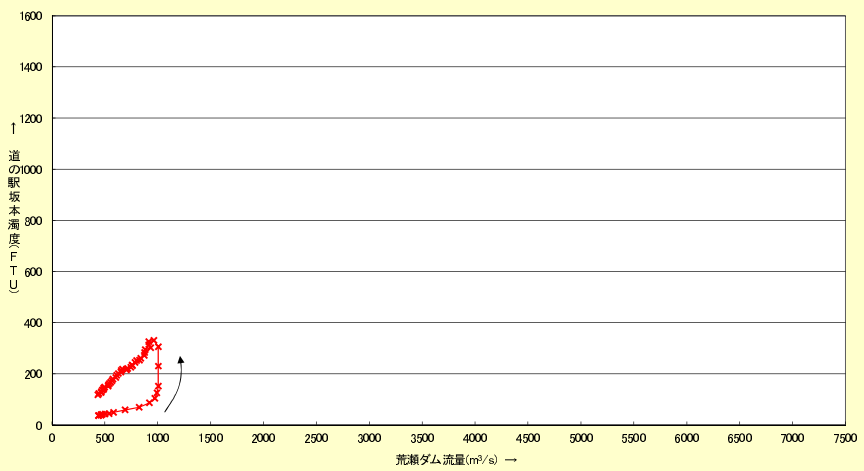
H26②

2014/7/6-7/7



H26③

2014/7/9-7/11



横 石

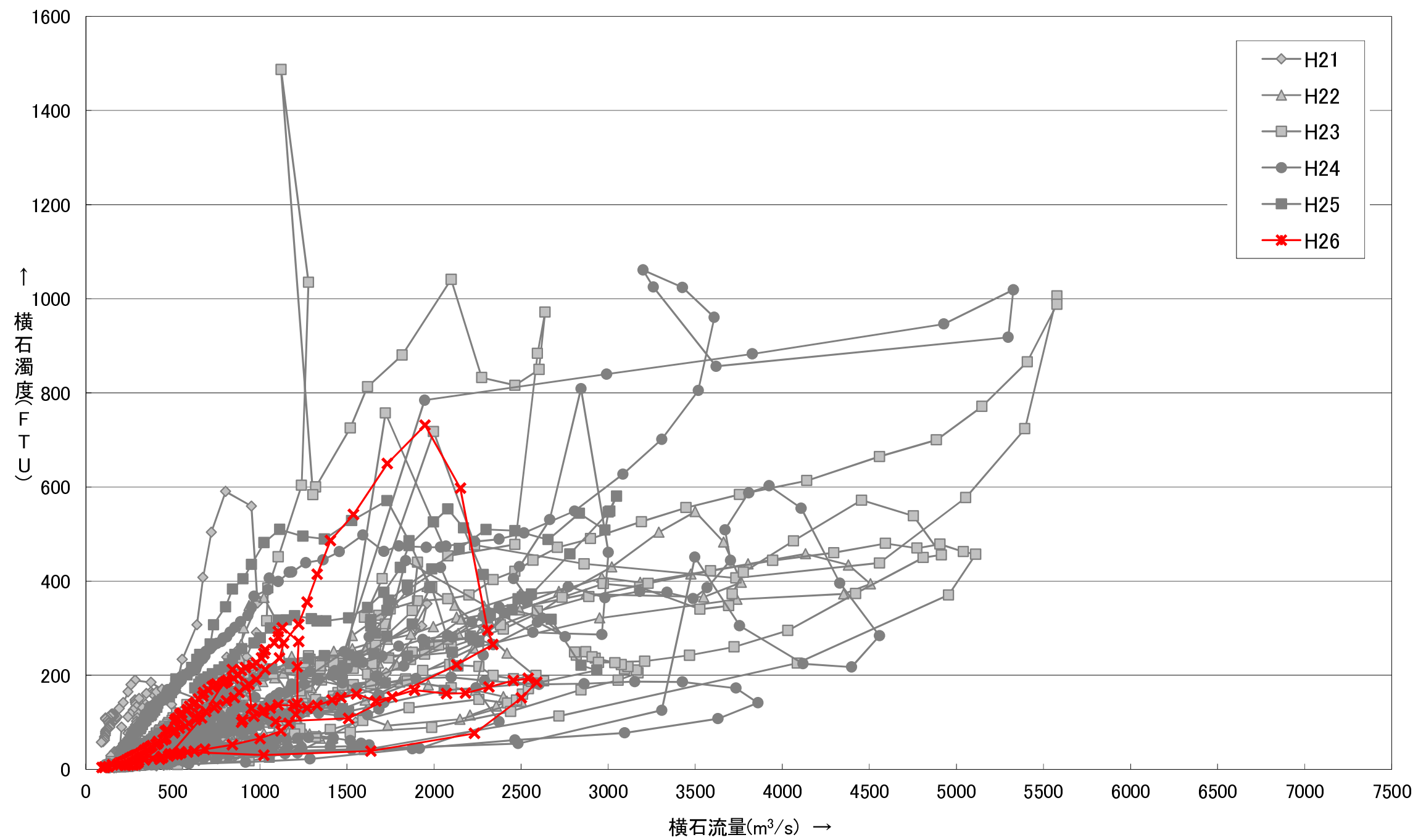
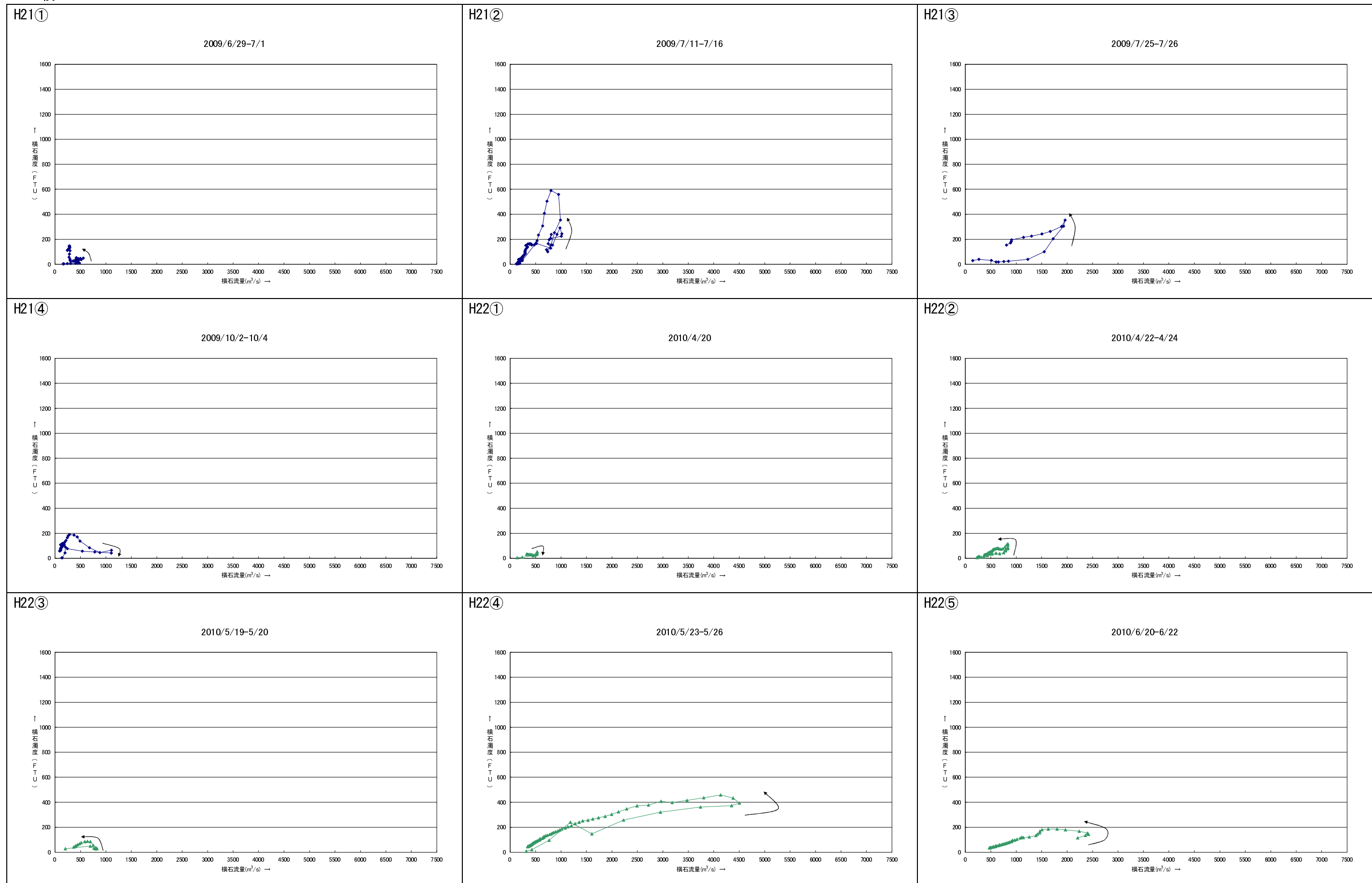


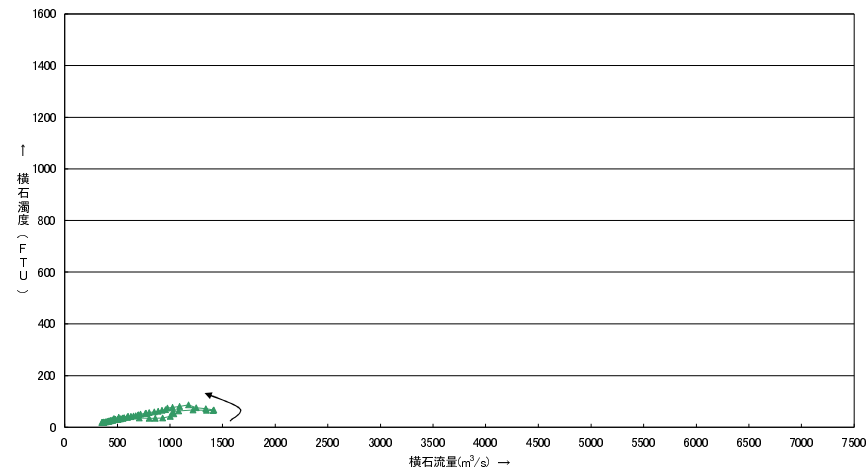
図 出水時の流量と濁度 (FTU) の時間的な変化 (横石)

○横石



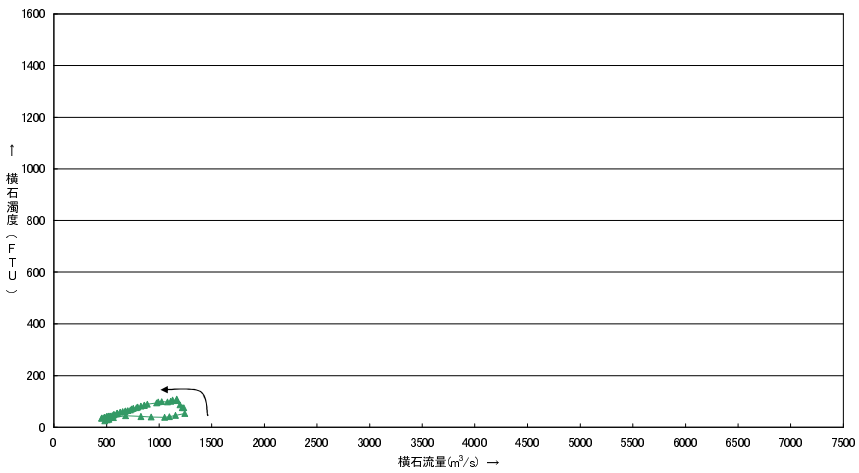
H22⑥

2010/6/22-6/25



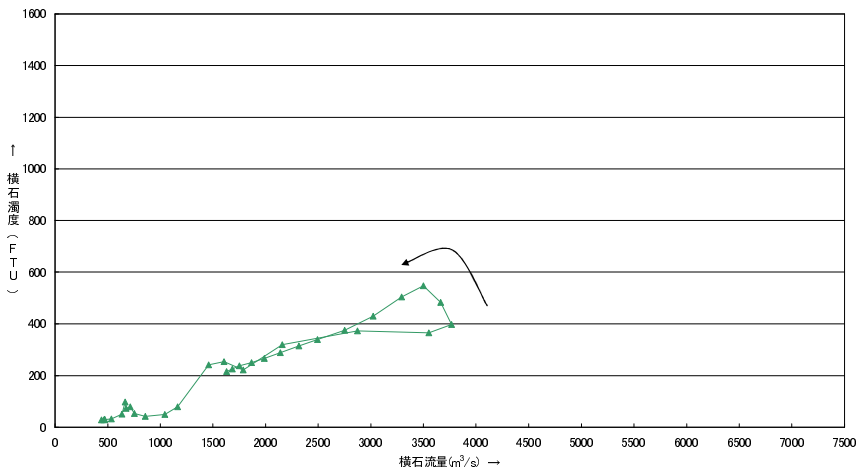
H22⑦

2010/6/26-6/28



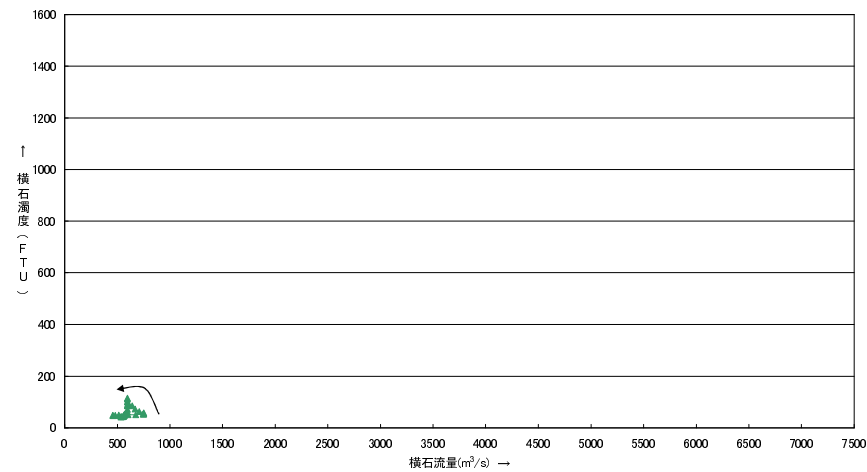
H22⑧

2010/6/28-6/30



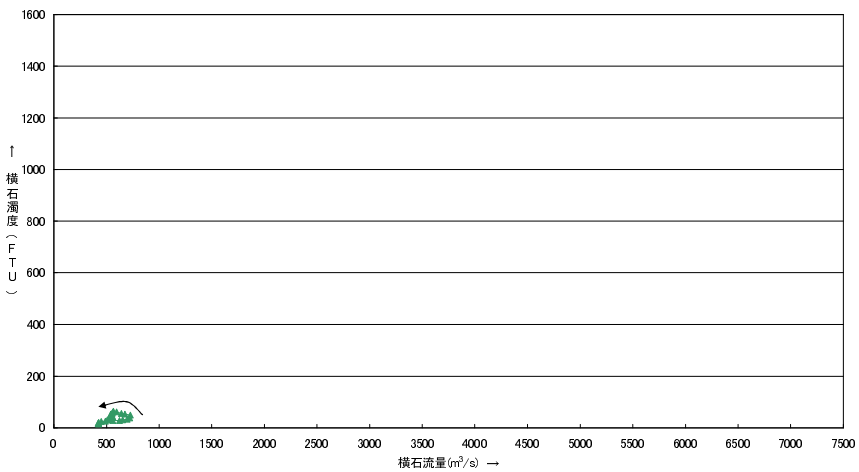
H22⑨

2010/7/3-7/4



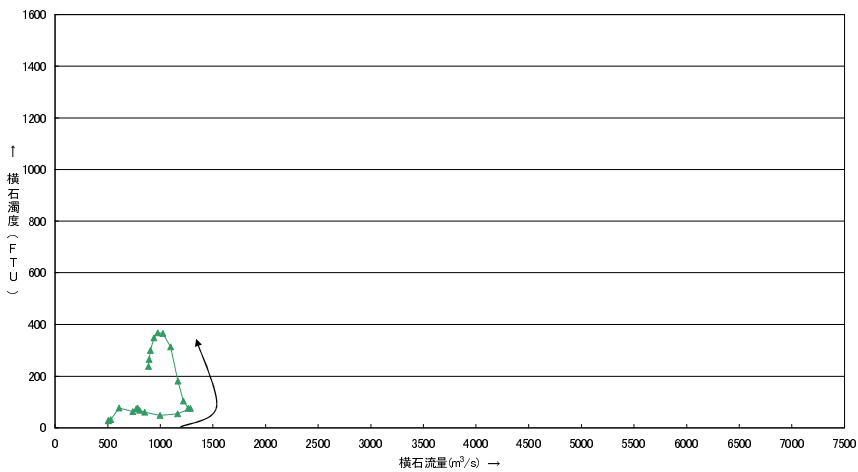
H22⑩

2010/7/11-7/12



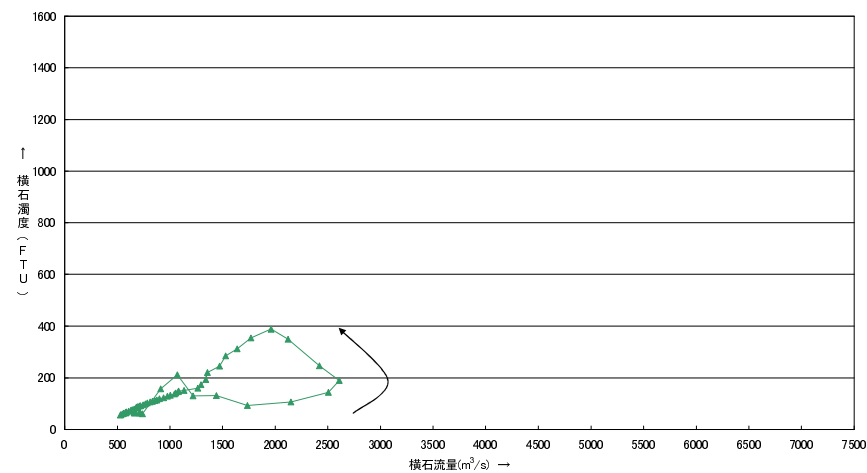
H22⑪

2010/7/12-7/13



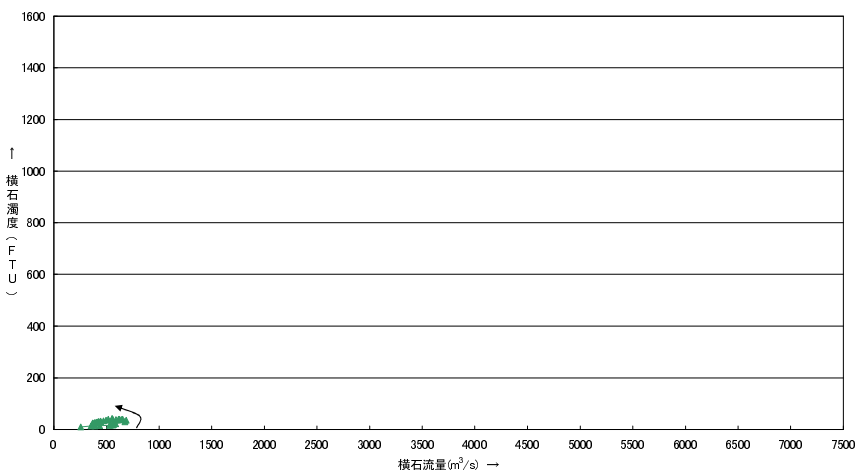
H22⑫

2010/7/14-7/16



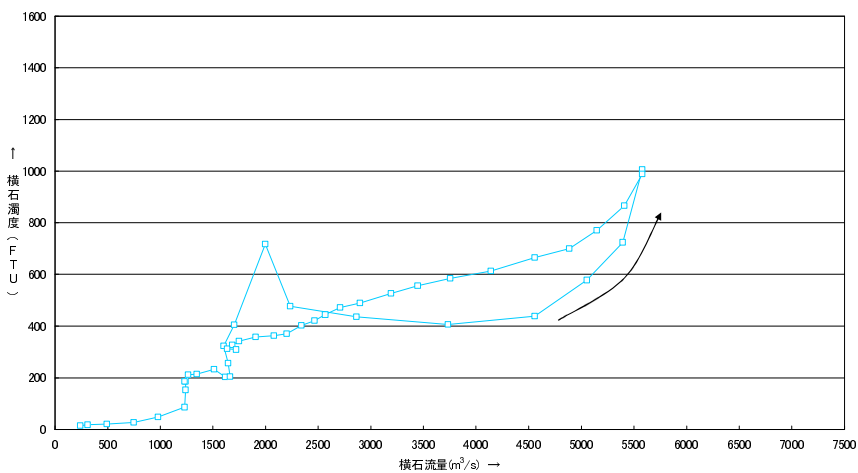
H22⑬

2010/7/28-7/30

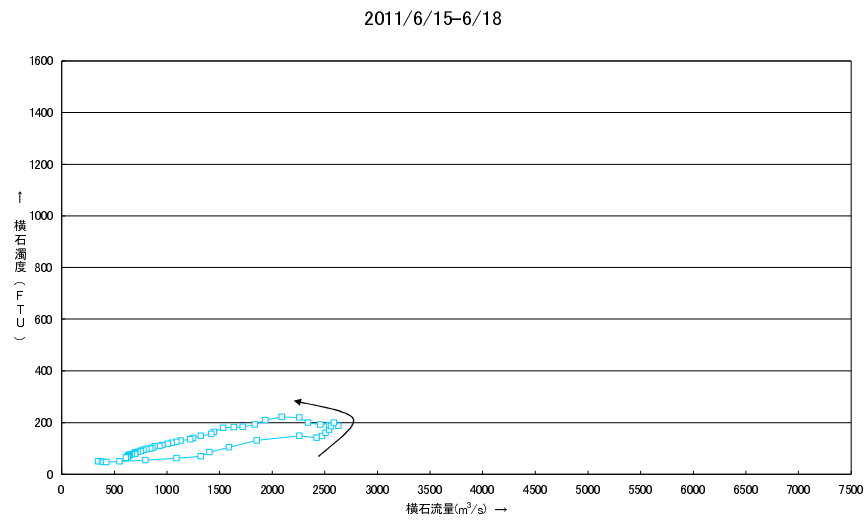


H23①

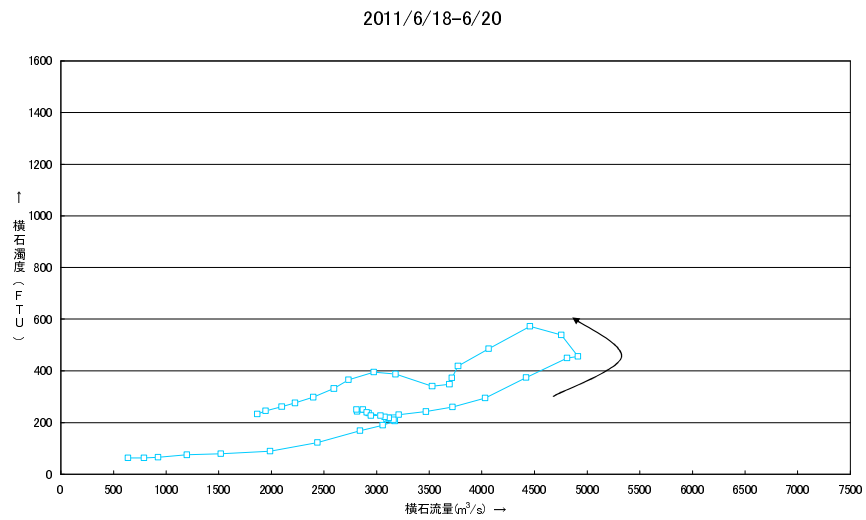
2011/6/10-6/12



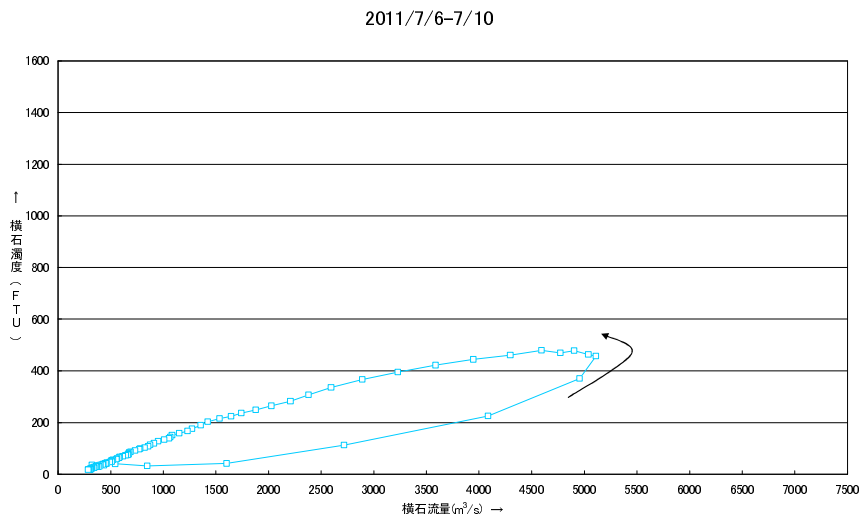
H23②



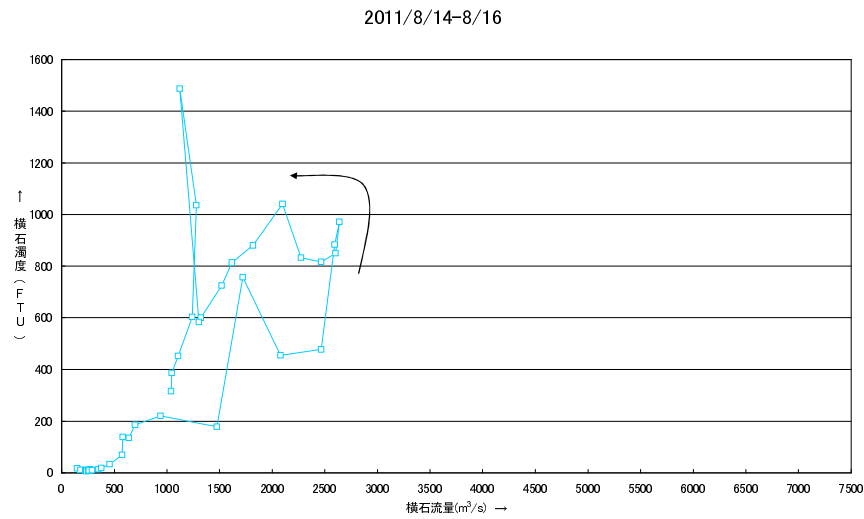
H23③



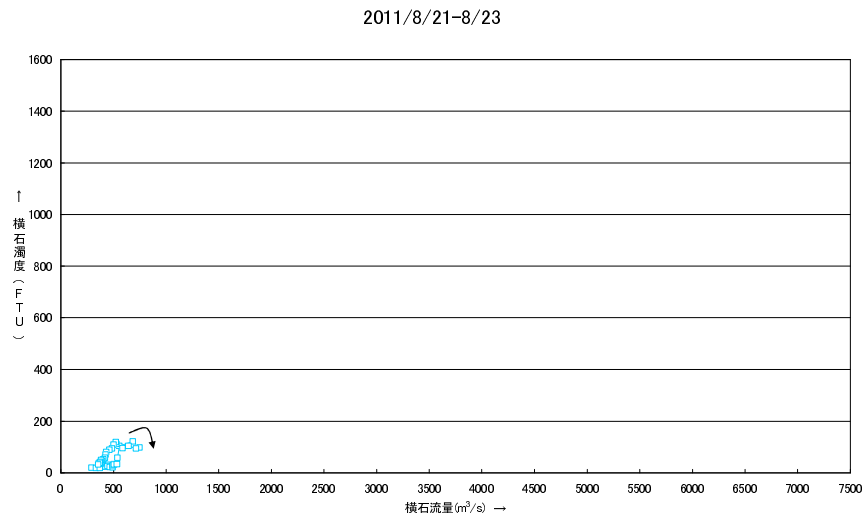
H23④



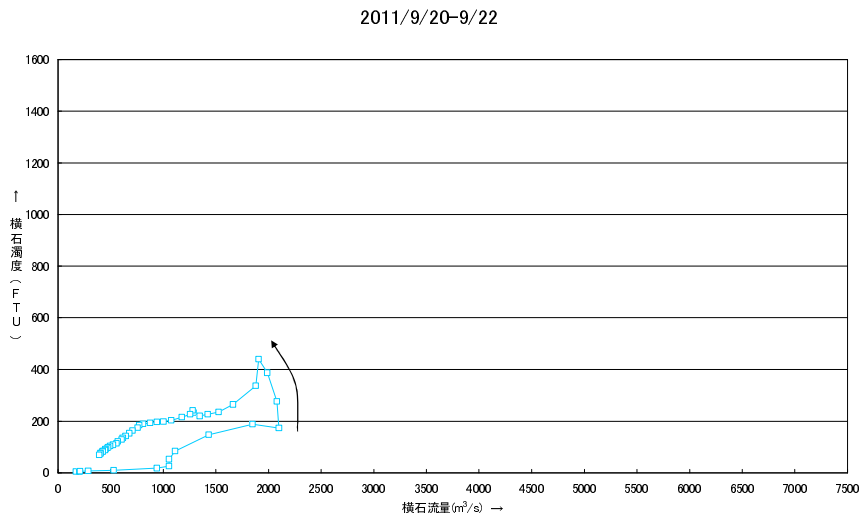
H23⑤



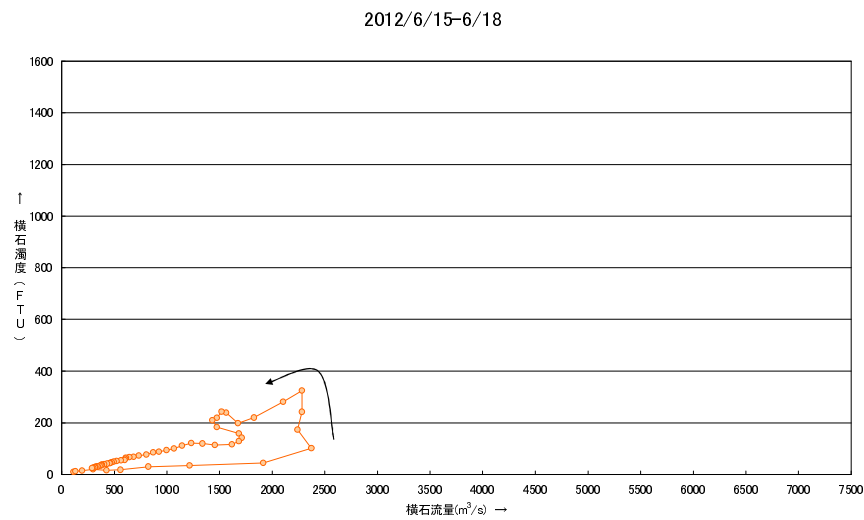
H23⑥



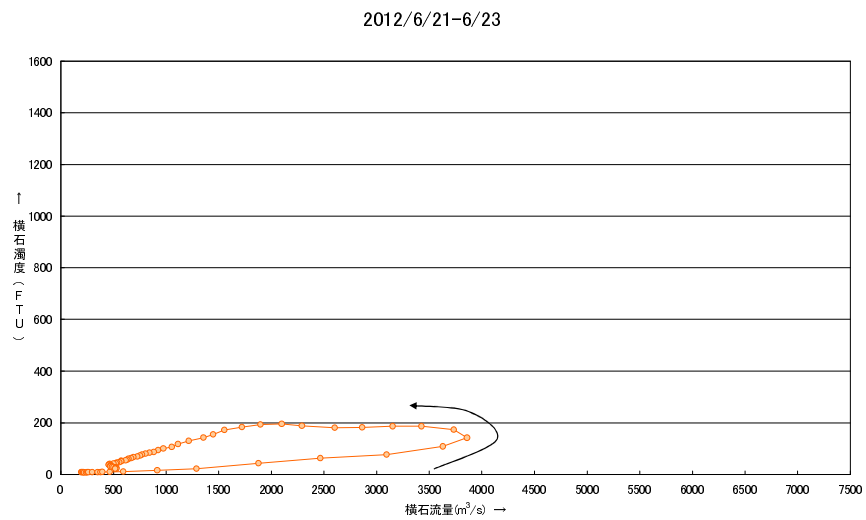
H23⑦



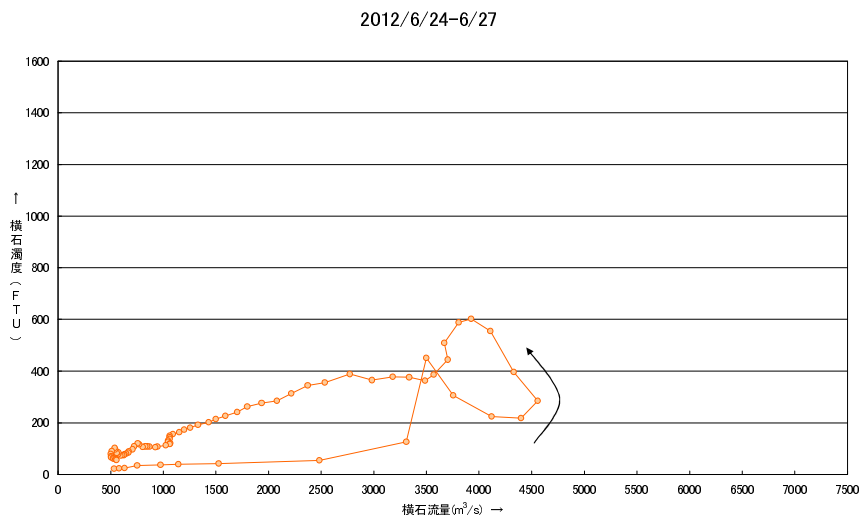
H24①



H24②

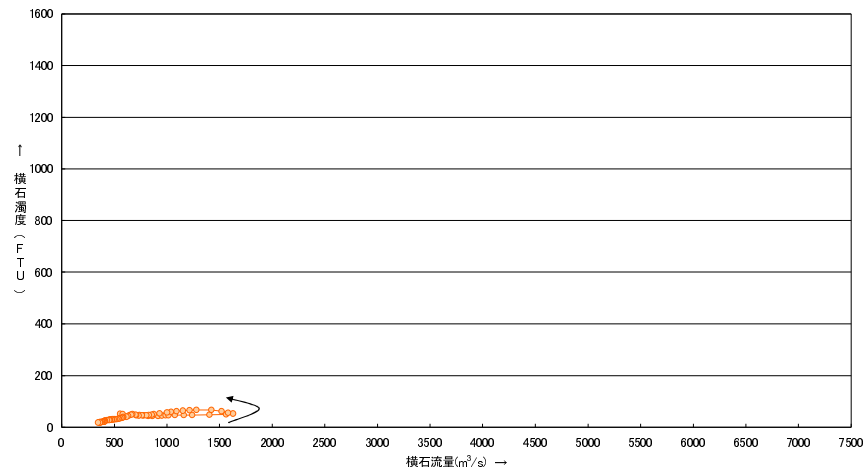


H24③



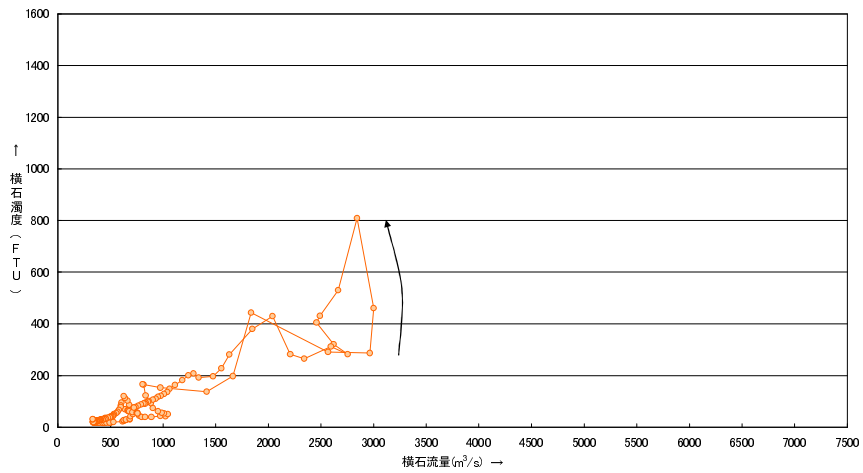
H24④

2012/6/27-6/30



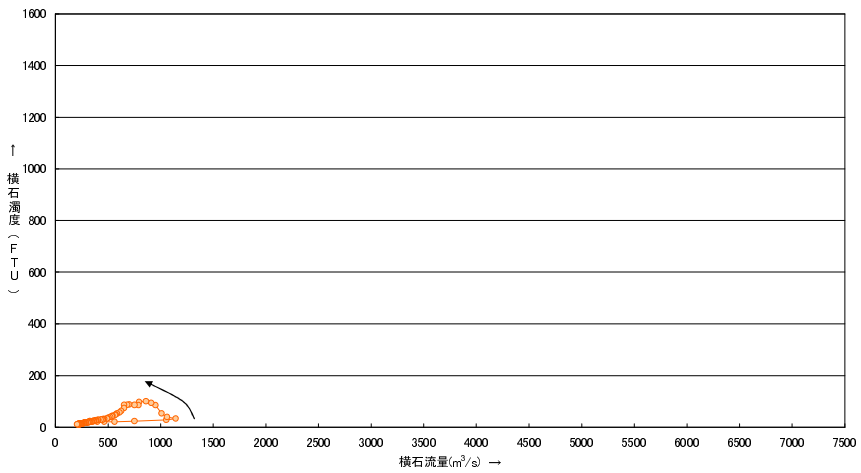
H24⑤

2012/6/30-7/7



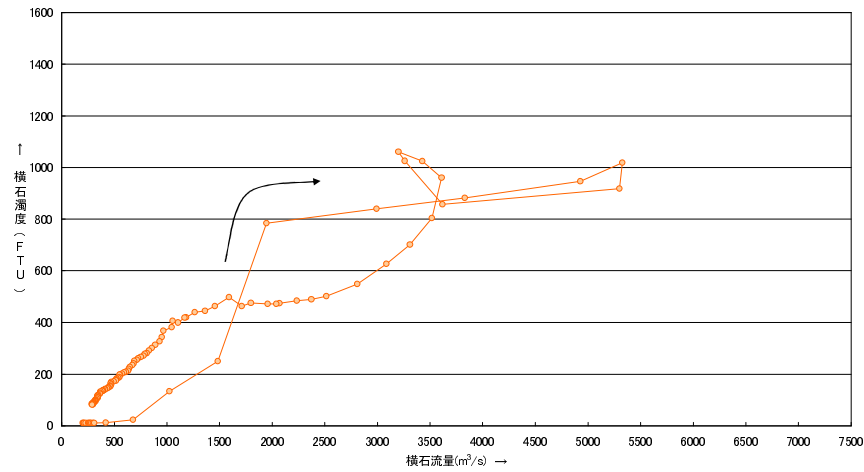
H24⑥

2012/7/7-7/11



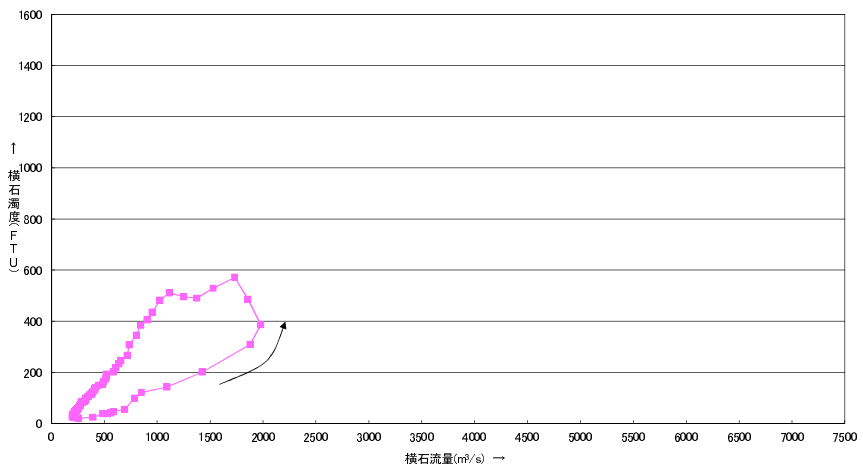
H24⑦

2012/7/11-7/16



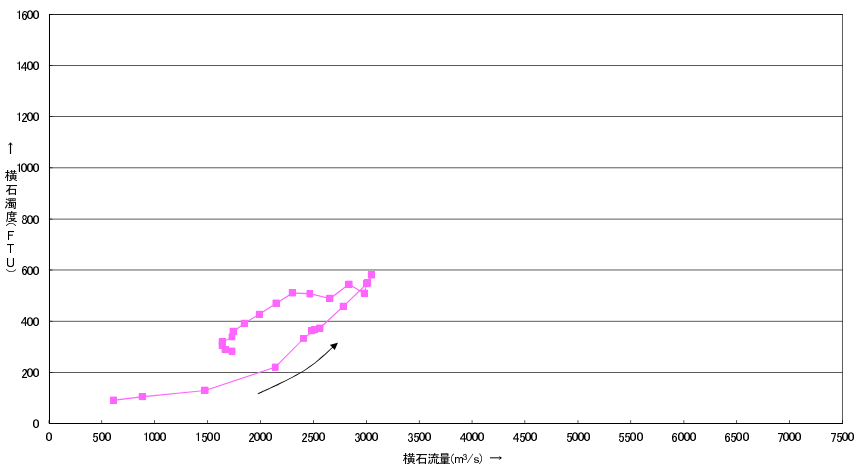
H25①

2013/6/25-6/29



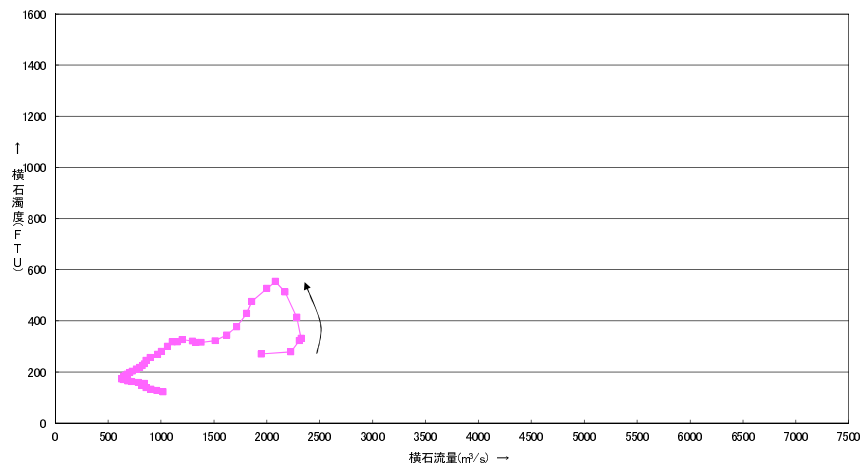
H25②

2013/9/1-9/2



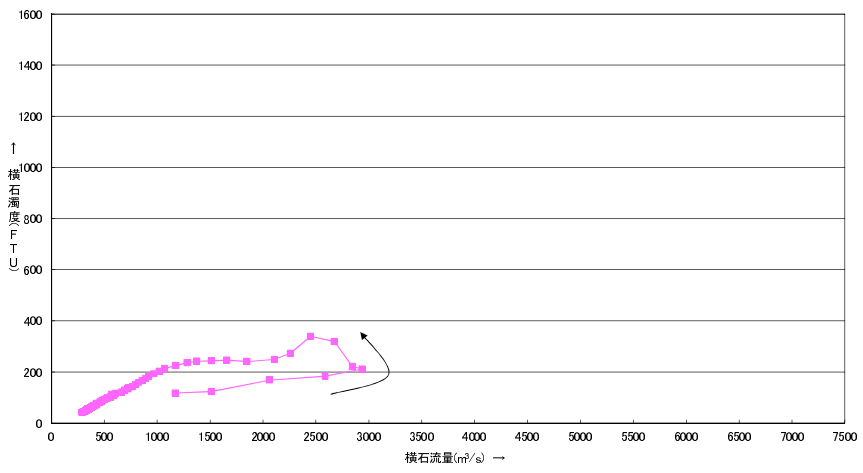
H25③

2013/9/2-9/4



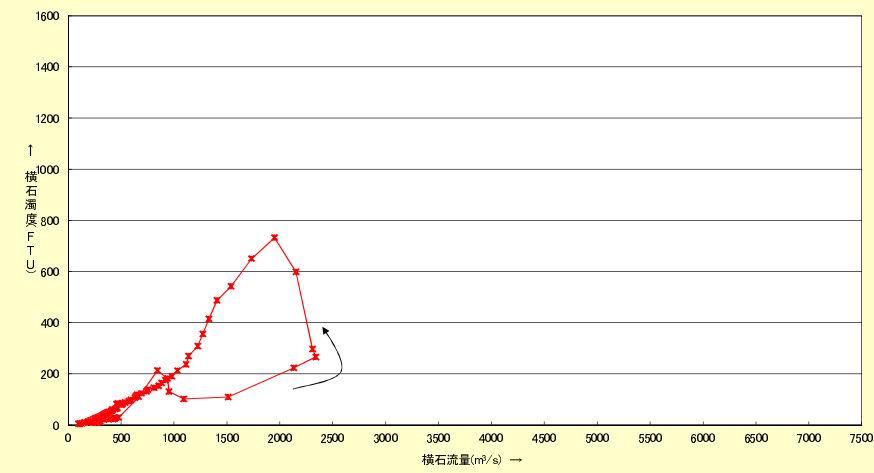
H25④

2013/9/4-9/6



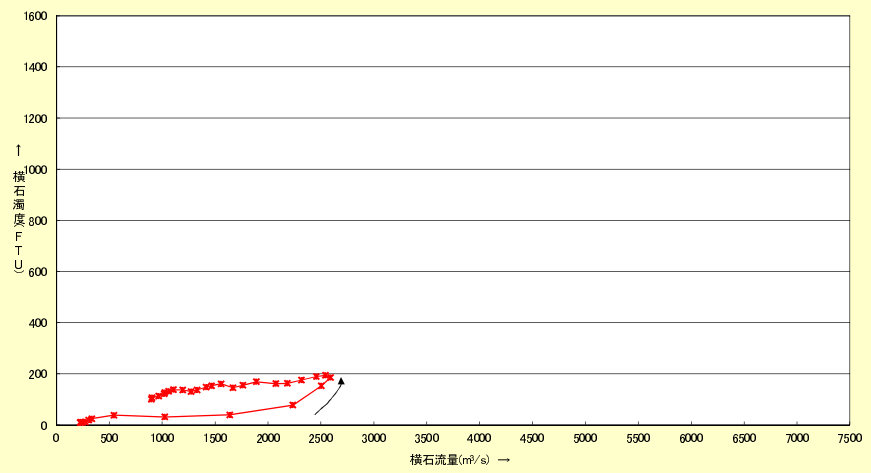
H26①

2014/6/21-6/26



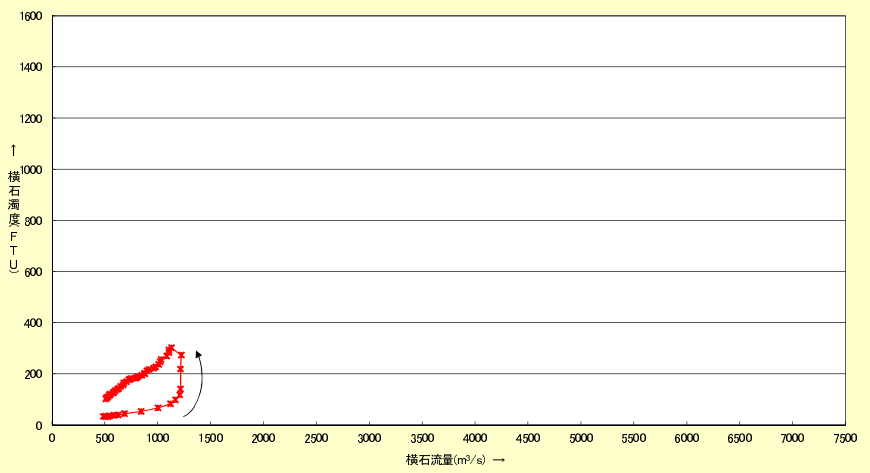
H26②

2014/7/6-7/7



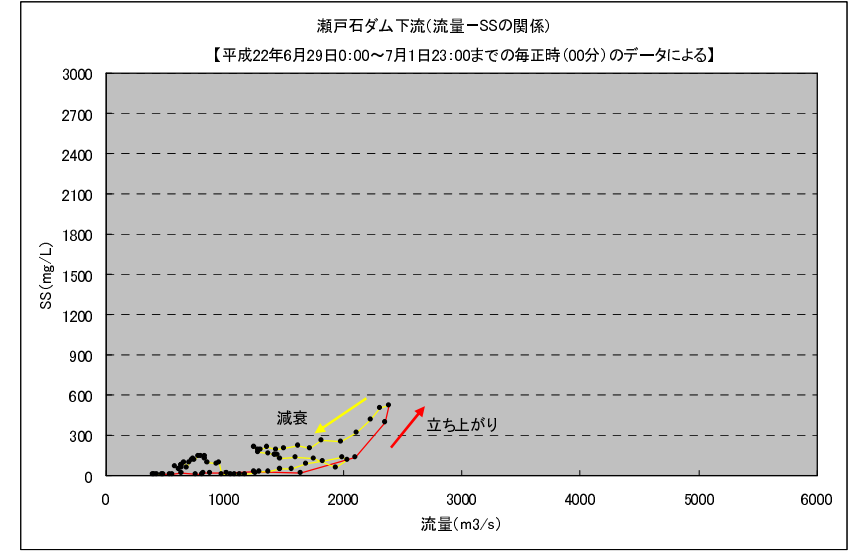
H26③

2014/7/9-7/11

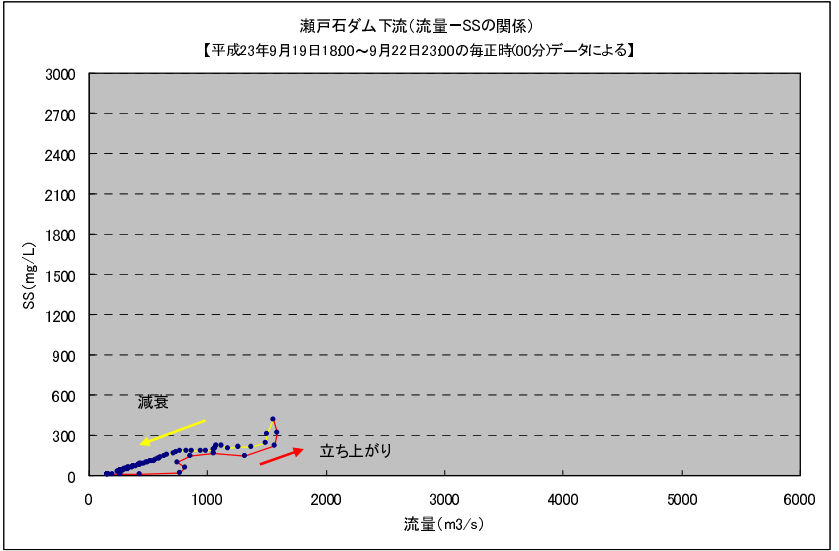


出水時調査時の流量と SS の時間的変化について、平成 22 年度、平成 23 年度及び平成 25 年度のデータを整理した図を以下に示す。全て反時計回りである。

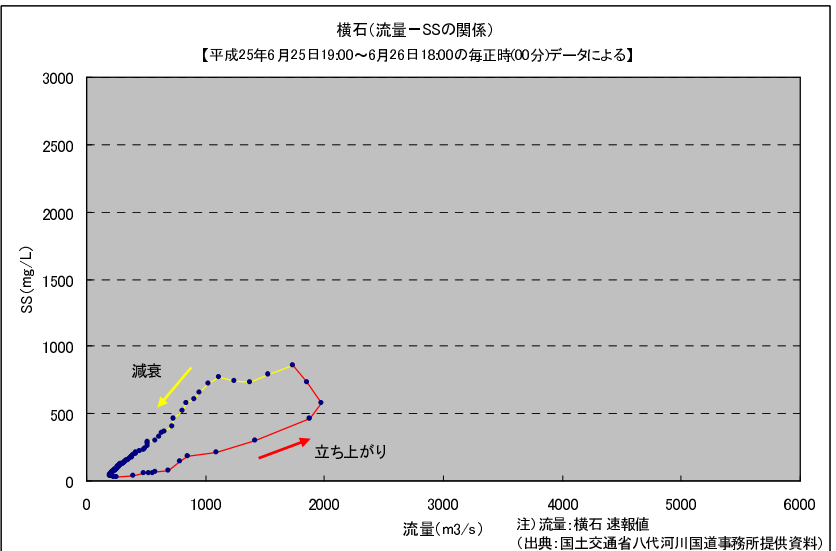
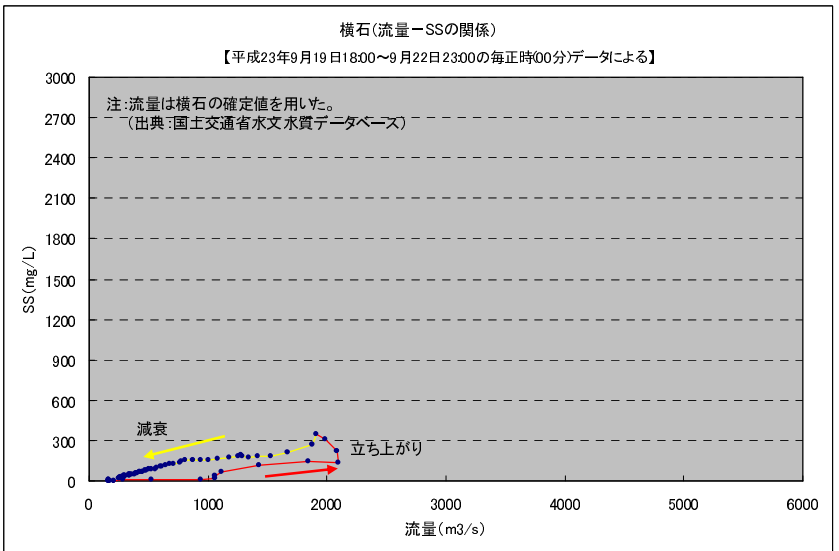
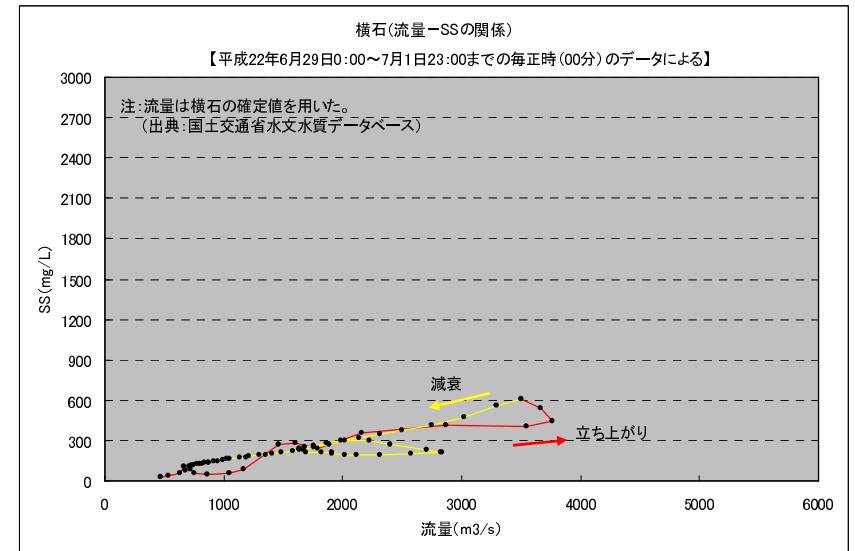
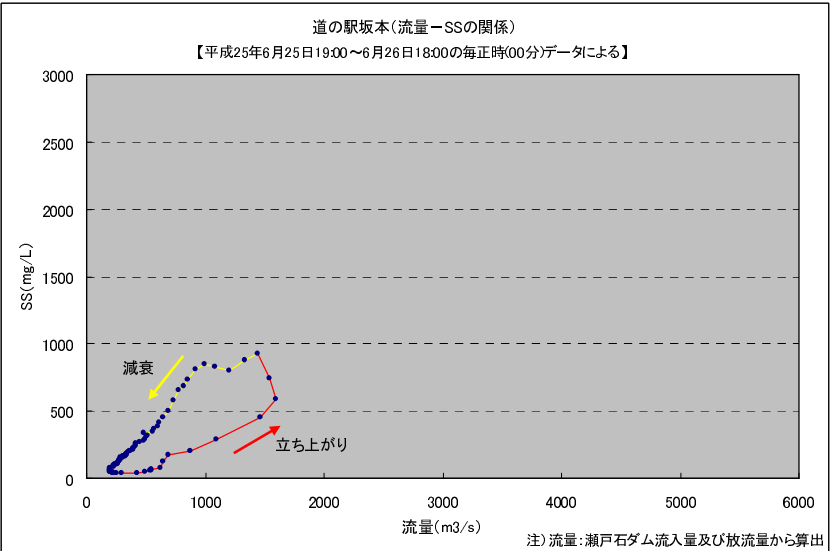
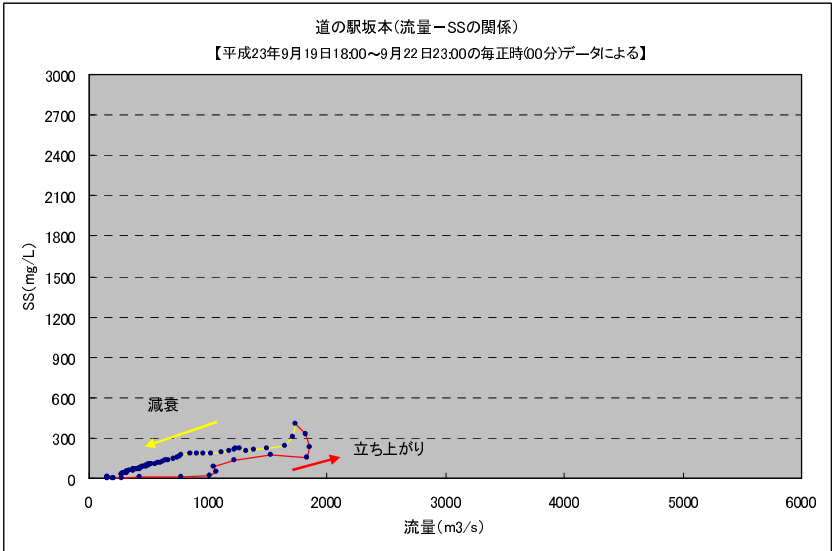
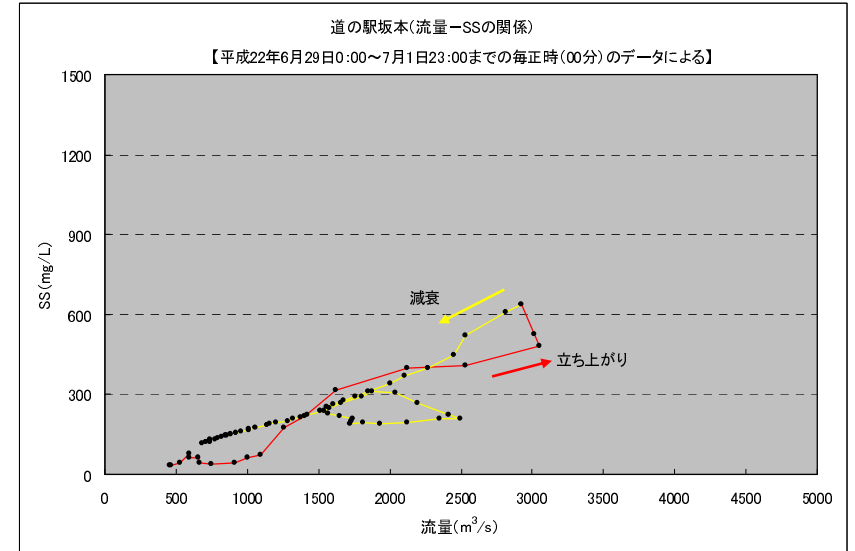
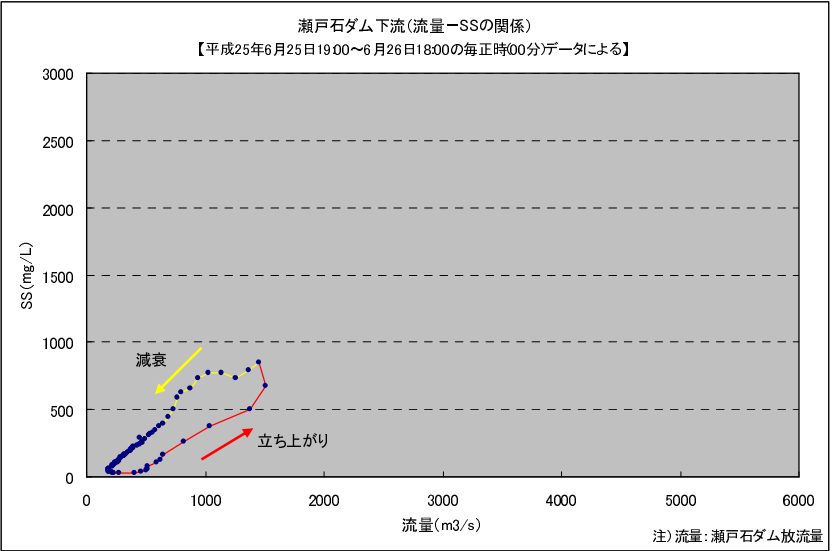
[出水時 1] 平成 22 年度 出水時調査結果（平成 22 年 6 月 29 日～7 月 1 日）

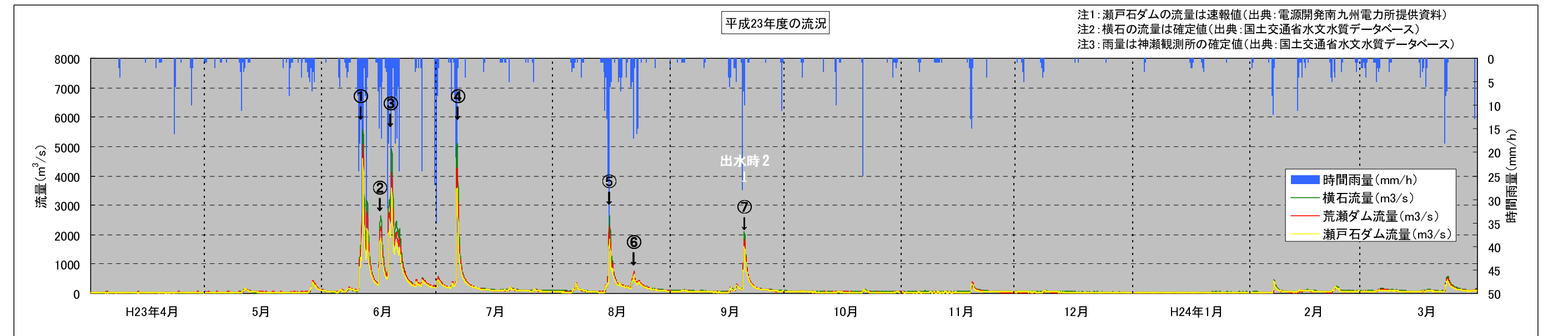


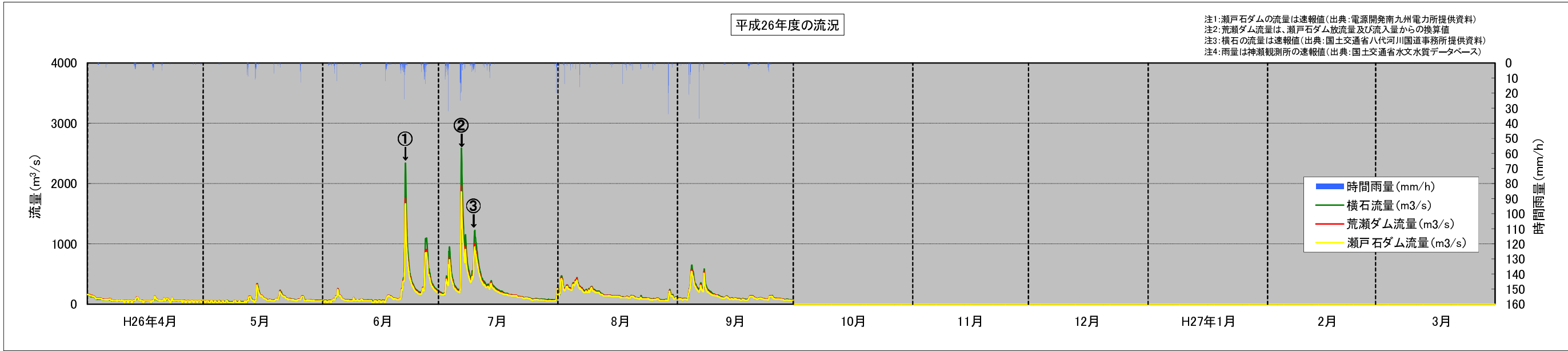
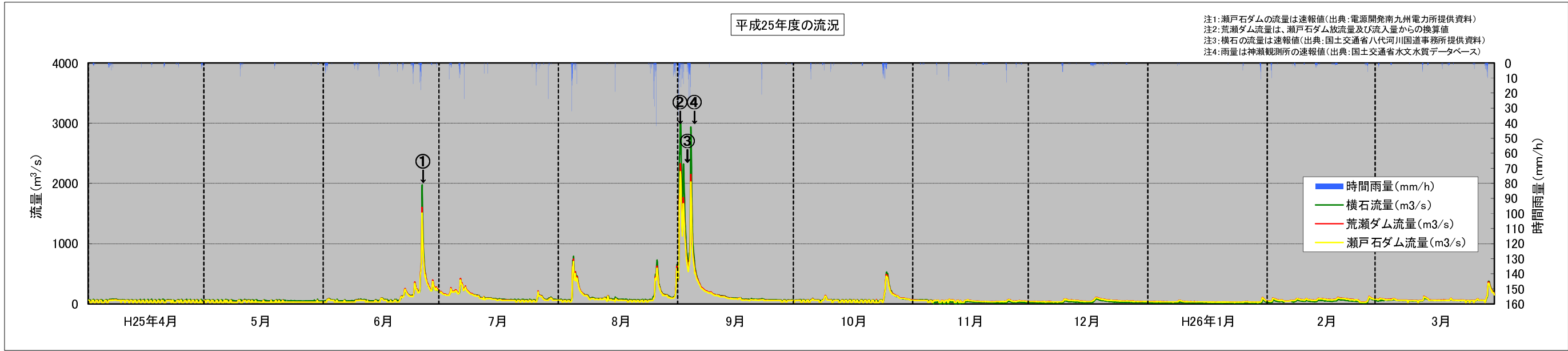
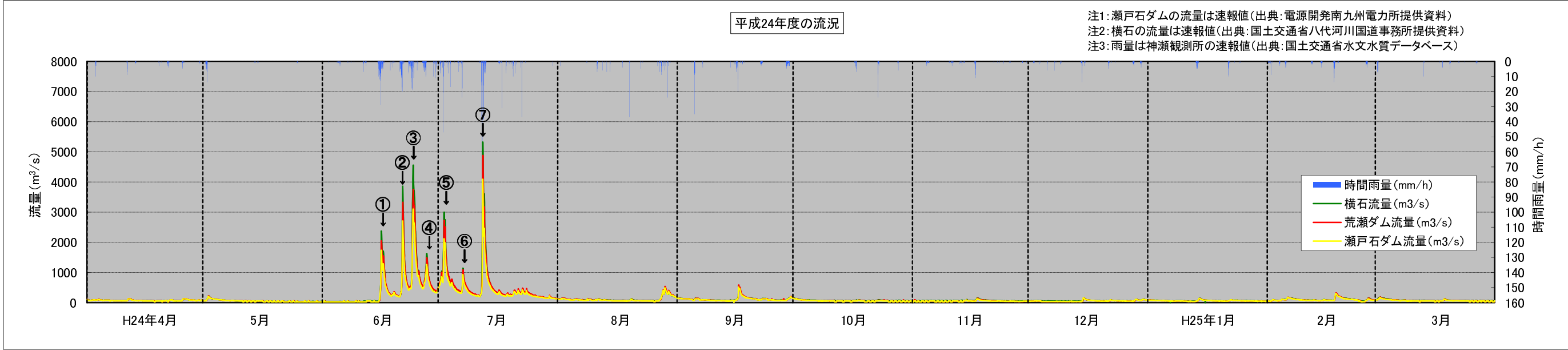
[出水時 2] 平成 23 年度 出水時調査結果（平成 23 年 9 月 19 日～9 月 22 日）



[出水時 3] 平成 25 年度 出水時調査結果（平成 25 年 6 月 25 日～6 月 26 日）



[illegible]

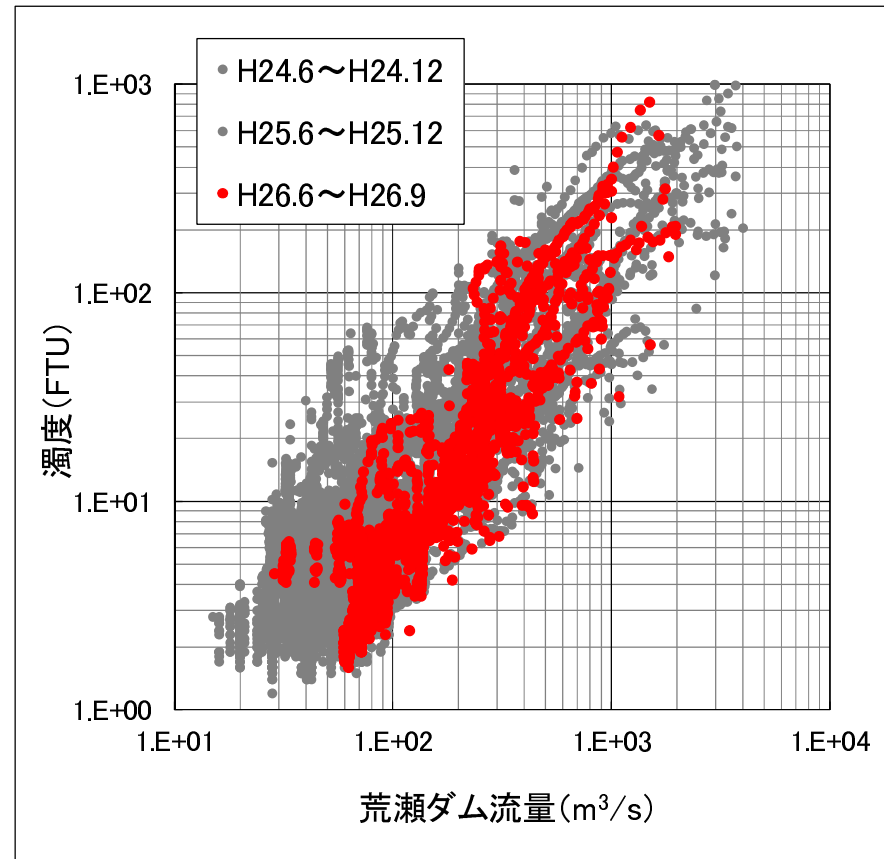


8) 出水時の道の駅坂本の流量（荒瀬ダム流量）と水質（濁度、SS）の関係について（H26 年度観測）

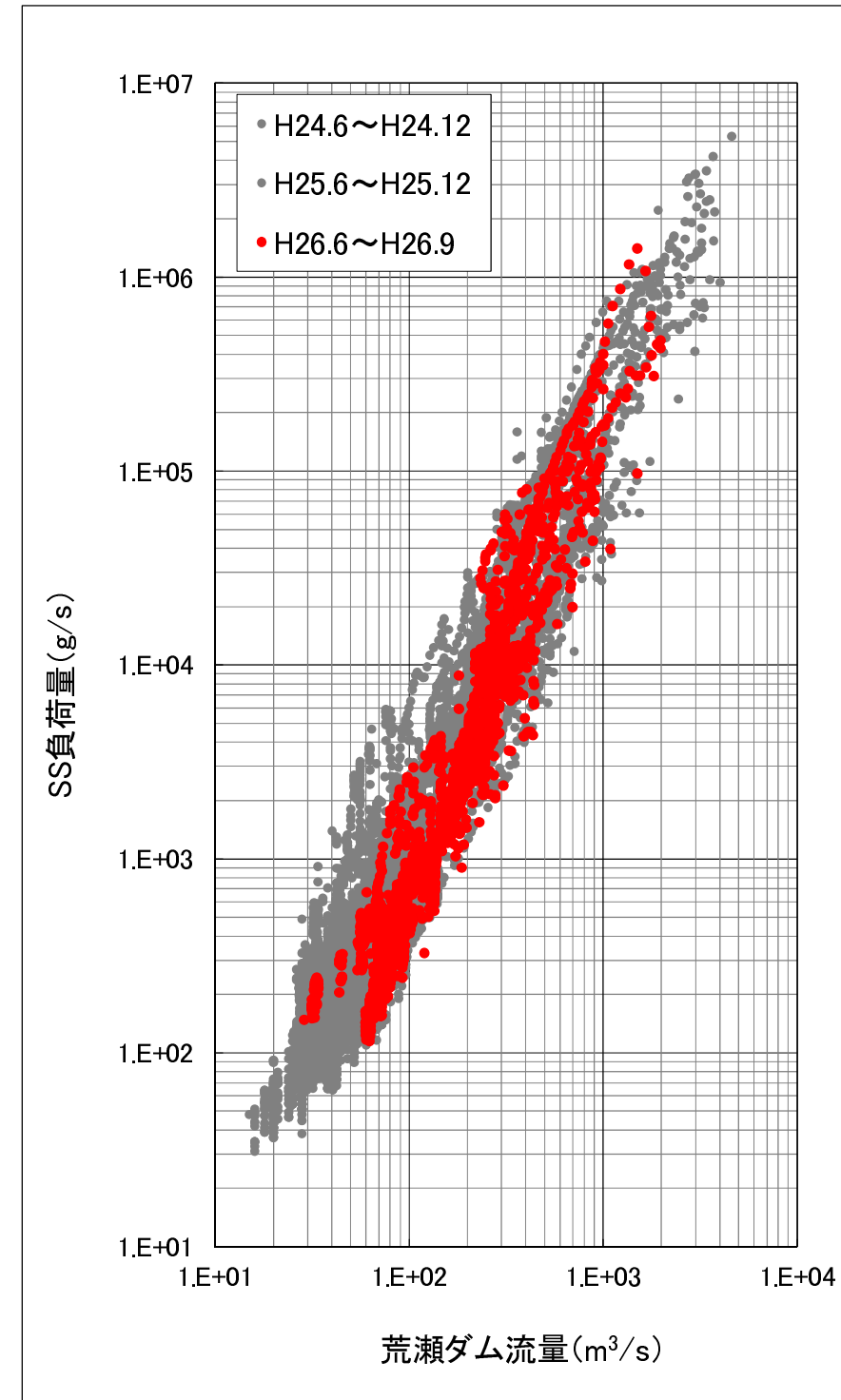
流量と濁度や SS の関係の平均的な挙動を把握するために、平成 24 年 6～12 月、平成 25 年 6～12 月及び平成 26 年 6～9 月の出水時における「流量と濁度 (FTU)」及び「流量と SS 負荷量」のデータをプロットしたものを下図に示す。

注：濁度から SS への換算は、平成 25 年度までのデータから作成した「 $SS=1.1435 \times \text{濁度}$ 」（第 7 回委員会資料と同じもの）を用いている。

流量（荒瀬ダム放流量）と濁度 (FTU) の関係図



流量（荒瀬ダム放流量）と SS^注負荷量の関係図



注：SS は、回帰式による濁度 (FTU) の換算値