WAAS Web Application Portal

SMS Animation Display

Contents

Introduction

As part of the William J. Hughes Technical Center WAAS Test Team website (www.nstb.tc.faa.gov), the WAAS Web Application Portal allows you to view a SMS Animation Display.

This website allows you to specify a period of time and then view the changing WAAS performance of airports, satellites, IGP GIVEs, and IGP Delays within that chosen time frame.

We recommend using either Google Chrome or Firefox browsers.

The following information shows you how to navigate the website. First, click on the "WAAS Web Application Portal" link (See red arrow below).

Once you click the link, you come to the screen below. Next, select "SMS Animation Display" (See red arrow below).

Welcome to The William J. Hughes Technical Center WAAS Test Team

Interactive Web Application Portal

Disclaimer: The data on this website is for information only and should not be used for flight planning.

Real-Time Applications

OTE Display   – Real-Time Receiver Data Display
SMS Display   – Real-Time Service Monitoring Subsystem Display
SBAS Display (Coming Soon) – Real-Time EGNOS / MSAS / WAAS Display

Reporting Applications

Airport Actual Outages – Provides "rolled up" airport outage information on a geographic display
Airport Schedules   – Shows predicted airport schedules for the next two weeks
Interactive PAN Report – Allows for interactive generation of select PAN Report Tables over a user specified period of time
NPA SPS Summary   – Summary NPA SPS Statistics
PA Summary   – Summary PA Statistics
Rollup Display   – Displays aggregated airport and IGP statistics on a geographic display
SMS Animation Display – Animates SMS data over user selected time periods on an interactive geographic display
UDREi Daily Graphs   – Displays savable UDREi GEO graphs for a given day

After clicking "SMS Animation Display," you will the screen below. As can be done with all Google Maps, you may zoom in and out by sliding the zoom control on the upper left corner of the map or the by using the scroll wheel on your computer mouse. You may also pan left/right/up/down using the Pan control (See the red box below).

In order to view any data, however, you must click on "Configuration Controls" button to open a dialog box (See red box below).
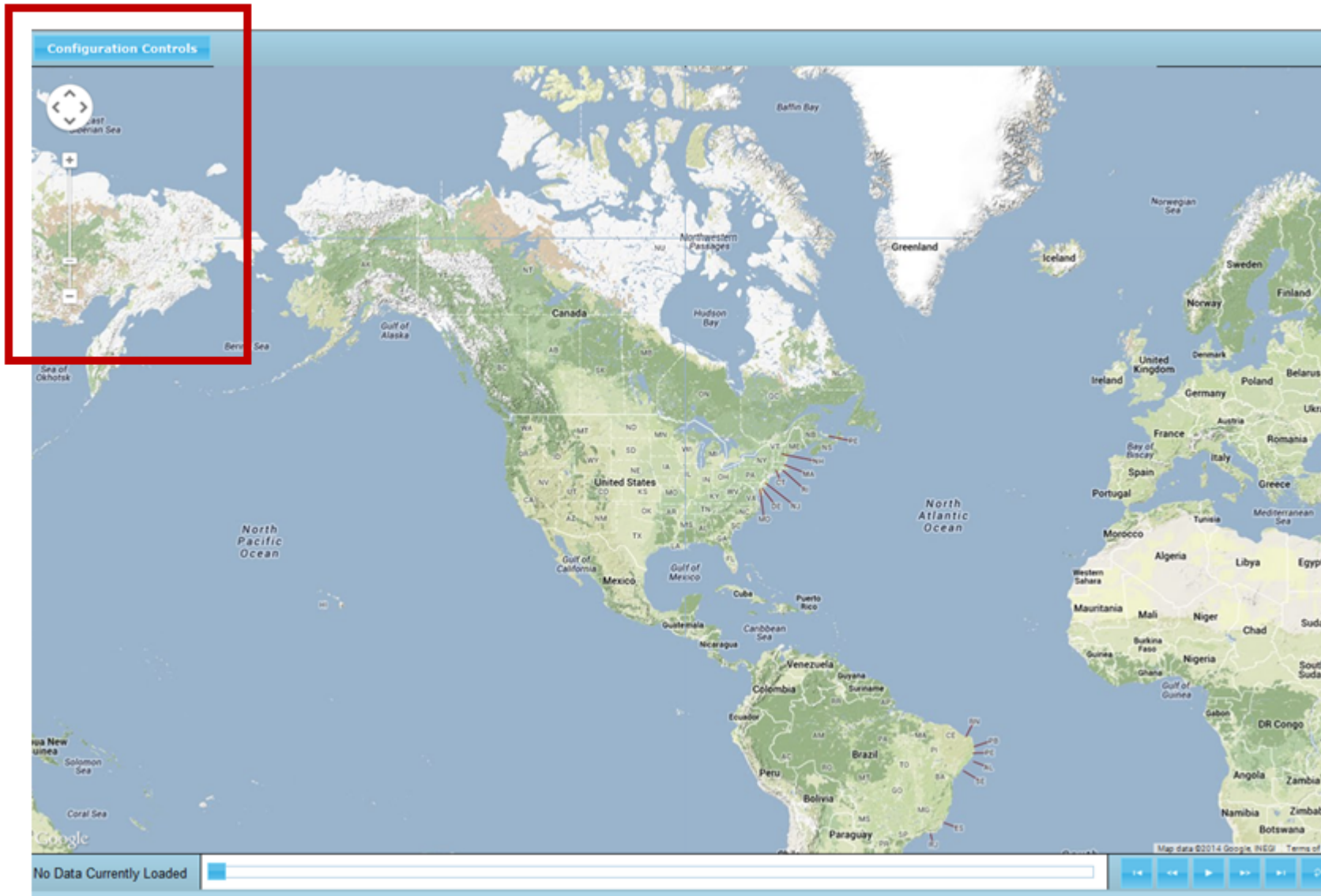
Scrolling

Here we scrolled in closer using the scroll wheel on the mouse. You may also zoom out to get a broader view of the earth.
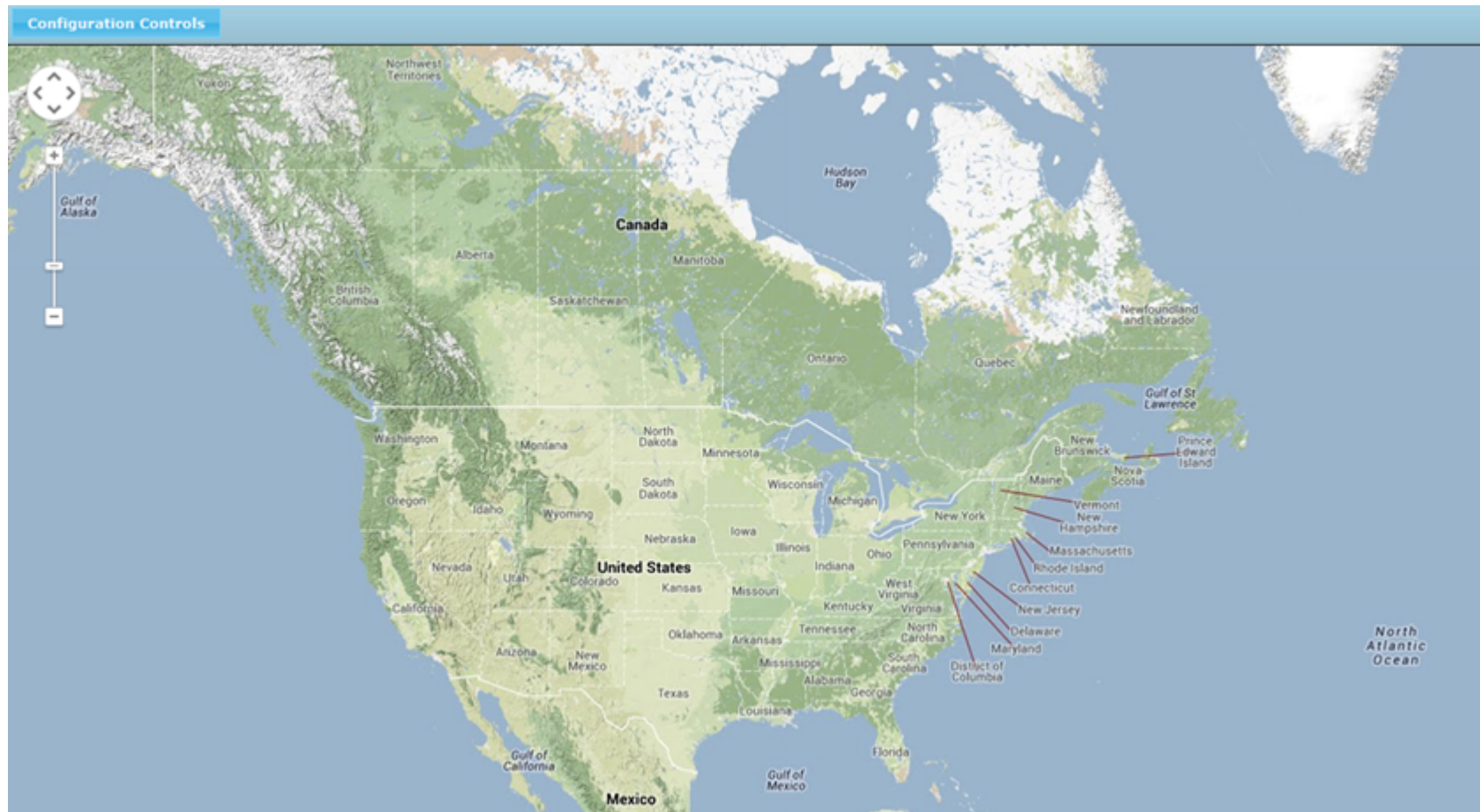
Configuration Controls

Here is the dialog box that opens after clicking "Configuration Controls." Notice the Animation settings tab is open by default (See #1 below).

#2 below shows the layers you may view. These include Airports, Ionospheric Grid Points (IGPs) and Satellites. These boxes may be deselected by clicking on them. If these layer buttons are a dark blue color, they will be shown on the next screen. In this example, Airports, IGPs and satellites will all be shown because we did not deselect any layers.

Next we must indicate the start and end times (See # 3).

Notice in the bottom left corner of the window that it states "No Data Currently Loaded" (See #4 below) because we have not yet entered our time or pressed the "Start New Animation" button.
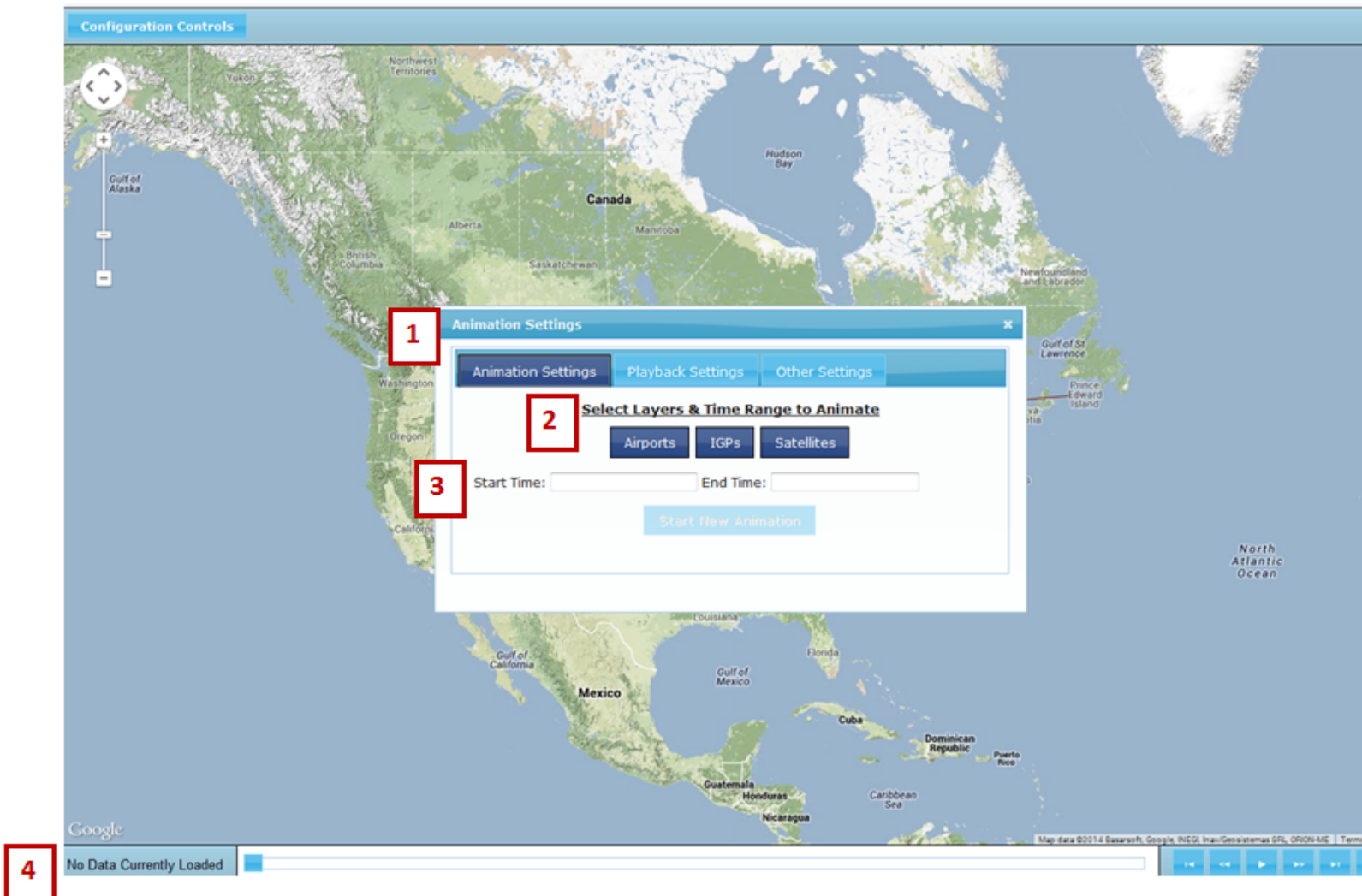
We chose a start time of 04/30/2014 00:00 and an end time 04/30/2014 05:00. (See below) Once this is complete, click the "Done" button. (See red arrow below). Note that a time period up to 24 hours can be selected.

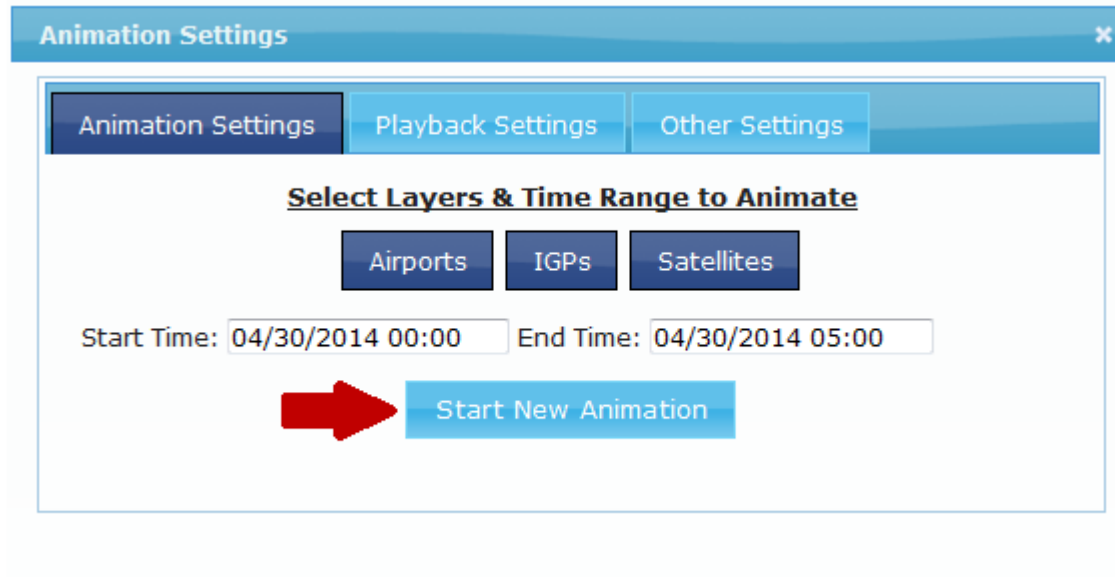Notice the Week and Day shows up in a small white box when you hover the cursor over a date in the calendar. Here it says "Week: 1790 Day: 3."

Start New Animation

Next, we clicked on the "Start New Animation" button to begin the animation (See red arrow).

A "Now Loading" bar will appear at the top right of your screen showing the percentage loaded. If you wish to cancel the page load, click (Cancel). In the example below, the 46% of the page has loaded.

Here is the screen after we chose the "Start New Animation" button. To initiate animation, press the Play button in the lower right corner, indicated by the triangle symbol. (See arrow below)
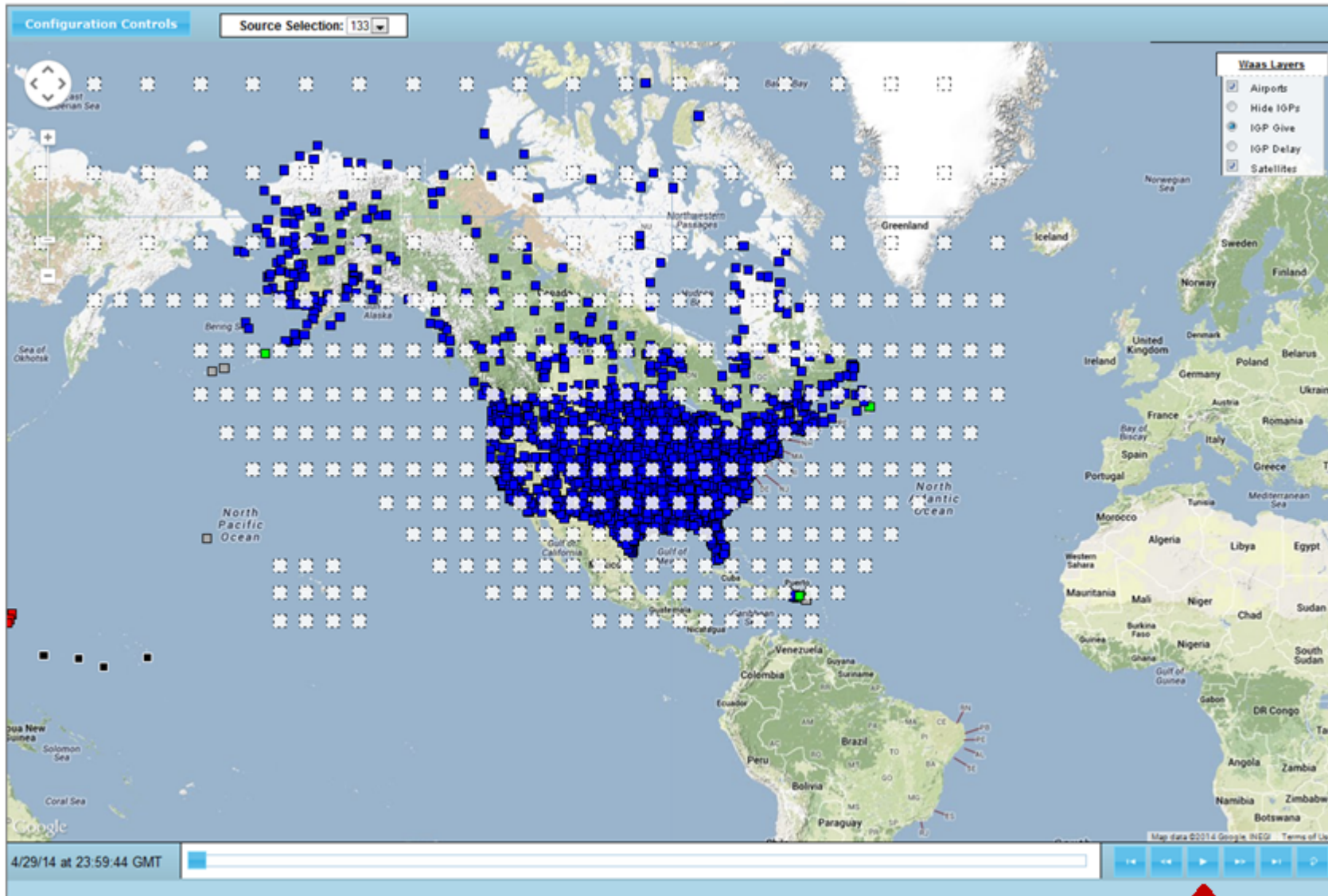
Here is a screen shot of the Animation in action. Notice the time highlighted in the red box is also represented by the box on the sliding scale to the right. This scale may be moved using the mouse at any time by holding and dragging the blue box on the scroll bar to go forward or backward in time.

You may pause this animation at any time by choosing the pause button, the button with the double vertical line symbol (Indicated here by the red arrow). If, however, the animation is paused and you use the scroll bar to move forward or backward in time, the image will stay paused on the time you designate. Simply press the Play button to re-animate the display.
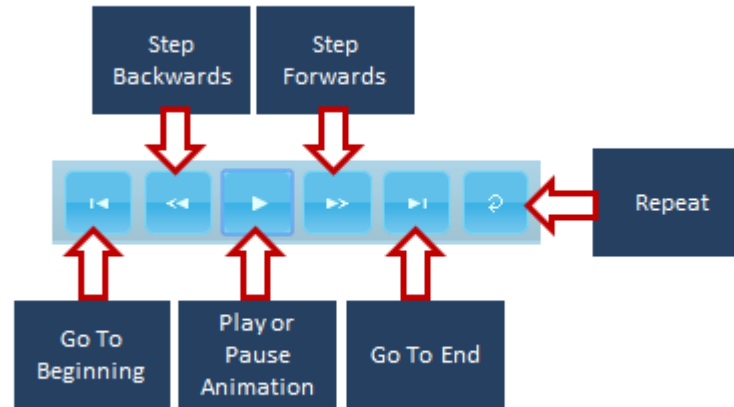
A few of the satellites are also pointed out here. The colors of the satellites here indicate:

- Green= PA mode
- Yellow= NPA mode
- Red= DNU or do not use
- Blue = Satellite Not Monitored by WAAS
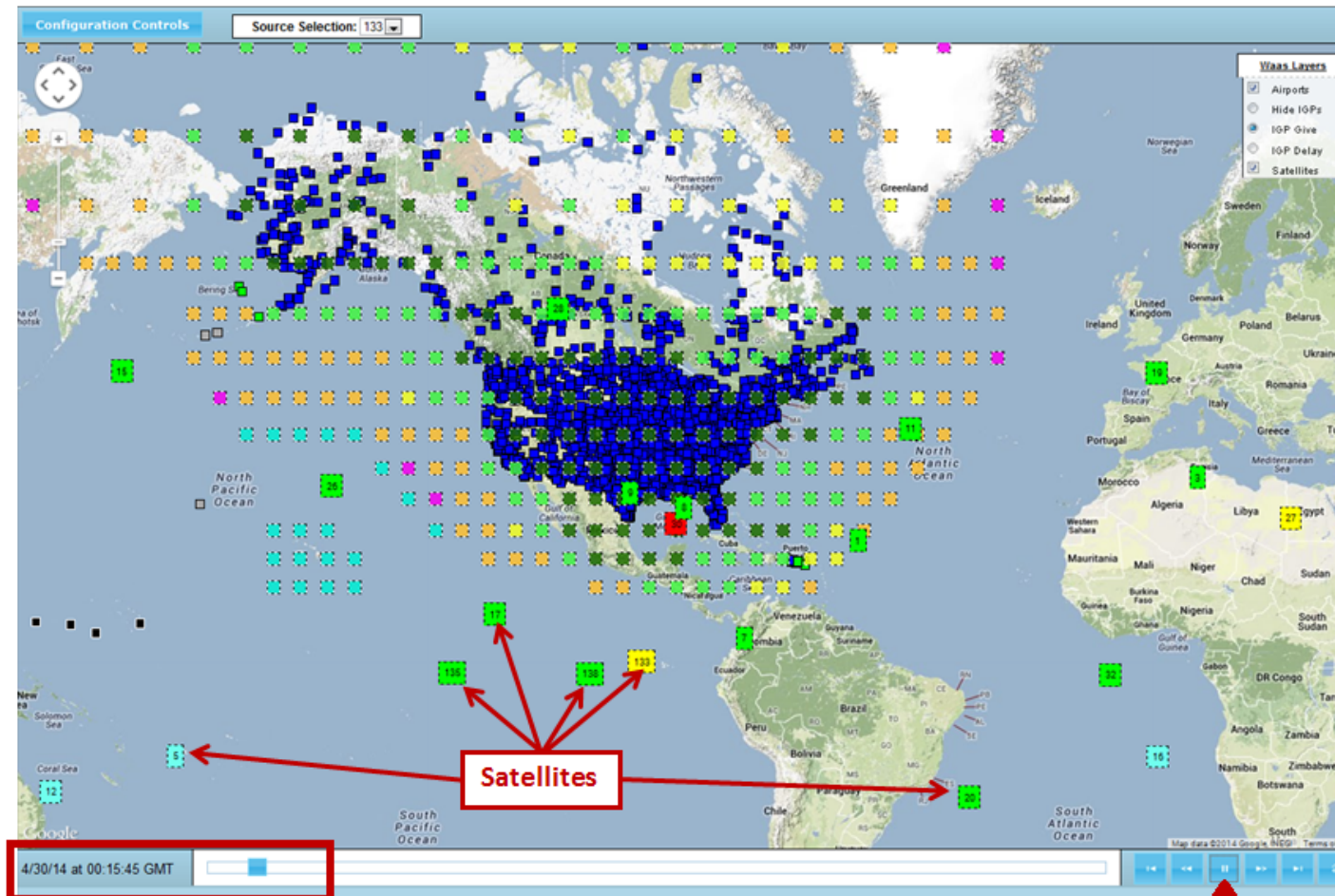
Animation Player

The Animation Player allows you to do many things. They are listed here:
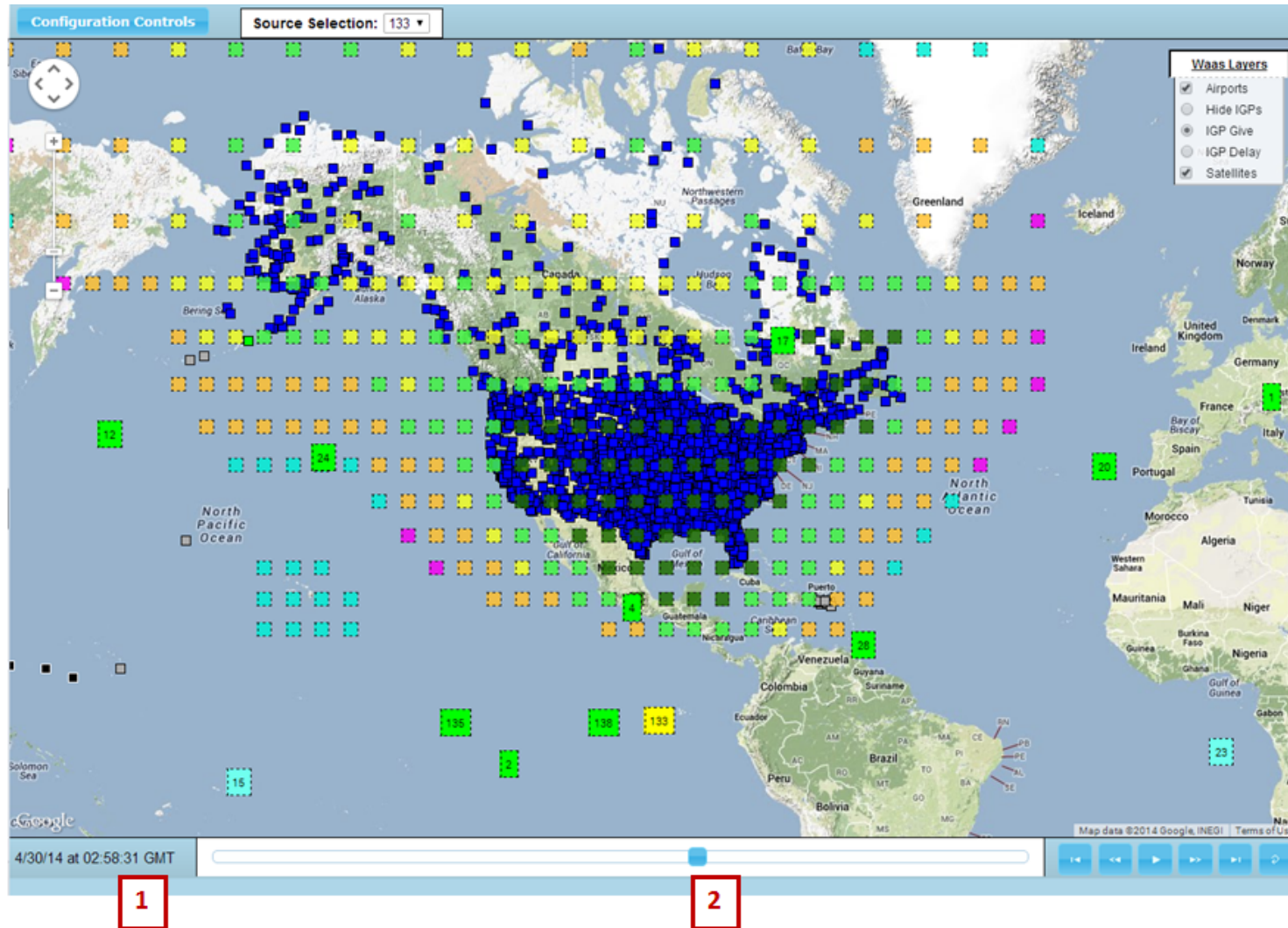
Time

Here is the same date at a later time. Notice it is 02:58:31GMT (See #1 below). The same time is also indicated on the sliding scale indicated by #2 below.

You may zoom in and out of the map as the animation is playing.

Notice here, at this point in time, the IGP GIVEs are different colors than earlier, as are some satellites.

Hiding Airports

The red box highlighting the WAAS layers shows we deselected "Airports" in the WAAS Layers box causing the blue airport boxes to disappear. Note: you may also deselect the airport check box while the page is loading. Unlike with the Rollup Display, you may hide and unhide the Airports easily by checking or unchecking the "Airports" box.

We then selected the IGP Delay radio button (See red box). We also kept the satellites checked.

The Time stayed the same (See red arrow); we simply changed the layers we wanted to view.

Please note: If a layer fails to appear after being selected in the Waas Layers box, refresh the SMS animation display by selecting the "Configuration Controls" button followed by the "Start New Animation" button."
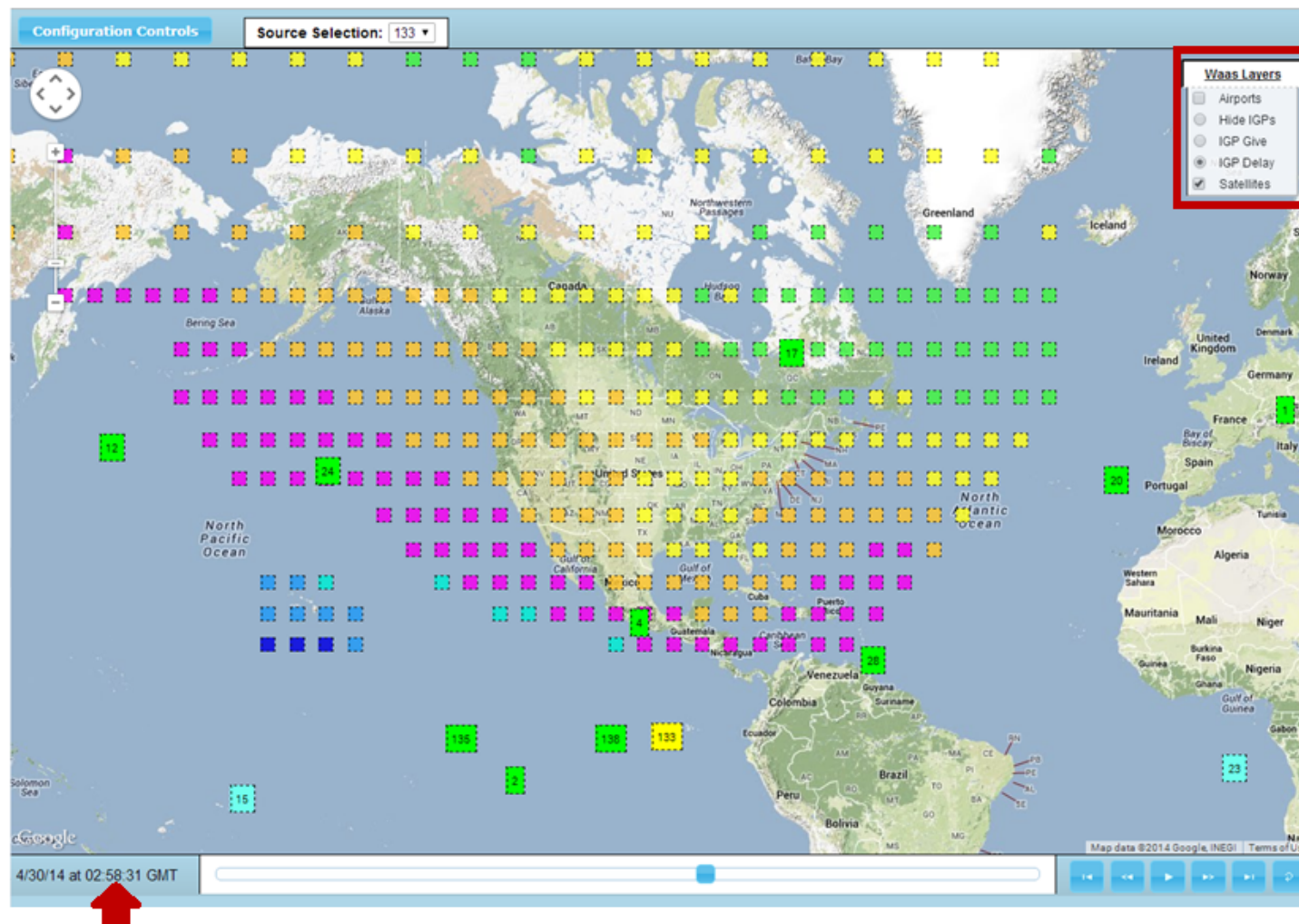
Hide IGPs

Here, we indicated "Hide IGPs" and we selected "Airports" (See red box on map).

To obtain further information on an airport, click on its box. Doing so will bring up a box with Nav Mode, the number of observed satellites, HDOP, VDOP, PDOP, HPL, VPL, GEO source, and GMT time and date (See Inset below). To close the Additional Data box, click the white "x" in the upper right corner.
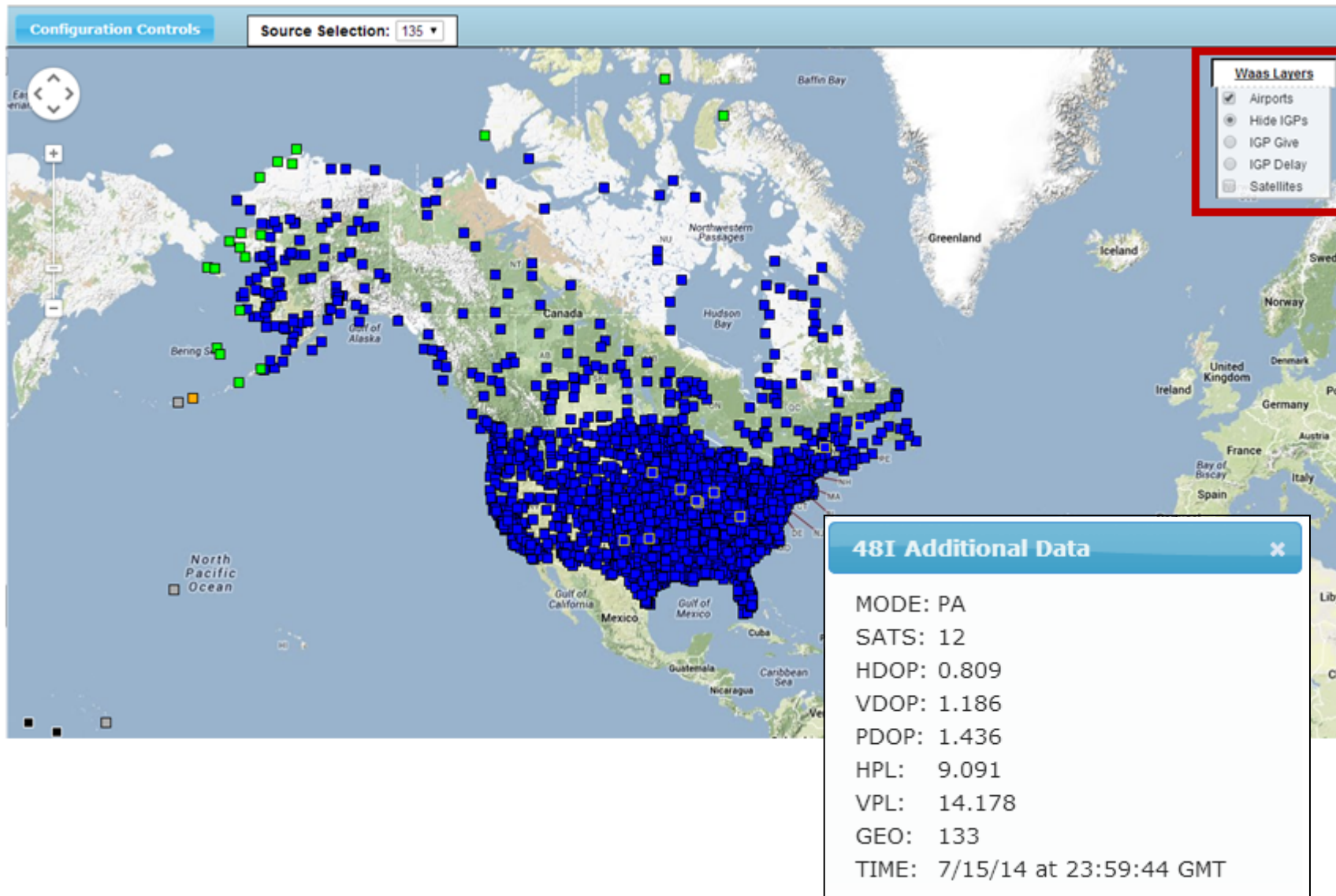
Source Selection

You may change the WAAS geostationary satellite source by using the down arrow next to "Source Selection." (See red arrow below). Different WAAS GEOs may transmit different information.
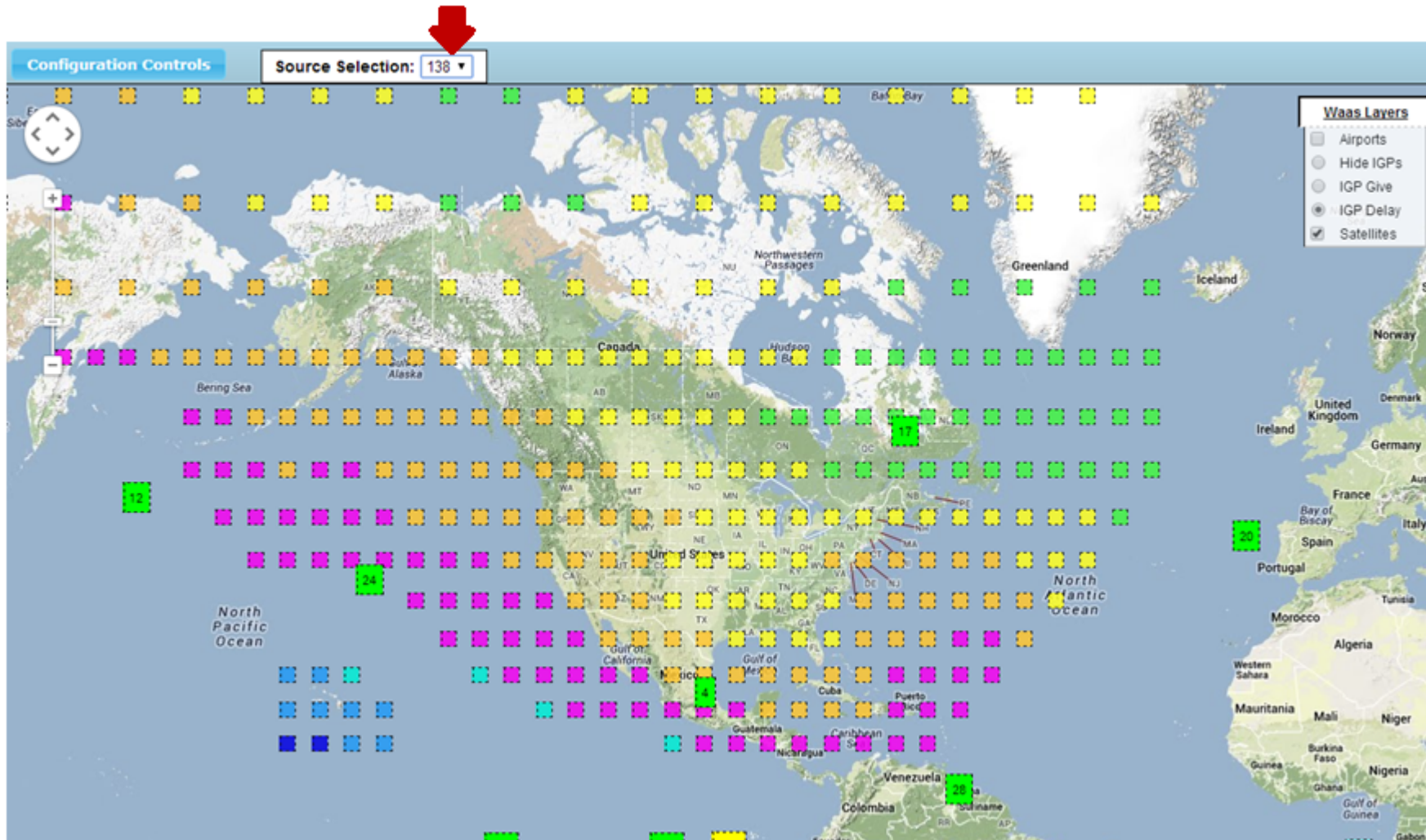
Playback Settings

Configuration Controls also allows you to adjust your playback settings. Click on the "Configuration Controls" (See red arrow below) and then select the "Playback Settings" tab in the dialog box. Currently, our Playback Rate is 2 frames per second and the Playback Step is 30 frames. You may slide this scale to increase or decrease the Playback Rate and Playback Step depending on your needs.
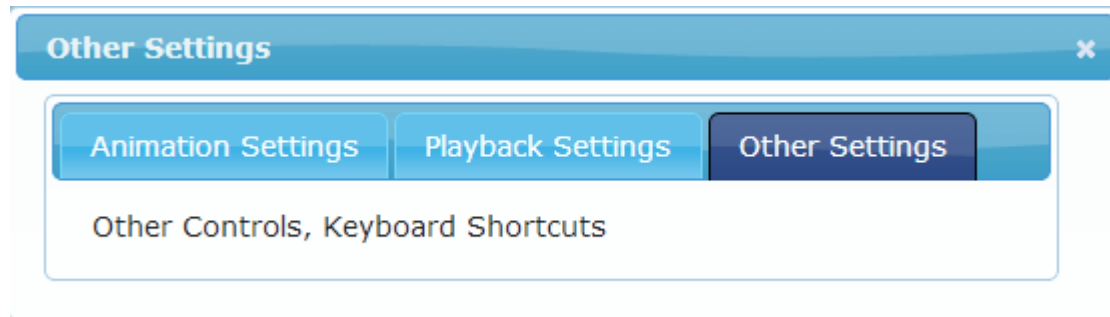
The ranges are:
- Playback Rate: 5 frames per second to 0.56 frames per second
- Playback Step: 1 frame to 300 frames
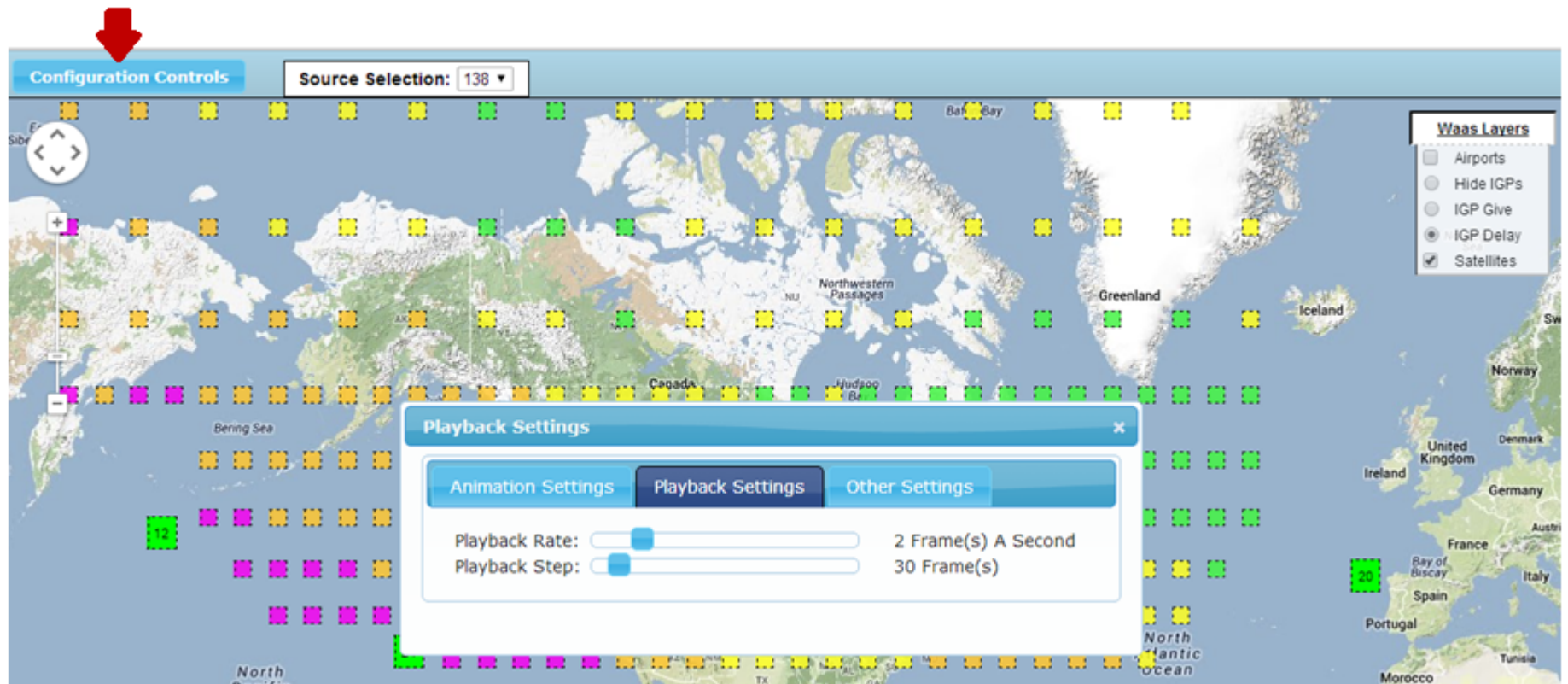
Other Settings

Currently, there is no information in the "Other Settings" tab. To close this dialog box, simply click on the "x" in the upper right corner of the box to return to the animation.

Obtaining Information by Hovering

As the animation is playing, hovering your cursor over airports gives you the airport code letters. Below, we hovered over TQK. Click on the box for further information.

Also, clicking or hovering over satellites does not display any further information.

Hovering over IGP Give or IGP Delay will open a small dialog box with some parameters.
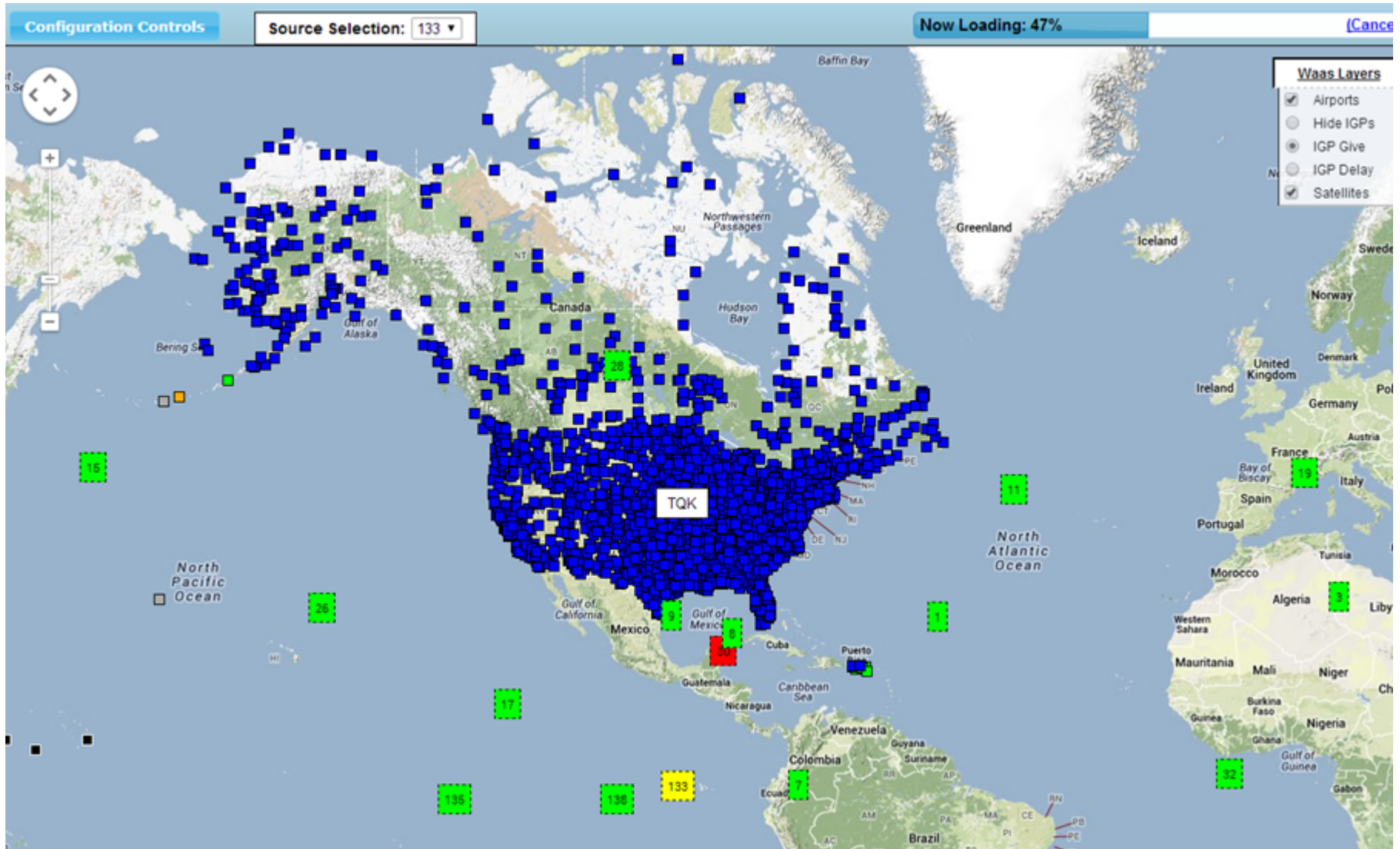
IGP Give Data

Here we hovered over a particular IGP Give which brought up a small white box with the latitude and longitude in parentheses, the Give and the Delay (See the screen shot below). Clicking on the GIVE boxes does not yield any further information.

IGP Delay

Here is a screen shot of the same day's animation, but we are looking at only the IGP Delays for that given day.