



National Space Operations Centre



MONITOR SPACE HAZARDS: TERMS AND CONDITIONS OF USE

Monitor Space Hazards is a platform through which UK-licensed commercial satellite operators and approved UK and international government users can receive SST information as part of a service from the NSpOC. The platform and associated SST services are still under development and will undergo further testing and validation during the service lifecycle. Satellite operators should not rely solely on Monitor Space Hazards as a source of SST information.

In these terms and conditions of use, unless the context otherwise requires, capitalised expressions shall have the meanings set out below.

Terms and Abbreviations

Term	Definition
Administrators	The User who is the main point of contact for each Organisation and who, amongst other things, is responsible for User registration and de-registration to Monitor Space Hazards
CAM	Collision Avoidance Manoeuvre
CDMs	Conjunction Data Messages
Confidential Information	“Confidential Information” means any information, disclosed by one party to another in any way that is designated as being confidential (whether or not marked as “confidential”) or which ought reasonably to be considered confidential
Conjunction	A “Conjunction” is a close approach of two or more space objects
Conjunction Event	A “Conjunction Event” is the situation that may trigger a set of analyses which may produce information related to a single conjunction
Conjunction Alert	A “Conjunction Alert” is a “Conjunction Event” that exceeds established risk thresholds for the Probability of Collision and requires approved government users to be notified
Conjunction Report	A “Conjunction Report” is a report generated by the NSpOC and uploaded to Monitor Space Hazards that provides detailed information on a “Conjunction Alert” to approved government employees
HIE	High Interest Event defined by NSpOC as a close approach detected by the NSpOC when any catalogued RSO has a perceived risk greater than 0.1% of colliding with a UK-licensed object
Intellectual Property Rights	Patents, trade marks, service marks, design rights (whether registrable or not), applications for any of those rights, copyright, database rights, trade or business names and other similar rights or obligations, whether registrable or not, in any country, including, but not limited to, the United Kingdom

Manoeuvre Trade Space Plot	A plot that displays how a range of manoeuvres would impact the expected event collision probability given a manoeuvre strength and time
Monitor Space Hazards	The platform through which UK-licensed satellite operators and approved UK and international government users can receive SST information as part of a service from the NSpOC
NSpOC	National Space Operations Centre
OEM	Orbital Ephemeris Message
Organisation	A body which operates satellites licensed by the Secretary of State for the Department for Science, Innovation and Technology or a government body that is approved to access the platform
Party or Parties	Refers to any given Party or all Parties involved in this agreement, including the NSpOC, Users and Organisations
Personal Data	Means any information which are related to an identified or identifiable natural person as under Article 4(1) UK GDPR
PoC	Probability of Collision
Re-entry Event	A “Re-entry Event” is the return of a space object into the Earth’s atmosphere
Re-entry Alert	A “Re-entry Alert” is a “Re-entry Event” that meets established alerting criteria and requires approved government users to be notified
Re-entry Report	A “Re-entry Report” is a report generated by the NSpOC and uploaded to Monitor Space Hazards that provides detailed information on a “Re-entry Alert” to approved government employees
RSO	Resident Space Object
Service	The services supplied by NSpOC via the Monitor Space Hazards platform to the Organisation and Users, as set out in clause 2 of these Terms and Conditions of Use, as covered by the Space Industry Act 2018
Specified Satellite	The satellite(s) registered to an Organisation for which a User from that Organisation has chosen to receive notifications through <i>Monitor Space Hazards</i>
SST	Space Surveillance and Tracking
TCA	Time of Closest Approach
TIP Message	Tracking and Impact Prediction Message
Track conjunction events	The service through which UK-licensed satellite operators and approved government employees can receive SST information on satellite conjunction events as part of a service from the NSpOC
Track re-entry Events	The service through which approved UK and international government employees and agencies can receive SST information on re-entering objects as part of a service from the NSpOC
UK GDPR	Means Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016, on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation) (United Kingdom General Data Protection Regulation), as it forms part of the law of England and Wales, Scotland and Northern Ireland by virtue of section 3 of the European Union (Withdrawal) Act 2018 (refer to section 205(4))
UKSA	UK Space Agency or any successor organisation
UKSpOC	UK Space Operations Centre
User	Employees and/or approved subcontractors of the Organisation, who have access to <i>Monitor Space Hazards</i>

1. General

- 1.1. The NSpOC reserves the right to change or modify these Terms and Conditions of Use at any time, and without prior notification and will distribute new Terms and Conditions of Use for Users to agree to before any further use of the Service.
- 1.2. The Services shall be provided to Users free of charge. Users will be notified in advance and new Terms and Conditions will be issued if this changes.
- 1.3. The NSpOC shall supply the Services as set out in clause 3 to Organisations and Users.
- 1.4. The process for onboarding Users may change due to the ongoing development of *Monitor Space Hazards*.
- 1.5. Organisations must have a Space Situational Awareness Data Sharing Agreement with US Space Command in place for the duration of the Services in order to access *Monitor Space Hazards*. Organisations, and therefore Users of those Organisations, may have any access to *Monitor Space Hazards* refused or revoked without notice at any time if such an agreement is not in place at any point during the Services, subject to clause 1.6.
- 1.6. Clause 1.5 will not apply if the Organisation is able to provide evidence to the satisfaction of the NSpOC that the Organisation is in the process of obtaining a Space Situational Awareness Data Sharing Agreement with US Space Command for the remainder or duration of the Services.

2. Users

- 2.1. Use of this Service is limited to
 - 2.1.1. Employees and approved subcontractors of organisations that operate satellites licensed by the Secretary of State for the Department for Science, Innovation and Technology.
 - 2.1.2. UK and International government employees and agencies that have been approved to access the Service by the NSpOC.
- 2.2. Each Organisation must have an Administrator who will act as a primary contact with the NSpOC, and who will agree to these Terms and Conditions of Use on behalf of their Organisation. The Administrator warrants and represents that they have authority to enter these Terms and Conditions of Use on behalf of their Organisation.
- 2.3. Each Administrator is responsible for creating log-in details for Users within their Organisation and ensuring that Users have their access to *Monitor Space Hazards* removed if they leave the Organisation or no longer require access.
- 2.4. Organisations, Administrators or Users deemed, by the NSpOC, to have breached these Terms and Conditions of Use may have their access to the Service revoked, without notice, at any time.

3. Services

- 3.1. *Track conjunction events* reports information through the online platform when a HIE is detected involving a User's Specified Satellites.
- 3.2. When a HIE is detected, *Track conjunction events* will report the following information via the online platform:
 - (a) Identity of secondary object;
 - (b) TCA;

- (c) PoC sourced from NSpOC;
 - (d) PoC sourced from Space-Track;
 - (e) Total miss-distance;
 - (f) Radial miss-distance;
 - (g) Event history;
 - (h) Altitude/longitude/latitude, impact velocity and number of fragments;
 - (i) Sources of information used in NSpOC analysis;
 - (j) Techniques used by the NSpOC to calculate probability of collision; and
 - (k) Manoeuvre Trade Space Plot.
- 3.3. Additional analysis will be provided by NSpOC orbital analysts only in relation to events that NSpOC analysis determines breach a probability of collision $\geq 1e^{-3}$. The NSpOC may provide additional analysis in other circumstances at its discretion.
- 3.4. A recent history of events involving Users' Specified Satellites will be stored in *Monitor Space Hazards*.
- 3.5. Users can choose to receive information about Conjunction Events involving all UK-licensed satellites registered to their Organisation or selected UK-licensed satellites registered to their Organisation. These selected satellites will be the User's Specified Satellites.
- 3.6. Users can opt-in to receive a notification by email and/or SMS when a HIE involving one of their Specified Satellites is detected, when information about a HIE is updated, and when a Conjunction Event is no longer deemed to be a HIE.
- 3.7. Users can set additional thresholds for when they receive notifications based on PoC, miss-distance and time to event.
- 3.8. Manoeuvre support is provided via the Manoeuvre Trade Space Plot and shows Users how a manoeuvre of various strengths (by change of velocity), performed at varying time intervals, would likely impact the collision probability of the event. Users must ultimately decide if a manoeuvre is required, when to manoeuvre or the size of manoeuvre.
- 3.9. Certain Government Users will have access to Conjunction Alerts generated when a Conjunction Event exceeds a certain risk and probability of collision threshold. These Users can select whether to receive all Conjunction Alerts, or only priority Conjunction Alerts, and also select to receive notifications by email and/or SMS.
- 3.10. *Track re-entry events* generates reports and alerts through the online platform when a Re-entry Event poses a risk to the UK or UK interests.
- 3.11. When a Re-entry Alert is detected, *Track re-entry events* will report the following information via the online platform:
- a) Identity of re-entering object;
 - b) Risk to the UK;
 - c) Probability of re-entry over the UK;
 - d) UK overflight time (UTC);
 - e) Re-entry time window worldwide (UTC);
 - f) Expected survivability to the ground;
 - g) Licensing country;

- h) Probability of re-entry by UK region and overseas territory;
 - i) Object mass;
 - j) Sources of information used in NSpOC analysis;
 - k) Techniques used by the NSpOC to calculate re-entry probabilities; and
 - l) Re-entry event history.
- 3.12. Re-entry reports may be updated with additional or new information by the NSpOC once reports have been generated and are live.
- 3.13. Users can choose to receive information about all Re-entry Alerts or only priority Re-entry Alerts, or only Re-entry Alerts involving UK satellites. Users are further able to select their areas of interest for Re-entry Alerts.
- 3.14. Users can choose to receive notifications by email and/or SMS when a Re-entry Alert is generated, when information on a Re-entry report is updated, and when a Re-entry Alert has passed.
- 3.15. The NSpOC reserves the right to amend the Services offered if:
- 3.15.1. it is necessary to comply with any applicable law or regulatory requirement, or
 - 3.15.2. the amendment will not materially affect the nature or quality of the Services.
- In either such event the NSpOC shall notify Administrators within 10 working days following the changes.
- 3.16. The NSpOC reserves the right to amend the Services and add new functions to *Monitor Space Hazards* due to the ongoing development of the platform. In any such event the NSpOC shall notify Administrators within 10 working days following the changes.
- 3.17. Users must provide the NSpOC with such information and materials as the NSpOC may reasonably require in order to supply the Services, and use reasonable endeavours to ensure that such information is complete and accurate in all material respects.
- 3.18. The Services shall commence on agreement to these Terms and Conditions of Use by the User, and on the condition that the Organisation has agreed to these Terms and Conditions of Use.

4. Information from *Monitor Space Hazards*

- 4.1. The information available is in part based on information retrieved from www.space-track.org and <https://discosweb.esoc.esa.int>. Information may be supplemented with additional data and analysis. Calculated PoC may vary from predictions issued by other SST providers.
- 4.2. The NSpOC remains the owner of all information provided through *Monitor Space Hazards*, subject to the Intellectual Property Rights of those from whom our data is derived.
- 4.3. Users agree not to disclose, transfer, lease, sell or lend any information received from *Monitor Space Hazards* to any other entity at any time without prior written approval from the NSpOC.
- 4.4. Users agree not to share publicly any information received from *Monitor Space Hazards* without prior written approval from the NSpOC.

- 4.5. All information and reports provided through *Monitor Space Hazards* will have the Government Security Classification 'Official'. Users agree to handle this information in line with the relevant [guidance](#).
- 4.6. If Users download reports from *Monitor Space Hazards*, they agree not to create any product or service substantially similar to them or copy any ideas, characteristics or functions derived from them.
- 4.7. All Intellectual Property Rights in or arising out of or in connection with *Monitor Space Hazards* Services (other than Intellectual Property Rights in any materials provided by the User) shall be owned by the NSpOC.

5. Information from Users

- 5.1. Users can submit information through the *Monitor Space Hazards* online platform including ephemeris data relating to their satellites in OEM format, by email or through the online platform.
 - 5.1.1. OEM files submitted through *Monitor Space Hazards* will not be retained routinely for more than 30 days. Such files may be retained longer if they are connected to an incident, in which case Users will be informed as soon as reasonably practicable.
- 5.2. By using these features, Users agree to authorise the NSpOC to generate SST information and services for the Users of *Monitor Space Hazards* based on information they have provided.
- 5.3. If Users submit information through *Monitor Space Hazards*, the NSpOC is not obligated to use this to conduct further analysis or produce further SST information.
- 5.4. *Monitor Space Hazards* uses essential cookies in order for the service to work. Analytics cookies are used to understand how the service is used and to make improvements. Users can see the cookies that are set and adjust preferences via the cookie policy.

6. Confidentiality

- 6.1. Each Party undertakes that it shall not at any time disclose to any person any Confidential Information concerning:
 - (a) information received by the User from *Monitor Space Hazards*;
 - (b) ephemeris data or other information submitted by Users; or
 - (c) analysis derived from Users' ephemeris data, including that received from a third party.except as permitted by clause 6.2, 6.3 or with prior written approval from the other Party who owns the Confidential Information.
- 6.2. Each Party may disclose the other Party's Confidential Information:
 - (a) to its employees, officers, representatives, contractors, subcontractors or advisers who need to know such information for the purposes of exercising the Party's rights or carrying out its obligations under or in connection with these Terms and Conditions. Each Party shall ensure that its employees, officers, representatives, contractors, subcontractors or advisers to whom it discloses the other Party's Confidential Information comply with this Clause 6; and
 - (b) as may be required by law, a court of competent jurisdiction or any governmental or regulatory authority, provided that the Party whose information is disclosed is

given not less than two (2) business days' prior notice of such disclosure by the other Party.

- 6.3. The NSpOC may disclose Users' Confidential Information to other HM Government affiliated entities.
 - 6.3.1. Where OEM files are shared, affiliated entities will also have a responsibility to comply with data retention requirements as set out in clause 5.1.1.
- 6.4. No Party shall use any other Party's Confidential Information for any purpose other than to exercise its rights and perform its obligations under or in connection with these Terms and Conditions.

7. Contact with the UK Space Agency

- 7.1. Users can contact the NSpOC by email or through the *Monitor Space Hazards* platform.
 - 7.1.1. General correspondence and support emails should be sent to:
monitorspacehazards@ukspaceagency.gov.uk.
 - 7.1.2. Enquiries relating to specific Conjunction Events should be sent via the 'Contact a NSpOC orbital analyst' feature in the Conjunction Event summary page on the *Monitor Space Hazards* platform.
 - 7.1.3. Enquiries relating to specific Re-entry Events or Re-entry Alerts should be sent via the 'Contact the UK Space Agency for more information' feature in the Re-entry Event or Re-entry Alert summary page on the *Monitor Space Hazards* platform.
- 7.2. Communications will be monitored Monday to Sunday, 0800-1600 UK time. Analysts will make reasonable efforts to provide a timely response, but this is not guaranteed in busier periods.
- 7.3. Users are encouraged to submit information regarding a planned or actioned CAM, however, NSpOC orbital analysts will NOT provide advice in relation to potential CAMs.
- 7.4. Users may contact the NSpOC to request further information regarding a specific Conjunction Event or Conjunction Alert. NSpOC orbital analysts may decide but are not obligated to obtain or provide more information regarding a Conjunction Event or Conjunction Alert (e.g., by tasking sensors). This will be based on the particular details of the Conjunction Event or Conjunction Alert and other priorities.
- 7.5. NSpOC orbital analysts may use contact details provided by Users to contact them regarding a Conjunction Event or Conjunction Alert.
- 7.6. Users may contact the NSpOC to request further information regarding a specific Re-entry Event or Re-entry Alert. NSpOC orbital analysts may decide but are not obligated to obtain or provide more information regarding a Re-entry Event or Re-entry Alert (e.g., by tasking sensors). This will be based on the particular details of the Re-entry Event or Re-entry Alert and other priorities.
- 7.7. NSpOC orbital analysts may use contact details provided by Users to contact them regarding a Re-entry Event or Re-entry Alert.

8. Liability

- 8.1. NSpOC shall not be held liable for any costs, damage or loss, whether direct or indirect, howsoever caused, including but not limited to costs, damages, or losses relating to the following situations:

- (a) the lack of or interruption in the provision of *Monitor Space Hazards*;
 - (b) any delay in the provision of information from *Monitor Space Hazards*;
 - (c) any inaccuracy of the information provided through *Monitor Space Hazards*; or
 - (d) any action undertaken in response to the provision of information through *Monitor Space Hazards*.
- 8.2. HM Government affiliated entities and subcontractors will also not be liable either in the above mentioned situations described in Clause 8.1 of these Terms and Conditions.
- 8.3. Users shall have no liability towards the NSpOC, any HM Government affiliated entity, or any third party in relation to its authorised use of the *Monitor Space Hazards* service.

9. Personal data

- 9.1. Users must provide their name, email address and phone number and keep this up to date in the *Monitor Space Hazards* online platform. Administrators will have responsibility for keeping account user records up to date.
- 9.2. Users' personal data may be used for the following:
- (a) to keep a record of agreement;
 - (b) to set up accounts and to enable Users to log in via the 'Auth0' 3rd party authentication service <https://auth0.com>;
 - (c) if they opt-in to receive notifications in relation to Conjunction Events/Alerts and/or Re-entry Events/Alerts;
 - (d) to notify them of any changes to the service; or
 - (e) if a NSpOC orbital analyst needs to contact a User regarding a Conjunction Event/Alert or a Re-entry Event/Alert.
- 9.3. The NSpOC reserves the right to use Personal Data to contact Users in the event of an emergency.
- 9.4. All personal data will be processed by the NSpOC or its subcontractors in accordance with the *Monitor Space Hazards* Privacy Notice in Appendix A hereto.

10. Cessation of services

- 10.1. Administrators must inform the NSpOC if their Organisation no longer wishes to access *Monitor Space Hazards*.
- 10.2. Administrators must inform the NSpOC if their Organisation ceases to operate UK-licensed satellites. Access to *Monitor Space Hazards* will be removed from the date when the Organisation ceases to operate UK-licensed satellites.
- 10.3. The NSpOC reserves the right to terminate the provision of these Services at its complete discretion including, but not limited to, in the event of a breach of these terms by a User or their representative.

11. Law

- 11.1. These Terms and Conditions of Use shall be governed and construed in accordance with English law. The Parties agree to submit to the exclusive jurisdiction of the English courts.

Appendix A

Data Privacy Notice

This notice sets out how we will use your personal data, and your rights. It is made under Articles 13 and/or 14 of the UK General Data Protection Regulation (UK GDPR).

Your data

The data

We will process the following personal data:

Names and contact details, such as (work) email addresses and (work) telephone numbers for Users of *Monitor Space Hazards*.

We process your contact details to send you notifications based on your consent and to fulfil our public task.

Purpose

The purpose(s) for which we are processing your personal data is:

- to set up accounts and enable Users to log in via the 'Auth0' 3rd party authentication service <https://auth0.com>;
- to send notifications to Users in relation to Conjunction Events/Alerts and/or Re-entry Events/Alerts;
- to notify Users of any changes to the service;
- to contact a User regarding a Conjunction Event/Alert or Re-entry Event/Alert;
- to contact a User in an emergency; and
- to keep a record of who has agreed to the *Monitor Space Hazards* Terms and Conditions.

Legal basis of processing

The legal basis for processing your personal data is:

1. **Consent:** You consent to us doing so. Consent is obtained during the registration process through a clear, affirmative action. You can withdraw your consent at any time by contacting monitorspacehazards@ukspaceagency.gov.uk.
2. **Public task:** Processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the data controller, such as the exercise of a function of the Crown, a Minister of the Crown, or a government department; the exercise of a function conferred on a person by an enactment; the exercise of a function of either House of Parliament; or the administration of justice.

The public task or function in this case is to deliver a pilot service to provide Space Surveillance and Tracking (SST) information on satellite conjunction events to operators of UK-licensed satellites and approved government employees, as well as information on re-entry events to approved government employees.

Recipients

Your personal data will be shared by us with: Contractors of the NSpOC including:

- suppliers involved in building and maintaining the relevant software for *Monitor Space Hazards*;
- suppliers providing orbital analysts to the NSpOC;
- suppliers of Monitoring and Evaluation services for the NSpOC SST Project; and
- other contractors who work for the NSpOC through an intermediary.

As your personal data will be stored on our IT infrastructure it will also be shared with our data processors Microsoft and Amazon Web Services.

We may share your personal data if we are required to do so by law, for example by court order or to prevent fraud or other crime.

We may share your personal data with other HM Government affiliate entities if necessary to deliver *Monitor Space Hazards* services.

We have Data Processing Agreements (DPAs) with all contractors, ensuring they adhere to UKGDPR requirements. These agreements mandate the implementation of appropriate security measures and restrict data processing to our instructions.

Retention

Your personal data will be kept by us whilst you are a User of *Monitor Space Hazards*. Personal data relating to your agreement to the *Monitor Space Hazards* Terms and Conditions of Use may be stored indefinitely.

Automated decision making

Your personal data will not be subject to automated decision making.

Where personal data has not been obtained from the data subject

Your personal data may be obtained by us from the Civil Aviation Authority or from your organisation's *Monitor Space Hazards* Administrator.

Your rights

You have the right to request information about how your personal data are processed, and to request a copy of that personal data.

You have the right to request that any inaccuracies in your personal data are rectified without delay.

You have the right to request that any incomplete personal data are completed, including by means of a supplementary statement.

You have the right to request that your personal data are erased if there is no longer a justification for them to be processed.

You have the right in certain circumstances (for example, where accuracy is contested) to request that the processing of your personal data is restricted.

You have the right to object to the processing of your personal data where it is processed for direct marketing purposes.

Where the personal data is processed on the basis of consent:

You have the right to withdraw consent to the processing of your personal data at any time.

Where the processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the data controller, such as the exercise of a function of the Crown, a Minister of the Crown, or a government department; the exercise of a function conferred on a person by an enactment; the exercise of a function of either House of Parliament; or the administration of justice:

You have the right to object to the processing of your personal data.

To exercise your rights (access, rectification, erasure, etc.), please contact our Data Protection Officer at the below contact details . We will respond to your request within one month.

International transfers

Your personal data will be processed in the UK.

Your personal data will not be processed in the European Economic Area (EEA), or by an international organisation.

As your personal data is stored on our IT infrastructure, and shared with our data processors Microsoft and Amazon Web Services it may be transferred and stored securely outside the European Economic Area. Where that is the case, it will be subject to equivalent legal protection through the use of Model Contract Clauses.

Security Measures

We use encryption, access controls, and regular security audits to protect your personal data from unauthorised access and breaches.

Breach Notification

In the event of a data breach, we will notify the Information Commissioner's Office (ICO) within 72 hours and inform affected individuals if there is a high risk to their rights and freedoms.

Complaints

If you consider that your personal data has been misused or mishandled, you may make a complaint to the Information Commissioner, who is a UK independent regulator.

You can make a complaint online at

<https://ico.org.uk/make-a-complaint/data-protection-complaints>

Alternatively, the Information Commissioner can be contacted at:

Information Commissioner's Office
Wycliffe House
Water Lane
Wilmslow
Cheshire
SK9 5AF

Phone: 0303 123 1113

Any complaint to the Information Commissioner is without prejudice to your right to seek redress through the courts.

Contact details

The data controller for your personal data is the Department for Science, Innovation and Technology (DSIT). You can contact the DSIT Data Protection Officer at:

Department for Science, Innovation and Technology
22-26 Whitehall
London
SW1A 2EG

Email: dataprotection@beis.gov.uk

