OPERATION CERBERUS NORTH



THEATRE INTELLIGENCE
REPORT

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FOREWORD

The Syrian Theatre of Operations (*STO*) is perhaps the most complex and unstable in the world right now. Although this region lacks a large conventional and powerful military threat such as China or North Korea, a number of military, political and religious nuances combine to create a unique melting pot of factors that make operations in this region incredibly complicated.

The STO currently contains no less than 14 separate major organisations with a political or religious agenda *and* the military capability to take action towards these goals. These groups include not just Syria's neighbours such as Israel, Lebanon, Turkey and Jordan but regional influences such as (until recently) Iran, Russia and of course NATO nations. Further to this the civil war in Syria has given rise to new players such as the Syrian Democratic Forces (*SDF*), the Kurdish YPG and the Syrian Islamic Army (*SIA*), these emergent groups are in addition to the existing regional groups such as Hezbollah.

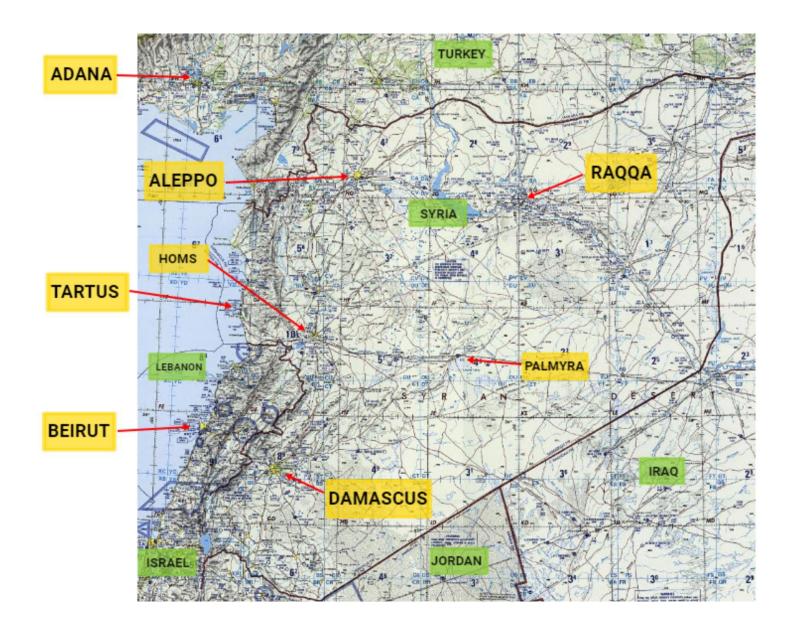
Given the level of complexity present, this report aims to address as many as the facets of the STO as possible, providing not just details on the military capability of the players within theatre but assessments on their political and cultural will as well.

This report has been authored by specialists within the DoD and DIA, with additional input from the state department and CIA. It has been assembled using information from a wide variety of sources including HumINT, SigINT, ELINT and SATINT, it represents the most up to date information currently available to US forces.



SECTION 1. SYRIA - KEY LOCATIONS

Major Population Centres - STO:

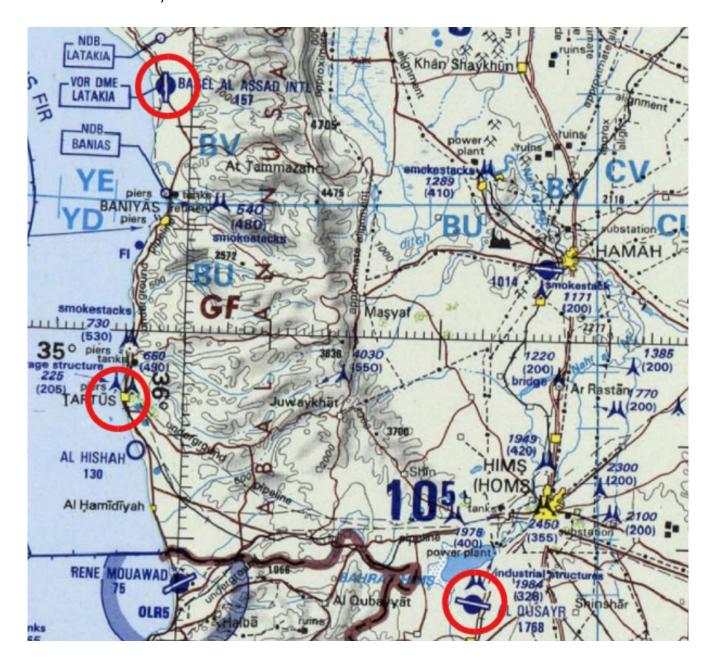




Active Air and Naval Facilities in the STO.

NW Syria:

- Bassel Al-Assad International (Russian Airbase).
- Tartus Naval Facility (Base of Russian Fleet).
- Al Qusayr Airbase.
- Shayrat Airbase.

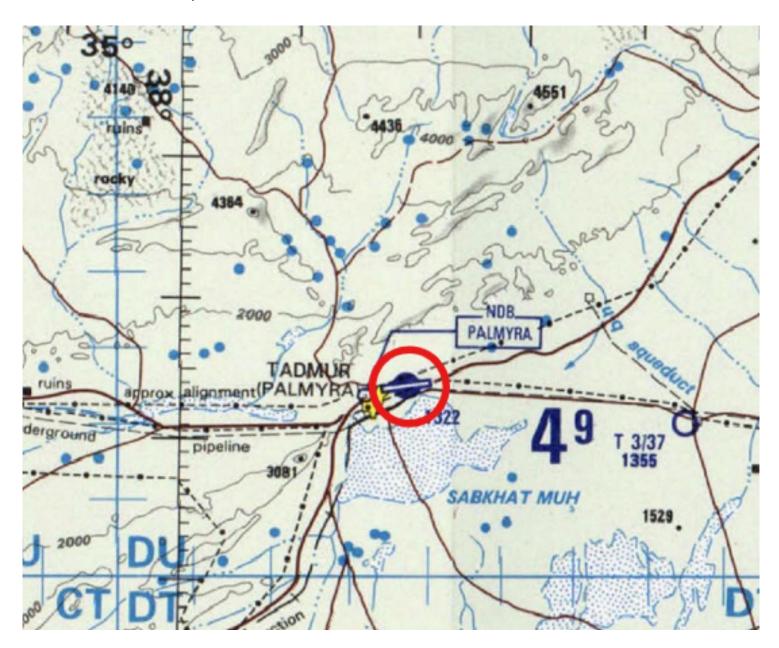




Active Air and Naval Facilities in the STO.

Central Syria:

- Palmyra Airbase.
- Tiyas Airbase.
- Shayrat Airbase.

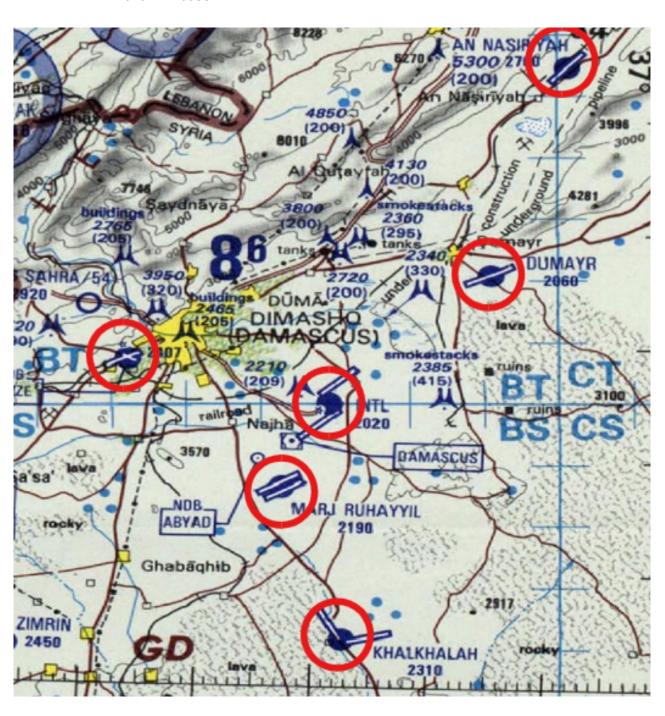




Active Air and Naval Facilities in the STO.

Damascus Area:

- An Nasiriyah Airbase.
- Al Dumayr Airbase.
- Damascus International Airport.
- Mezzeh Airbase.
- Marj Ruhayyil Airbase.
- Khalkhalah Airbase.
- Sayqal Airbase.
- Tha'lah Airbase.





SECTION 2. AREAS OF CONTROL - STO

Since the outbreak of war Syria has become fractured and a number of groups now fight for control in different regions.

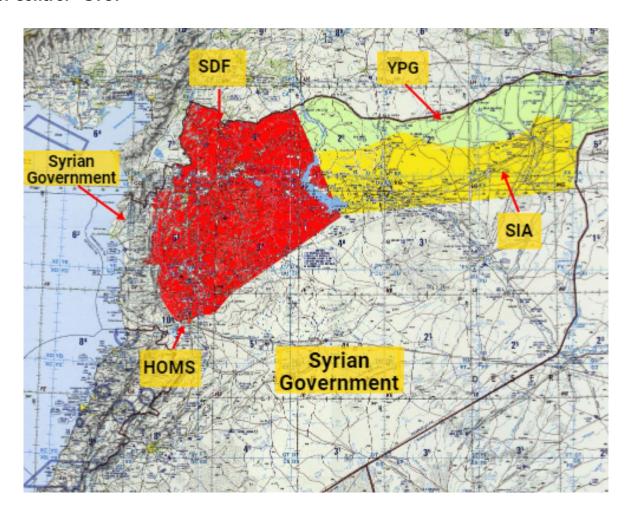
The Syrian Government remains in control of the majority of the country, namely central and southern Syria along with the western coastal region, colloquially known as 'The Russian Quarter' due to the basing of Russian forces there.

The Syrian Democratic Forces (*SDF*) have ousted the government from the north west and now control territory from the Turkish border in the north to Homs further south and out east to the Bahrat Assad lake. SDF territory encompasses Aleppo and Hama with Homs currently being contested with the Syrian Government.

The civil war has allowed space for fringe extremist groups to grow, the most prominent of which is the Syrian Islamic Army (SIA). The SIA has captured a swathe of territory from Raqqa through to Iraq.

The north east of Syria is controlled by the Kurdish groups, the most influential of which is the YPG.

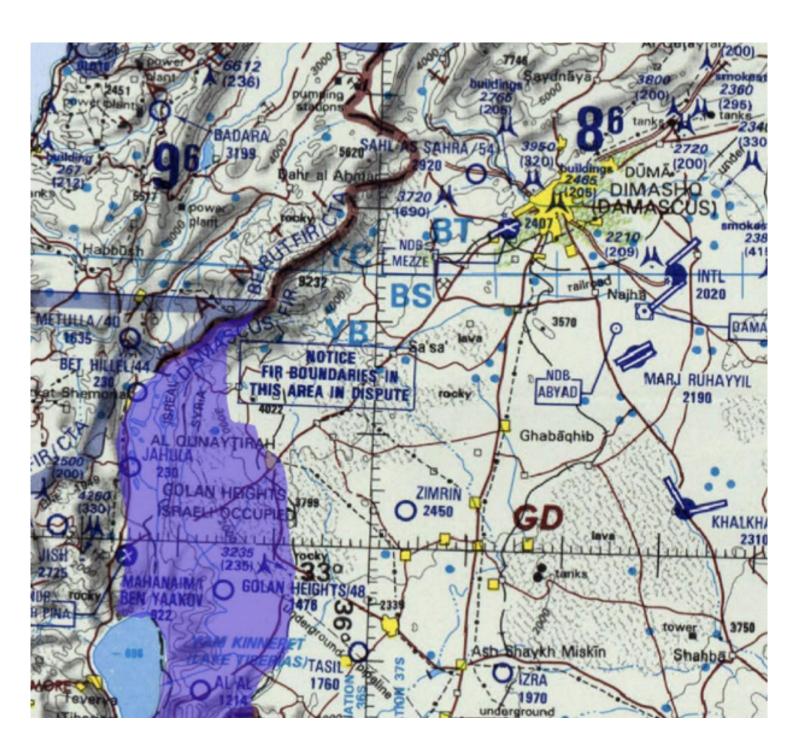
Areas of Control - STO:





The Golan Heights lies to the SW of Syria and borders Israel. This area is currently occupied by the Israelis following previous conflicts with Syria. This remains a highly contested and militarised border, forces in this area maintain high states of alert and readiness at all times.

STO - Golan Heights:





SECTION 3. INTELLIGENCE ASSESSMENT - BA'ATH PARTY & SYRIAN ARMED FORCES

The Syrian Armed Forces consist of the Syrian Arab Army, Syrian Arab Air Force, Syrian Arab Navy and Syrian Arab Air Defence Force. The Syrian military is estimated to be around 325,000 strong and consists mostly of conscripts. Most conscripts serve only 2 years and as a result the overall level of training in the Syrian military is considered to be poor, although there are some exceptions to this. Units linked to the Syrian leadership tend to be the elite units within the Syrian Armed Forces - likely a throwback to Syria's history of regular coup d'etats.

Syrian Arab Army

The SAA forms the bulk of the Syrian military, comprising around 220,000 personnel.

The SAA is divided into three corps, each assigned a geographic area of responsibility. 1st Corp operates in the south of Syria, including Damascus and the borders with the Golan Heights and Jordan. 2nd Corp's area of responsibility covers all Syria north of Damascus up to Homs. 3rd Corp's AOR is all of Syria north of Homs. In addition to the three corps the SAA operates two divisions designated as special forces.

The SAA operates Russian built equipment, with armour being a mix of T-55 and T-72 tanks and either BMP-1 or BMP-2 IFVs.

Estimates put Syrian equipment (including equipment in storage) numbers as:

- 4500 tanks.
- 4000 IFVs.
- 500 self propelled artillery pieces or surface to surface rocket systems.
- 70 Scud launchers.

The following tables list all known regular SAA formations, their equipment where applicable and their area of operations where known. Note that at the time of writing 3rd Corp has incurred heavy losses and defections and has been driven out of north Syria and into the western coastal region.



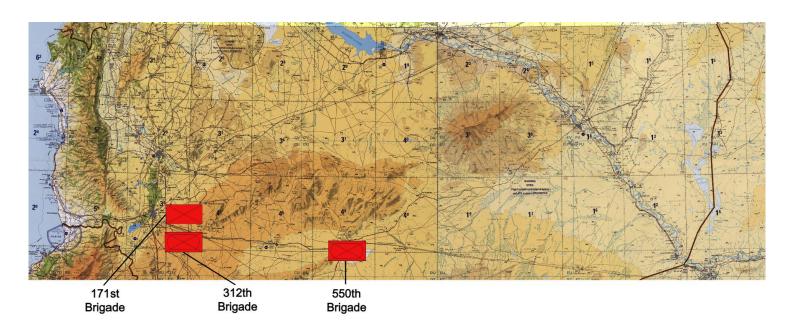
Unit	Туре	Equipment	Location	Status
1st Corp				
1st Armoured Division	Armour	T-72 BMP-2	South Damascus	Active Elite Unit
4th Armoured Division	Armour	T-72 BMP-2	West Damascus	Active Elite Unit
7th Division	Mechanized Infantry	BMP-1	Southwest Damascus	Active
9th Armoured Division	Armour	T-55	TBC	Unknown
78th Armoured Brigade	Armour	T-55	Southeast Syria	Active
89th Brigade	Mechanized Infantry	BMP-1	Southwest Syria	Active
100th Artillery Regiment	SP Artillery	2S53 Akatsia	South Damascus	Active
121st Brigade	Infantry		Southwest Syria	Active
165th Brigade	Mechanized Infantry	BMP-2	Southwest Syria	Active
155th Artillery Regiment	MLRS	9K57 Uragan BM-27	Damascus	Active
156th Brigade	Infantry		Co-located at Al Dumayr Airbase	Active
158th Brigade	Infantry		South Damascus	Active

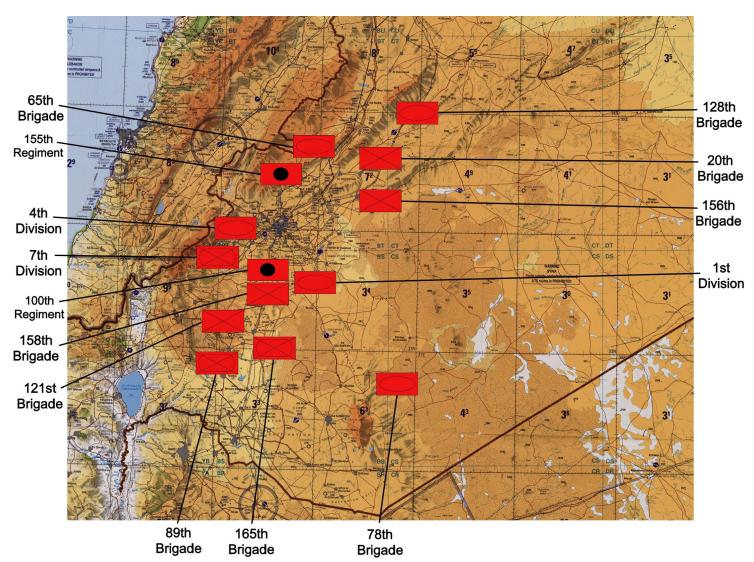


Unit	Туре	Equipment	Location	Status
2nd Corp				
10th Division	Mechanized Infantry	BMP-1	TBC	Unknown
15th Brigade	Infantry		TBC	Unknown
20th Brigade	Infantry		North Damascus	Active
45th Artillery Regiment	SP Artillery MLRS	2S53 Akatsia 9K57 Uragan BM-27	TBC	Unknown
60th Brigade	Infantry		ТВС	Unknown
65th Brigade	Armour	T-55	North Damascus	Active
112th Brigade	Infantry		ТВС	Unknown
128th Brigade	Armour	T-55	Co-located An Nasiriyah Airbase	Active
132nd Brigade	Infantry		TBC	Unknown
171st Brigade	Infantry		Homs	Active
312th Brigade	Mechanized Infantry	BMP-1	Homs	Active
550th Brigade	Mechanized Infantry	BMP-2	Palmyra	Active

Unit	Туре	Equipment	Location	Status
3rd Corp				
3rd Armoured Division	Armour	T-55	Latakia Region TBC	Degraded
45th Brigade	Infantry		Latakia Region TBC	Degraded
67th Brigade	Infantry		Latakia Region TBC	Degraded
87th Brigade	Mechanized Infantry	BMP-1	Latakia Region TBC	Degraded
123rd Artillery Regiment	SP Artillery	2S53 Akatsia	Latakia Region TBC	Degraded









Syrian Arab Air Force

The SyAAF operates predominantly Russian built aircraft, with the French made Aérospatiale Gazelle being the only non-Russian aircraft in operation by Syria.

The SyAAF operates the following aircraft types:

Fixed Wing

Mig-21BIS - 6 squadrons. Mig-23MLB - 7 squadrons. Mig-29A - 3 squadrons. SU-24 - 2 squadrons.

Rotary Wing

Mi-8 - 6 squadrons. SA-342 - 5 squadrons. Mi-24 - 2 squadrons.

A lack of funding and equipment over the last 20 years means limited training has been carried out by the SyAAF and the assessment of their capability is that they are functional but at a severe disadvantage to western nations with regards to tactics and experience.

Details of squadron locations and aircraft types are provided in section 5.

Syrian Arab Air Defence Force

The SyADF operates a variety of relatively modern and legacy Russian made air defence systems.

These range from low tech systems such as SA-18 Grouse MANPAD and AAA to an air defence system consisting of an interlinked network of early warning radars and SAM systems, including advanced double digit systems.

Estimates put the number of self propelled or static SAM systems at over 200, with up to 4000 additional MANPAD systems and thousands of AAA pieces.

Locations and technical details of the equipment in use by SyADF are provided in section 6.



Syrian Government and Use of Military Force

The Syrian government has a history of having the political will to use strong force in domestic situations. For example the 1982 siege of Hama following the Muslim Brotherhood uprising is thought by some to have been responsible for up to 40,000 casualties. The recent attacks on Homs have shown that the Syrian Government's attitude towards the use of force has not lessened over time, the Syrian regime is determined to hold onto power, seemingly at any cost.

What is unclear at this stage is whether this predisposal to use force extends to Syria's interactions on the international stage, and more importantly if the Russian backing of Syria would offer Syria any degree of protection should it attempt to forcibly overcome the imposed restrictions on it's territory by JSTF.

Weapons of Mass Destruction

The Syrian regime is believed to have previously run a nuclear weapons programme, development of which ceased following Israeli strikes in 2007. Syria does however possess what is believed to be one of the world's largest stockpiles of chemical weapons, with both VX and Sarin gas in their inventory.



SECTION 4. INTELLIGENCE - REGIONAL PLAYERS

Syrian Democratic Forces (SDF)

The SDF is an alliance of various ethnic groups and militias. They were founded in late 2011 from elements of the Free Syrian Army (FSA), an organisation itself built from defecting Syrian military personnel who engaged in guerilla warfare against the Syrian state. The FSA however were a disparate and decentralised organisation, specialising in hit and run tactics but not capable of effectively holding territory. The SDF came into being in northern Syria after the FSA had gained de facto control of this area and the threat of conflict between the Arab, Kurdish, Assyrian and Turkmen groups became a real possibility. These groups were however, able to put aside their differences and instead unified under the banner of the SDF. The SDF's goals are the securement of a free, secular northern territory in Syria and the formation of a democratic government.

The SDF control a considerable amount of territory, stretching south from the Turkish border to Homs and southeast to Lake Assad. The SDF is believed to have a significant army, consisting of approximately 50,000 soldiers, as well as several hundred captured armoured personnel carriers and several dozen tanks and self-propelled artillery pieces. The SDF is also known to operate a limited air defence force, with a number of captured AAA pieces and SA-9 mobile SAM systems.

The SDF has close ties to the Kudish YPG militia, relations no doubt helped by the active Kurdish groups within the SDF. The SDF is in direct conflict with Syrian Government forces, with fighting currently ongoing around Homs, and with the SIA in the Lake Assad / Raqqa region.

The SDF alliance appears strong at present, it is believed that the common cause that unites the different elements of the SDF is stronger than the forces that would drive it apart. However, if this alliance is able to hold in the long term remains to be seen, asides from the ethnic differences within the SDF, other destabilising influences exist. The most significant of these is Turkey, who view the the SDF and it's large Kurdish contingent as a threat to it's border region, Turkey knows it cannot get away with direct action against the SDF currently but it is believed that if the SDF were to break apart the Kurdish elements of the SDF would be firmly in Turkey's sights.



Syrian Islamic Army

The Syrian Islamic Army (SIA) is a radical Salafi Islamic organization based primarily in north eastern Syria, the group has claimed to be fighting a global Jihad against non-muslims and is fanatically committed to creating a caliphate throughout Syria and the wider Middle East. The SIA has seen rapid and frightening growth in the region having captured a large swath of north eastern Syria over the last 6 months. Within this territory the SIA have created a proto-state of terrifying proportions, installing a fundamentalist regime that demands absolute allegiance and obedience to it's strict interpretations of Islam, with barbaric consequences facing those that fail to comply.

The SIA's roots lie in the conflicts of the Middle East. Following the 2003 invasion of Iraq and the subsequent disbanding of the Ba'athist institutions (including notably the military) many Iraqis were left unemployed, powerless and disenfranchised with the newly installed Iraqi government. From this discontent and opposition to western occupation grew the Iraqi insurgent groups. These groups remained active in Iraq for many years and although the violence lessened during 2008 these groups still persisted in Iraq at the point that the US led coalition invaded Iran in 2011. During Operation Persian Freedom a number of militia's formed in opposition to the Iranian government, the most notable of which was an extremist Sunni organisation called New Dawn's Promise (NDP). The NDP initially supported the removal of the Iranian regime, but quickly grew discontented with the newly installed Shia government and carried on it's fight. With western support the Iranians forced the NDP out of Iran, who fled into neighbouring Iraq and ultimately joined forces with the existing Iraqi insurgency groups. At this point it is believed the newly allied militias began to consolidate their strength and when war broke out in Syria, they made their move, joining with emerging Sunni insurgencies in eastern Syria and engaging on a rapid campaign that took them from western Iraq to the Syrian city of Raqqa in just 2 weeks.

The SIA have made no secret of their goals in the region; to defeat the Syrian government and rival rebel groups, gain control of all of Syria and then from a position of strength, launch an all out attack on Israel.

The SIA control a corridor of territory from Lake Assad into western Iraq, the jewel in it's crown is the city of Raqqa, which has been declared the capital of the 'new caliphate'. The SIA have several million people under it's control with an estimated fighting force of around 75,000. At least 15,000 of these fighters are believed to be foreigners from all over the world. The SIA is also well equipped, having a significant amount of Soviet/Russian made armour and artillery, most of which was captured from Iraqi and Iranian stockpiles by the insurgents. A limited air defence capability also exists, with a number of older Russian SAM systems being detected by ELINT to date.

The SIA are an organisation of enormous cruelty and barbarism, enforcing their will through mass killings and torture, including public beheadings, crucifixtions, lashings and maimings. Yet despite all this, the SIA are also surprisingly sophisticated. They remain well financed through the oil



wealth they captured during their offensive and have proven to be extremely savvy when it comes to self marketing - skills that have enabled them to continue to recruit new fighters to their organisation. They also possess considerable military and intelligence prowess, boasting as they do a number of former senior Iraqi army and intelligence personnel in their ranks.

YPG

The YPG, or People's Protection Units are a mainly Kurdish militia operating in northeast Syria. A limited number of Arab and foreign fighters also make up their ranks. The YPG were formed at the outbreak of the Syrian civil war for the purpose of defending Kurdish regions of Syria, a task they carried out with great effectiveness. However in the last several months the YPG has switched to a more aggressive posture and gone on the offensive against the SIA as the threat from this extremist group grows along the YPG's southern border.

The YPG is estimated to consist of around 20,000 fighters, this force is almost exclusively light infantry, with very little armour available. But despite the lack of advanced equipment the YPG is considered to be a very effective fighting force, employing speed, stealth and guerilla tactics to gain a battlefield advantage.

The YPG has strong ties to the SDF owing to the numerous Kurdish groups also operating with this alliance. The YPG's main adversaries within the STO are the Syrian government (although they are no longer in direct conflict owing to geographical constraints), the SIA, with whom they are in direct conflict and the Turkish government.

The conflict with the Turkish government stems from the view Turkey holds that the YPG is an extension of the Kurdistan Worker's Party (PKK), a rebel Turkish-Kurdish group fighting for autonomy within Turkey. The Turkish military has shelled YPG territory on several occasions, ignoring calls from NATO members for restraint concerning the YPG. There is concern amongst the Kurds in Syria that Turkey will use any military action against the SIA as cover to also attack the YPG.



<u>Russia</u>

Russia has strong links to Syria - a historical ally. It is currently allied with the Syrian government and is actively supporting their campaign against the SDF, YPG and SIA. Russia has serious investments in the Syrian government and considers them their key strategic ally in the region. Syria houses a substantial Russian military presence, the Russian naval facility at Tartus is the only Russian naval base in the Mediterranean and there is also a major Russian airbase at Bassel Al Assad Airport. Syria is also a major importer of Russian arms. In short, for both economic and strategic reasons Russia has a very strong interest in the continued survival of the current Syrian government and is expected to continue to strike against groups opposed to the Syrian state. Russian military strength in the STO is detailed further in section 7.

Turkey

Although a member state of NATO, Turkey is a nation whose interests don't necessarily align with those of other NATO members (need we be reminded of the fractious relationship between two NATO members, Turkey and Greece). In recent years Turkey has also become friendlier to the Russian state, going so far as to even purchase arms from Russia over the US. In the STO concerns also remain over Turkish intentions towards the Kurdish groups.

<u>Israel</u>

Israel has long been the dominant military force in the middle east, a position it has had to maintain to deter the very real threat to the nation's existence. Israel has a well equipped, highly trained and motivated military. It has proved in numerous conflicts over the years that it is a far superior fighting force to it's Arab neighbours. Israel has also proven many times that it is only too willing to use force in defence of it's interests, either through covert means or overt military action. The United States of course remains Israel's greatest ally, but even this relationship is sometimes not enough to keep Israeli actions in check - if Israel believes itself to be threatened, expect them to attack. There are a number of immediate security concerns for the Israelis; most notably the continued sporadic rocket attacks from Hezbollah fighters in southern Lebanon and the rise of the SIA in Syria. The ever growing influence of Hezbollah in Lebanon is a particular concern, especially since the suspected arrival of the fleeing Iranian leadership.



<u>Lebanon</u>

Lebanon is a nation besieged by issues. A vibrant and prosperous nation in the 1950's and 60's it was torn apart by a prolonged civil war from 1975-1990 - the legacy of which would be the creation of Hezbollah, a near 30 year occupation of most of the country by Syria and a 15 year conflict between Hezbollah, Israel and proxies in southern Lebanon. This conflict ended in 2000 and the Syrian occupation in 2005, yet in 2006 Lebanon was invaded once again, this time by the Israeli Defence Forces in response to Hezbollah attacks which killed three IDF soldiers and captured two more. Israeli airstrikes caused substantial damage to parts of the Lebanese capital Beirut.

Another important element of the Lebanese story is that of the Palestinian refugees, with hundreds of thousands of Palestinians (displaced from what became Israeli territory in the 1948 and 1967 conflicts) fleeing to southern Lebanon. Refugee camps and slums still exist today all over Lebanon, although the influence of the PLO has waned after it was finally forced out of Lebanon by the IDF. Lebanon though is once again beginning to see a new influx of refugees - this time Syrians fleeing the civil war.

The impact of the Syrian civil war in Lebanon is not just limited to refugees however, there have been recent reports of sectarian violence erupting between the SDF backing Lebanese Sunni's and the regime backing Lebanese Shia.

The Lebanese operate a small military force of approximately 70,000 personnel, the vast majority of which are ground forces. However this force is growing rapidly as it attempts to rebuild following years of civil war and occupation. The Lebanese Air Force operates a small fleet of helicopters and transport aircraft, but no combat aircraft and almost no air defence capability. The Lebanese Navy is limited to small coastal patrol boats. Due to the fraught situation within Lebanon the Lebanese military is expected to stay out of the Syrian conflict and focus on internal security.

This stance is no surprise given the strength Hezbollah has within Lebanon (see more on Hezbollah below), although the Lebanese military is larger, Hezbollah is certainly better funded, much better equipped and has enormous influence amongst the Lebanese Shia. It is the presence, strength and boldness of Hezbollah within Lebanon that threatens to draw Israel into further conflict.



<u>Hezbollah</u>

Hezbollah (Party of Allah) is a Shia Islamist political body and militant group. Their stated cause is a resistance movement dedicated to the liberation of Lebanon from 'colonial influences' and any Israeli occupation. The elimination of the state of Israel remains as another goal of this organisation.

Based in Lebanon and headquartered in Beirut, Hezbollah was established by Lebanese clerics and based on a model created by Iran's Ayatollah Khomeini. Iran supported the formation of Hezbollah through extensive funding and training, which had the effect of unifying a number of Lebanese Shia groups under one umbrella.

Hezbollah has been widely designated as a terrorist organisation for some time, yet this greatly simplifies and creates the wrong impression of the organisation. Although being held responsible for many terror attacks (most significantly the 1983 bombing of US Marines in Beirut), Hezbollah actually possesses considerable *conventional* military capability and was partly responsible for driving the Israelis out of Lebanon in 2000 before fighting the IDF to a stalemate in the 2006 Lebanese War. Since 2006 the military capability of Hezbollah has expanded significantly and it is now considered more powerful than the Lebanese Army. In fact Hezbollah's influence with Lebanon has grown so much it is at times referred to as a 'state within a state', holding seats in the Lebanese government and running radio and TV broadcasts. It is also prehaps surprising to some that Hezbollah has shown tolerance to non Muslim beliefs, engaging with Lebanese Christians, in fact Hezbollah insists it regards all cultural, political and reigious freedoms in Lebanon as sanctified. It is critically important to note however that this does not extend to groups with Israeli ties.

Hezbollah's primary supporter was Iran, from which it received military training, weapons and financing - this support continued until Operation Persian Freedom began. Syria also has provided political and military support in the past as well. Hezbollah's military is acknowledged to possess tens of thousands of rockets of various designs, modern anti tank weaponry, advanced cyber capabilities and even more advanced equipment with unconfirmed reports of SA-6 SAM systems. The exact size of Hezbollah's army remains a closely held secret, but regional experts estimate around 20,000 fighters are available for Hezbollah at any one time.

Hezbollah and Syria have remained on good terms for many years. Since the outbreak of the Syrian civil war Hezbollah has at times supported the Ba'athist forces on the ground.

It is believed a number of senior Iranian figures fled to Lebanon and Hezbollah following last year's invasion of Iran.



In conclusion Hezbollah remains a highly significant player within the STO and their military capabilities should not be underestimated. The collapse of the regime that formed their primary support and the decline of the regime that is their secondary stream of support raises interesting questions. Will this new state of affairs lead to a degradation of Hezbollah's capabilities? Or will it, given it's considerable presence in Lebanon, seek to further legitimise itself in government through either political or military means?

<u>Jordan</u>

Jordan, a nation that is remarkably stable for this region, is so far largely unaffected by the Arab Spring. What instability Jordan does experience is often a result of it's more tolerant stance towards Israel and the US, which can clash with the feelings of some of it's population, not least the estimated 2 million Palestinian refugees residing in Jordan.

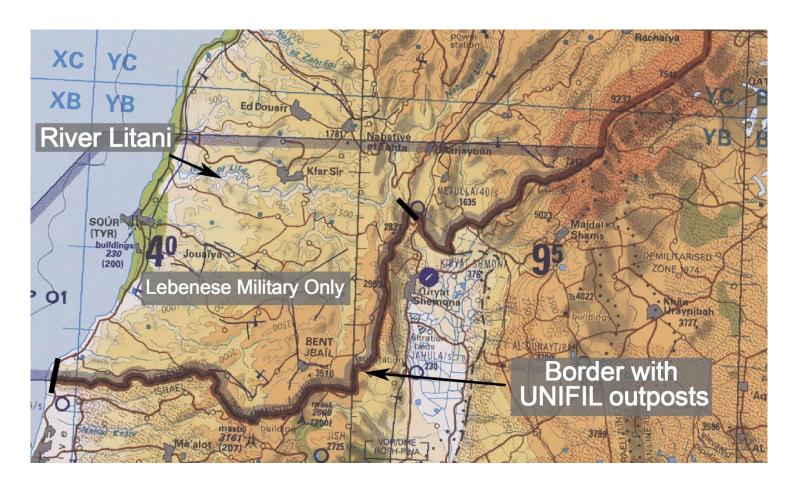
Jordan has one of the most professional and organised militaries in the region, with excellent training and support from the US, UK and France.

The country's relationship with the Syrian government has historically been tumultuous but recent times had seen a warming in diplomacy. However the Jordanian links to the US may well cause their Syrian relationship to be more strained in the times ahead. The potential spreading of the Syrian conflict to the south of Syria could also create additional refugee issues for Jordan.

The United Nations

The borders between Lebanon, Syria and Israel contain one additional organisation - the UN. More specifically the United Nations Interim Force in Lebanon (UNIFIL). Operating under a UN mandate this international security force was initially established in 1978 to confirm the withdrawal of Israeli forces from southern Lebanon, restore international peace and security and assist the Government of Lebanon in ensuring the return of its effective authority in the area. Since 2006 this role has expanded to amongst other tasks, monitor the area between the Israeli border and the Litani river, ensuring no armed forces other than the Lebanese military operate there. A number of armed UN outposts are located along Lebanon's southern border.





The reality of the UNIFIL is a troubled one. It's current deployment and operating area is designed primarily to keep Israeli and Hezbollah forces apart and deny them the use of Lebanon as their battleground. Hezbollah however has frequently infiltrated the restricted area to launch rocket attacks against Israel and unable to fulfil this role consistently Israeli feelings towards UNIFIL are not always positive. Should Israel feel the need to once again respond in Lebanon the only barrier to them doing so is politics - no one expects the UNIFIL to be able, or willing to stop them.



SECTION 5. SYRIAN AIRBASES - SYAAF & SAADF

This section outlines all the major airbases in use by the Syrian Armed Forces, highlighting all identified aircraft present and any identified air defences co-located at the base. For more comprehensive details of Syria's air defence systems see section 6.

Al-Dumayr Airbase, East of Damascus.

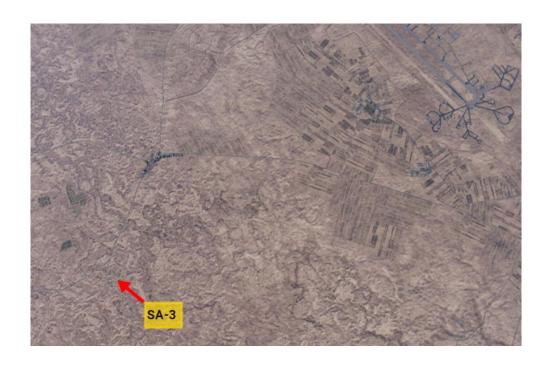
Mig-23 - 67 Squadron.

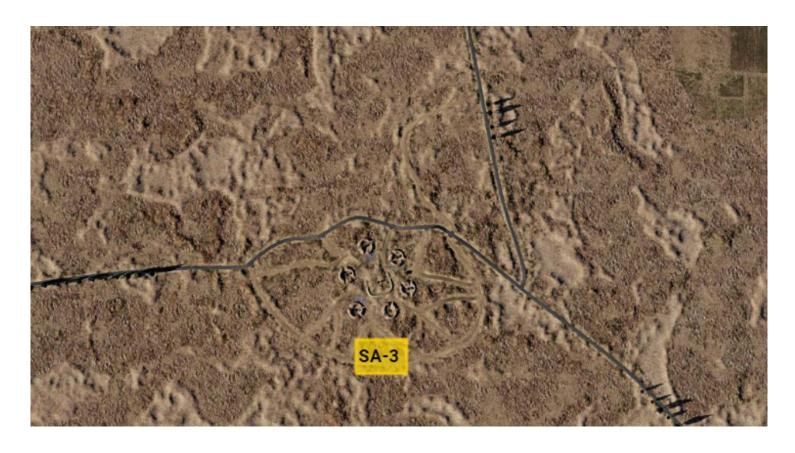
SA-3 - South of airbase.











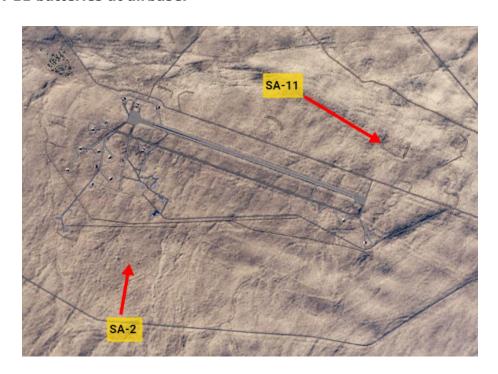


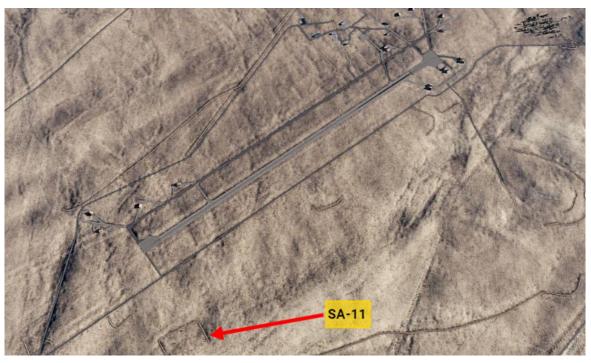
Al-Nasiriyah Airbase, northeast of Damascus.

Mig-23 - 895 & 898 Squadrons.

Mi-24 squadron (TBC)

SA-2 & SA-11 batteries at airbase.







Al-Qusayr Airbase.

MIG-21 - 825 & 826 Squadrons.







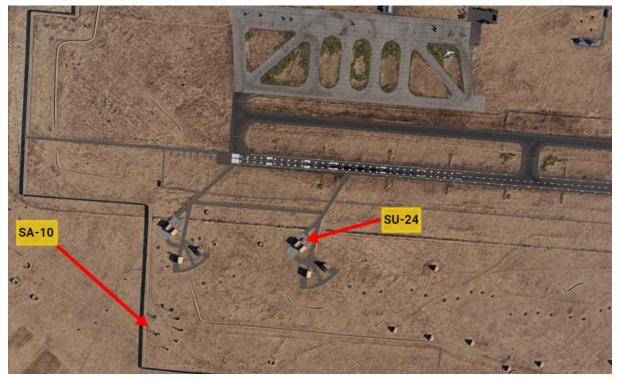
Damascus International Airport.

Mig 29A & SU-24 squadrons (TBC).

Mi-24 squadron (TBC)

SA-10 Battery.





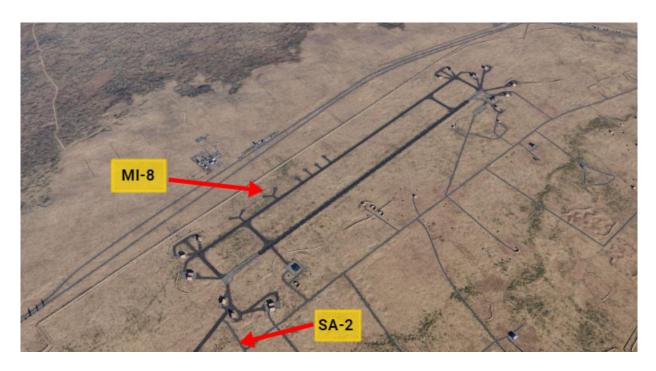


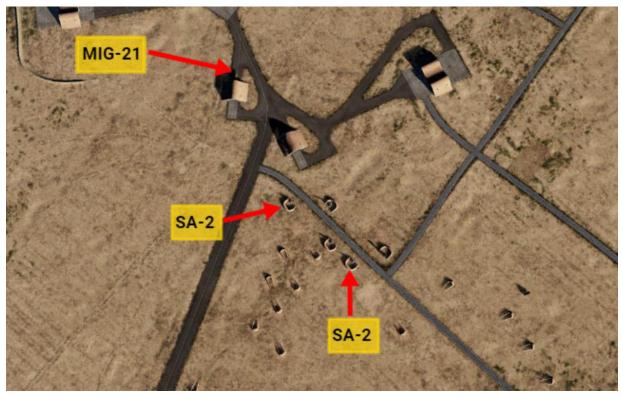
Khalkhalah Airbase, south of Damascus.

Mig-21 - 945 & 946 Squadrons.

Mi-8 Squadron (TBC).

SA-2 Battery.





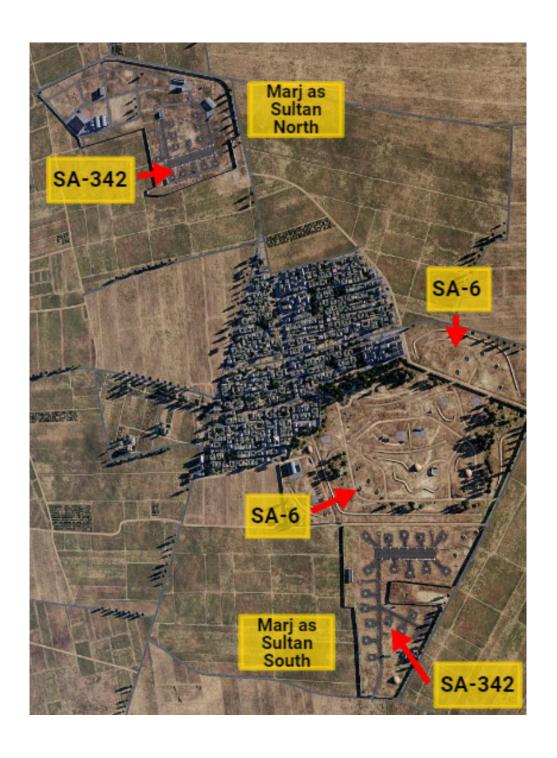


Marj-as-Sultan Helicopter Base, south Damascus.

Mi-8 Squadrons (TBC)

SA-342 - 525 & 537 Squadrons.

SA-6 Batteries.

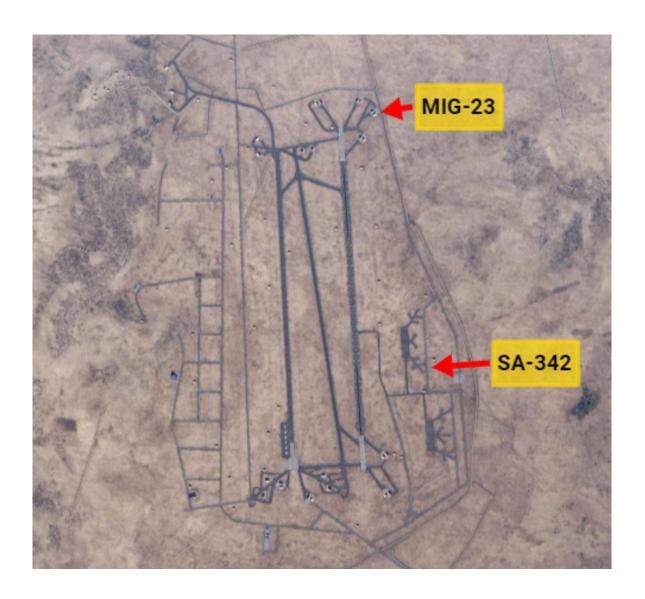




Marj Ruhayyil Airbase, south of Damascus.

Mig-23 - 55 & 77 Squadrons.

SA-342 Squadron (TBC).





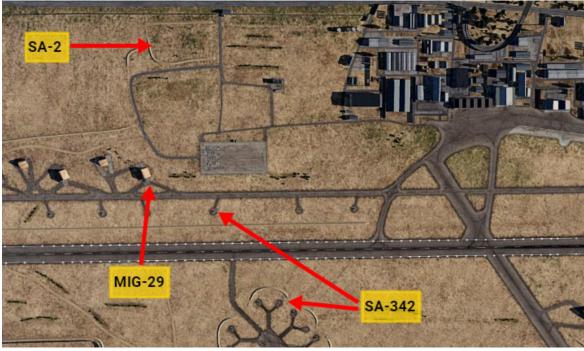
Mezzeh Airbase, southwest Damascus.

Mig-29A Squadron (TBC).

SA-342 - 976 & 977 Squadron.

SA-2 Battery.





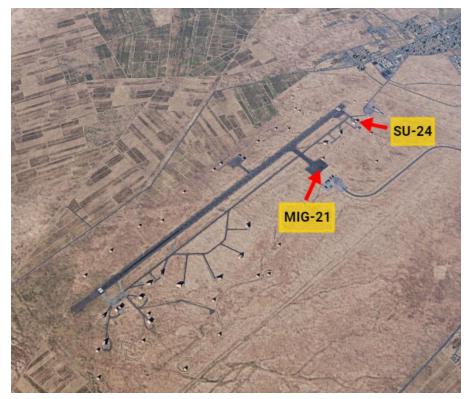


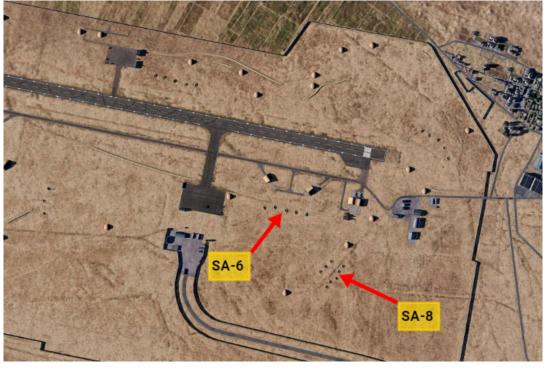
Palmyra Airbase.

SU-24 Squadron (TBC).

Mig-21 Squadron (TBC).

SA-6 Battery.

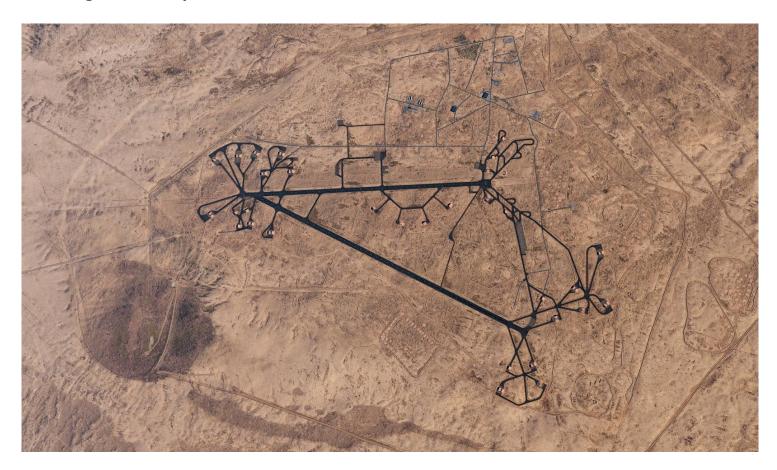






Sayqal Airbase.

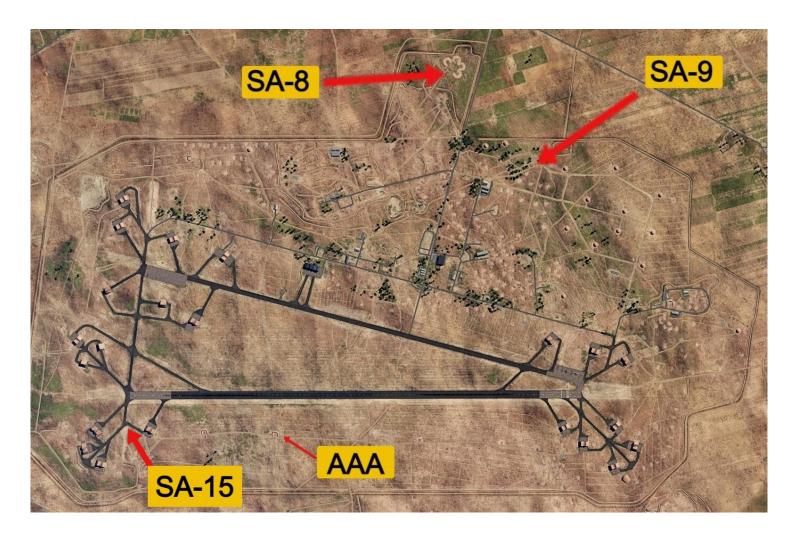
Mig-29 - 697 Squadron.





Shayrat Airbase.

Mig-23 - 675 Squadron.





Tha'lah Airbase.

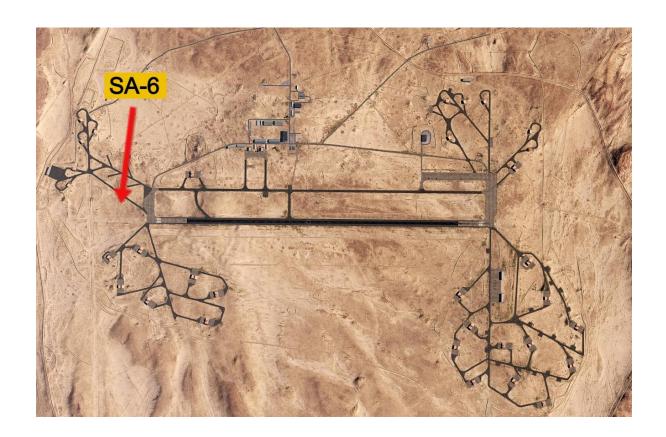
Mi-8 - 266 & 725 Squadron. SA-6 Battery.





Tiyas Airbase.

Mig-23 - 819 Squadron. Mig-21 - 827 Squadron. SA-6 Battery.





Qabr as Sitt Helicopter Base.

Mi-8 - 532 Squadron.



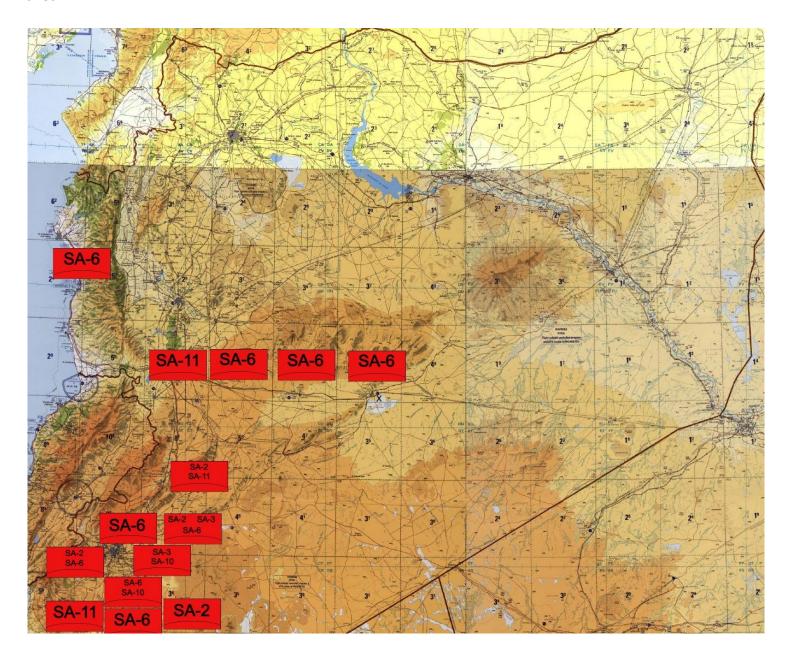




SECTION 6. SYRIAN AIR DEFENCES - STO

This section details all confirmed Syrian air defence sites within the STO that are not co-located with Syrian airfields. Capability assessments of all major SAM and AAA systems operating in the STO are also provided.

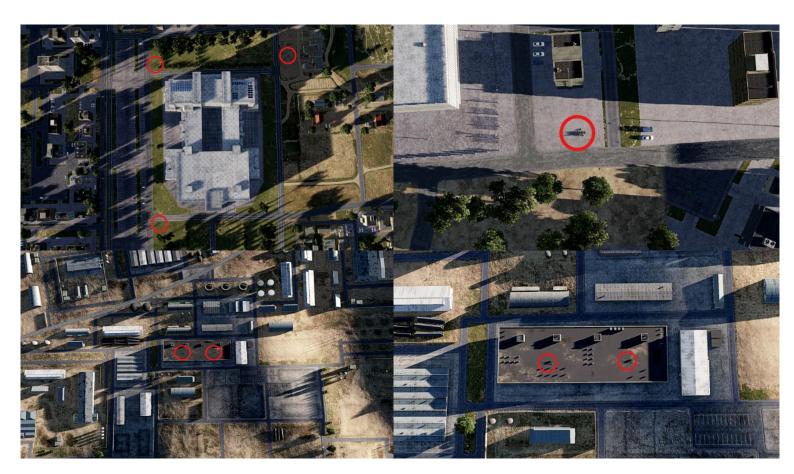
The following map shows the location of all known major Syrian SAM systems. In addition to those shown there are Russian operated SAM batteries at Bassel Al-Assad and Tartus. Please note this map is intended to only give an overview of the SyADF IADS, further intelligence on specific locations of batteries and number of systems in each location should be sought as part of the mission planning process. In addition to the larger SAM systems shown here the presence of smaller short range systems such as SA-8,9,13,15 and 19 should be planned for in the mission area.





Anti Aircraft Artillery - Damascus.

Damascus is protected not just by a ring of potent SAM threats but by hundreds of low and medium altitude AAA positions spread across the city. SATINT shows that the thickest coverage occurs towards the centre of the city and around government facilities such as the Syrian Parliament building, State Broadcast Facility, Ministry of the Interior HQ, HQ of the Security Directorate and the Presidential Palace.

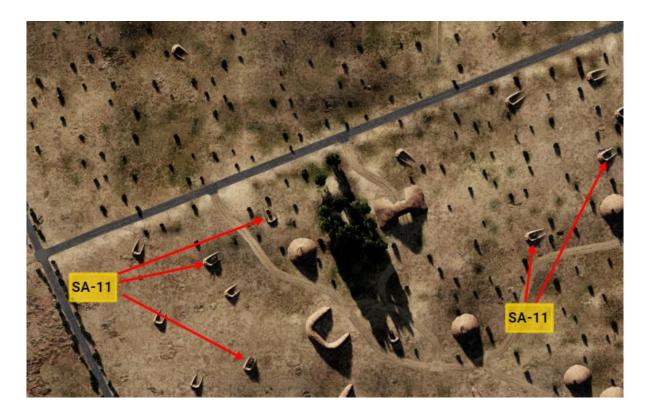




Homs Air Defence Academy.

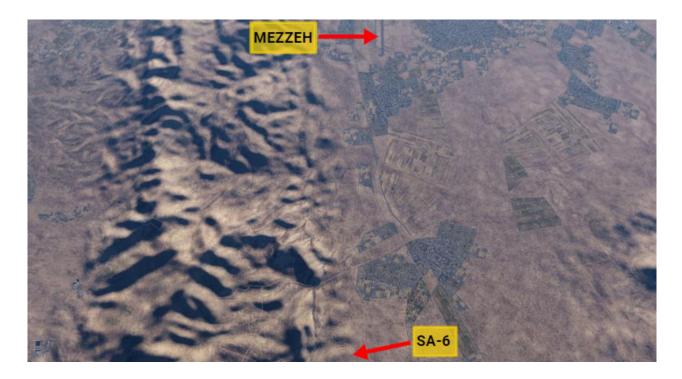
SA-11 currently present but the nature of this site means a number of systems regularly cycle through. SA-10, 2,3 and 6 have all been recorded here in the past.

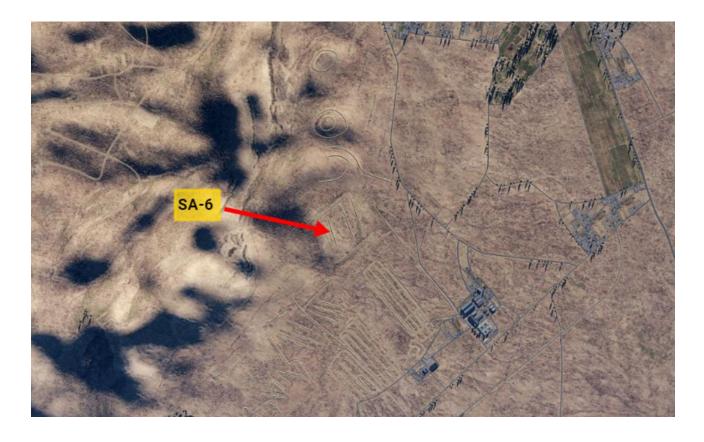






SA-6 Battery, southwest of Mezzeh Airbase.

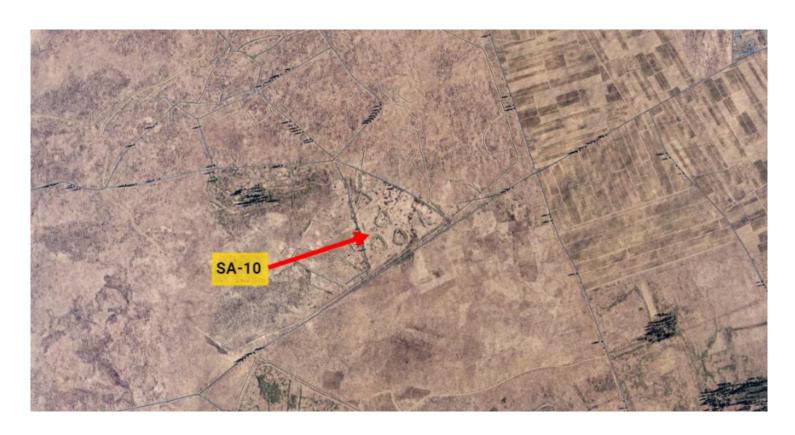






24th Air Defence Regiment.

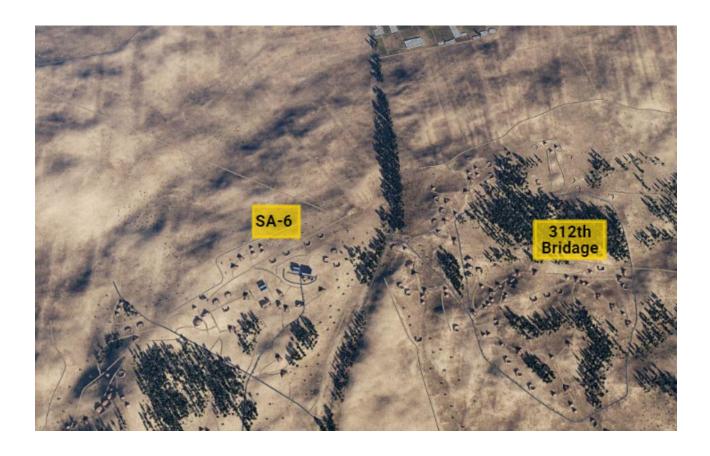
SA-10 Battery, additional systems also identified to be present intermittently such as SA-6 and SA-8.







SA-6 position, co-located with HQ of the 312th SAA Brigade, southeast of Homs.

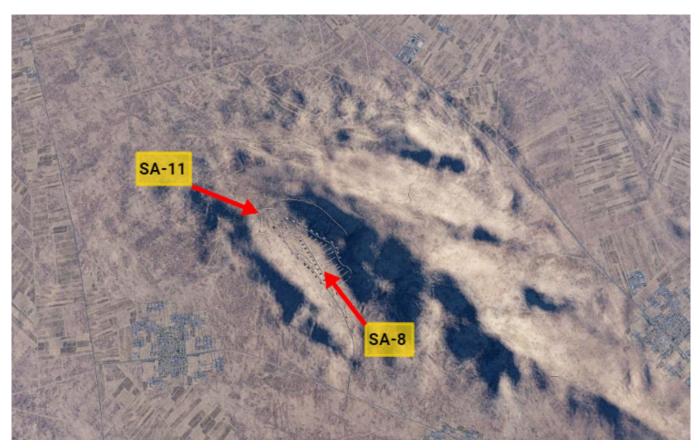






150th Air Defence Regiment, south of Damascus.

SA-11 and SA-8 confirmed. This facility contains a large number of underground shelters and is believed to be used as an air defence storage facility.

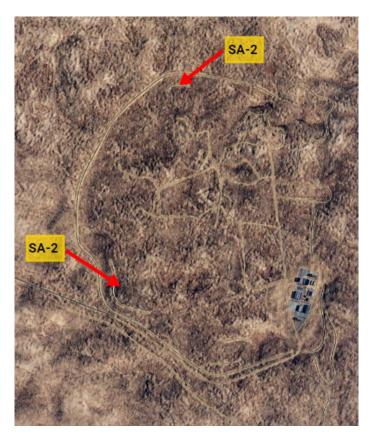


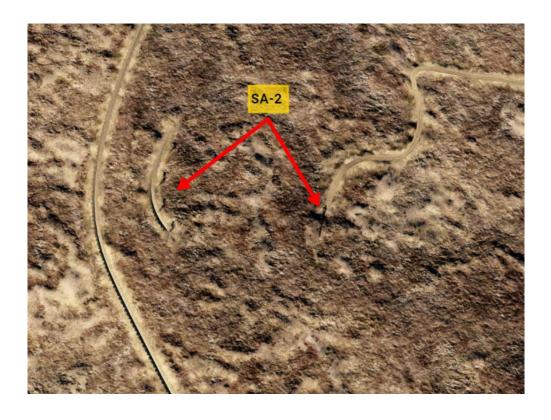




159th Air Defence Regiment, southeast of Damascus.

2 x SA-2 positions.





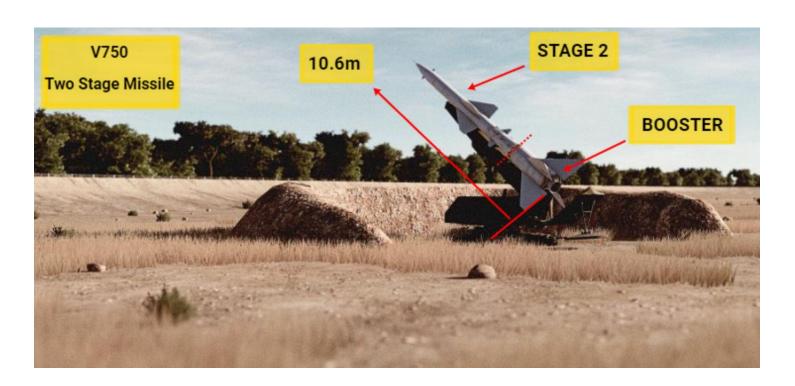


Surface to Air Weapons Systems - Known Capabilities

SA-2 'GUIDELINE'	
Guidance Type	Radar, command guidance
Acquisition Range	55 nm
Max Engagement Range	23 nm
Max Ceiling	82,000 Ft MSL
Missile Mach	3.5
Warhead Type	440lb Frag HE
Fuzing	Command
RWR Symbology	2
Notable Features	Two stage missile, with stage one burning for ~5 seconds and stage two propelling the missile for a further ~23 seconds.
	Low maneuverability.
	Typical configuration - Fan Song radar controlling ~ 4 - 6 V750 missiles on single rail launchers. Often combined with EWR systems.



FIRE CONTROL & TRACKING RADAR











SA-3 'GOA'	
Guidance Type	Radar, command guidance
Acquisition Range	55 nm
Max Engagement Range	10 nm
Max Ceiling	59,000 Ft MSL
Missile Mach	3.5
Warhead Type	132lb Frag HE
Fuzing	Proximity
RWR Symbology	3
Notable Features	Two stage missile, with stage one burning for ~5 seconds and stage two propelling the missile for a further ~19 seconds.
	More capable with low flying targets than older SA-2.
	Typical configuration - Low Blow radar, up to 6 S-125 launchers carrying 4 V600 missiles apiece.





6.1m

STAGE 2

BOOSTER



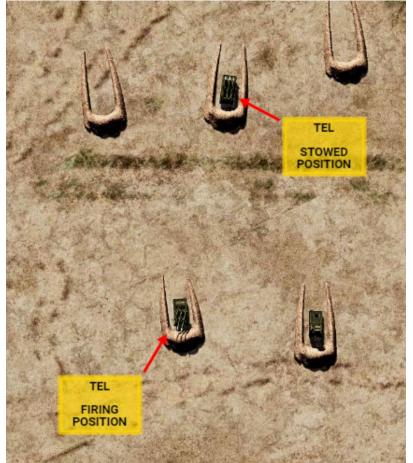


SA-6 'GAINFUL'	
Guidance Type	Radar, command guidance, semi active radar homing
Acquisition Range	40 nm
Max Engagement Range	15 nm
Max Ceiling	40,000 Ft MSL
Missile Mach	2.8
Warhead Type	130lb Frag HE
Fuzing	Proximity/contact
RWR Symbology	6
Notable Features	Semi Active Radar Homing in terminal phase.
	Missile burn time ~ 21 seconds.
	Highly mobile, can be operational within 15 minutes of relocating.
	Typical configuration - 1 x Tracked 'Straight Flush' radar vehicle, 4 x tracked TEL's carrying 3 missile apiece.



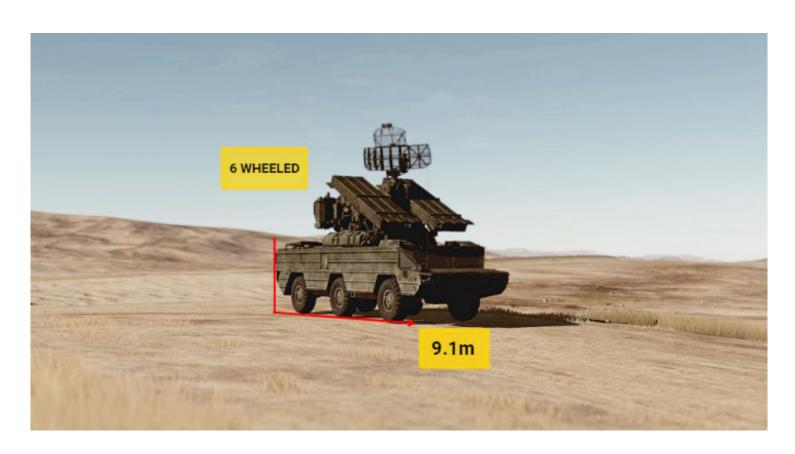








SA-8 'GECKO' **Guidance Type** Radar, command guidance **Acquisition Range** 15 nm 6 nm **Max Engagement Range Max Ceiling** 39,000 Ft MSL **Missile Mach** 2.0 35lb Frag HE **Warhead Type Fuzing Proximity/contact RWR Symbology Notable Features** Amphibious & highly mobile. Missile burn time \sim 15 seconds. 6 missile load.

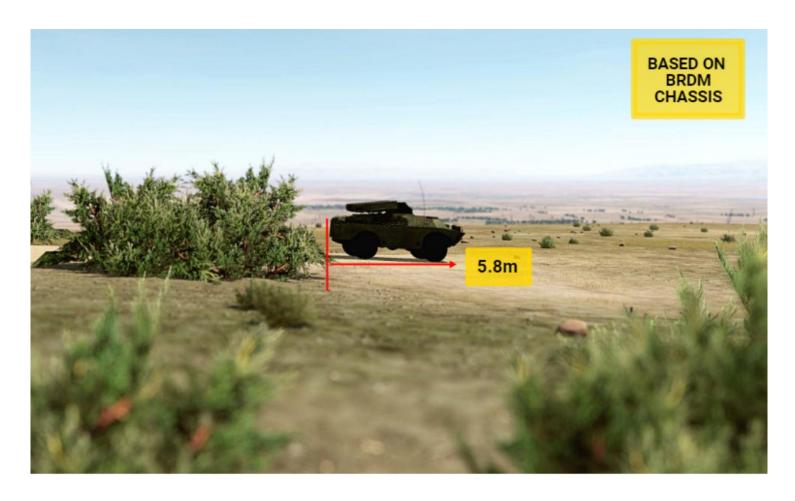




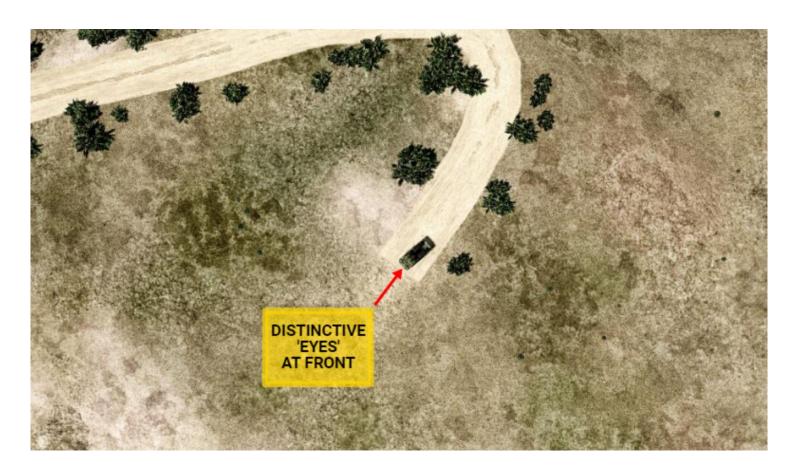




SA-9 'GASKIN' **Guidance Type** Infra-red Visual **Acquisition Range Max Engagement Range** 2.5 nm **Max Ceiling** 12,000 Ft MSL **Missile Mach** 1.8 5.7lb Frag HE **Warhead Type Fuzing RF Proximity Notable Features** Amphibious & highly mobile. 4 missile load.









SA-10 'GRUMBLE'	
Guidance Type	Semi Active Radar Homing
Acquisition Range	90 nm
Max Engagement Range	65 nm
Max Ceiling	95,000 Ft MSL
Missile Mach	6.2
Warhead Type	293lb Frag HE
Fuzing	Proximity/Contact
RWR Symbology	10 - FLAP LID CS - CLAM SHELL BB- BIG BIRD
Notable Features	Can be deployed as a distributed position, with radars, command centre and launchers up to ~25nm apart.
	Mobile but difficult to relocate and setup in short periods of time. Central command post linked to three radars, CLAM SHELL (search radar continuous wave doppler), FLAP LID (phased array track radar), BIG BIRD (search radar - designed for ballistic and cruise missile detection) and up to 12 4 missile TEL's.
	Specializes in low altitude detection through CLAM SHELL and high altitude detection through BIG BIRD.
	Missile burn time ~ 20 seconds.







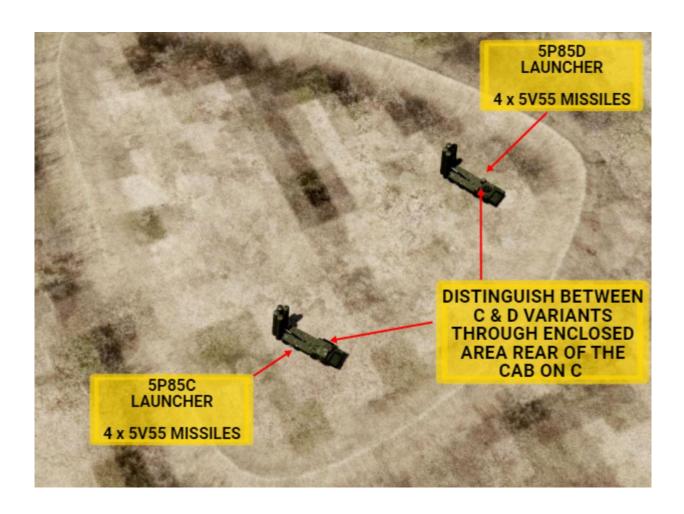


30N6
FLAP LID'
TRACKRADAR

DISTINGUISH FROM CLAM SHELLTHROUGH STATIC, FLAT ANTENNA









SA-11 'GADFLY'	
Guidance Type	Semi Active Radar Homing
Acquisition Range	50 nm
Max Engagement Range	20 nm
Max Ceiling	72,000 Ft MSL
Missile Mach	3
Warhead Type	150lb Frag HE
Fuzing	RF Proximity
RWR Symbology	SD- SNOW DRIFT TAR 11 - FIRE DOME TR
Notable Features	Consists of 3 elements. 9S470M1 Command Centre, 9S18M1 'SNOW DRIFT' Search & Acquisition radar and 9A310M1 TELAR.
	Tracked and high mobile.
	Missile burn time ~ 20 seconds.

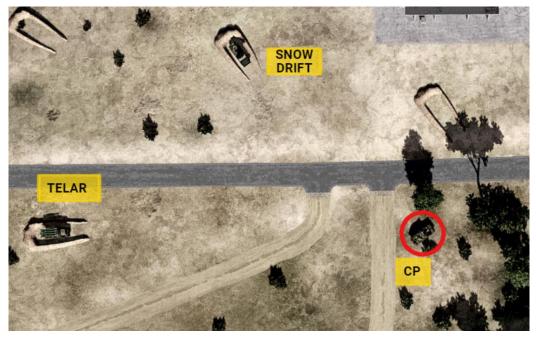




9S18M1

SNOW DRIFT'
TARGET AQUISITION RADAR







Warhead Type

Notable Features

Fuzing

SA-13 'GOPHER'

Guidance Type Infra-Red / Optical

Acquisition Range Visual

Max Engagement Range 2.5 nm

Max Ceiling 12,000 Ft MSL

Missile Mach 2

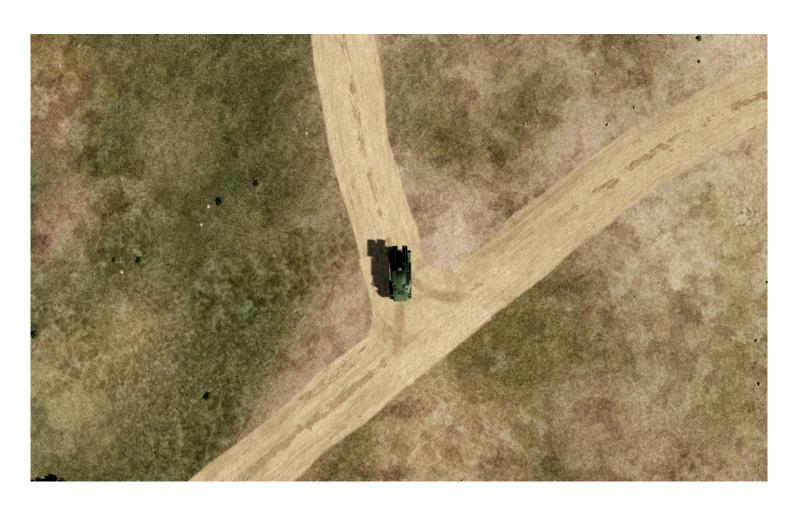
11lb Frag HE

Contact / Laser Proximity

Tracked and high mobile.





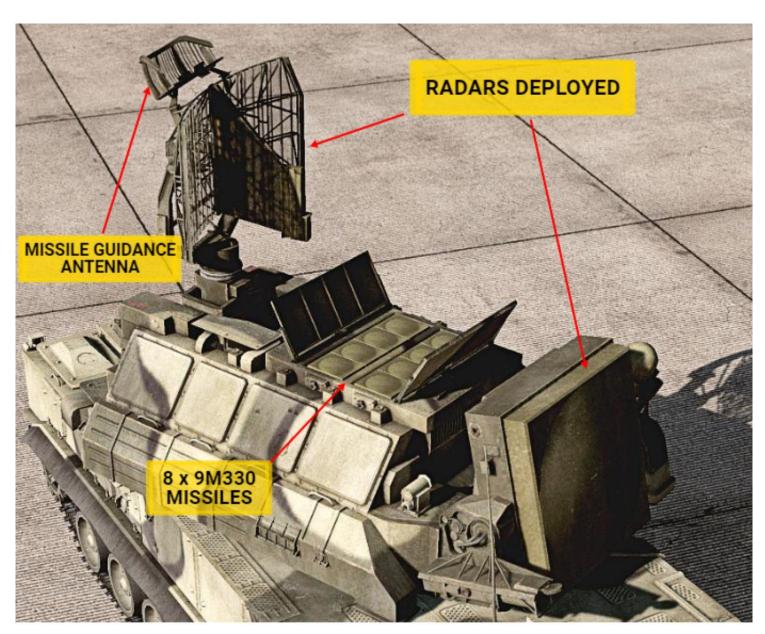




Radar Command Guidance
15 nm
8 nm
25,000 Ft MSL
2.5
30lb Frag HE
RF Proximity
15
Tracked TLAR highly mobile, carries 8 missiles ready to fire.
Missile burn time ~ 7 seconds.









SA-18 'GROUSE'	
Guidance Type	Infra-Red
Acquisition Range	Visual
Max Engagement Range	3 nm
Max Ceiling	12,000 Ft MSL
Missile Mach	1.9
Warhead Type	2.6lb Frag HE
Fuzing	Contact / Grazing
Notable Features	Man Portable Air Defence (MANPAD), highly mobile and easy to hide. May operate in teams of shooter/spotter, communicating over distance to ambush targets.





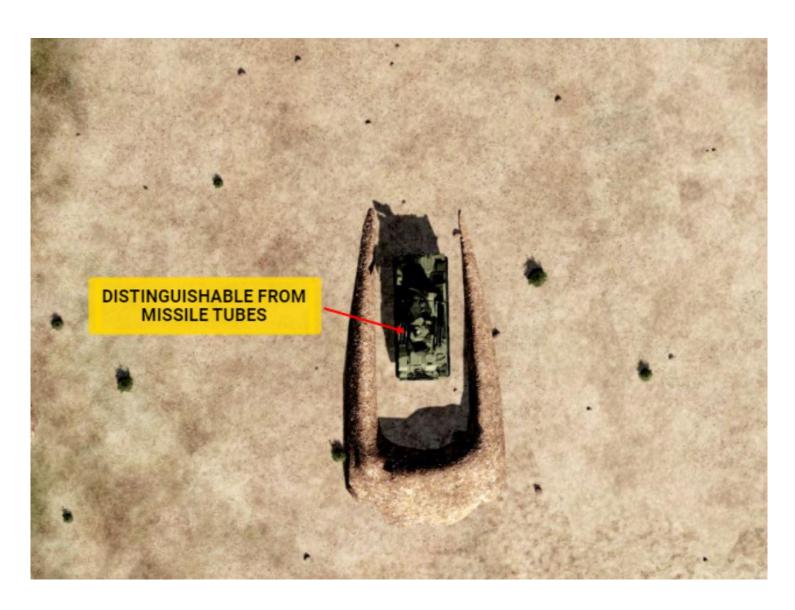


SA-19 'GRISON'	
Guidance Type	Radar Command Guidance
Acquisition Range	10 nm
Max Engagement Range	5 nm
Max Ceiling	12,000 Ft MSL
Missile Mach	2.8
Warhead Type	20lb Continuous Rod
Fuzing	Laser
RWR Symbology	S6
Notable Features	Tracked and highly mobile, equipped with both SAM and 2 x guided 30mm cannon.
	Missile burn time ~ 3 seconds.





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ZU-23 AAA	
Guidance Type	None
Acquisition Range	Visual
Max Engagement Range	1.5 nm
Max Ceiling	7,000 Ft MSL
Notable Features	Twin 23mm autocannon. Towed system, easy to relocate. Cheap and widely proliferated. Can be truck mounted for a highly mobile, low cost air defence platform. Fires HE rounds that explode on contact or at set altitude.





ZSU-23-4 AAA	
Guidance Type	Radar
Acquisition Range	2.5 nm
Max Engagement Range	1.5 nm
Max Ceiling	7,000 Ft MSL
RWR Symbology	A
Notable Features	Four x 23mm autocannon.
	Tracked and high mobile.
	Fires HE rounds that explode on contact or at set altitude.





ZU-57-2	
Guidance Type	None
Acquisition Range	Visual
Max Engagement Range	3 nm
Max Ceiling	20,000 Ft MSL
Notable Features	2 x 57mm autocannon.
	Tracked, self-propelled system.
	Uses a version of the widely proliferated S-60 AA cannon.





S-60 AAA	
Guidance Type	None
Acquisition Range	Visual
Max Engagement Range	3 nm
Max Ceiling	20,000 Ft MSL
Notable Features	Single 57mm autocannon. Capable of firing over 70 rounds per minute.
	Towed system, easy to relocate. Cheap and widely proliferated.
	Fires HE rounds that explode on contact or at set altitude.





Radar & Control Systems

	Function & Symbology ()	Max Acquisition Range	Notable Features
1L13 'BOX SPRING'	Early Warning (S)	65nm	
P-19 'FLAT FACE'	Early Warning (S)	86nm	Truck mounted & mobile.
55G6 'TALL RACK'	Early Warning (S)	65nm	
9S80M1 'DOG EAR'	Search Radar & Mobile Command Post (DE)	20nm	Can form part of command and control of many SAM systems such as 8,13,15,18 and 19. Tracked, highly mobile.





SECTION 7. RUSSIAN MILITARY FACILITIES - STO

This section provides details on all Russian operated military facilities in Syria.

Bassel Al-Assad Airport.

SU-27, MIG 29, SU-25, Mi-24, and Mi-26 Squadrons (TBC).

SA-10 Battery.











Tartus Naval Facility.

Home to Russian 5th Squadron.





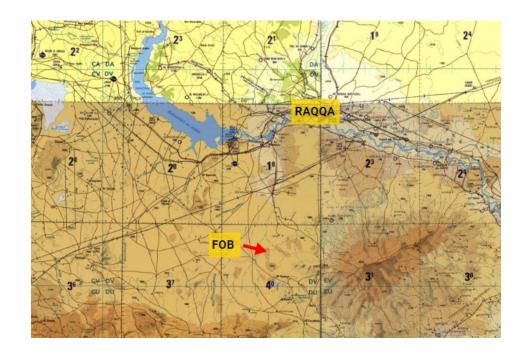


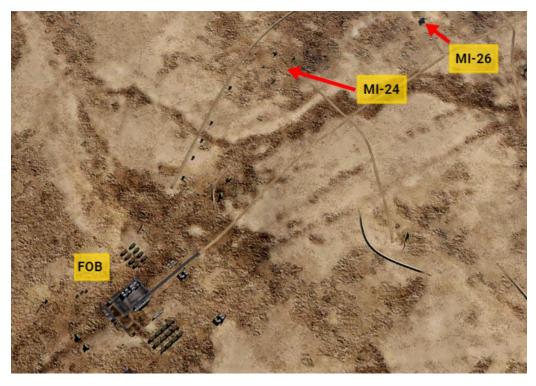
Forward Operating Base, south of Raqqa.

Mi-24 & Mi-26 Squadrons (TBC).

Self Propelled Artillery, Mortars, at least 1 company of infantry, believed to be Special Operations Forces.

SA-19 Grison.







MORTAR POSITION

COMM RELAY



SECTION 8. THREAT AIRCRAFT & AIR TO AIR WEAPONS SYSTEMS

Threat Aircraft

MIG-21 BIS 'FISHBED'	
Role	Fighter Interceptor
Max Speed	Mach 2.05
Service Ceiling	58,400 Ft
Gross Weight	19,235 lb
Max Thrust	15,650 lb
Combat Range	650 nm
Armament	GSh-23L 23mm cannon, 4 wing hardpoints for AA/AG weapons, one centreline hardpoint for bombs/fuel tank. Can carry R-3, R-13, R-60.
Notable Features	Exploitation programmes have revealed comparable performance to an F-5.

MIG-21 BIS, in the markings of the Syrian Air Force.





MIG-23 MLD 'FLOGGER'	
Role	Fighter
Max Speed	Mach 2.35 @ altitude, Mach 1.1 @ sea level
Service Ceiling	60,000 Ft
Gross Weight	32,717 lb
Max Thrust	28,660 lb
Combat Range	810 nm (no tanks)
Armament	GSh-23L 23mm cannon, 4 wing & 2 fuselage hardpoints for AA/AG weapons. Centreline point for tank only. Can carry R-24, R-60.
Notable Features	Variable Wing Geometry, marks a significant step up in BVR capability from the Fishbed.

MIG-23 MLD over the Syrian/Lebansese border. The MLD is the ultimate version of the Flogger, with improved maneuverability, FCS and offensive & defensive systems.





Mig-23 MLD over the Syrian/Lebansese border. Note the R-24 BVR capable missile.





MIG-29 A 'FULCRUM'	
Role	Fighter
Max Speed	Mach 2.3 @ altitude, Mach 1.225 @ sea level
Service Ceiling	59,000 Ft
Gross Weight	32,849 lb
Max Thrust	36,680 lb
Combat Range	770 nm (no tanks)
Armament	GSh-301 30mm cannon, 6 Wing hardpoints for AA/AG weapons, 1 centreline hardpoint for fuel tank/pod. Can carry R-27, R-60, R-73.
Notable Features	Very agile fighter but limited by short range in combat and lack of SA aids and HOTAS.

MIG-29 A's, lined up in their revetments. The leading edge root extensions can be seen protruding below the canopy. These LERXs contribute to the Fulcrum's high maneuverability and high alpha performance.





MIG-31 'FOXHOUND' Role Interceptor **Max Speed** Mach 2.83 @ altitude, Mach 1.21 @ sea level **Service Ceiling** 82,000 Ft **Gross Weight** 90,390 lb **Max Thrust** 68,000 lb **Combat Range** 780 nm **Armament GSh-6-23 23mm rotary cannon, 6 hardpoints for AA.** Can carry R-40, R-60, R-33. **Notable Features** Designed for long range interception & escort of strategic bombers. Limited performance in the WVR arena.

A MIG-31 that intercepted a US B-52 over the Caucuses during a NATO/Georgian exercise. The Foxhound carries 4 of the R-33 (AA-9 Amos) long range missiles on the fuselage along with either 1 R-40 or 2 R-60 missiles on each wing pylon.





SU-24 M 'FENCER'	
Role	Ground Attack
Max Speed	Mach 1.6 @ altitude, Mach 1.06 @ sea level
Service Ceiling	36,000 Ft
Gross Weight	83,864 lb
Max Thrust	49,400 lb
Combat Range	332 nm
Armament	GSh-6-23 23mm rotary cannon, 8 hardpoints for variety of AG weapons with 2 hardpoints also capable of accepting AA IR missiles for self defence.
Notable Features	All weather, supersonic ground attack with variable wing geometry.

A Russian SU-24M Fencer photographed on a low level attack mission over Syria. Note the very smokey engines.





SU-25 T 'FROGFOOT' Role **Close Air Support Max Speed** Mach 0.79 **Service Ceiling** 23,000 Ft **Gross Weight** 31,835 lb **Max Thrust** 19,860 lb 40 nm **Combat Range GSh-30-2 30mm cannon, 11 hardpoints for variety of AG weapons Armament** with 4 hardpoints also capable of accepting AA IR missiles for self defence. **Notable Features** All weather, ground attack aircraft - rugged and slow. Distinctive twin pitot tubes on the nose aid ID.

SU-25 T Ground Attack Aircraft. Note the heavy weapons load, the SU-25, like the A-10 is a formidable weapons platform.





SU-27 'FLANKER' Role **Air Superiority Fighter Max Speed** Mach 2.35 @ altitude, 1.13 @ sea level **Service Ceiling** 62,000 Ft **Gross Weight** 51,654 lb **Max Thrust** 55,200 lb **Combat Range** 720 nm **Armament** GSh-30-1 30mm cannon, 10 hardpoints for a variety of modern AA & AG weapons. **Notable Features** Supermaneuverable, highly dangerous adversary. The SU-30 is a two seat, multi role variant

An SU-27 (rear) on the ramp with it's lightweight counterpart the Mig-29 (front). Designed to complement the Mig-29 the SU-27 has a similar design but is considerably larger and is distinguishable through it's wing tip rails.





SU-34 'FULLBACK'	
Role	Strike Fighter
Max Speed	Mach 1.78 @ altitude, 1.2 @ sea level
Service Ceiling	56,000 Ft
Gross Weight	85,980 lb
Max Thrust	60,000 lb
Combat Range	540 nm
Armament	GSh-30-1 30mm cannon, 12 hardpoints for a variety of modern AA & AG weapons.
Notable Features	Two seat strike fighter, with a design based on the SU-27, albeit with a very significant weight gain.

An SU-34 over southern Russia. The Fullback's Flanker roots are clear in the design, however note the side by side two-seat cockpit and the very long tail boom which houses a number of systems including a rear facing radar.





TU-95/TU-142 'BEAR'	
Role	Strategic Bomber
Max Speed	499 Kn
Service Ceiling	45,000 Ft
Gross Weight	376,990 lb
Combat Range	8,100 nm
Armament	AM-23 Autocannon in tail, up to 33,000lb of air to surface missiles
Notable Features	Unusual combination of swept wing and turboprop engines. Powering 8-bladed contra-rotating fully-feathering constant-speed propellers.
	The TU-142 is a maritime & ASW version, noted by it's underbelly ASW suite.

TU-95MS, following an intercept by a flight of Israeil F-16's.





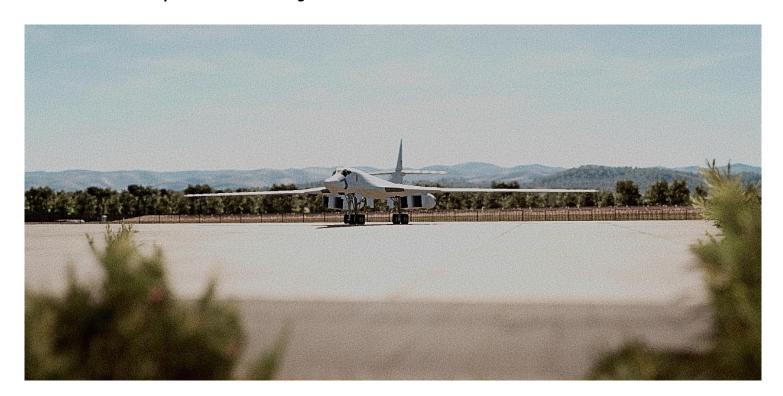
TU-95MS, taxiing out for take-off.





TU-160 'BLACKJACK'	
Role	Heavy Strategic Bomber
Max Speed	Mach 2.05
Service Ceiling	52,000 Ft
Gross Weight	589,957 lb
Combat Range	1,100 nm @ M1.5, 6,600 nm @ M0.7
Armament	Two internal weapons bays - typically used for up to 12 ALCM
Notable Features	Swing wing, variable intake ramps.
	Highly visible as painted in 'anti flash' white to protect the aircraft and crew from thermal radiation following a nuclear attack.

TU-160, photographed on a stop over at Bassel Al-Assad Airbase. Note the similarity to a B-1 Lancer, however the TU-160 presents a much larger radar cross section.





TU-160, photographed over the Arabian Sea by a Navy F/A-18. The white anti-flash paint and large size makes this aircraft easy to identify.





Threat AA Missile Systems

Name	NATO Reporting Name	Seeker Type	Max Range	Speed
R-3	AA-2 'ATOLL'	IR	4 nm	M2.5
R-13	AA-2 'ADVANCED ATOLL'	IR	8 nm	M2.5
R-24R	AA-7 'APEX'	SARH	11 nm	М3
R-24T	AA-7 'APEX'	IR	11 nm	М3
R-27R	AA-10 'ALAMO' A	SARH	27 nm	М3
R-27T	AA-10 'ALAMO' B	IR	22 nm	M2.5
R-27ER	AA-10 'ALAMO' C	SARH	38 nm	М3
R-27ET	AA-10 'ALAMO' D	IR	38 nm	М3
R-33	AA-9 'AMOS'	SARH	54 nm	M3.5
R-60	AA-8 'APHID'	IR	3 nm	M2
R-73	AA-11 'ARCHER'	IR	8.5 nm	M2.5
R-77	AA-12 'ADDER'	ARH	32nm	М3



Credits

SYRIA MAP IMAGE

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SWORD IMAGE

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