Missile Threats and Missile Defense in the Middle East: An Update

Uzi Rubin

- The Middle East in upheaval: One year on.
- The Eastern Mediterranean - the next flash point?
- North Korea and the Iranian connection.
- Southern Israel: Missile Defense in action.

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The Middle East in Upheaval - One Year On

Libyan SCUD B launch 2007

An Abandoned SCUD B in Benghazi
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Rockets in Libya Civil War

SS21 Tockka/KN02

SCUD B/C

SR 600

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Syria Rattles its Missiles - December 4 2011
First Ever Officially Released Footage of Syrian Ballistic Missiles
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Syrian Insurgents Occupy Missile Base - June 10 2012

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Syrian Insurgents Video Syrian SCUDs on the Move - June 6 2012

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Syria Rattles its Missiles - December 3 2011
First Ever Officially Released Footage of Syrian Anti Ship Missiles

C802
Silkworm
Yakhont

Impact on EPAA Phase 1 Deployment

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June 2012
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Impact on EPAA Phase 1 Deployment
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Eastern Mediterranean Resource Zone

Countries Entitled to Offshore Resource Exploitation:
- Turkey
- Syria
- Cyprus
- Lebanon
- Israel
- Palestinian Authority
- Egypt

Leviatan

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Eastern Mediterranean Resource Zone

Syria:
- Yakhont

Hamas:
- C-704

Hizbollah:
- C-802

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BARAK 8 Sea based air/missile defense system
By IAI and Rafael

North Korea Unveils the “KN08”, Pyongyang 15 April 2012
North Korea Unveils the “KN08”, Pyongyang 15 April 2012

- The displayed articles were partly or entirely mockups.
- Whether the mockups represent a real ongoing program is still in debate.
- If real, the roughly estimated properties are:
  - 1st and 2nd stage diameter: ~ 1.8 M
  - 3rd stage diameter: ~ 1.25 M
  - Length: ~ 17 M
  - Takeoff weight: ~ 40 Ton
  - Range with 500 Kg warhead: ~ 7500 Km

* These values are still controversial

Possible Rationale for the (Hypothetical) Range
North Korea Unveils the “KN08”, Pyongyang 15 April 2012

Possible Rationale for the (Hypothetical) Range

Any Iranian Connection?

- Some launcher assemblies closely resemble equivalent Shahab 3 assemblies.
- The KN08 third stage might be common with Iran’s Safir SLV second stage
- KN08 estimated range is not useful for Iran.
- First impression: Shared technologies but not a shared program.
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Any Iranian Connection?

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According to Israel’s Minister for Strategic Affairs, Iran is working on its own 10000 Km solid propellant ICBM

http://www.jpost.com/MiddleEast/Article.aspx?id=256186

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Is Iran Deliberately Reducing its Missiles’ Profile?

- No announcement on long range ballistic missile test since February 2011
- No announcement of a new missile system unveiled since February 2011
- No televised missile demo firing since June 2011
- Considering that Iran is running at least 6 parallel missile programs, this remarkable lull might be politically motivated to ease pressures for sanctions and military action.
- Nevertheless, Iran’s missile programs continue to churn under the surface, as testified by the accelerated pace of the space program:

February 3 2009  June 15 2011  February 3 2012  May 17 2012
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Iran's Missiles Go Underground

- Is this a rocket?
- Yes.

Silo Capacity Potential
For Bigger and Better Stuff?
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The Bigger and Better Stuff?

BM25/Musudan 3500 (?) Km IRBM

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Iranian Ballistic Missiles to Venezuela?
Ballistic Missiles in South America

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Shahab 2

Cape Paragua

June 2012

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Southern Israel: Missile Defense in Action

Evolution of the Rocket Campaign Against Southern Israel

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<th>Rockets per year</th>
<th>Military operation against Hamas</th>
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Iron Dome Lower Short Range Missile Defense System
Optimized against light and medium rockets

- Interceptor
- Launcher
- FC Radar

Main System Requirements
- Intercept rockets launched from up to 70 km range
- All weather operation
- “Defended zone” of over 150 square km
- Threat warhead detonation (all types)
- Effective against salvos
- Ignoring rockets predicted to hit unpopulated areas
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Israel Short Range Missile Defense In Action 2011-2012

• The system was rushed into action on April 7th 2011.

• Three batteries defended Southern Israel’s main cities during August 2011 October 2011 and March 2012 flare ups.

• The system successfully discriminated between non threatening and threatening targets, scoring 75% - 85% kill rates against the latter.

• Numerous lives were saved, damages were dramatically reduced. This had a beneficial effect and eased the way to renewed cease fires.

• More batteries are in various stages of production and delivery, funded in part by the US.

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Iron Dome in Action

Ashdod Industrial Park, March 2012
Ashdod Seaport, March 2012

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Summary of Main Issues

• The Middle East upheavals have generated collateral proliferation. More might be expected.

• The Eastern Mediterranean is turning into a prospective flash point.

• Short range missile defense is viable and effective.