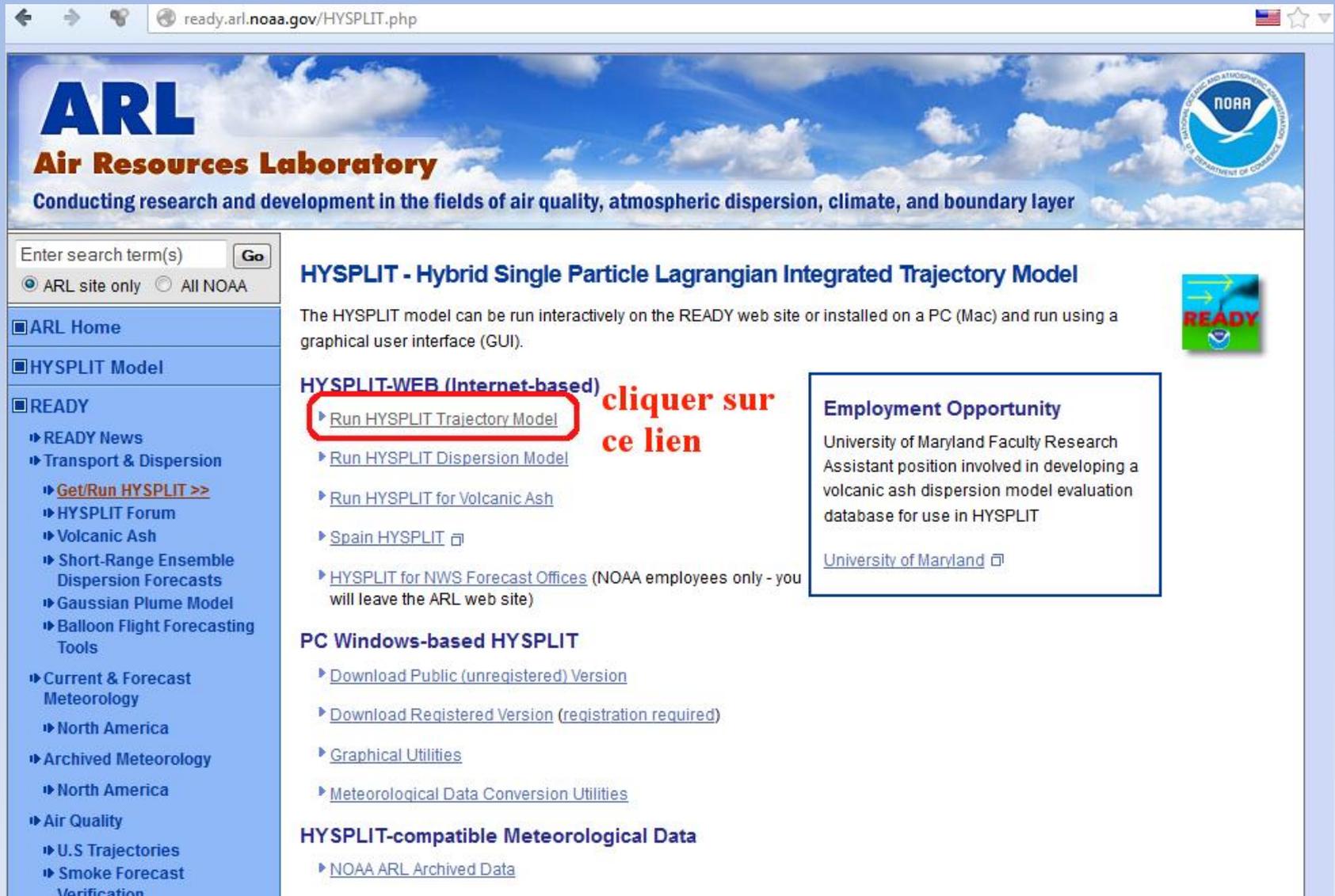


**Comment déterminer les rétro  
trajectoires atmosphériques à  
partir du modèle du NOAA ?**

On utilise le site suivant : [air resources laboratory](http://airresourceslaboratory.noaa.gov)

On obtient la page suivante et on clique sur le lien indiqué :



ready.arl.noaa.gov/HYSPLIT.php

# ARL

## Air Resources Laboratory

Conducting research and development in the fields of air quality, atmospheric dispersion, climate, and boundary layer

Enter search term(s)

ARL site only  All NOAA

- ARL Home
- HYSPLIT Model
- READY
  - READY News
  - Transport & Dispersion
    - [Get/Run HYSPLIT >>](#)
    - HYSPLIT Forum
    - Volcanic Ash
    - Short-Range Ensemble Dispersion Forecasts
    - Gaussian Plume Model
    - Balloon Flight Forecasting Tools
  - Current & Forecast Meteorology
    - North America
  - Archived Meteorology
    - North America
  - Air Quality
    - U.S Trajectories
    - Smoke Forecast Verification

### HYSPLIT - Hybrid Single Particle Lagrangian Integrated Trajectory Model

The HYSPLIT model can be run interactively on the READY web site or installed on a PC (Mac) and run using a graphical user interface (GUI).

#### HYSPLIT-WEB (Internet-based)

- [Run HYSPLIT Trajectory Model](#) **cliquer sur ce lien**
- [Run HYSPLIT Dispersion Model](#)
- [Run HYSPLIT for Volcanic Ash](#)
- [Spain HYSPLIT](#)
- [HYSPLIT for NWS Forecast Offices](#) (NOAA employees only - you will leave the ARL web site)

#### PC Windows-based HYSPLIT

- [Download Public \(unregistered\) Version](#)
- [Download Registered Version \(registration required\)](#)
- [Graphical Utilities](#)
- [Meteorological Data Conversion Utilities](#)

#### HYSPLIT-compatible Meteorological Data

- [NOAA ARL Archived Data](#)

#### Employment Opportunity

University of Maryland Faculty Research Assistant position involved in developing a volcanic ash dispersion model evaluation database for use in HYSPLIT

[University of Maryland](#)



Sur la page suivante : faire le choix « archive » (on peut aussi faire le choix « forecast », c'est-à-dire « prévision » mais ce n'est valable que pour les USA)



Conducting research and development in the fields of air quality, atmospheric dispersion, climate, and boundary layer

[ARL Home](#) > [READY](#) > [Transport & Dispersion Modeling](#) > [HYSPLIT](#) > [HYSPLIT Trajectory Model](#)

### HYSPLIT Trajectory Model

- ▶ [Compute \*forecast\* trajectories](#)
- ▶ [Compute \*archive\* trajectories](#)
- ▶ [Retrieve previous model results](#)
- ▶ [Restart user session \(clear user inputs\)](#)

**cliquer sur ce lien**

- ▶ [Current \*\*pre-computed\*\* U.S. trajectory forecasts](#)
- ▶ [Trajectory optimization for balloon flights](#)
- ▶ [Return to main HYSPLIT page](#)



Publications using HYSPLIT results, maps or other READY products provided by NOAA ARL are requested to include an acknowledgement of, and citation to, the NOAA Air Resources Laboratory. Appropriate versions of the following are recommended:

**Citation**

*Draxler, R.R. and Rolph, G.D., 2013. HYSPLIT (HYbrid Single-Particle Lagrangian Integrated Trajectory) Model access via NOAA ARL READY Website (<http://www.arl.noaa.gov/HYSPLIT.php>). NOAA Air Resources Laboratory, College Park, MD.*

*Rolph, G.D., 2013. Real-time Environmental Applications and Display sYstem (READY) Website (<http://www.ready.noaa.gov>). NOAA Air Resources Laboratory, College Park, MD.*

**Acknowledgment**

*The authors gratefully acknowledge the NOAA Air Resources Laboratory (ARL) for the provision of the HYSPLIT transport and dispersion model and/or READY website (<http://www.ready.noaa.gov>) used in this publication.*

**Redistribution Permission**

Permission to publish or redistribute HYSPLIT model results using **forecast** meteorological data from NOAA ARL can be obtained by providing relevant information (reason, to whom, from whom) via email to [arl.webmaster@noaa.gov](mailto:arl.webmaster@noaa.gov). For further information, see the [HYSPLIT Use Agreement](#).

Laisser par défaut « 1 » et valider (« next »)



[ARL Home](#) > [READY](#) > [Transport & Dispersion Modeling](#) > [HYSPLIT](#) > HYSPLIT Trajectory Model

## Type of Trajectory(ies)

Number of Trajectory Starting Locations

- 1 Note: By choosing just one source location, more options for selecting the location will be presented on the next page, such as choosing by latitude/longitude, by WMO ID, or by plant location. Multiple source locations limit the input to just latitude/longitude positions.
- 2
- 3

Type of Trajectory

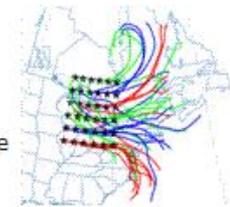
- Normal  Matrix  Ensemble

Next>>

## Details

### Trajectory Matrix

The trajectory matrix option will run a grid of trajectories bounded by the first 2 source locations (trajectory 1 is the lower left grid point and trajectory 2 is the upper right grid point) and evenly spaced with a grid increment given by the distance between the lower left grid point (trajectory 2) and trajectory 3. Only one height is allowed.



### Trajectory Ensemble



Cliquer sur votre point d'intérêt puis sur « next »

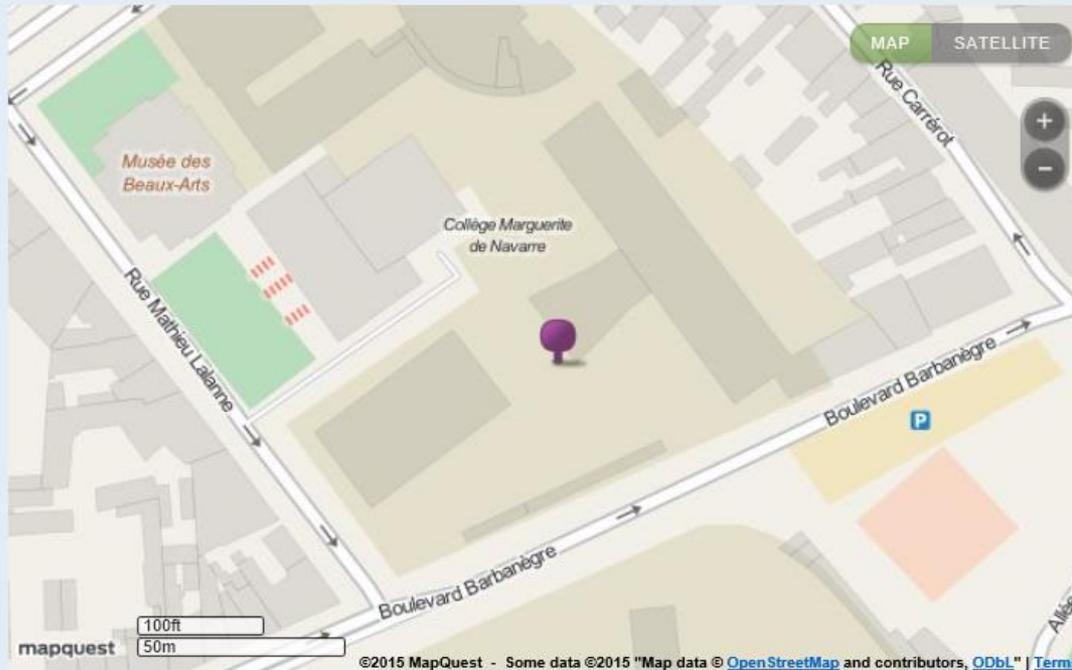
## Trajectory Calculation

**Meteorology:**

GDAS (1 degree, global, 2006-present) ▾

[More info](#) ▶

**Source Location** (enter using **one** of the following methods):



Close Map Display

Decimal Degrees Latitude:   ▾

Longitude:   ▾

DDD/MM/SS Latitude:     ▾

Longitude:

City (Country or State: name: lat: lon):

Airport or WMO ID (i.e., dca):  [ID Lookup](#)

Attention ! L'option par défaut est « current7days »...évidemment les données les plus récentes ne commencent pas aujourd'hui DONC si vous voulez des mesures, déroulez le « archive file »



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---

### Meteorology File

**Meteorology:** Archived GDAS1  
**Source Location:** Lat: 44.201200 Lon: 0.623800

Choose an archived meteorological file

Archive File:

En cliquant sur la première archive on sélectionne les données les plus récentes, ensuite on clique sur « next »



[ARL Home](#) > [READY](#) > [Transport & Dispersion Modeling](#) > [HYSPLIT](#) > [HYSPLIT Trajectory Model](#)

## Meteorology

Meteorology  
Source

Choose an archive

Archive File:

- current7days
- gdas1.sep15.w5
- gdas1.sep15.w4
- gdas1.sep15.w3
- gdas1.sep15.w2
- gdas1.sep15.w1
- gdas1.aug15.w5
- gdas1.aug15.w4
- gdas1.aug15.w3
- gdas1.aug15.w2
- gdas1.aug15.w1
- gdas1.jul15.w5
- gdas1.jul15.w4
- gdas1.jul15.w3
- gdas1.jul15.w2
- gdas1.jul15.w1
- gdas1.jun15.w5
- gdas1.jun15.w4
- gdas1.jun15.w3
- gdas1.jun15.w2
- gdas1.jun15.w1
- gdas1.may15.w5
- gdas1.may15.w4
- gdas1.may15.w3
- gdas1.may15.w2
- gdas1.may15.w1
- gdas1.apr15.w5
- gdas1.apr15.w4
- gdas1.apr15.w3
- gdas1.apr15.w2

GDAS1

297300 Lon: -0.363100

file

Next>>



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Resources Laboratory, NOAA's Office of Atmospheric Research, National Oceanic and Atmospheric

Si on veut une **rétro trajectoire** on va en « **1** » sélectionner « backward » puis en « **2** » on indique le nombre d'heures souhaitée (par défaut, 24 H) ; on va prendre 4 jours soit 96 heures et en « **3** » on peut rajouter des niveaux ( ici par exemple on va reconstituer la trajectoire des masses atmosphériques jusqu'à leur arrivée à 500, 3000 et 5000 mètres au-dessus du point d'intérêt)

### Model Run Details Request trajectory

The archived data file (GDAS1) has data beginning at 09/29/15 0000 UTC.

#### Model Parameters

**Trajectory direction:**  Forward **1**  Backward (Change the default start time!) [More info](#)

**Vertical Motion:**  Model vertical velocity  Isobaric  Isentropic [More info](#)

**Start time (UTC):** Current time: 08:57  
year: 15 month: 09 day: 29 hour: 8 [More info](#)

**Total run time (hours):** **2** 96 [More info](#)

**Start a new trajectory every:** 0 hrs **Maximum number of trajectories:** 24 [More info](#)

**Start 1 latitude (degrees):** 43.297300 [More info](#)

**Start 1 longitude (degrees):** -0.363100 [More info](#)

**Start 2 latitude (degrees):**

**Start 2 longitude (degrees):**

**Start 3 latitude (degrees):**

**Start 3 longitude (degrees):**

**Level 1 height:** 500  meters AGL  meters AMSL [More info](#)

**Level 2 height:** 3000

**Level 3 height:** **3** 5000

Si vous ne modifiez pas le « none » par défaut ici en « 1 » vous n'aurez que 2 choix possibles pour l'affichage, il ne reste plus qu'à valider ! « 2 »

### Display Options

GIS output of contours? **1**  None  Google Earth (kmz)  GIS Shapefile [More info ▶](#)

---

The following options apply only to the GIF, PDF, and PS results (not Google Earth)

Plot resolution (dpi):  [More info ▶](#)

Zoom factor:  [More info ▶](#)

Plot projection:  Default  Polar  Lambert  Mercator [More info ▶](#)

Vertical plot height units:  Pressure  Meters AGL  Theta [More info ▶](#)

Label Interval:  No labels  6 hours  12 hours  24 hours [More info ▶](#)

Plot color trajectories?  Yes  No

Use same colors for each source location?  Yes  No [More info ▶](#)

Plot source location symbol?  Yes  No

Distance circle overlay:  None  Auto [More info ▶](#)

U.S. county borders?  Yes  No [More info ▶](#)

Postscript file?  Yes  No [More info ▶](#)

PDF file?  Yes  No

Plot meteorological field along trajectory?  Yes  No [More info ▶](#)

Note: Only choose one meteorological variable from below to plot

Terrain Height (m) **→ Cette option affichera l'altitude etc..**

Potential Temperature (K)

Ambient Temperature (K)

Rainfall (mm per hr) [More info ▶](#)

Mixed Layer Depth (m)

Relative Humidity (%)

Downward Solar Radiation Flux (W/m\*\*2)

**2**

Il ne reste plus qu'à cliquer sur « gif » ou « pdf » pour obtenir votre graphique :

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**READY** ARL Home > READY > Transport & Dispersion Modeling > HYSPLIT > HYSPLIT Trajectory Model

### HYSPLIT Trajectory Model Results

**HYSPLIT MODEL RESULTS FOR JOB NUMBER 117625**

**Model Status:** Wed Oct 7 05:08:23 EDT 2015  
The model and graphics are now complete.  
Finished generating graphics for job 117625.  
Creating traj PDF file

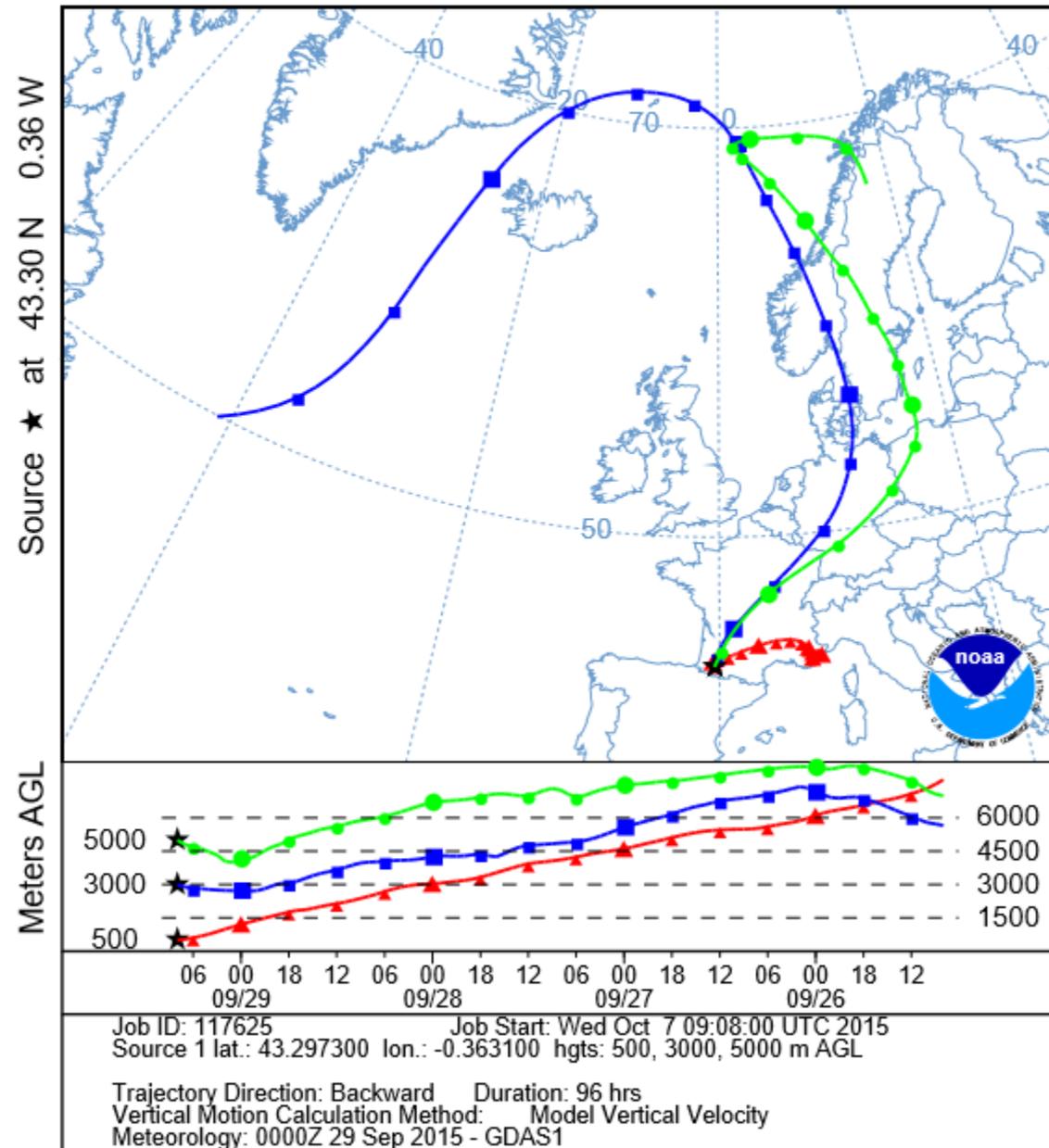
RESULTS	Click on text link to view images in a new window.	
	GIF Plots	PDF Plots
Trajectories	<a href="#">.gif</a>	<a href="#">.pdf</a>

- **Modify the trajectory plot without rerunning the model.**
- **Trajectory endpoints file.**
  - [Trajectory endpoints format help.](#)
- **HYSPLIT SETUP file.**
- **HYSPLIT CONTROL file.**
- **HYSPLIT MESSAGE (diagnostics) file.**
  - [MESSAGE file format help \(pdf\)](#)

NOAA HYSPLIT MODEL  
 Backward trajectories ending at 0800 UTC 29 Sep 15  
 GDAS Meteorological Data

Attention !

La lecture se fait sur le graphe du bas, **de droite à gauche**; on voit par exemple ici que la masse d'air le 29 septembre au-dessus de Pau à 3000 m provient du milieu de l'Atlantique et d'environ 6000 m d'altitude.



Si on choisit l'option « kmz »  
on pourra afficher les  
trajectoires dans Google  
earth

**HYSPLIT MODEL RESULTS FOR JOB NUMBER 117560**

**Model Status:** Wed Oct 7 05:05:02 EDT 2015  
The model and graphics are now complete.  
Finished generating graphics for job 117560.  
adding: greenball.png (deflated 1%)



RESULTS	Click on text link to view images in a new window.			
	<a href="#">GIF Plots</a>	<a href="#">PDF Plots</a>	<a href="#">Google Earth</a>	<a href="#">Flash Maps</a>
<a href="#">Trajectories</a>	<a href="#">.gif</a>	<a href="#">.pdf</a>	<a href="#">.kmz</a>	<a href="#">.kmz</a>



