



Capacity Notification Scheme for Hong Kong International Airport (HKIA)

Presented by Hong Kong, China

WP33
ATM/AIS/SAR/SG/22
JUNE25-29 2012



Capacity Management

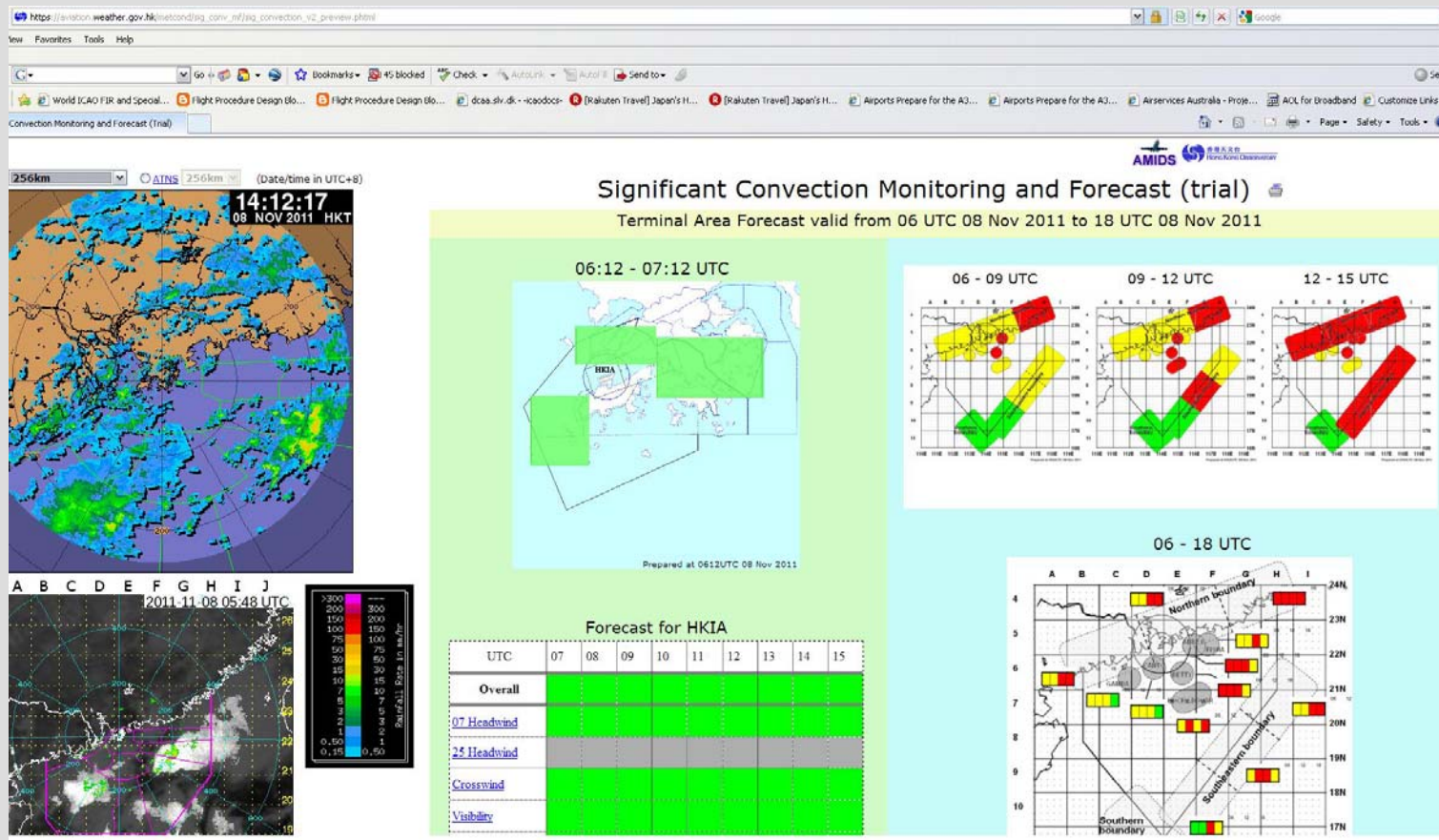
- In the absence of a regional flow management mechanism, HKIA has largely been reliant on a robust airport capacity declaration and schedule coordination process plus ad-hoc flow control measures, to ensure that overload of the Air Traffic Management system does not occur.

Daily ATFM Planning

- October 2011 – Move from reactive to proactive ATFM planning
- Development of Airport/Airspace capacity determination tool for Supervisors
- Implementation of Capacity Notification Scheme for HKIA
 - Twice daily – Initially 2200UTC & 0500UTC

ATFM Wx Related Products

- Close collaboration with HKO to develop capacity related weather forecasting products



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ATFM Planning

- Development of capacity determination tool and Capacity Notification Scheme

Capacity Notification						
Valid From	Date	Hour	To	Date	Hour	UTC
	03	03		03	11	
Expected Runway	07					
FACILITIES						
Runway Availability	<input checked="" type="radio"/> Dual <input type="radio"/> Single					
Approach	<input checked="" type="radio"/> ILS/RNAV <input type="radio"/> VOR					
WEATHER						
	DIR	SPD	X/W	H/W		
WIND	070	5	0	5		
VIS/RVR(m)	5000					
CLOUD CEILING (BKN+)	3000					
TS/CB in 20NM?	<input checked="" type="radio"/> No <input type="radio"/> Yes					
Available Arrival Feeds	<input checked="" type="radio"/> 3 <input type="radio"/> 2 <input type="radio"/> 1 <input type="radio"/> 0					
OTHER FACTORS						
Additional Spacing (WX/AWK?)	0					
Mode of Operation	SIM					
Final Spacing	4.25	NM				
Final Speed	137	kts				
Arrival Acceptance Rate	32					
Capacity Level	1					
Critical Factors	-					
Remarks						
Calculate		Send		Close		Profile

Version 1.0.1 by
AESD Sep 2011

CAPACITY RELATED INFORMATION
VHHH (FOR ARRIVALS)
VALID: 012200 to 020600 UTC

CAPACITY LEVEL: 1

AIRPORT ACCEPTANCE RATE: 32 flights per hour

EXPECTED DELAY: Up to 15 mins

REASON: -

REMARK:

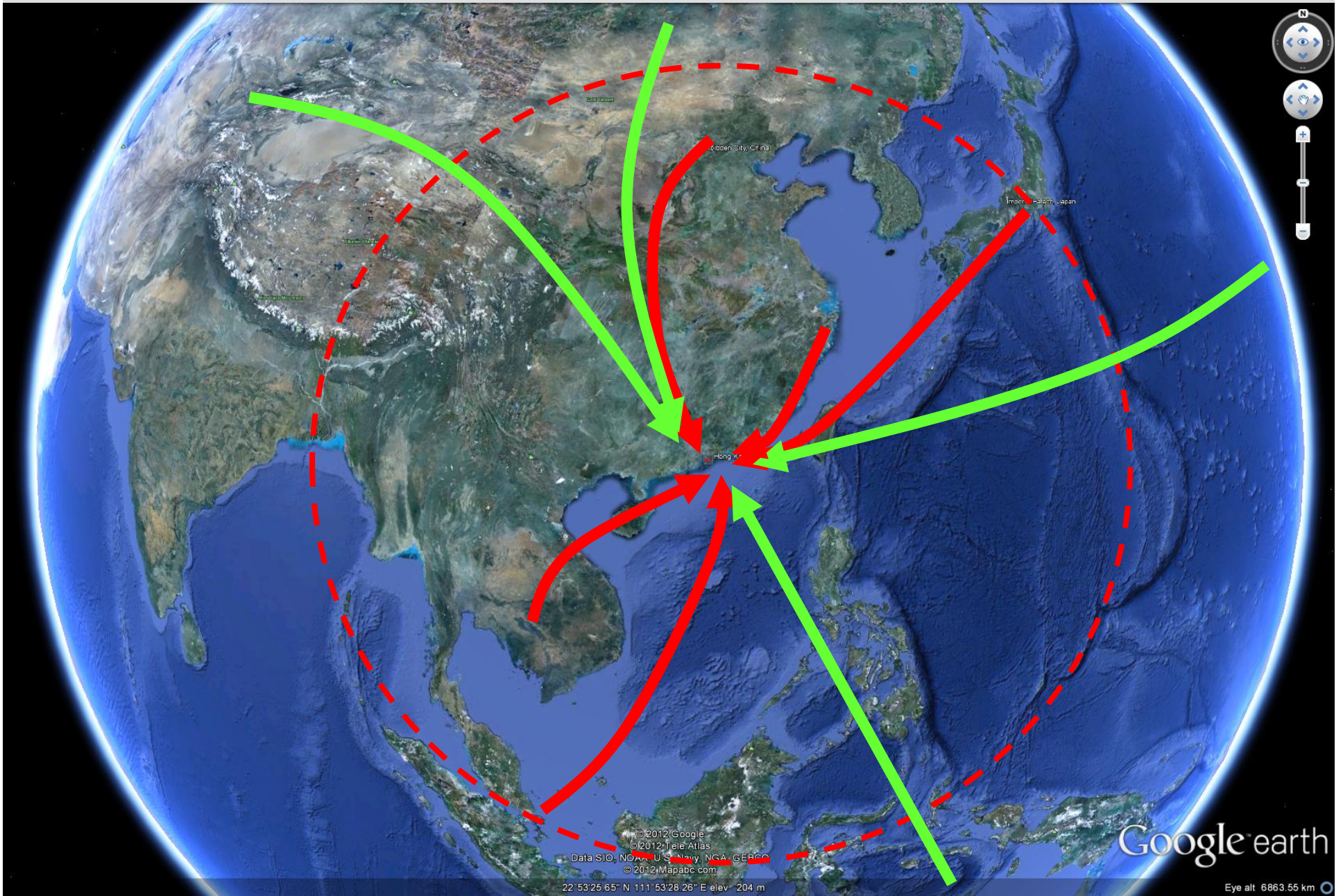
Distribution

- TPE ACC
- Fukuoka ATMC
- 100+ Airline Operators

- Planned distribution to Bangkok and Guangzhou in mid 2012

Daily ATFM Planning

- Saw the need to improve the ATFM “horizon” for capture of traffic before airborne to assist operators with fuel strategy and upstream ATC with compliance
- Morning Notification moved to 2200UTC
- Enables flow restrictions to be issued prior to morning departures within 4-5 hours flight time



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Data SIO, NOAA, U.S. Navy, NGA, GEBCO
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22°53'25.65" N 111°53'28.26" E elev -204 m

Google earth

Eye alt 6863.55 km

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Demand vs Capacity

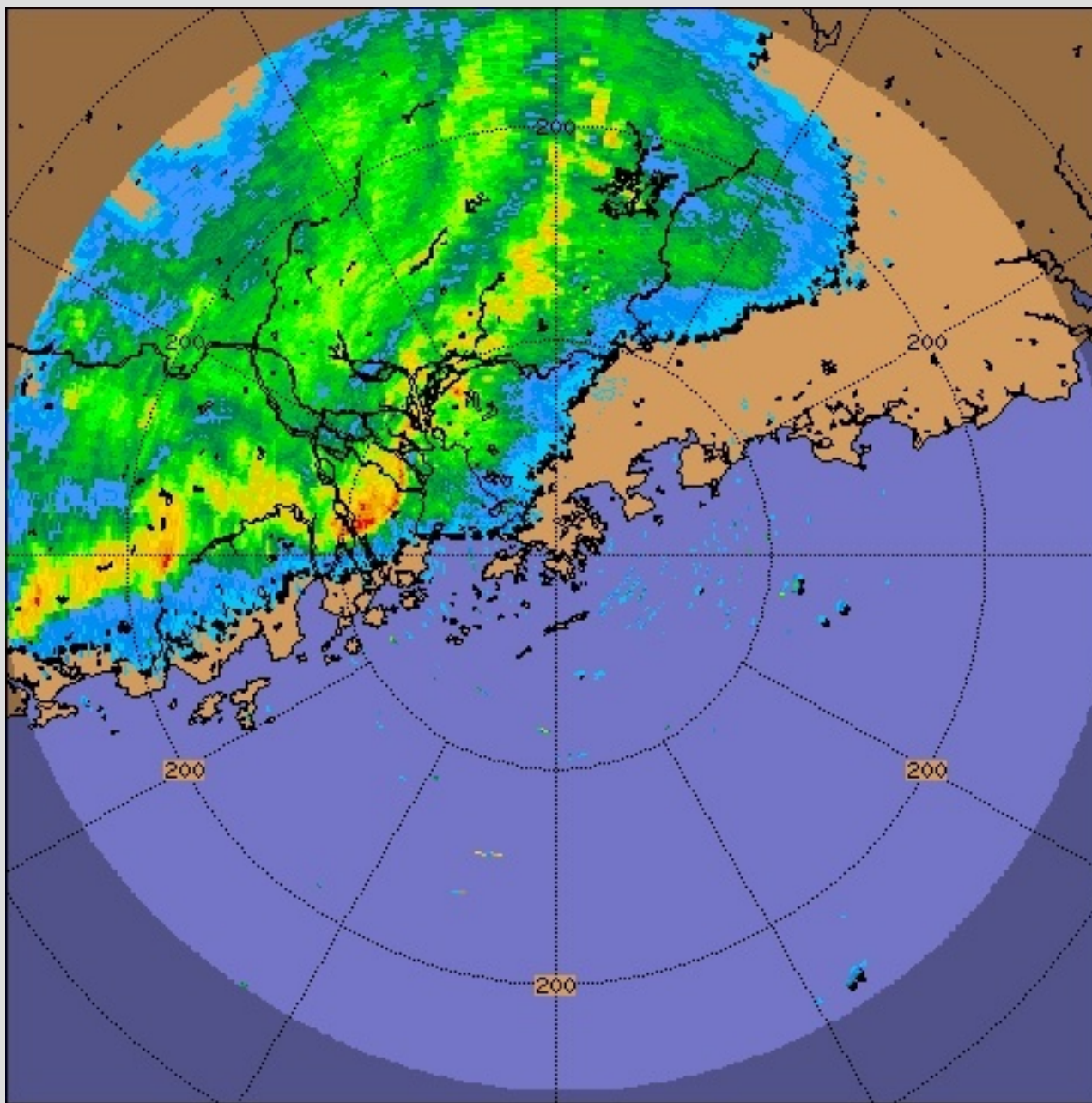
- How to determine when and what level of flow restriction?
- April 2012 –Development of Demand vs Capacity Analysis tool

Demand vs Capacity Tool

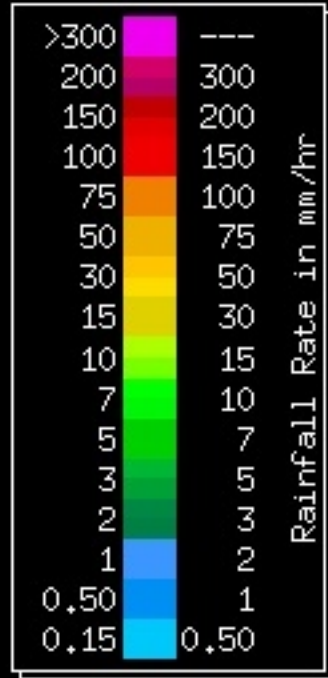
- Objectives:
 - ensure flow restrictions are only implemented when absolutely necessary
 - ensure HK FIR internal capacity is utilized to the fullest extent before pushing the problem to upstream units
 - provide as much prior notice as possible

Example

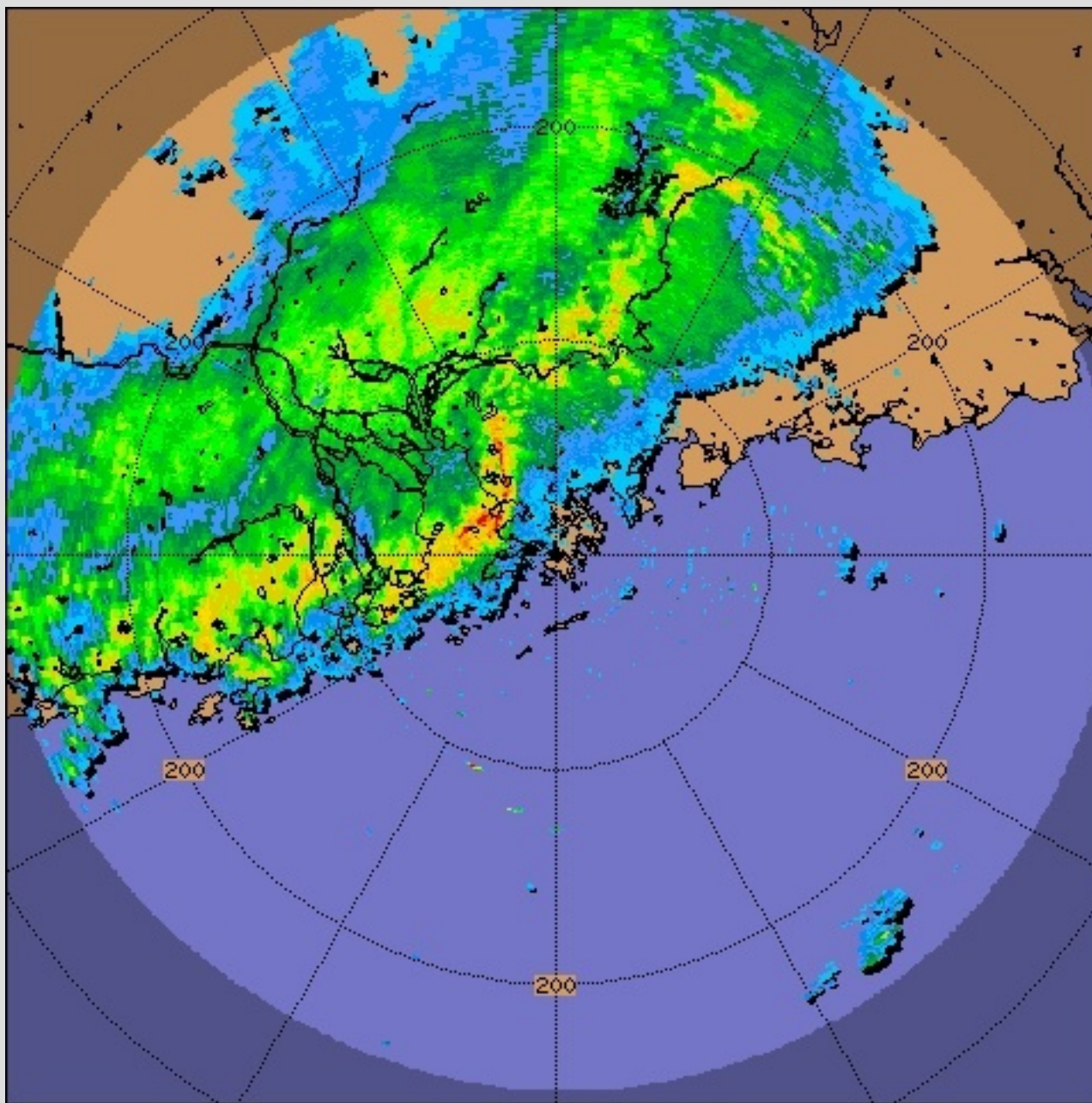
- Friday 20th April



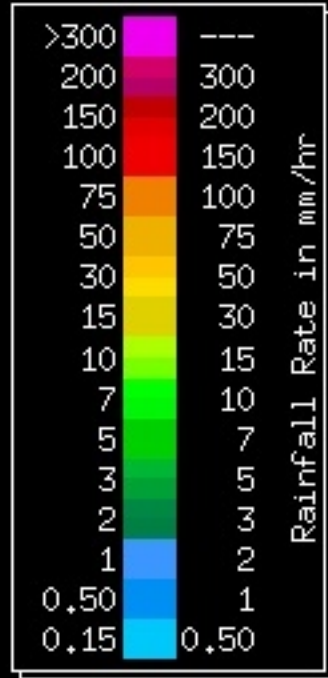
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 CAPPI
 R_C_030_256
 Task: PPIVOL_*
 PRF:576/432
 Height:3.0 km
 Max Range:256 km
09:00:01



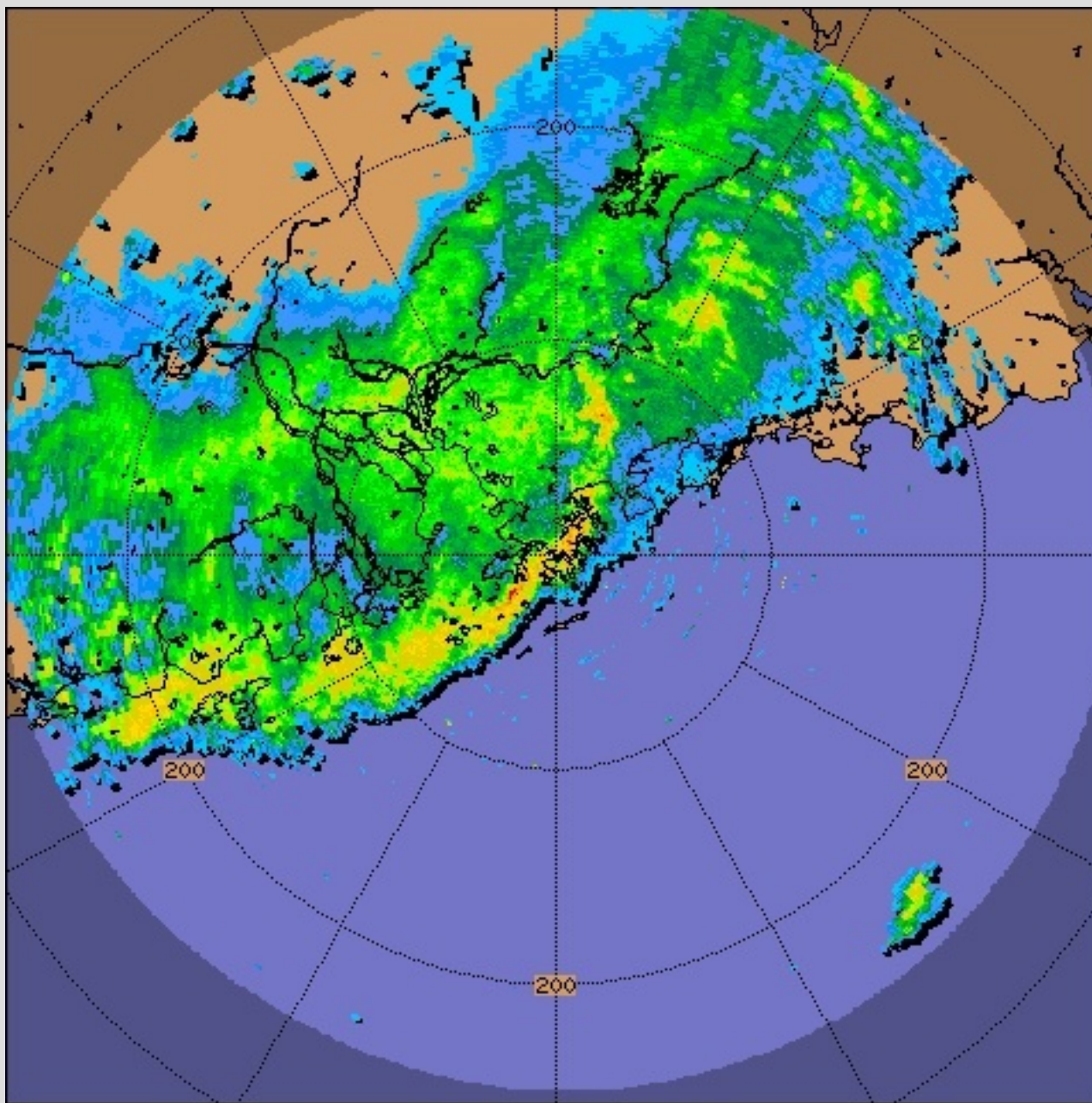
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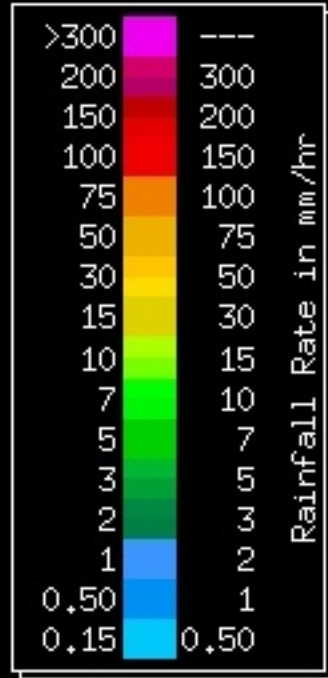
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10:00:01



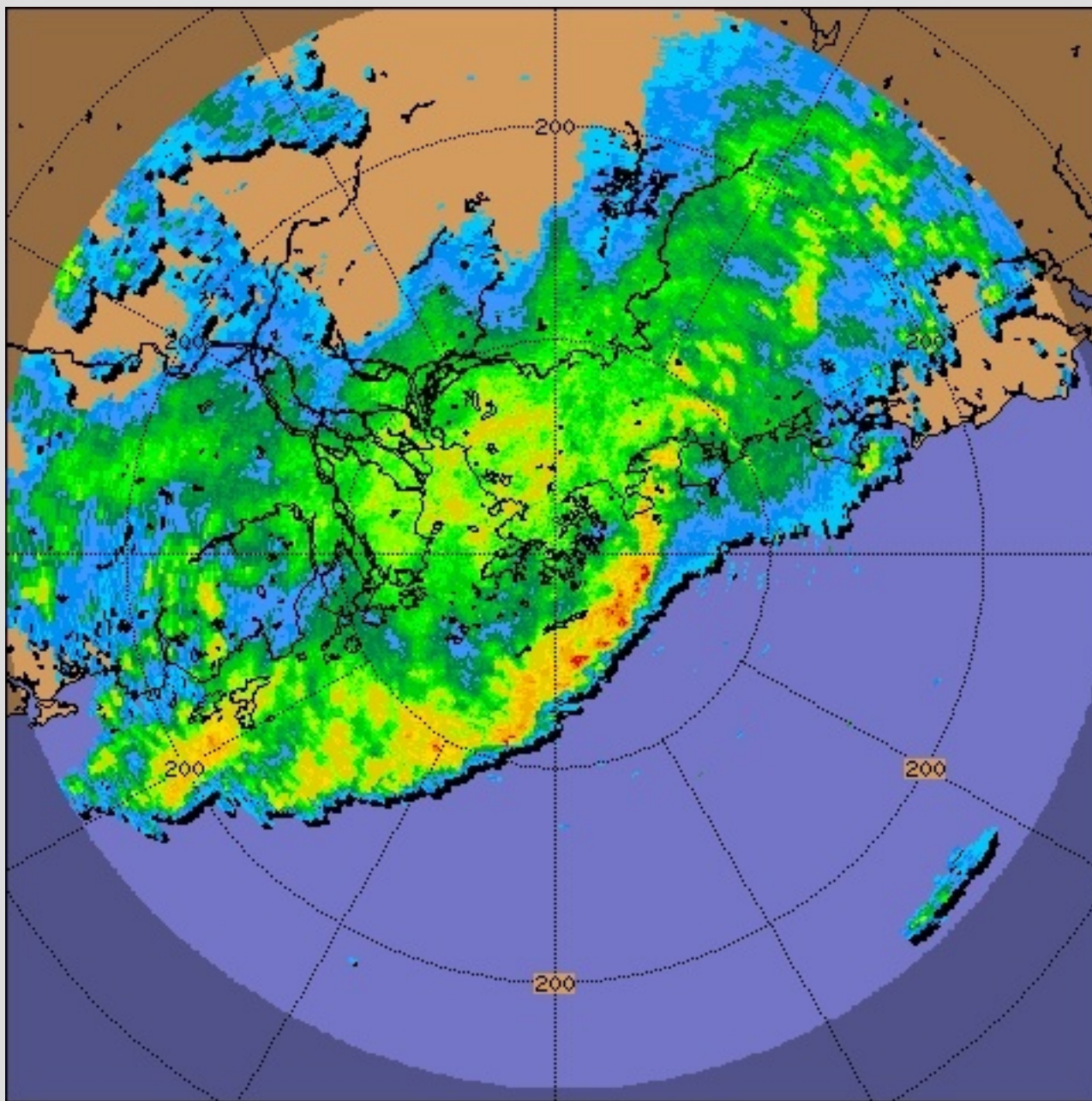
JUNE25-29 2012



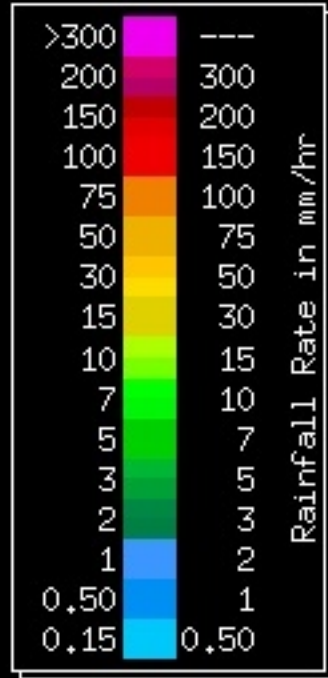
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11:00:01



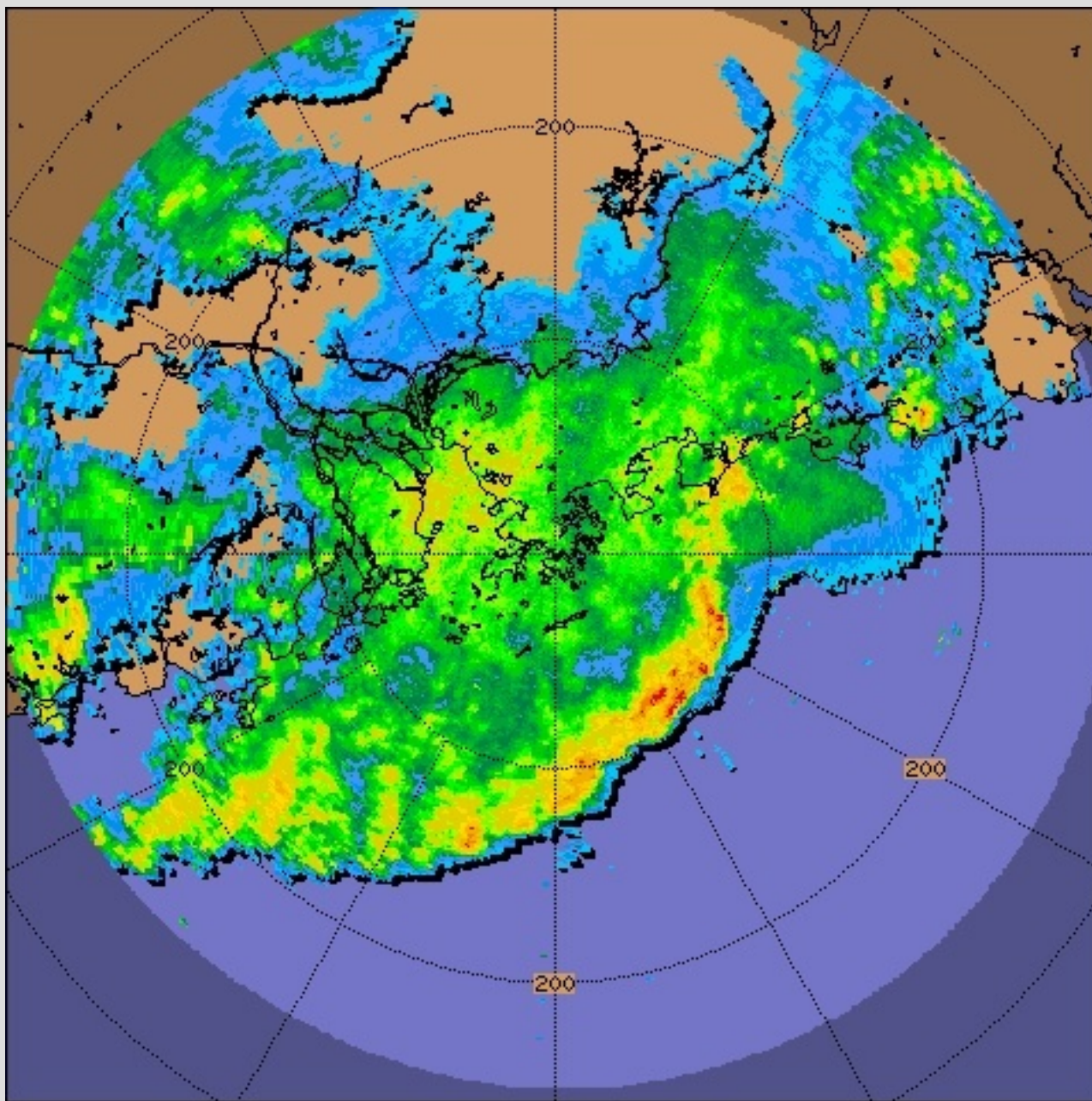
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12:00:01

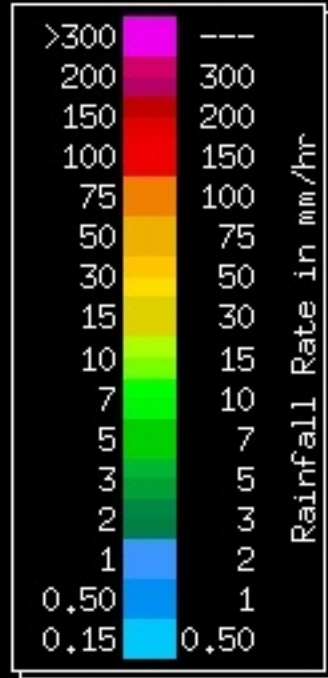


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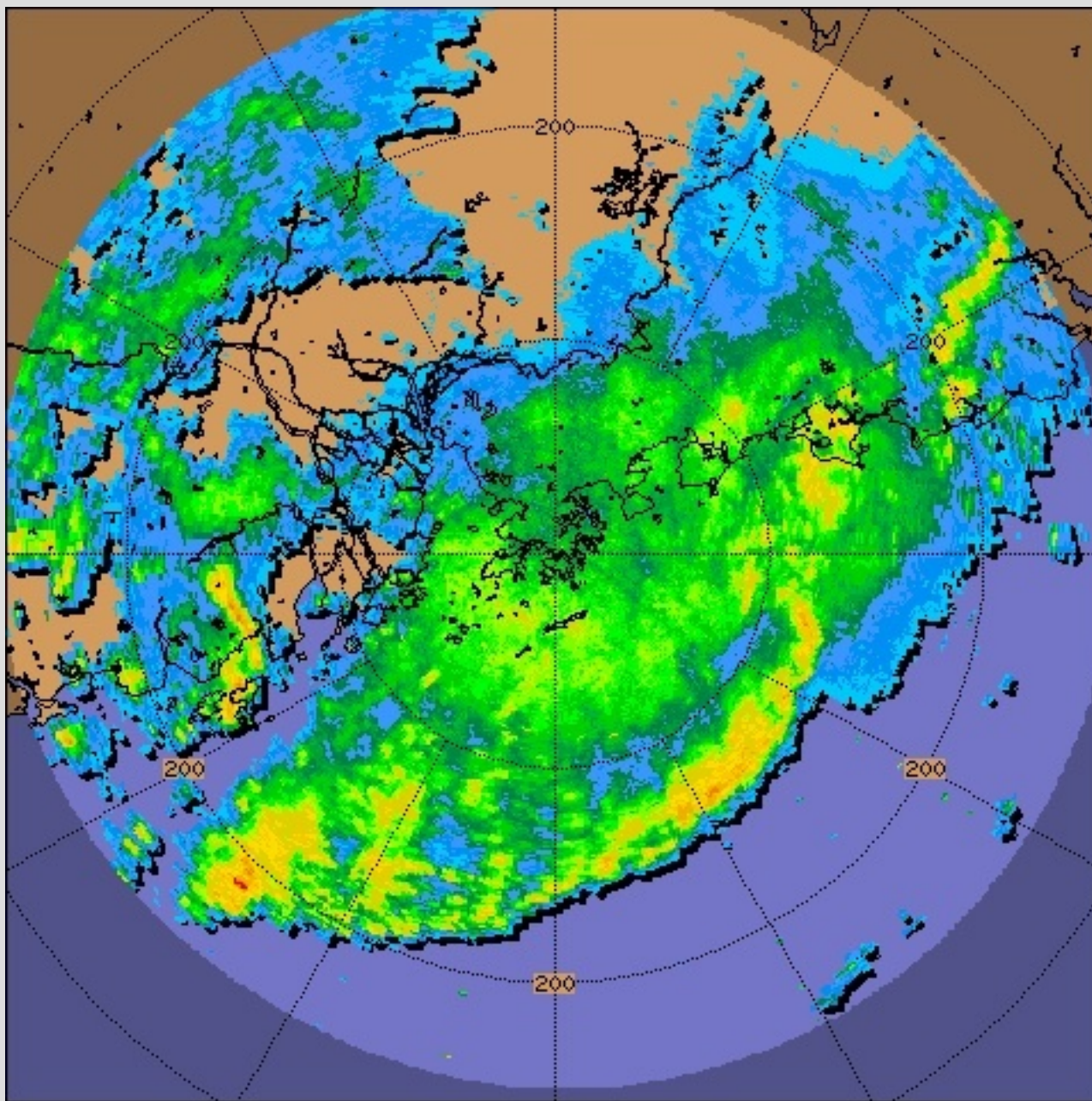


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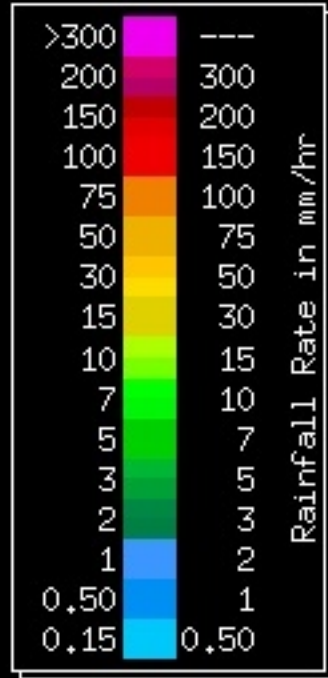
13:00:02



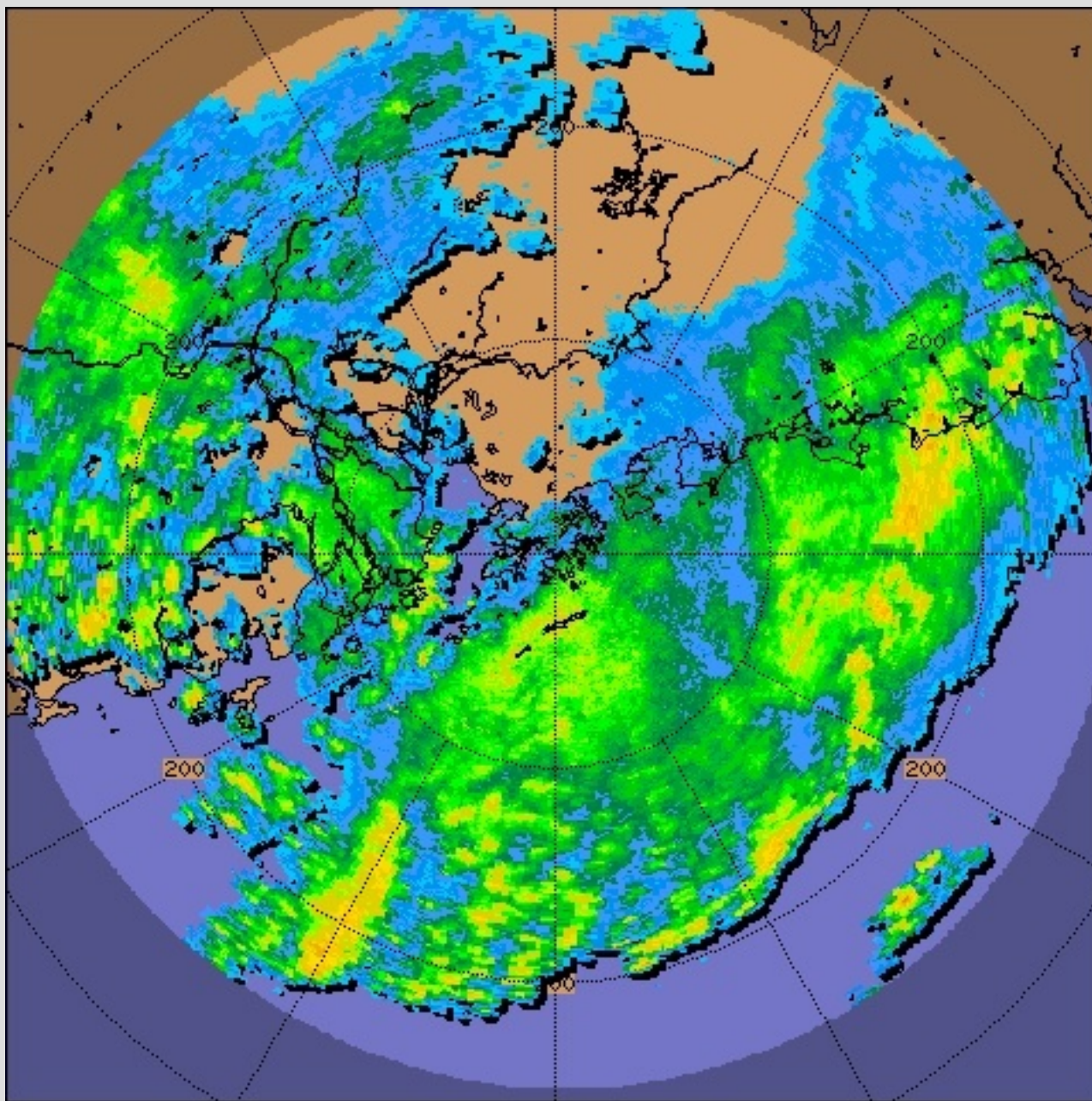
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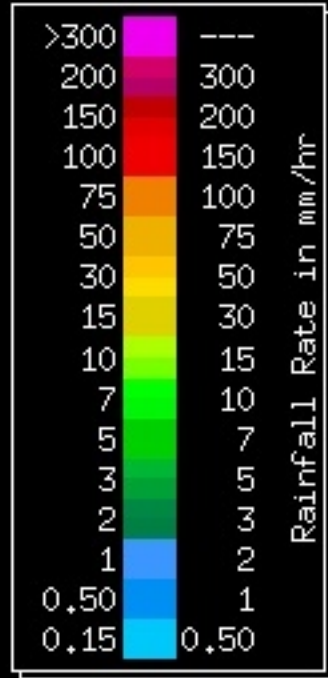


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hk_comp
 CAPPI
 R_C_030_256
 Task: PPIVOL_*
 PRF:576/432
 Height:3.0 km
 Max Range:256 km

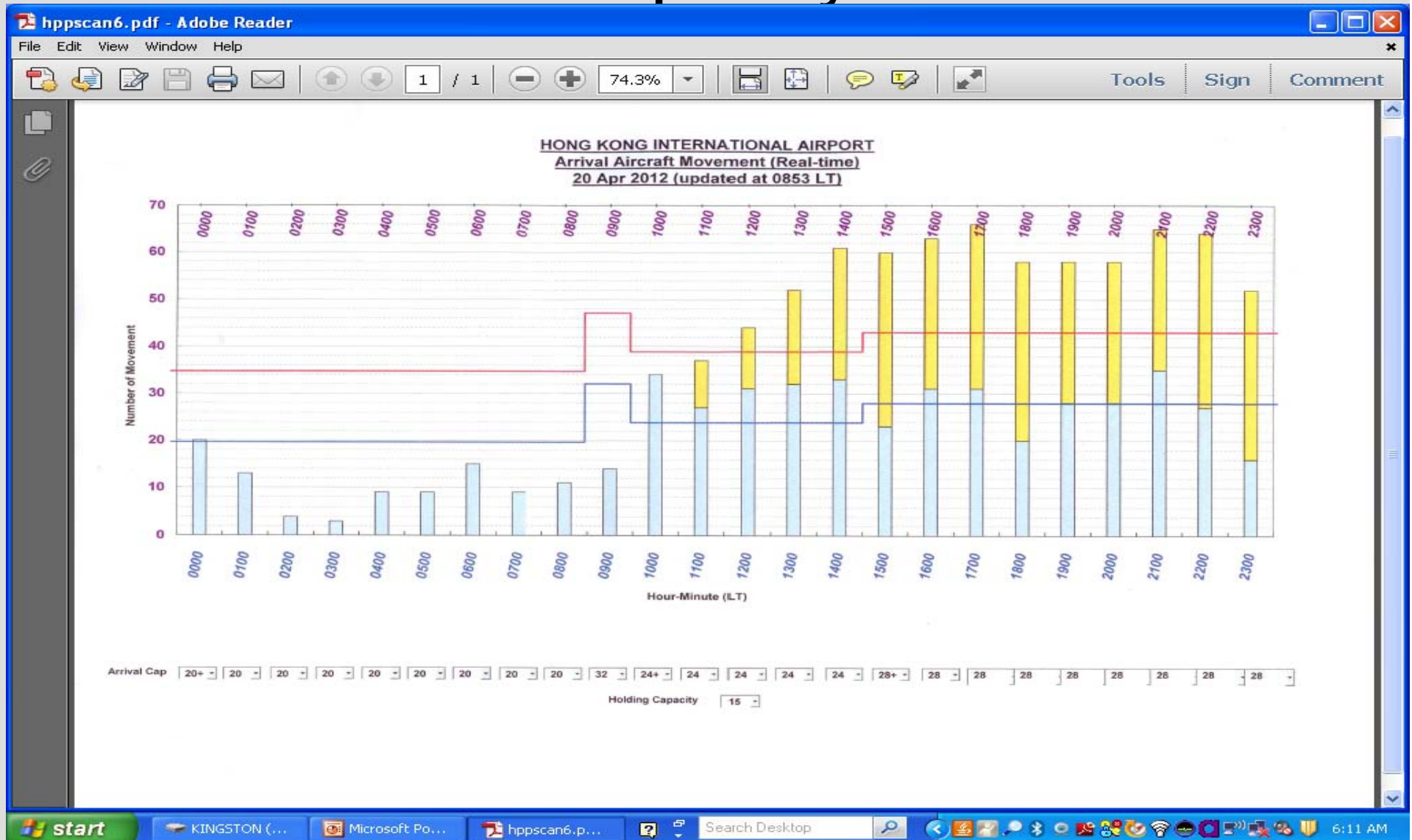
15:00:01



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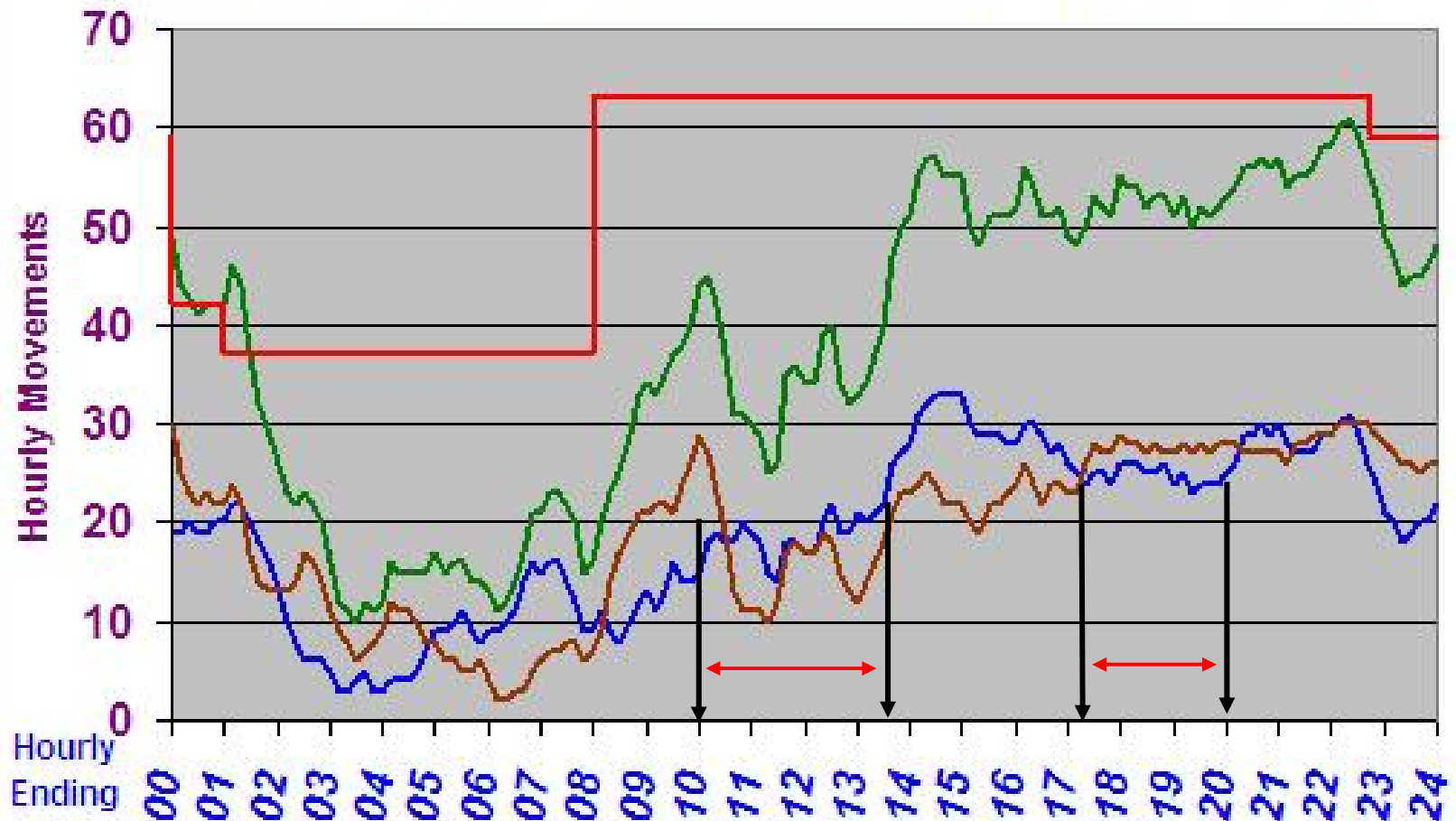
- CAPACITY RELATED INFORMATION VHHH (FOR ARRIVALS)
- VALID: 192300 to 200600 UTC
- CAPACITY LEVEL: 2
- AIRPORT ACCEPTANCE RATE: 24 flights per hour
- EXPECTED DELAY: Up to 30 mins
- REASON: CB in vicinity of Aerodrome
- REMARK: Thunderstorm activities affecting HK at around 20/0200UTC onwards.

Demand vs. Rwy and Holding Capacity



- CAPACITY RELATED INFORMATION VHHH (FOR ARRIVALS)
- VALID: 200600 to 201000 UTC
- CAPACITY LEVEL: 2
- AIRPORT ACCEPTANCE RATE: 24 flights per hour
- EXPECTED DELAY: Up to 30 mins
- REASON: Reduced Holding Capacity
- REMARK: TS over holding feeds, reducing holding capacity.

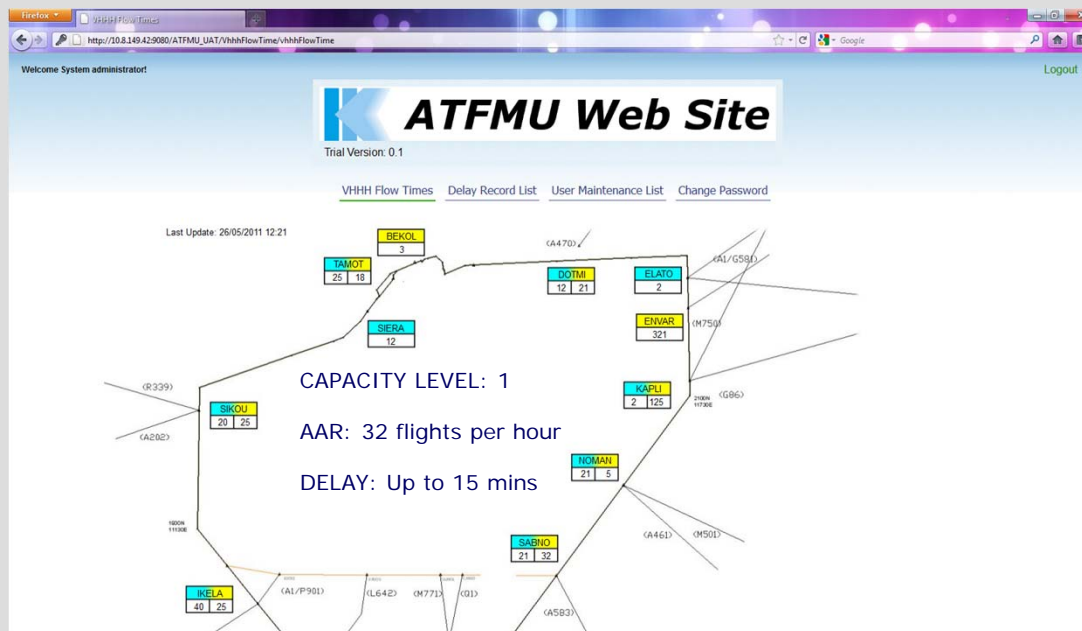
HKIA Hourly Aircraft Movement (20 Apr 2012) - LT

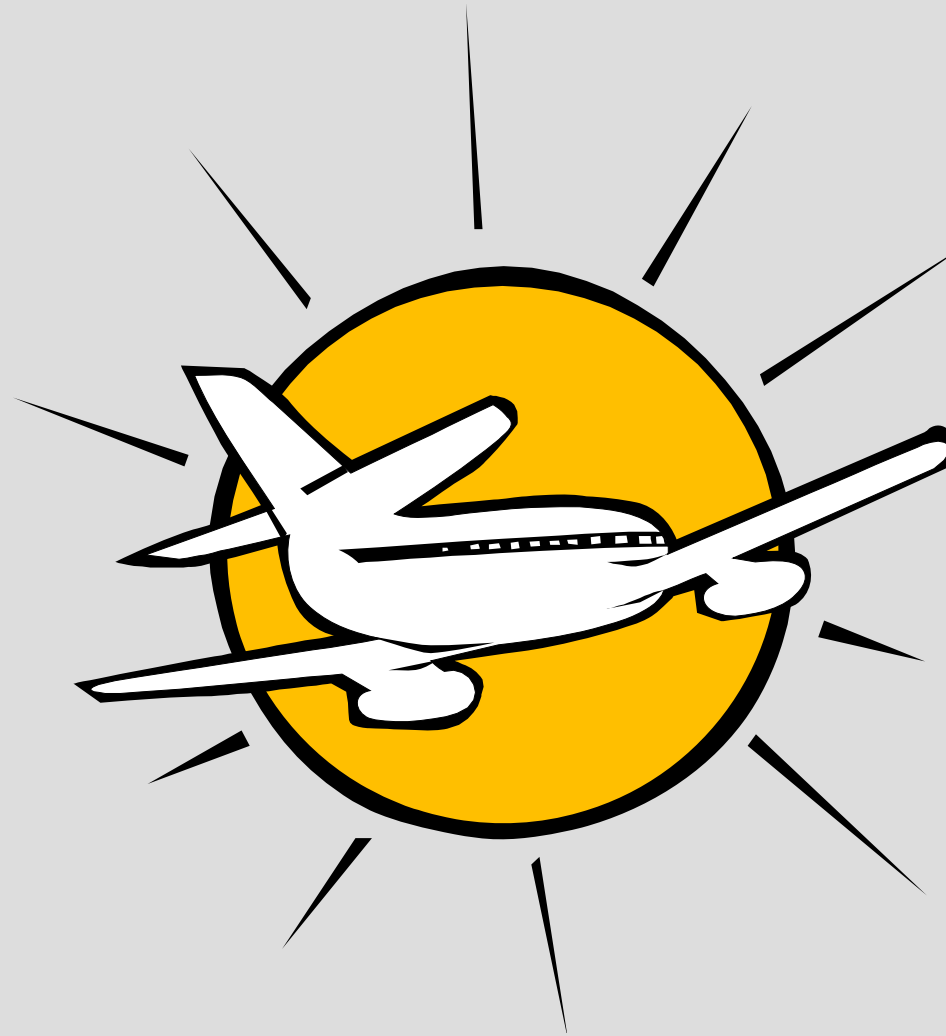


Actual ■ ARR (460) ■ DEP (456) ■ TOTAL (916)

Future Development

- Issuance of Flow Control requirements still verbally to adjacent ACC's
- ATFM website under development





Thank You

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