
Le trou dans la couche dozone continue de se rduire en 2022

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Le trou d'ozone annuel de l'Antarctique a atteint une superficie moyenne de 8,9 millions de miles carrés (23,2 millions de kilomètres carrés) entre le 7 septembre et le 13 octobre 2022. Cette zone appauvrie de la couche d'ozone au-dessus du pôle Sud était légèrement plus petite que l'année dernière et généralement a poursuivi la tendance générale à la baisse de ces dernières années.

"Au fil du temps, des progrès constants sont réalisés et le trou se réduit", a déclaré Paul Newman, scientifique en chef pour les sciences de la Terre au Goddard Space Flight Center de la NASA à Greenbelt, Maryland. «Nous constatons des hésitations à mesure que les changements météorologiques et d'autres facteurs font légèrement varier les chiffres d'un jour à l'autre et d'une semaine à l'autre. Mais dans l'ensemble, nous le voyons diminuer au cours des deux dernières décennies. L'élimination des substances appauvrissant la couche d'ozone par le biais du Protocole de Montréal réduit le trou.

La couche d'ozone - la partie de la stratosphère qui protège notre planète des rayons ultraviolets du Soleil - s'amincit pour former un "trou d'ozone" au-dessus du pôle Sud chaque septembre. Des formes chimiquement actives de chlore et de brome dans l'atmosphère, dérivées de composés produits par l'homme, se fixent aux nuages polaires de haute altitude chaque hiver austral. Le chlore et le brome réactifs déclenchent alors des réactions destructrices d'ozone lorsque le soleil se lève à la fin de l'hiver antarctique.

Des chercheurs de la NASA et de la NOAA détectent et mesurent la croissance et la rupture du trou d'ozone avec des instruments à bord des satellites Aura, Suomi NPP et NOAA-20. Le 5 octobre 2022, ces satellites ont observé un trou d'ozone maximum d'une journée de 10,2 millions de miles carrés (26,4 millions de kilomètres carrés), légèrement plus grand que l'année dernière.

Une vidéo explicative décrivant les principes fondamentaux de ce qui cause le trou dans la couche d'ozone, ses effets sur la planète et ce que les scientifiques prédisent se produira dans les décennies à venir.

Crédits : Centre de vol spatial Goddard de la NASA

Lorsque le soleil polaire se lève, les scientifiques de la NOAA effectuent également des mesures avec un spectrophotomètre Dobson, un instrument optique qui enregistre la quantité totale d'ozone entre la surface et le bord de l'espace - connue sous le nom de valeur totale de la colonne d'ozone. Globalement, la moyenne totale de la colonne est d'environ 300 unités Dobson. Le 3 octobre 2022, les scientifiques ont enregistré la plus faible valeur d'ozone totale de la colonne de 101 unités Dobson au-dessus du pôle Sud. À cette époque, l'ozone était presque totalement absent à des altitudes comprises entre 8 et 13 miles (14 et 21 kilomètres) - un schéma très similaire à l'année dernière.

Certains scientifiques étaient préoccupés par les impacts stratosphériques potentiels de l'éruption de janvier 2022 du volcan Hunga Tonga-Hunga Ha'apai. L'éruption du mont Pinatubo en 1991 a libéré des quantités substantielles de dioxyde de soufre qui ont amplifié l'appauvrissement de la couche d'ozone. Cependant, aucun impact direct de Hunga Tonga n'a été détecté dans les données stratosphériques de l'Antarctique.

Be found - Be connected

Digital marketing refers to any marketing activity that uses digital channels to promote a product, service, or brand. Digital channels include search engines, social media platforms, email, mobile apps, websites, and other digital media. Digital marketing is important because more and more people are spending time online, and businesses need to reach their target audience where they are spending their time.

These are just a few examples of digital marketing strategies. The key to a successful digital marketing campaign is to identify your target audience, select the right channels, create valuable content, and track and measure your results to continually improve your strategy.

SEO

SEO, or search engine optimization, is a digital marketing strategy that involves optimizing your website and its content to rank higher in search engine results pages (SERPs) and drive more organic traffic to your site. The goal of SEO is to make it easier for search engines like Google to understand what your website is about and to provide valuable and relevant content to users who are searching for information related to your business or industry.

SEO is an ongoing process that requires continuous monitoring, tracking, and optimization to achieve and maintain high search engine rankings. It's also important to keep up-to-date with the latest SEO best practices and algorithm updates to ensure that your website stays ahead of the competition.

PPC, or pay-per-click advertising

PPC, or pay-per-click advertising, is a digital marketing strategy that involves placing ads on search engine results pages (SERPs) or social media platforms and paying for each click on the ad. PPC ads are typically shown at the top or bottom of search engine results pages, or within social media feeds, and they are marked as ads to differentiate them from organic search results.

PPC advertising works on an auction system, where advertisers bid on the keywords and phrases they want to target, and the ad platform (such as Google Ads or Facebook Ads) selects the winning ad to display based on a variety of factors, including bid amount, ad quality, relevance, and other factors.

PPC ads can be highly targeted, allowing businesses to reach specific audiences based on demographics, interests, behaviors, and other factors. They can also be optimized for specific goals, such as driving website traffic, generating leads, or increasing sales.

PPC advertising can be complex and requires ongoing monitoring and optimization to achieve the best results. It's important to have a clear strategy, set realistic goals, and continually test and refine your campaigns to ensure they are delivering the best possible results.

Social media marketing

Social media marketing is a digital marketing strategy that involves using social media platforms like Facebook, Instagram, Twitter, LinkedIn, and others to build brand awareness, engage with customers, and drive traffic to your website.

Social media marketing typically involves creating and sharing content, such as images, videos, and text-based posts, that are designed to engage and entertain your audience, promote your products or services, and build brand loyalty. Social media marketing also involves interacting with your followers and responding to their comments and messages.



To be successful in social media marketing, it's important to have a clear strategy, set measurable goals, and consistently create and share high-quality content that resonates with your target audience. It's also important to track and measure your results and continually refine your approach to ensure you are achieving the best possible outcomes.

Email marketing

Email marketing is a digital marketing strategy that involves sending targeted emails to your subscribers or customers to promote your products or services, build relationships, and drive conversions. Email marketing can take many forms, including newsletters, promotional emails, product updates, and more.

To be successful in email marketing, it's important to have a clear strategy and set measurable goals. This involves building a quality email list of subscribers who have opted-in to receive emails from your business, creating engaging content that resonates with your audience, and consistently testing and optimizing your campaigns to achieve the best results.

It's also important to comply with email marketing regulations, such as the CAN-SPAM Act, by including clear opt-out links and contact information in your emails and avoiding misleading or spammy messaging.

Content marketing

Content marketing is a digital marketing strategy that involves creating and sharing valuable, relevant, and consistent content to attract and retain a clearly defined audience, with the goal of driving profitable customer action.

Content marketing can take many forms, including blog posts, videos, infographics, podcasts, social media posts, and more. The key is to create content that provides value to your target audience and aligns with your business objectives.

To be successful in content marketing, it's important to have a clear strategy and set measurable goals. This involves identifying your target audience, understanding their needs and interests, and creating content that aligns with their preferences and expectations.

It's also important to consistently create and share high-quality content that is optimized for search engines and promoted through social media and other channels. This involves creating a content calendar, conducting keyword research, and leveraging analytics and other tools to track and measure your results and continually refine your approach.

Affiliate marketing

Affiliate marketing is a digital marketing strategy where a business partners with an affiliate or publisher to promote its products or services in exchange for a commission on sales or leads generated through the affiliate's efforts. This means that the affiliate promotes the business's products or services on their website or other digital channels and earns a commission for each sale or lead that they refer.

To be successful in affiliate marketing, it's important to choose the right affiliates and build strong relationships with them. This involves identifying affiliates who are a good fit for your business and who have an audience that aligns with your target market.

It's also important to provide affiliates with high-quality promotional materials, such as banner ads and product descriptions, and to track and measure the results of your affiliate marketing campaigns to continually refine your approach and optimize your results. Additionally, it's important to comply with relevant laws and regulations, such as the Federal Trade Commission's guidelines on endorsements and testimonials.

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