

FREE FLIGHT

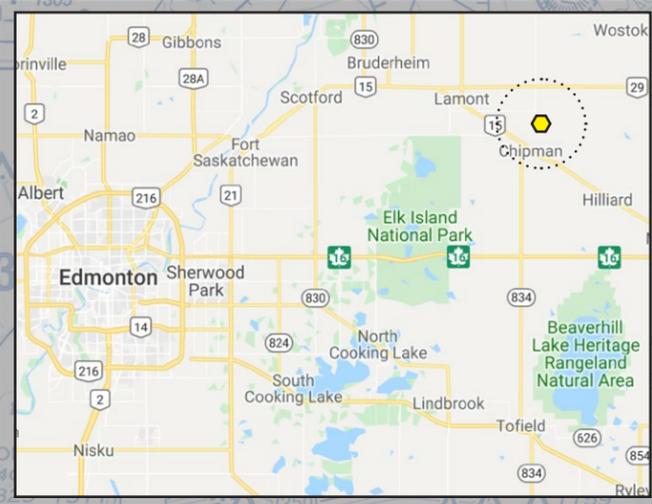
2019 Issue 1





May 27th-June 5th, 2020
Edmonton Soaring Club

Preferential Registration Date:
 April 1st, 2020 @ \$300
 \$400 thereafter
 Registration includes banquet
CM: Thorsten Duebel & Chris Gough
CD: Guy Blood
 Practice: May 25 & 26
 Mandatory Meeting: May 26, 7pm
<http://cdnnats.soaringchampionships.ca/>



Chipman Gliderport
 185020, Township Rd 550
 Chipman, Alberta
 Contest Inquiries:
contest@edmontonsoaringclub.com



The journal of the Soaring Association of Canada
 Le journal de l'Association Canadienne de Vol à Voile

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Editors Note

With 2019 drawing to a close, I hope many of the members of the Canadian soaring community will have the opportunity to open the pages of Free Flight and share in some of the activities and achievements that occurred during the year. As the next editor of our collective magazine, I'd like to acknowledge the work of Doug Scott, Bill Cole, Tony Burton and those who came before.

The focus of this issue is the 3rd FAI Pan American Gliding Championship that took place in Rockton, Ontario during July of this year and was hosted by Sosa Gliding Club. Participants, organizers and volunteers have shared their experiences, perspectives and the sense of excitement that was created for several weeks (well, much longer for many).

Several issues of the magazine are planned for 2020 as Free Flight ramps up the production frequency. The next issue will feature perspectives on recent wave flights in western Canada. Perhaps you have seen some of the traces online or heard details on a gliding focused podcast called 'The Thermal'.

Thank you to all who have contributed content. Please utilize this medium to promote upcoming events, to recognize achievements, to share developments, and to elevate safety.

Around the same time of the championship excitement in Ontario, tragedy struck in Alberta as two of our friends were killed in the midair collision of a towplane and glider at Cu Nim Gliding Club. I believe that our soaring community is would like to understand more about the circumstances that led to the loss of Adam Leinweber and Allan Wood. Importantly, pilots want to apply the learnings to avoid this occurrence in the future. This investigation is ongoing and details will be shared as they become available through official channels. For now, I will end this note holding Adam and Allan in our memories.

Ben Hornett

Cu Nim Gliding Club

Soaring Association of Canada 2020 Annual General Meeting

Date: Saturday, March 21, 2020

Location: Pacific Zone
Canadian Museum of Flight
5333 216 St
Langley Airport, Langley BC

Program: Morning: SAC AGM
Lunch: Awards luncheon for 2019 Annual Trophies and Awards
Afternoon: Safety Seminar - Pilot recurrent training program (CAR 401.05)

Other: Complimentary museum tours, possibility of flying with the Vancouver Soaring Association

SOARING ASSOCIATION of CANADA

is a non-profit organization of enthusiasts who seek to foster and promote all phases of gliding and soaring on a national and international basis. The association is a member of the Aero Club of Canada (ACC), the Canadian national organization representing Canada at the Fédération Aéronautique Internationale (FAI), the world sport aviation governing body composed of the national aero clubs. The ACC delegates to SAC the supervision of FAI related soaring activities such as competition sanctions, processing FAI badge and record claims, and the selection of Canadian team pilots for world soaring championships.

Free Flight is the official journal of SAC, published quarterly.

Material published in free flight is contributed by individuals or clubs for the enjoyment of Canadian soaring enthusiasts. Individuals and clubs are invited to contribute articles, reports, club activities, and photos of soaring interest.

Send e-mail contributions as an attachment in Word or a text file. Text is subject to editing to fit the space available and the quality standards of the magazine. Send photos as unmodified hi-resolution .jpg or .tif files.

Free Flight also serves as a forum for opinion on soaring matters and will publish letters to the editor as space permits. Publication of ideas and opinion in free flight does not imply endorsement by SAC. Correspondents who wish formal action on their concerns should communicate with their Zone Director.

Material from free flight may be reprinted without prior permission, but SAC requests that both the magazine and the author be given acknowledgement.

For change of address contact the SAC office at sac@sac.ca. Copies in .pdf format are free from the SAC website, www.sac.ca

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Board of Directors Update

ASSOCIATION CANADIENNE DE VOL À VOILE

est une organisation à but non lucratif formée d'enthousiastes et vouée à l'essor de cette activité sous toutes ses formes, sur le plan national et international. L'association est membre de l'Aéro-Club du Canada (ACC), qui représente le Canada au sein de la Fédération Aéronautique Internationale (FAI), laquelle est responsable des sports aériens à l'échelle mondiale et formée des aéroclubs nationaux. L'ACC a confié à l'ACVV la supervision des activités véliplanes aux normes de la FAI, telles les tentatives de record, la sanction des compétitions, la délivrance des insignes, et la sélection des membres de l'équipe nationale aux compétitions mondiales.

Free Flight est le journal officiel de l'ACVV publié trimestriellement.

Les articles publiés dans free flight proviennent d'individus ou de groupes de véliplanes bienveillants. Tous sont invités à participer à la réalisation du magazine, soit par des reportages, des échanges d'idées, des nouvelles des clubs, des photos pertinentes, etc.

L'idéal est de soumettre ces articles par courrier électronique, bien que d'autres moyens soient acceptés. Ils seront publiés selon l'espace disponible, leur intérêt et leur respect des normes de qualité du magazine. Des photos, des fichiers .jpg ou .tif haute définition et niveaux de gris peuvent servir d'illustrations.

Free Flight sert aussi de forum et on y publiera les lettres des lecteurs selon l'espace disponible. Leur contenu ne saurait engager la responsabilité du magazine, ni celle de l'association. Toute personne qui désire faire des représentations sur un sujet précis auprès de l'ACVV devra s'adresser au directeur régional.

Les articles de free flight peuvent être reproduits librement, mais le nom du magazine et celui de l'auteur doivent être mentionnés.

Pour un changement d'adresse, communiquez par sac@sac.ca. La revue est disponible gratuitement, en format "pdf" au www.sac.ca.

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Welcome Back

Le conseil d'administration de l'ACVV - SAC est heureux de retrouver la publication du magazine Free Flight / vol libre, maintenant que nous avons trouvé un nouveau rédacteur en chef : Ben Hornett, membre du club de vol à voile de Cu Nim. L'hiver dernier, l'ACVV- SAC avait lancé un appel à tous afin de trouver une personne responsable du contenu ayant comme but de nous garder en contact les uns avec les autres. Ben est désireux de combler cet objectif en cherchant des contributions de nos membres. Vous vous souviendrez que nous avions avions de la difficulté à récolter du contenu intéressant et des nouvelles nécessaires à une publication d'intérêt et utile. Nous avons donc tous un rôle à jouer à cet égard, soit en aidant Ben à nous aider. Réfléchissez à ceci et partagez avec vos collègues de notre communauté les expériences qui méritent d'être connus de tous. Ben vient de terminer le seul numéro de Free Flight / vol libre pour 2019. Selon votre contribution, nous visons trois ou quatre éditions pour 2020.

Et c'est parti !

The SAC board is pleased to have Free Flight / vol libre back in production now that we have found a new editor: Ben Hornett, member of Cu Nim Gliding Club. Last winter SAC sent out a call for a 'content person' to support of all the SAC tools by which we as a soaring community stay in touch with each other. Ben is keen to fill that gap, actively seeking out contributions. As you will recall, we found ourselves challenged to collect all the interesting articles and news items necessary to produce a useful, compelling publication. We each have a role in that, helping Ben help us. Please, each of you, put on your thinking caps, and share with your compatriots across the country. Ben just completed one issue of Free Flight/vol libre for this year; for 2020, with your help, we are shooting for three or four.

Here we go!

Sylvain Bourque - President
George Domaradzki - V-P
Jay Allardyce - Treasurer
Pavan Kumar - Secretary
Bruce Friezen - Pacific zone Director
Paul Parker, S. Ontario zone Director

New Director for southern Ontario

Paul Parker is the new Southern Ontario Zone Director. He obtained his power pilot's license at 18, but turned to gliding as soon as he could. He studied in Australia and joined the Canberra Gliding Club in 1983, becoming an instructor in 1986. He then moved to England where he instructed at Lasham Gliding Club. Returning to Canada, he took a 16 year break while his children were young and then joined SOSA where he enjoys instructing and flying cross-country. In 2018 he won the club class at the Canadian nationals and then flew in the PanAmerican Gliding championships in 2019. Sharing solar powered flight is a passion.

UN SF28 au SAGUENAY

Pascal Mourgues



La première machine du nouveau club CVVS sera un motoplaneur SF28 - Pascal Mourgues

Pour la saison de vol à voile 2020, le nouveau Club de vol à voile Saguenay - CVVS, pourra voler sur leur première acquisition qui est un motoplaneur allemand Scheibe SF28, fabriqué en 1985. Ce biplace en tandem est motorisé par un moteur Limbach de 1700 cc développant 65cv. Très économique, consommant 10 litres à l'heure d'essence automobile, son réservoir de 40 litres lui confère une autonomie de 4h. Le SF28 a une finesse de 28 à 1, une fois le moteur arrêté et l'hélice mis en drapeau.

Un motoplaneur pour commencer les activités au CVVS

Pascal Mourgues, le créateur et responsable du CVVS a franchi une étape importante en cette fin d'été 2019.

Après plusieurs mois à essayer de trouver des solutions pour démarrer le club CVVS avec un planeur et devant le fait que les 6 autres adhérents n'aient pas fait l'objet de mise de fonds conséquente, Pascal a décidé d'investir personnellement dans l'achat d'un planeur. Le CVVS n'ayant toujours pas trouvé de champs de vol, bien que des démarches soient établies et acceptées auprès de la municipalité de St Ambroise, situé dans la région de Saguenay, il était difficile d'aborder des propriétaires de terrains agricoles sans posséder de planeur ni d'avion-remorqueur. Il faudra certainement plusieurs années afin que les divers organismes acceptent l'activité du vol à voile sur un champ agricole.

Devant cette évidence qui de l'œuf ou de la poule a commencé, Pascal devait donc penser

différemment s'il voulait que le CVVS s'envole.

Le CVVS avait divers éléments acquis, soit une adresse de son siège social situé sur l'aéroport de St-Honoré à même le hangar des Pilotes Associés où siège également l'Association des Pilotes du Saguenay Lac St Jean (APSL) qui regroupe 100 membres, tous issus du monde de l'aviation de loisirs. L'aéroport de St-Honoré (CYRC) dispose de 3 pistes en triangle d'une dimension de 150' x 6085' pour la plus grande. Le trafic aérien y est très important du fait que le Centre Québécois de Formation Aéronautique - CQFA ainsi que les écoles de pilotage Cargair et ExactAir soient basés à même ces installations. Également, cet aéroport a un espace aérien contrôlé de classe D avec utilisation de transpondeur. Ces deux gros inconvénients ne permettent pas d'y intégrer les opérations d'un avion-remorqueur et d'un planeur standard. Devant ces contraintes, le CVVS se devait afin de pouvoir avoir une activité de Vol à Voile, de trouver un compromis pour l'achat d'une machine permettant alors un dispositif d'envol incorporé, double place pour l'école ou les vols double, facile d'entretien, facile à piloter et peu coûteux en entretien. C'est alors que l'évidence allait vers un motoplaneur, simple, de début pour démarrer l'activité vol à voile.

Un SF28 français au CVVS

Début aout 2019, mon ami d'enfance Laurent Savoie, un pilote de planeur possédant plusieurs milliers d'heures à son actif, membre du club de Vinon du sud de la France et propriétaire d'un joli ASH25, me texte le message suivant :

Salut Pascal, Vinon vendrait possiblement son SF28... accompagné d'une photo de la bête.

Ni une, ni deux, je réponds à Laurent, si le prix est compris entre 10 et 15 000 euros, je prends.

Laurent qui savait que je cherchais un SF28, après avoir essayé un SF25 côte à côte en février 2019 dans le centre de la France que je n'avais pas aimé pour son assise inconfortable, me fit passer les coordonnées de l'actuel président du club de Vinon, Noël Faucheux. Je laissai donc un message à Noël, en mentionnant que j'avais eu vent qu'éventuellement le SF28 de Vinon serait à vendre et que je lui en proposais 10 000 euros, en prétextant que notre club en démarrage n'avait malheureusement pas plus d'argent que cela pour démarrer. La plupart des motoplaneurs SF28 affichés sur planeur.net étaient entre 16 et 18 000 euros. 15 jours plus tard, je n'avais toujours pas de réponse de Noël. Je lui réécrivis pour savoir s'il avait bien pris mon courriel en note. Noël me répondit 2 jours après qu'il ne m'avait pas répondu, car devant l'offre de prix faite, le club de Vinon ne pouvait le vendre, car la qualité de cette machine était A1 et qu'à ce prix il préférerait encore voler dessus.

Je devais me rendre à l'évidence que si je voulais pouvoir acquérir un SF28, je devais augmenter un peu l'offre, surtout que devant les éléments que Noël m'apporta, je me rends vite compte que ce SF28 est vraiment en très bon état malgré ces 4230 h de la cellule. La peinture est parfaite, de plus très originale, avec une anecdote dont je reviendrais plus tard. Le moteur

à 250h, il vient d'être refait et lui reste donc un potentiel de 750h. Son hélice qui est aussi en début de potentiel avec 190h.

Le club n'ayant pas les fonds alors tant pis, je décide de faire le grand saut, je fonce, j'investis personnellement, et je ferais ce que les clubs français font la plupart du temps avec les planeurs privés, je mettrais ce motoplaneur à disposition du club, sous la formule CONVENTION DE MISE A DISPOSITION D'UN PLANEUR PRIVÉ. Cette convention permet à son propriétaire de voler sans payer les heures de vol de son propre planeur tout en ayant la priorité sur son planeur pour le voler quand il veut avec certaines dispositions quand même. Quant au CVVS, ce dernier n'a aucune location de planeur à payer au propriétaire. Par contre le club doit assurer la machine, doit le garer à l'abri et réaliser l'entretien comme si le planeur appartenait au club. Cela permet alors une entente gagnant-gagnant qui de plus renforce les liens du club et son propriétaire à voler et partager ensemble l'actif volant.

Tous les adhérents y compris le propriétaire paient leurs cotisations au club. Les heures faites par les autres membres, autres que le propriétaire reviennent en totalité au club. Cela permet au club en démarrage de pouvoir compter sur des personnes ayant les moyens d'acheter une machine, et de mettre de l'argent dans les caisses de l'association, et permet ainsi sa prospérité et son développement.

C'est cela un vrai club... l'amitié et le partage.

J'ai toujours vécu dans un club en France depuis ma plus tendre enfance, j'avais possiblement 5 ou 6 ans que mon père m'amenait déjà à bord de vieux Nord 1300, fauve AV22, ou bien encore M200.

Le soir après les vols tels un bon gaulois, nous partageons un bon repas, et les anecdotes des pilotes furent nos soirées. On n'avait pas de bardes qui chantaient au club, mais la grivoiserie y allait de bon cœur. À 15 ans avec l'âge de voler je fis mes premières armes sur Bi-jave, super javelot, Ka6, Ka8, topaze et les bêtes de course du début des années 80, tels Twin Astir et Astir de Grob, Ls1, Ls1D, cirrus, et celui ou j'ai le plus d'heures le libelle standard.

DÉPART POUR VINON

Fin aout de cette année, billet Air Canada en poche, je décolle de Bagotville pour Montréal, puis Lyon direct. Je prends une voiture de location et je descends de suite à Romans sur Isère, le club de mon enfance, de mes parents. Le samedi soir en famille après les vols, petit apéro au club de vol à voile. Cela permet de jaser avec les amis de longue date. Ils avaient bien volé ce jour-là, la météo était superbe et ils ont fait de nombreux km sur les Alpes.

Le dimanche en fin de matinée, nous allons avec ma mère, elle aussi pilote planeur et avion, prenons la route pour le club de St Jean en Royans. Ce petit club est au pied de la combe Laval.

On rejoint le mari de ma mère qui lui est le

président du club vol moteur, mais aussi pilote remorqueur et pilote planeur à Romans.

Ce dimanche le soleil est brûlant, la masse d'air est chaude et étouffante, pas un cumulus dans le ciel, possiblement que du thermique pure, thermique bleu comme on dit ici au Québec.

Devant cette chaleur, une seule chose à faire : se mettre à l'ombre sous les arbres à côté du bar de l'Aéro club et partager un bon petit pique-nique avec les amis du vol moteur.

Après cette petite fin de semaine à me promener sur mes terrains de prédilection, il faut aller au boulot, car ma semaine s'annonçait chargée.

Le lundi matin je souhaite aller voir un SF28 en vente dans le sud-ouest de la France, à 4h de voiture par des routes tortueuses du centre. Comme à cette saison fin aout il fait encore très beau en France, j'avais décidé un peu à l'avance que j'irais en avion au départ de Romans sur ce petit club de St-Afrique avec mon beau père et ma mère.

Lundi matin, 8 heures du matin...

Nous étions donc déjà au club de Romans à sortir le DR400, remorqueur, pour faire cette nav vers St-Afrique.

Le vol s'est très bien passé et on a pu voir le SF28. Malheureusement celui-ci était en révision, le moteur démonté et n'ai pas donc pu le tester. Il a moins d'heures que celui de Vinon et moins cher, mais il manquait un peu d'amour.

Après un bon petit repas avec la présidente du club de St-Afrique, nous redécollions pour un retour en survolant le pont de Millau.

Rentré au terrain à Romans, après une belle journée et 2h30 de vol environ aller-retour, la journée se termina en remplissant les carnets de vol et rentré le matériel, puis retour à la maison.

Le mardi matin je commence à descendre sur Vinon, je ne me presserais pas et en profiterais pour faire une petite halte sur le terrain de vol à voile d'Aubenasson, où mon père y passe son temps l'été. Lui aussi pilote, mais ayant arrêté de voler depuis une année ou 2.

Terrain vide, je rencontre quand même 2 chums, je jase un peu avec eux, mais ils doivent partir, la journée ne sera pas bonne vélocitément parlant, donc je continue ma route vers Vinon, en passant successivement près des terrains d'aspres sur Buech, ou je vois un planeur bien bas sur la pente. Il a du mal à monter et je m'arrête pour l'observer. Il réussit à prendre le large et me revoilà de nouveau parti, je longe le terrain de Serres, terrain de Klaus Ohlmann.

Klaus Ohlmann est un pilote de planeur allemand qui a établi 36 records du monde approuvés par la FAI. Parmi ceux-ci est le record pour un vol de distance libre jusqu'à 3 tours points en volant 3 009 km de l'aéroport Chapelco à San Martin de los Andes (Argentine) dans un Nimbus Schempp-Hirth 4 DM le 21 janvier 2003 avec son copilote Karl Rabeder. Il a également battu le 9 janvier 2003 le record

de distance libre de Hans-Werner Grosse, qui avait duré plus de 30 ans, par un vol de 2 247,6 km dans un Schempp-Hirth Nimbus 4 DM à El Calafate en Argentine.

Le 1er février 2014, il est devenu le tout premier pilote de planeur à survoler le mont Everest.

Il est membre du Mountain Wave Project de la section météorologique de l'OSTIV. Voler dans des conditions houlomotrices est son fort. Klaus vit dans le sud de la France, près de Serres, où il possède un centre de planeurs appelé Quo Vadis, réputé pour ses vols guidés dans la région.

Source : https://en.wikipedia.org/wiki/Klaus_Ohlmann

Et n'hésitez pas à surfer sur son site <https://www.klaus-ohlmann.com/>

34 kilomètres après Serres, me voilà à Sisteron et je décide de passer par la vieille ville. Surnommée « la Porte de la Provence », elle confine au nord le Dauphiné. Sisteron possède de nombreux monuments dont sa citadelle face au rocher de la Baume dont les strates sont presque verticales, une cathédrale du XIIe siècle, Notre-Dame des Pommiers, cinq tours, plusieurs chapelles et les vestiges d'anciens couvents. Sisteron est une ville qui accueille de nombreux touristes attirés par son climat méditerranéen, avec une moyenne annuelle de 300 jours de soleil, son patrimoine riche et varié, son plan d'eau ou son aéroport de Vaumeilh, je reprends après la vieille ville l'autoroute A51, me permettant de rejoindre plus rapidement Vinon, qui n'est plus qu'à une soixantaine de kilomètres avec tous de même au milieu, au bas de la montagne de Lure, le fameux centre de vol à voile National de St Auban où des pilotes du monde entier sont un jour venus pour certains être formé pour les vols dans les Alpes par nos moniteurs, salariés de l'état français afin de former ces derniers. Le CNVV exploite 25 planeurs et 7 remorqueurs. Elle y forme également ces champions du monde tels que de grands noms du vol à voile tels que Gerard Pierre en 1954, François Louis Henry en 1965, Marc Schroeder en 1981, Jean-Claude Lopitiaux et Jacques Aboulin en 1989 respectivement dans la classe libre et la classe standard, Gilbert Gerbaud en 1993 en classe 15m, Eric Napoléon en 1995, puis un triplé en 1997 avec Gerard Lherm en libre, Jean Marc Caillard, mon ami dit Chacha en standard et Frédéric Hoyeau en classe mondiale. En 1999, mon ami Chacha, Jean Marc Caillard, remet cela toujours dans la même classe, ainsi que Julien Henry, le petit fils de François Louis Henry. Ensuite jusqu'à ce jour pas moins de 11 titres de champions du monde français ont été enregistrés ce qui fait de la France et surtout dans cette région du sud, la seconde nation mondiale de vol à voile.

Ma route se termine enfin à Vinon, ou je vais enfin découvrir le SF28.

Notre première machine du club du CVVS dont l'acte de vente a été signé le 30 aout 2019...

Calgary is a

BIG

Patrick McMahon

WAVE

Place

Having been provided clearance into Class B airspace at Chester's discretion about 100 minutes and 260km prior, pilots in Canada's first Arcus M—a self launching, cutting edge, two seat motorglider with a 65' wingspan—were surprised to be asked by a controller from Edmonton Centre:

“ZWW, how much further are you planning on flying that heading?”

“Edmonton Centre, ZWW would like to fly another 20 miles”

“ZWW, just so you know, you are approach-

ing the main descent route into Calgary from Vancouver”

“Edmonton Centre, we can descend out of Class B immediately”

“ZWW - you are ok, there is no traffic inbound. Just include this in your route planning in the future.”

“ZWW”

The Arcus added a few more miles to the flight. The sun had long gone behind the boiling mass of clouds to the west, and we didn't want to overstay our welcome in controlled

airspace. We turned to the left and headed back to Black Diamond - achieving 335 km/h over the ground assisted by the strong west wind which made the whole flight possible.

Pilots Chester Fitchett and Patrick McMahon found themselves in this airway, further north than anticipated in order to extend their flight distance beyond 1000km as scored through a platform for soaring pilots around the world known as the OLC. This December flight would eventually become the 15th best in the world on a list of the top 50 where 46 launched in

south central Africa, and 3 in Australia. Outside temperature on the ground was -6C when the Canadian flight launched - a much more extreme and unforgiving climate by comparison to competitors in the warmer climates in the southern hemisphere.

The day hadn't started well. The nearly one-ton airplane and crew self launched just after sunrise, it's owner Chester in the front, and Patrick in the back. Chester piloted his airplane to nearly 9000 feet west of Turner Valley, 5300 feet above the Cu Nim Gliding Club airfield when the engine was retracted. The rising air was not sustained, and the engine was deployed again to move further west and higher—now 9900' before the engine was packed, and the airplane transformed into one of the most efficient and aerodynamic machines ever produced.

The winds were strong, and there was a massive arch cloud for as far as the eye could see—a consequence of strong westerly winds aloft, and the abrupt transition from mountain to prairie below. Clouds like the Chinook Arch exist upwards of 40000', are massive, and alive. The wave flying epicentre in Canada is located at Cowley, AB (since the 1950's and chronicled in 'Stalking the Mountain Wave') and has been an exercise in world class climbs, and a pioneering spirit.

Chester's interest in soaring was deep enough to get a gliding license, buy a single seat motorglider, build a hangar, order the ultimate machine (considered by many to be the best glider in the world), build another hangar, and wait patiently for C-FZWW to arrive.

For the determined, Cu Nim has a gliding season that stretches year-round, with the possibility of performing massive cross-country flights any week of the year. April to June has excellent thermal soaring on the prairies - traditionally this has been the meat and potatoes of cross country from the field. During May to August, the Rocky Mountains become a limitless playground if you can reach them. September to March is when mountain wave

soaring dominates.

The Arcus is the right instrument to exploit the tremendous power of the lee wave of the Canadian Rockies, at its most powerful time of the year—winter. Gliders are unheated and the atmosphere cools at about 3C per 1000 feet of height gained. Taking off in -6 Celsius and climbing 14000 feet in December without the opportunity to move around for up to 8 hours requires careful planning to avoid frostbite, or worse, having to end the flight prematurely.

Once the wave was found, the flight outcome was far from certain. Patrick, in his first wave flight expected to be back on the ground in twenty-five minutes when faced with 120 km/h winds once the engine was packed. Chester flew the plane into the wind to find ribbons of lift running parallel to mountain peaks and the 1700 lb airplane began to climb. As they climbed, winds continued to increase beyond 130 km/h. Slowing down in pockets of stronger lift had the effect of moving the glider backwards over the ground while flying at 120 km/h through the air. They pushed the nose down to gain some speed on the wind and turned ever so slightly toward the south to work their way to better conditions and a higher airspace ceiling. Flying WSW (8 o'clock) to travel south (6 o'clock) was disorienting, and the view ahead was a morass of undulating clouds—some smooth, some twisting, and visibly rotating.

The pilots had been limited by the airspace above them and had to use spoilers to disrupt the air over the massive wings. They would be used for nearly 25% of the flight in order to stay under airspace limits. As they moved south, new airspace was reached, the spoilers closed, speed increased, lift was utilized, confidence acquired, and the aircraft began moving south in earnest as it climbed 5000 feet in 7 minutes and accelerated over the ground.

Wave patterns in air with decent humidity create clear indicators of where lift will be. Clouds cascade over the peaks of mountains and disappear down the eastern slopes, de-

scending rapidly. A gap between clouds creates a channel of clear air before a 'rotor' cloud is formed away from the mountains. A time-lapse of these clouds shows them rotating like a corkscrew with air rapidly going up on their west side, over and down the east side of the formation. Pilots need to account for the impact of the wind and slide the glider along these ribbons of lift that stretch from New Mexico to beyond the Northwest Territories depending on how the wind is crossing the backbone of North America, the Rocky Mountains.

Soaring flights are scored based on the longest 6 legs (plus a consideration for a triangle within) within the recorded GPS trace. To maximize distance and avoid unnecessary paperwork (beyond a flight plan—very rarely required in gliding) Chester and Patrick ideally wanted to fly back and forth from the US border to about NW of Turner Valley three times. This is a dream, the recipe for a nearly 1,500 km flight.

Now covering ground to the south, the first leg was cut short over Castle Provincial Park as the complete cloud cover and no identifiable features of lift forced the pilots to turn back, and head north. Eventually, they would run back into lower airspace west of Claresholm. With full spoilers (enough to bring the glider down at 1500 feet per minute) the pilots could only maintain altitude below the airspace limit while racing through a channel between clouds. They started to fly faster and despite the strong winds were now really moving over the ground (about 150 km/h). Patrick made an 85-degree banked turn to mark the end of the leg and abruptly transitioned to the second southbound leg. When the Arcus' 20 m wings rolled level, they found a more inviting route as the air was already beginning to dry out and the morass of clouds began to open up with identifiable wave channels toward Waterton National Park and the US border.

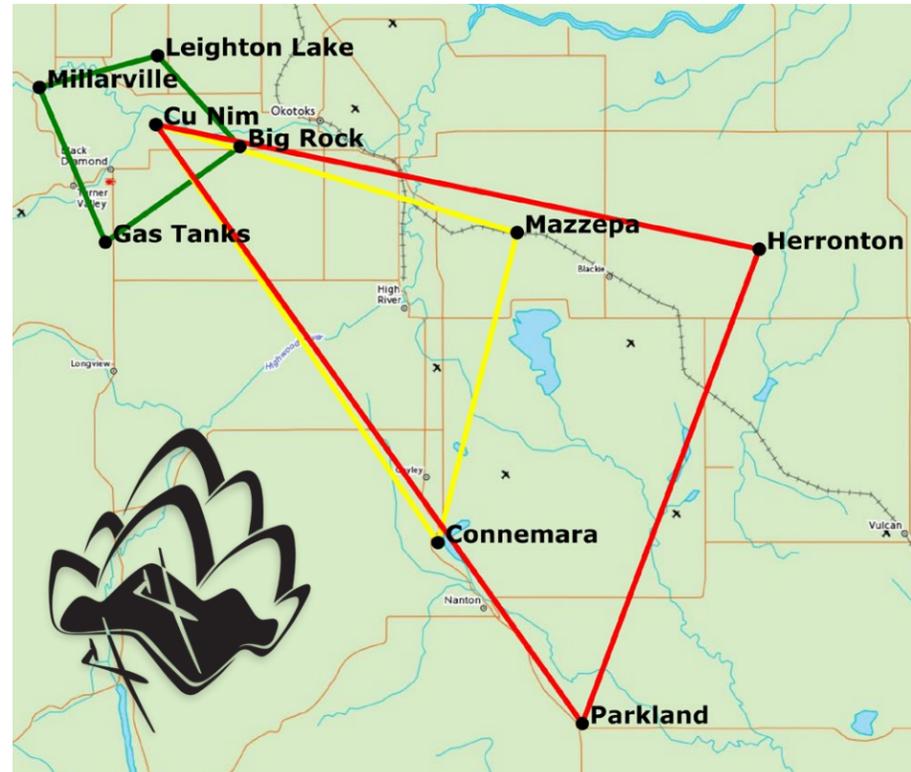
This run to the south would cover 173km at an average speed of 232km/h. Now things start-

...continued on page 38



Motivating Task Based Flying

The Proving Grounds Team - Casey Brown, Chris Gough, Patrick McMahon



PROVING GROUNDS

- Start cylinder cap = 7500MSL
- Start/Finish = 2km cylinder
- Turnpoints = 2km cylinders
- Min finish height = 4700MSL

Racetrack		Task 2	Task 3
Millarville	Start	Cu Nim	Cu Nim
Leighton Lake	Leg 1	Connemara	Parkland
Big Rock	Leg 2	Mazzepa	Herronton
Gas Tanks	Finish	Cu Nim	Cu Nim
50.1 km	Total Dist.	103.9 km	160.8 km

At the time of this writing, a dozen Canadian gliding clubs have taken the offer from SAC to have a Proving Ground setup for their club. That's up from one, Cu Nim, this time last year! As a tool, the Proving Grounds seeks to motivate task based flying, with specific consideration for pilots taking their first steps away from the field, and the early XC pilot to fly deliberate tasks.

Before technical enhancements made between the 2018 and 2019 soaring seasons, the Proving

Grounds was setup at Cu Nim with three tasks, which built on each other - designed to develop XC capacity, provide a common language of task flying to the novice pilot, and to ensure early time building pilots were flying over generally safe terrain. In order to create a social competition, ranking boards were installed and flight times were manually evaluated and posted in the clubhouse. The platform launched in 2018, and the soaring season ended early due to an active wildfire season, but there were

lots of questions on the few tasks which were flown - specifically how to score them. The interest in the tasks, and the pain of manually scoring flights motivated the development of an automated scoring system, which became the foundation for the Proving Grounds tool now being deployed across Canada.

We think many clubs face the same challenges as Cu Nim, how to keep pilots interested, how to develop pilot skills safely, and how to manage a development program without over-burdening the more senior members. The Proving Grounds tool seeks to address this challenge with a package of three key elements:

- 1) The development of progressive tasks specific to each club
- 2) An email portal that offers automatic and near instantaneous scoring of flight traces against tasks
- 3) Physical hardware to showcase flight results and display them socially

Most clubs took delivery of their kits late in the 2019 season and we've heard of excitement, attempts and some early success - but also that clubs are looking forward to 2020 to gain real experience and unlock the value to their respective clubs. Alberta clubs had their kits early in the soaring season, and all clubs (four) have had at least one successful task flown. Feedback has been great so far. Dr. Jason Acker, CFI at Edmonton Soaring Club shared early, profound feedback:

"Proving Grounds was what we needed to motivate members to head out on a cross country task. Since implementing the program three weeks ago, we have already recorded 5 successful completions of our triangles and have had many members make attempts. Successfully completing a triangle has been very satisfying for members as we compete for who has the fastest time. But more importantly, those that have not been successful have used the opportunity to work with our instructors and senior members to understand what they did wrong to invalidate their flight (missed a turn point, missed a start / finish cylinder height) or what they need to work on to avoid getting low and having to turn back to the field.... or land out.

In only 3 weeks, I have seen members who were very happy to spend hours in the local club thermals, decide to venture out and attempt one of the triangles.... only to have their first successful landout. Giving our members a common cross country goal, appears to have been the missing piece that our cross country program needed at ESC!

Proving Grounds has injected a significant amount of excitement into the club and we are

very happy to see the response our members have had to this very easy to manage program."

At Cu Nim, there's a growing sense of competition to own the top spot on the tasks from existing XC pilots, while student pilots who have completed the 49km 'Racetrack' during soaring development flights have a visible sense of pride when they add their name to a 'trophy' with their mentors. The competitive aspect, with a public record has created a really interesting drive among even our pre-solo pilots.

The scaled tasks (e.g.: ~50km around the airfield, ~100 km moving away, and a 150 km real cross country triangle) are showing value already. New bronze or pre-bronze pilots may be exploring the local task, but by flying multiple laps they are starting to build the skills and confidence towards the larger tasks. Competing for fastest lap times can give that novice cross country pilot those learning opportunities that come from misjudging a cloud or thermal, all within a close distance of the airfield. Experienced pilots may take on a larger task "just for fun" on days where the conditions don't support longer flights, or on the way out and way back from even larger triangles on the prairies.

It's worth highlighting the mechanics of how this works. The hardest part is the initial task definition, and that's not particularly hard. Some clubs come with pre-existing tasks, and some look for our help to define tasks. Either way, we work with the club to develop a set of tasks. Once defined, the scoring tool is configured to evaluate these tasks, along with club specific configuration options. After that it is just a matter of club members emailing their

.igc flight traces to the scoring tool. The flight is evaluated against the club tasks, and a response is emailed back, usually within one minute, with scoring information. The pilot can then take the information and post it on the club

Scoring Cu Nim tasks

Completed RACE-Millarville in 0:42:26

- Hit Millarville at 22:22:01
- Hit Leighton Lake at 22:28:59
- Hit Big Rock at 22:34:18
- Hit Gas Tanks at 22:49:32
- Hit Millarville at 23:04:28

Flight passed near the following waypoints

- 22:01:25 to 22:02:58 near: Cu Nim
- 22:20:07 to 22:22:02 near: Millarville
- 22:28:59 to 22:29:55 near: Leighton Lake
- 22:34:18 to 22:38:13 near: Big Rock
- 22:49:32 to 22:51:13 near: Gas Tanks
- 23:00:40 to 23:01:02 near: Cu Nim
- 23:04:28 to 23:05:05 near: Millarville
- 23:11:02 to 23:14:28 near: Cu Nim
- 23:16:38 to 23:18:09 near: Big Rock
- 23:24:06 to 23:25:34 near: Cu Nim

Other Flight Info

- Take off detected at 22:01:25 UTC
 - Off tow detected at 22:02:15 UTC
 - Take off pressure alt is 1125.0m (3691ft)
 - Altitude correction is -2.8m (-9 ft)
- Done scoring 2019-06-09-XCS-AAA-02.igc

Proving Grounds board. After the initial setup, no further club member time is required.

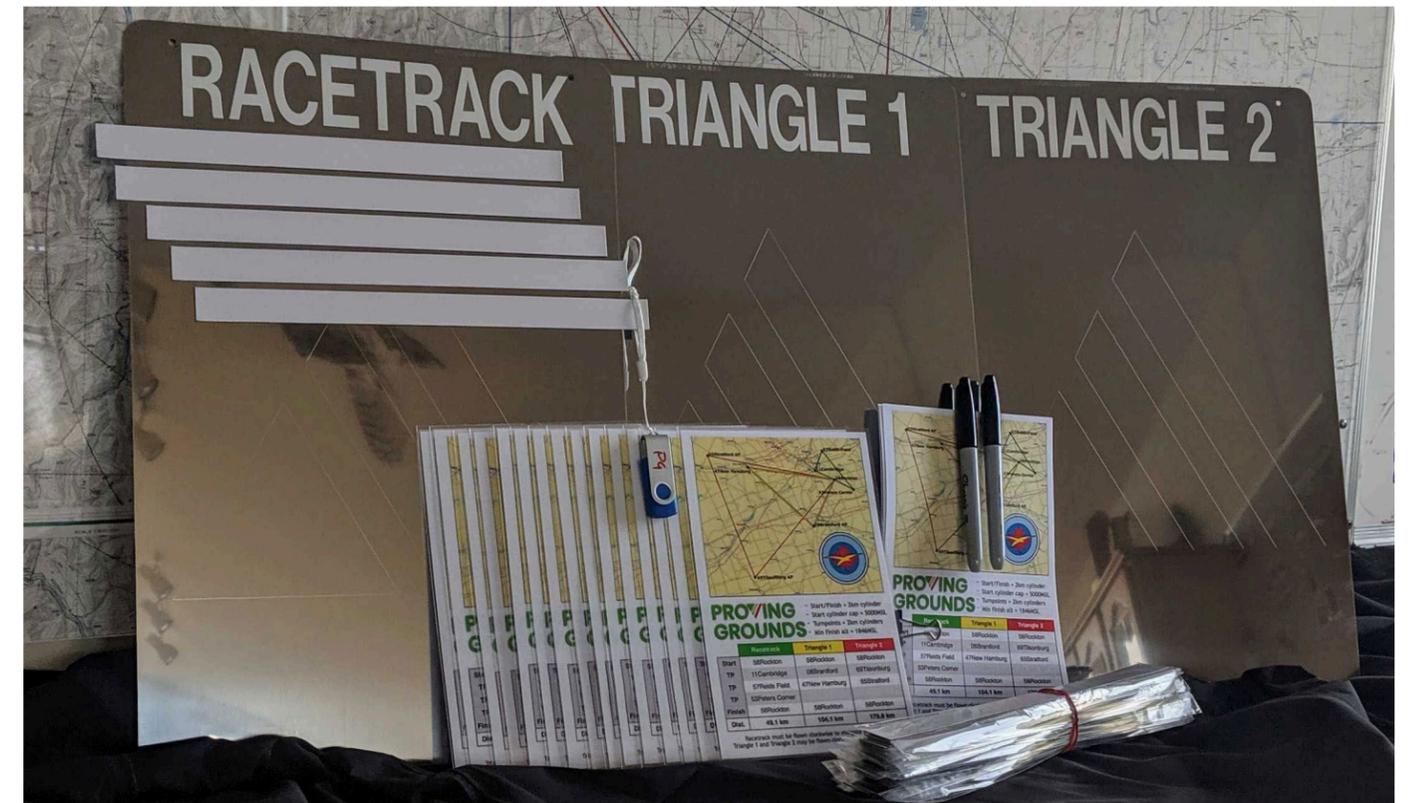
Members at Cu Nim are already talking amongst themselves about ways to add more excitement around the Proving Grounds. Talk of getting a sponsor for each task and the top time through the year earns a prize, or throwing in \$5 or \$10 at the start of the weekend and the top time on a task through the weekend takes the pot.

Chances are good that your clubs has this toolset to start the 2020 season - if you don't please reach out. The platform is available in French and English and SAC has committed to covering setup and the first 3-years of subscription fees (\$50/year). If the platform demonstrates the value intended, SAC will consider ongoing funding if clubs validate the benefit of the platform for member development, retention, satisfaction.

Please, encourage its use, share feedback, and ask your tenured pilots to consider adding their names to the task boards - either through their own flying, or mentoring flights to enhance the value to the novice pilot who yearns for the opportunity to celebrate their personal milestones which are often overshadowed by the experienced members posting to the OLC.

We will be looking to grow this solution, seeded with the support of the Alberta Soaring Council and Soaring Association of Canada into the US through 2020.

Have a safe, fun, and outcome oriented 2020 flying season. Thanks for your support in establishing an instance at your club!



Sounds of Soaring

Promotional

The Thermal Podcast is new, noteworthy and Canadian made. The shows are plus/minus an hour long and can be downloaded from your favourite podcast provider. Great listening on your way to and from the gliding club. The content includes everything from interviews with record breaking pilots to WW2 combat glider operations.

One of the more fascinating interviews is with the Perlan Project's chief pilot Jim Payne. He describes in detail his record-breaking flight to 76-thousand feet over Southern Argentina in Antarctic wave.

Some of the interviews have information every pilot can use. In Episode #2, Herrie interviews Mr. Parachute...Allen Silver of Silver Parachutes. Is your parachute past it's best before date and do you carry survival equipment? If you don't you, probably will after listening to Allen.

Canadian pilot and CuNim member Chester Fitchett is also on The Thermal. He describes his amazing wave flights along the Canadian Rockies and into the US. That's on Episode #5.

The show's host and producer is Herrie ten Cate, a long-time member of the SOSA gliding club. He's a former CBC Radio producer who describes the podcast as the gliding

version of CBC Radio's *As it Happens*. A bit of something for everyone.

"I realized I could put my journalism skills to use by making a podcast aimed specifically at glider pilots and the sport of soaring. Podcasting is a new medium to many, but the skills required are essentially old school radio."

There's also a segment called Gliding Club Confidential where you can hear about the details of gliding clubs from Argentina to the Netherlands. If you want to profile your club on The Thermal, get in touch with Herrie at thethermalpodcast@gmail.com

Episode #7 of The Thermal will be out in early December. It will include a story about a remarkable flight in 1958, from central England, across the Channel and deep into Holland. There will also be an interview with Andrew Blum - the author of a new book called "The Weather Machine".

New episodes of The Thermal are released by the 1st Saturday of every month. For more details of what's coming up, check out The Thermal Podcast's page on Facebook.

Herrie is also looking for story ideas to keep the show going. At the moment, The Thermal Podcast has been downloaded over 5000 times...not bad for a new podcast.



Sporting Code

FR Calibration Requirements - Tony Burton

The Cowley fall camp was fortunate to have one good wave day before the snow fell and didn't go away. There were Diamond climbs to apply for, which resulted in a question about what to do about the use of an uncalibrated FR.

The notes and instructions on the first page of the badge claims application form states the Sporting Code requirement (SC3-2.4.6) that an FR, if it has a pressure sensor, or an FR must be calibrated 5 years prior or 2 months after the flight. However, SAC has provided a little relief in that the Badge Chairman may accept a claim if the height gain is significantly higher than the minimum (150m for a Silver climb and 250m for a Diamond). This was put into place before there was any such relief in the Sporting Code.

Since 2015 however, the Sporting Code (in 2.4.3b) now allows GPS height data to be used with an additional 100m on the minimum in lieu of pressure data, but only for Silver or Gold climbs. A Diamond climb will require a

calibrated FR/PR. So from now on, when the revised badge application form is posted, a calibration will be necessary for Diamonds.

By the way, in the olden days, measuring the height involved using a pair of dividers on a physical trace. The OO might be tempted to do something like the same thing by moving the cursor to the digital high and low points indicated on the tiny OLC barogram, and reading off the displayed height values. This is way too crude for accuracy. If you don't happen to be using a flight analysis program, open the .igc file in a text program, scroll down to the approximate times of interest, then search for the fixes that recorded the min and max heights of interest, then adjust these values by the calibration error at those heights. Finally, because no pressure reading is ever actually as precise as the sensor suggests, round the value down to the nearest 10m (see 1.6 in the SC3 OO & Pilot Guide).

CARs Update

602.03 No person shall act as a crew member of an aircraft

(a) within 12 hours after consuming an alcoholic beverage; **N E W**

(b) while under the influence of alcohol; or

(c) while using any drug that impairs the person's faculties to the extent that the safety of the aircraft or of persons on board the aircraft is endangered in any way.

Flight Training and Safety Committee

FTSC Chairman - Dan Cook

FTSC has been discussing the "I can not Release" signal on aerotow as we have received some observations of difficulty with the exercise. In the examples we have been given there have been some back releases from tow rope, tow ring strikes on the canopy or fuselage as the glider turns right to avoid the tow plane. It has also brought in the question if the signal is safe and necessary that all the aircraft are equipped with radios and whether it should be dropped from the training and Flight test evaluation. The issue may be a normalization of deviation situation. In each exercise repetition, the instructors have exaggerated the position to the left to get the tow pilot's attention because the students barely moved to the left and this became more normal until problems started occurring?

FTSC has also brought the discussion to the OSTIV Training and Safety Panel (TSP) for discussion. The signal is internationally recognized as it is a back up to communications failure or at clubs that use the signal first and radios second due to frequency congestion. The latter has not been an issue with most Canadian clubs. TSP has not reported any similar issues in other countries with this signal. The consensus is that the exercise is safe and a good alternate method to radio first. The issue may be in how the exercise is being demonstrated by instructors and performed by pilots. If the swing to the left of the tow plane is too aggressive or too far left and the glider has less drag than a SGS 2-33 it is easy to accelerate too fast and create too much

slack in the tow line leading to a back release. The swing out must be done slowly as in the boxing the wake exercise and should be a follow on exercise from box the wake exercise as holding the position requires substantial left rudder. How to identify the proper position can be difficult. From the glider's perspective the pilot can line up the tow plane's right landing gear with the tail wheel for an approximate 45 degree angle. If the tow rope back releases during the exercise, a right turn out for the glider may be delayed until there is sufficient distance from the tow plane to clear the tow rope. Air brakes may be required to slow the glider. If you are also having problems with this exercise and the explanation does not provide the fix, please let FTSC know.

See and Avoid. There have been 7 fatalities in last few years in mid-air collisions. Many may believe that their flawless scan technique and understanding of blind spots will protect them and that PowerFLARM may not be necessary. In Switzerland, where FLARM was developed, after many years of glider to glider fatalities, this accident rate has dropped to zero! The last three mid airs in Canada have been glider/glider, GA/glider, and tow plane/glider. Let's take a closer look at our procedures, policies, and priorities. If you think it can't happen to you, think again. I have lost three friends and excellent pilots all of them experienced instructors.

Motor glider operations with GPL and new Requirements for TMG. FTSC has sent a letter to all CFIs and Club Presidents identifying that

TC has agreed that Motor gliders can be flown with a GPL and method of launch endorsement signed by an instructor familiar with the method of launch. Additional MG and TMG training requirements have been promulgated to clubs by FTSC to address concerns expressed by TC. The current regulations for MG endorsement will not be changed for the time being.

National Safety Program Safety Audits and Safety Program Manuals have been submitted as part of the safety grant programs over the last few years. Clubs should review these documents annually to identify changes and improvements. Many of the Safety Program Manuals are more in line with a club operations manual. This document should focus more on how the club is going to implement safety, assign responsibilities, and identify how safety issues will be followed up. Does your manual identify your process for hazard identification, risk analysis, and mitigation process? Who at the club does what, when and how? This will help identify your club safety culture.

At the National Level the club incident reporting has improved exponentially and has helped the NSO, David Donaldson, identify trends and make recommendations in the SAC annual safety report. I hope these reports generate good discussion at the club's annual pilot meetings. Keep up the good work as these incidents give us a good insight into what can and should be done.



Photo ©Luke Szczepaniak

On Approach

Alberni Valley Soaring Association - Nicholas Lutsch

Beautifully situated in the heart of Vancouver Island lies Canada's most Westerly Gliding Club, the Alberni Valley Soaring Association (AVSA). Humbly equipped with a sole PW-5, what the club lacks in a fleet of rental gliders, we make up with excellent facilities, prized scenery, steady thermal and ridge lift con-

ditions, a favourable climate and all-around charm. A quick tow behind the 160-horsepower Piper Pawnee provided by the Vancouver Island Soaring Center will immediately reveal the stunning vista of mountains, lakes and oceans. To the Northeast lies the Beaufort Range, spanning over 20 nautical miles from Port Alberni to Comox lake. Southwesterly facing, the range gets the best from both direct afternoon sun and prevailing winds, resulting in

seemingly effortless ridge soaring opportunities throughout the summer. All along the valley is a spectacular selection of lakes, including Elsie, Great Central, and Sproat Lake where the famed Martin Mars water bombers can be seen. Upon reaching 6000 feet, one can clearly see both sides of Vancouver Island with the Pacific

Ocean gleaming to the West and the Strait of Georgia to the East. Should the conditions render ridge soaring unsuitable, the valley floor consistently hosts ample thermal activity and mountain waves are known to appear in the shoulder seasons. On the downside, with the abundance of natural beauty comes the vast expanses of forests which make suitable fields for out-landings a scarcity. Naturally, this inhibits particularly ambitious cross-country attempts, but no one

said that Port Alberni was the place to come to set distance records. However, upon returning from the day's soaring, the still-grinning pilot is greeted with a 5000 foot-long paved runway that makes for some of the most enjoyable landing experiences one could ever hope for in a glider. Still, as far as records go, I believe with some conviction that if ever there were a record for "most touch-and-go's in a single glider flight", that Port Alberni would be a strong contender for choice location.

Despite runway dimensions designed to accommodate B737s, traffic at the airport is infrequent and, without a doubt, gliding operations comprise the majority of flying in the area. There is something truly surreal about being at such a facility and seeing so little activity. Indeed, we have seen bears and other wildlife saunter across the approach (surely an uncomfortable day to be the only wing-runner). Even so, these moments of stillness are fashionably interspersed with the occasional arrival of a water bomber for maintenance, or a Buffalo from Comox dropping off some of Canada's finest search and rescue technicians for parachute training. In fact this general aviation traffic makes flying gliders in the Alberni Valley that much more vibrant. General aviators has always been very friendly about giving us extra space when needed.

It has been a simply stunning season out here in the valley and I encourage anyone interested to come out and play with us next season. Visiting pilots are welcomed and the PW-5 is often available. Alternatively, consider a flight in the two-seater PW-6 operated by the Vancouver Island Soaring Center. The charming town of Port Alberni has a lot to offer and the famed Tofino is a popular destination only an hour and a half from the airport.



Use the Whole Day

Developing Competitive Pilots - Luke Szczepaniak

The recent PAGC held at SOSA gliding club was a fantastic event. Good organization, good tasking, and the unprecedented streak of good weather made the contest a memorable one. Through the complexities of the team scoring formula the Canadian team came in third; this does not reflect the performance of the team. We owned the podium in 18m class, took 1st in 15m/Std combined class, and took 3rd in Club class. The performance of our pilots moved Canada up six spots on the IGC country ranking list, placing us seventeenth in the world, above both Argentina and the USA. While this is a fantastic achievement, it will be difficult to maintain let alone improve our position.

The biggest problem is that the World Gliding Championship contests are the only place for our pilots to gain real international experience. When we show up at a WGC, our pilots are learning to fly the European style on the spot with 120 other gliders in the air. It took me the first three contest days at Benalla just to understand what was going on at the start line and in the gaggles, the next three days were spent trying not to get frustrated by the gaggles and how to use them. By the time I was starting to get the hang of it the contest was over. From my chats with Sergei his experience was similar; he called it shock therapy. This is not something you can teach, it must be experienced.

The European pilots experience this kind of flying multiple times per year, starting with junior national contests and can develop quickly. The costs are much cheaper. The pilot gets in a car, tows a club class glider from their home country to Germany, or Poland, or Czechia, or France and camps at the field. They learn the area, the tasking, the weather and gain experience. For the fortunate few North American

pilots that get to go, this happens once every two years and it involves renting a car, renting or shipping a glider to another continent, and paying air fare (approx. \$15k CAD, not counting food, accommodation, Team Captain expenses, entry fee, tows, meals). There aren't many of us because it takes a long time just to qualify for the team (roughly 10 years of dedicated competition flying). You need to be able to afford to go, you need to justify this expense to yourself and your family, and you need the vacation time to go. By the time we get to that point we are usually a lot older than the average European pilot at their first WGC and we don't have as many years to develop, not to mention that spending this kind of money every 2 years on top of the other contests you have to fly to be competitive adds up very quickly.

Thanks to the advantages, the competitive level in Europe is higher. There are a lot of clubs close together so there are more pilots per class. Even regional contests have many more pilots per class and there are a lot of high-level pilots in all glider classes, giving the less experienced pilots opportunity to learn and develop. Clubs have more, and better equipment. They are willing to let pilots use club gliders in a contest even away from the home club. Private owners are less reluctant to rent their gliders to others. All this has a snowball effect, by flying more frequently with faster pilots the less experienced pilots become faster, and in turn can help those who are less experienced than they are. In the past 15 years the Canadian team has seen the competitive level of our pilots rise tremendously. We were able to do this by being mentored by the previous team members and flying as many US and Canadian contests as possible. At this point however, if we want to get to the next level, the quickest way is to train

and gain more experience by flying in Europe. It goes without saying that this is prohibitively expensive.

What are some other options? How do we get more of our pilots the experience necessary?

Adopting IGC rules, at least the "no less than 1/3 task type" guideline, would be a good start. North American contests usually don't have many assigned tasks while the more balanced European approach promotes pilot development. Some pilots prefer area tasks as they allow one to be more creative and independent. In theory, they also reduce leaching. Unfortunately, not flying many assigned tasks slows down pilot development; we end up flying mostly alone, and we can't compare performance directly.

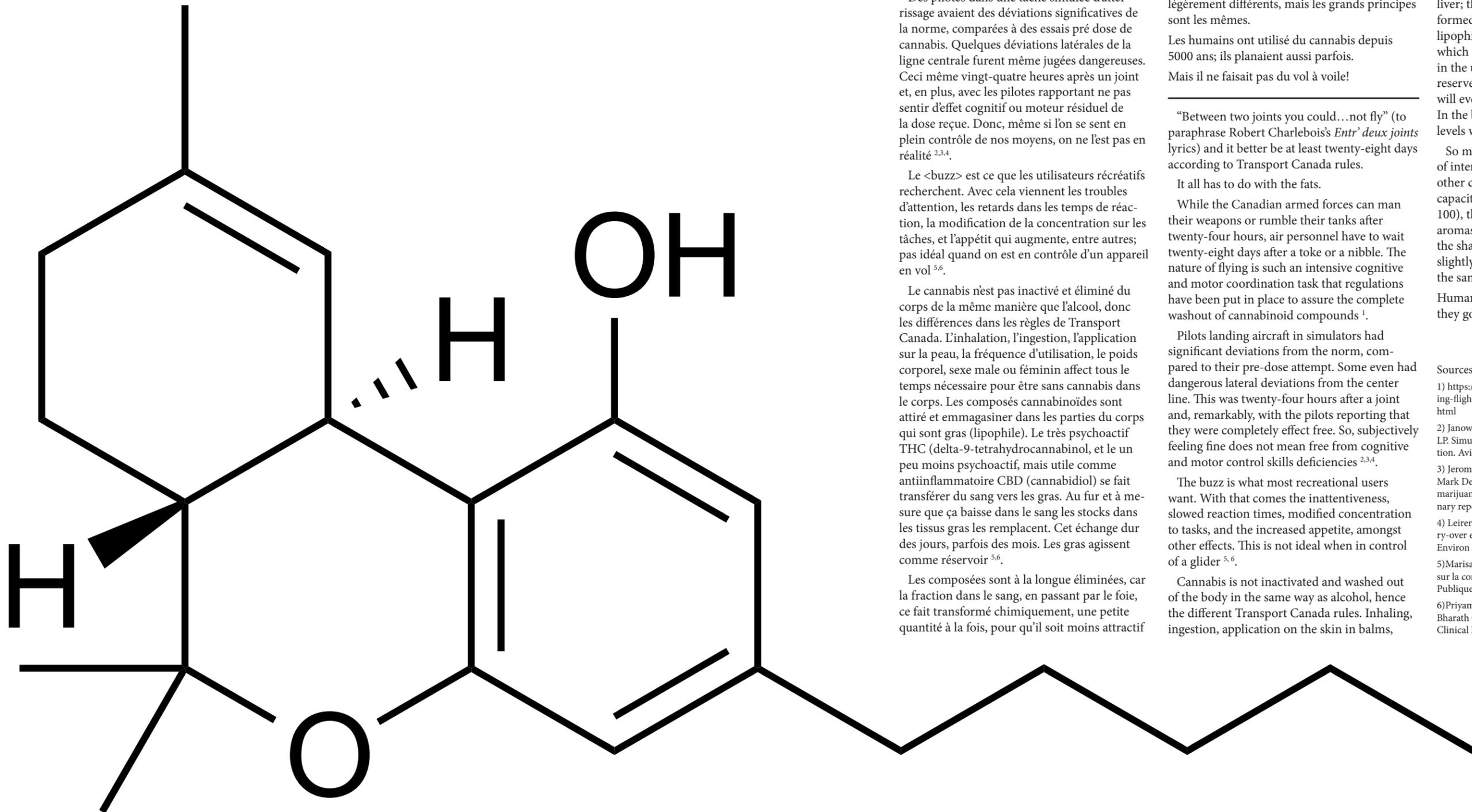
We could allow for communication between pilots in our contests. I would have been against this, if I hadn't experienced it at the Polish 15m Nationals in 2018. There are some negatives; pilots will form teams and will be at an advantage. However, even by just listening in, the less experienced pilot gains a lot. The pilot will hear good information about the weather, deviations, path choices, climb rates, and other observations. Hearing the decision-making process of the more experienced pilots brings the novice up to speed more quickly.

The most important factor however, would be tasking that maximizes the day. Most North American contests typically under-call the day; the weather predictions are less certain, the launches take longer, the gap in glider performance in a given class is wider, the pilots don't want to deal with land-outs. The main goal seems to be to get everyone around the task rather than to get the most out of the day. If we want to do well at the world level, we need to use the day in its entirety.





Guy Thériault, MD



« Entre deux joints tu pourras...pas voler » (pour paraphraser les paroles de Robert Charlebois) et il devra s'écouler au moins 28 jours, selon les règles de Transport Canada.

Cela a tout à faire avec les gras.

Dans les forces armées canadiennes les chars d'assaut peuvent vrombir et les armes manipulées après vingt-quatre heures, mais le personnel de vol doivent attendre vingt-huit jours d'un joint ou une bouché. La nature des tâches de pilotage est d'une telle intensité cognitive et de coordination motrice que des règles ont été mises en place pour s'assurer d'une élimination complète des composés cannabinoïdes ¹.

Des pilotes dans une tâche simulée d'atterrissage avaient des déviations significatives de la norme, comparées à des essais pré dose de cannabis. Quelques déviations latérales de la ligne centrale furent même jugées dangereuses. Ceci même vingt-quatre heures après un joint et, en plus, avec les pilotes rapportant ne pas sentir d'effet cognitif ou moteur résiduel de la dose reçue. Donc, même si l'on se sent en plein contrôle de nos moyens, on ne l'est pas en réalité ^{2,3,4}.

Le <buzz> est ce que les utilisateurs récréatifs recherchent. Avec cela viennent les troubles d'attention, les retards dans les temps de réaction, la modification de la concentration sur les tâches, et l'appétit qui augmente, entre autres; pas idéal quand on est en contrôle d'un appareil en vol ^{5,6}.

Le cannabis n'est pas inactivé et éliminé du corps de la même manière que l'alcool, donc les différences dans les règles de Transport Canada. L'inhalation, l'ingestion, l'application sur la peau, la fréquence d'utilisation, le poids corporel, sexe male ou féminin affect tous le temps nécessaire pour être sans cannabis dans le corps. Les composés cannabinoïdes sont attiré et emmagasiner dans les parties du corps qui sont gras (lipophile). Le très psychoactif THC (delta-9-tetrahydrocannabinol), et le un peu moins psychoactif, mais utile comme antiinflammatoire CBD (cannabidiol) se fait transférer du sang vers les gras. Au fur et à mesure que ça baisse dans le sang les stocks dans les tissus gras les remplacent. Cet échange dur des jours, parfois des mois. Les gras agissent comme réservoir ^{5,6}.

Les composées sont à la longue éliminées, car la fraction dans le sang, en passant par le foie, ce fait transformé chimiquement, une petite quantité à la fois, pour qu'il soit moins attractif

au gras (moins lipophile), qui les rend plus faciles à être éliminés dans l'urine et les selles. C'est comme votre réserve d'altitude en vol plané (excuser le jeu de mots); ça va finalement se rendre à zéro, l'altitude d'atterrissage. Dans le sens biochimique, les niveaux des cannabinoïdes sont non mesurables.

Ça c'est pour les deux ingrédients majeurs d'intérêt, on n'a même pas touché les autres composés qui ont des effets sur nos capacités : les autres cannabinoïdes (plus que 100), les terpènes (qui donnent aussi les différents arômes), ni les flavonoïdes (également responsable des différentes teintes de vert dans les produits). L'élimination de ceux-là prend des chemins légèrement différents, mais les grands principes sont les mêmes.

Les humains ont utilisé du cannabis depuis 5000 ans; ils planaient aussi parfois.

Mais il ne faisait pas du vol à voile!

“Between two joints you could...not fly” (to paraphrase Robert Charlebois's *Entr' deux joints* lyrics) and it better be at least twenty-eight days according to Transport Canada rules.

It all has to do with the fats.

While the Canadian armed forces can man their weapons or rumble their tanks after twenty-four hours, air personnel have to wait twenty-eight days after a toke or a nibble. The nature of flying is such an intensive cognitive and motor coordination task that regulations have been put in place to assure the complete washout of cannabinoid compounds ¹.

Pilots landing aircraft in simulators had significant deviations from the norm, compared to their pre-dose attempt. Some even had dangerous lateral deviations from the center line. This was twenty-four hours after a joint and, remarkably, with the pilots reporting that they were completely effect free. So, subjectively feeling fine does not mean free from cognitive and motor control skills deficiencies ^{2,3,4}.

The buzz is what most recreational users want. With that comes the inattentiveness, slowed reaction times, modified concentration to tasks, and the increased appetite, amongst other effects. This is not ideal when in control of a glider ^{5,6}.

Cannabis is not inactivated and washed out of the body in the same way as alcohol, hence the different Transport Canada rules. Inhaling, ingestion, application on the skin in balms,

frequency of use, body weight, female or male sex all affect the timeline to be cannabis free. The cannabinoid compounds are attracted to the fatty parts of the body (lipophilic). The very much psychoactive THC (short for delta-9-tetrahydrocannabinol) and the less psychoactive but useful as an anti-inflammatory CBD (cannabidiol) will get transferred from the bloodstream to the fats. As the levels go down in the bloodstream, the levels in the lipids (those fats) will replace them. This exchange goes on for days, sometimes months. The fats act as a reservoir ^{5,6}.

It all gets eventually washed out as the blood-borne ingredients fraction passes through the liver; the compounds are chemically transformed, by small amounts, to make them less lipophilic (they do not go to the fats as easily) which makes them it easier to be eliminated in the urine and feces. It is like your altitude reserve when soaring high (pardon the pun)—it will eventually go to zero, your landing altitude. In the biochemical sense, the cannabinoid levels will eventually be unmeasurable.

So much for the two principal ingredients of interest, we haven't even touched on the other compounds that have effects on our capacities: the other cannabinoids (more than 100), the terpenes (they also give the different aromas), or the flavonoids (also responsible for the shades of green). The washout routes are slightly different, but the general mechanism is the same.

Humans have used cannabis for 5000 years; they got high too. But they did not soar then!

Sources

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Antenna Placement

PowerFLARM Effectiveness - George Haeh

We owe it to ourselves to examine the effectiveness of our PowerFLARM installations and remedy deficient installations.

Flarm Technology on its website in its comprehensive Support section offers an Application Note on antenna placement:

<https://flarm.com/wp-content/uploads/man/FTD-041-Application-Note-FLARM-Antenna-Installation.pdf>

and a Flarm Range Analyzer:

<https://flarm.com/support/tools-software/flarm-range-analyzer/>

Careful attention must be paid to the Application Note when installing Flarm antennae. When enough flights with traffic have been performed, the Range Analyzer needs to be performed to verify the installation. If deficiencies in range are seen, the antenna configuration should be changed, and subsequent range analysis performed.

Data Collection

Casey Brown and I at Cu Nim collected PowerFLARM IGC files from participating aircraft at the abbreviated Summer Cowley Camp. Flarm Technology has kindly received these files and returned spreadsheets with a large volume of detection data that will take considerable time to analyze.

In the meantime, application of the Flarm Range Analyzer shows quite a large variation of effectiveness among gliders and the towplane.

Range Analysis Results

The following range analyses are paired with photos of the antenna installations.

ASW-19

Note that the range and antenna mount at the top of the glareshield are both lopsided. Possibly the bottom of the dipole is touching the glareshield contrary to the Application Note.

ASW-27 - Single Flarm A Standard Antenna

This historic example is the only one not produced at the 2019 Cowley Summer Camp. It is included for contrast to the current dual antenna installation in the same glider in the next example. The glider is carbon fiber which blocks RF transmission; so, the standard Flarm A antenna was mounted just below the canopy through an opening in the glareshield. The recommended minimum range (green line) is not quite satisfied.

ASW-27 - Dual Flarm A & B Long Antennae

A Core 1.1 was installed with Flarm A and B long (137mm) antennae on both sides of the canopy. Foam blocks are fixed to the canopy and the antennae are attached with Velcro®

to allow canopy jettison and removal for maintenance. The ADS-B antenna is similarly attached. For those interested in having transponders, an internal L2 antenna is mounted through an opening in the glareshield.

This configuration seems to produce the best coverage and merits consideration for new and upgrade installations.

Dual Antenna Transmit Delayed by Innovation, Science and Economic Development Canada

In Europe both Flarm antennae can transmit. Unfortunately, Innovation, Science and Economic Development Canada has not yet approved this innovation. Without approval from ISED, transmission blind spots will persist and the avoidable hazard that two PowerFLARM equipped aircraft in each other's transmission blind sector will get unacceptably close without warning continues unabated.

DG-303

Coverage directly ahead may be obstructed by rudder pedals, tow hook and pilot feet. The dipole tips may not have adequate clearance from the instrument binnacle.

DG-1000

The front antenna is connected to the Flarm A port (transmit/receive) and has good range. The lead does not leave the antenna at the recommended 90° angle, which may contribute to the asymmetry of coverage. The stub antenna is on the B (receive only) port between the pilots and fails to add coverage. Note the poor coverage directly to the rear. The pilot(s), batteries and tail ballast are in the way. Possibly rear coverage could be improved by an antenna on the side of the rear canopy.

Grob-103

The antenna is mounted on the left nose cone ahead of the rudder pedals. Range directly ahead is impaired by the tow hook mechanism. Behind and to the right, range seems obstructed by the pilots. A second standard length antenna has been added to the front canopy rail, but we don't yet have enough flights with other traffic to determine the difference. In the off season, we plan to replace the antennae with two long antennae on the bow between the canopies, similar to the successful example of ASW-27 - Dual Antennae

Towplane

As with the DG-1000, a remote antenna of standard length is connected to the A port and mounted on a steel structural tube by the rear seat. The performance is abysmal (mea culpa). The A range hardly shows on the graph. The stub antenna on port B shows better reception

to the left, likely because it's mounted on the left glareshield. That said my PowerFLARM on the ground showed the towplane some 2 km away on one occasion.

The critical case for a towplane is ahead and below, especially on descent. Neither antenna covers this vital sector.

Any antenna placement on a towplane must find a view unobstructed by pilot, engine, and other large metal components such as structural members, skin and fuel tanks.

At a minimum the Flarm A port should be connected to an external antenna on the bottom. Perhaps a long antenna mounted on a rear window would provide adequate coverage above.

Moving Forward

The wide variation in effectiveness shows that clubs and private owners need to run the Flarm Range Analyzer and revise antenna configuration if range is inadequate.

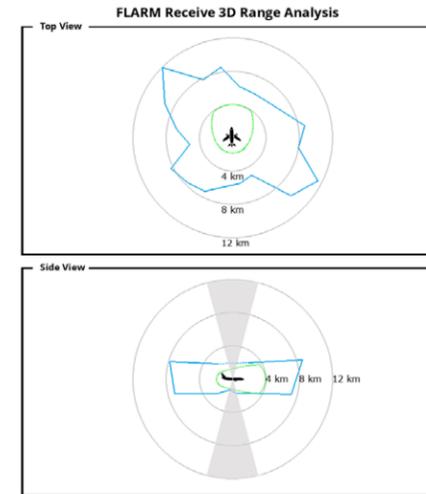
Mounting on the sides of the canopy using both A and B ports seems to be the best solution for gliders.

Antenna Options

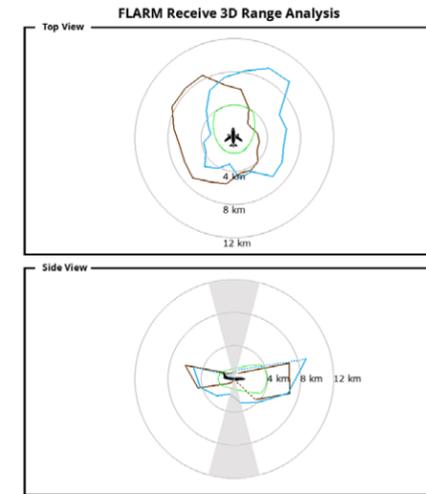
Long antennae can be obtained for \$20 US.

External antennae cost \$215 US and will need a separate coax for approximately \$50.

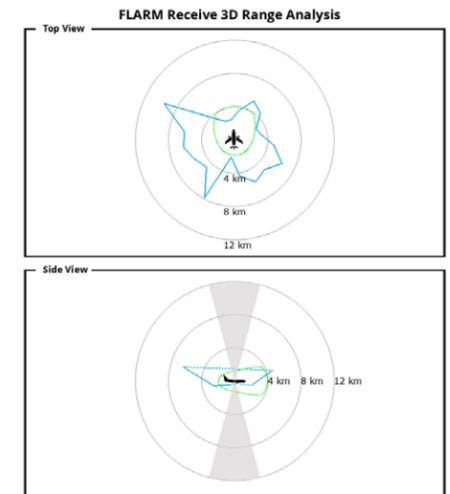
Early PowerFLARM units supported both antenna ports. The second Flarm antenna must be purchased. With later units, activation of the second antenna is an extra cost option: \$155 US or €125 directly from Flarm.com.



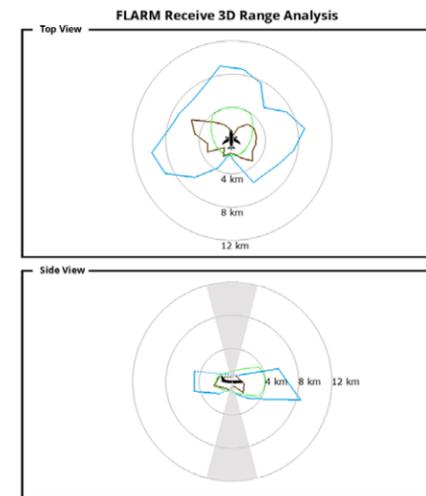
ASW-19



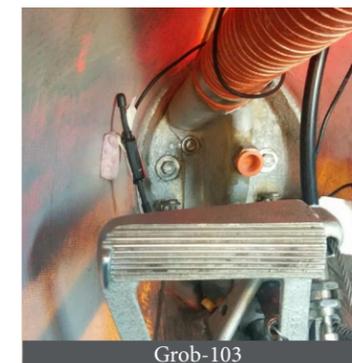
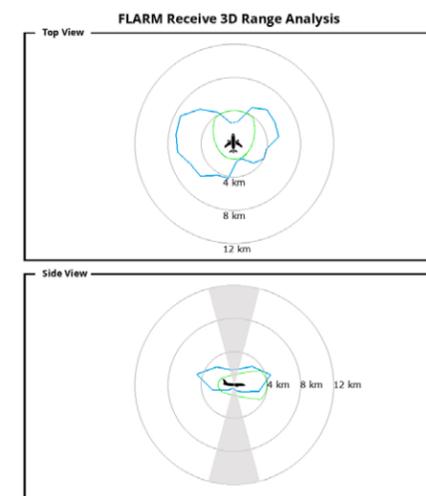
ASW-27



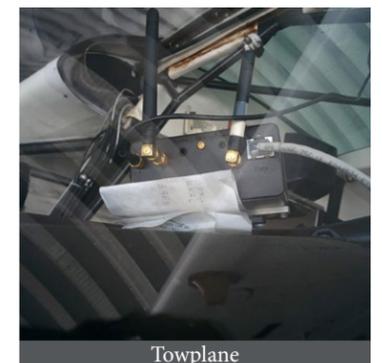
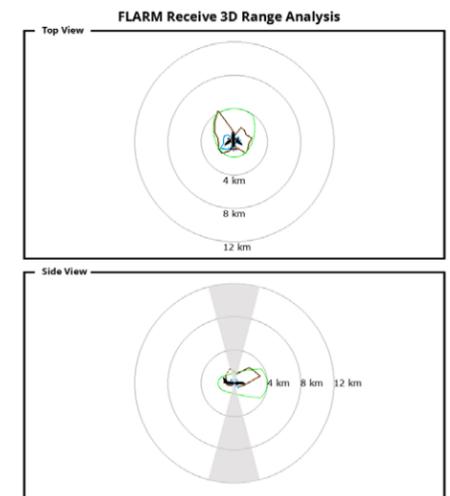
DG-303



DG-1000



Grob-103



Towplane

3rd FAI Pan-American Gliding Championship

SOSA Gliding Club
Rockton, Ontario
29 July - 14 August

2019

Contest Manager - Virginia Thompson
Contest Director - Ken Sorenson
Assistant CD - Tom Coulson
Task Setter - Tom Coulson/Ed Hollestelle
Scorer - Rick Sheppe
Weatherman - Tony Firmin
Scrutineering - Dave Ferguson/Gary Baker
Office Manager - Pat Wood, Diane Leonard and Jack Leach
Operations - Neil Wilson/Catherine Eaglin
Chief Towpilot - Logan Orosz
Sniffer - Ed Hollestelle



Clean Sweep

Joerg Stieber

It all started in March 2017 when I presented Canada's bid to host the third Pan American Championships at the Plenary Meeting of the International Gliding Commission (IGC) in Budapest, Hungary. Beside factual information about SW Ontario, the Power Point contained pictures of blue skies filled with beautiful cumulus clouds and large flat fields for easy off-field landings. During the break following my talk, a number of people came up to me, curious about soaring in Canada. My standard answer was, "it's the Sweden of the Americas". There were no competing bids, so it was not a big surprise that the delegates awarded the contest to Canada. I traveled home with mixed feelings, knowing that having just been awarded the first ever international gliding competition to be held in Canada, a monumental task laid ahead.

the Seniors in Florida for many years, I knew we had the best person to pull this together. She did an absolutely awesome job, right to the closing ceremony. She managed to enlist Ken Sorensen, the CD of the 2012 Worlds in Uvalde, TX as Contest Director and Rick Sheppe, the CD of the 1st PAGC in 2015, as scorer. Rick with his profound knowledge of the IGC rules and his contacts there was a huge help in navigating the rules (Sporting Code 3, Annex A) and obtaining waivers where we had to deviate.

Being well known and respected among US pilots allowed Virginia to very successfully promote the contest in the US which resulted in great US participation in all classes. She was also instrumental in helping the Argentinian Team to get Canadian flight permits, radio licenses and satisfy English proficiency rules for

one mandatory rest day). I believe this result was beyond everyone's wildest dreams, it was certainly for me. On many contest days the task area was at the boundary between a low pressure system to the south and a High to the north, making for challenging varied conditions ranging from overdevelopment to blue. Once, on a day with sea breeze along the Lake Erie shore, we flew a leg along the shoreline with a beautiful view of the lake where the colors were rapidly changing between deep blues and light greens as cloud shadows alternated with bright sunlight.

In 18m Class, Canada had a clean sweep of the podium as three of the four Canadian pilots in this class were on it.

15m Class was also won by a Canadian, followed by two US pilots.



for Canada



The first task was to make a final decision on the location. Under consideration were York Soaring at Arthur (lots of space, clear approaches from all sides), SOSA (most experience hosting national level competitions), Brantford Airport (hard surface runways and apron). In the end SOSA got the nod.

Dave Springford spearheaded the hosting of the 2018 Canadian Nationals at SOSA in early August with international guests, as a rehearsal for the Pan Americans at the same time in 2019.

It was my lucky day when I managed to sweet-talk Virginia Thompson into assuming the key position of Contest Manager and all the responsibilities that come with it. It took a few days of careful consideration before she said yes. With Virginia who has been organizing

their pilots. In total, we had 40 contestants in three classes. In each class we had at least one competitor from each of the three participating Nations, Argentina, Canada, USA.

Virginia is also a very effective fundraiser. She raised many thousands of dollars and non-monetary sponsorships.

However, the best contest organization becomes meaningless if the weather does not cooperate. After a late and terrible spring and wet early summer, I was really worried. Fortunately, we were off to an excellent start. After two good practice days, we had four consecutive contest days. We had a valid competition in all three classes after only four days into the contest. In total we got an incredible nine competition days out of a possible eleven (twelve minus

The Argentinian pilots were strong in Club Class, finishing first and second with a Canadian in third place. https://www.soaringspot.com/en_gb/3rd-fai-pan-american-gliding-championship-ontario-muni-2019/results/club

The idea behind creating a Continental Championship in the Americas was to give pilots on this side of the Atlantic the opportunity to compete in an international Level 1 competition to improve their standing in the International Pilot Ranking List.

How did we do? In the country ranking Canada moved up 6 places into 17th place of 39 and two places ahead of the US. Individual Canadian pilots improved their standing by 79 to 1686 places – not bad!

Directing the Race

Ken Sorenson

I was privileged to be the Championship Director (CD) at the recent PAGC hosted by SOSA at Rockton Aerodrome, Ontario. The contest was conducted under the international FAI rules and procedures - just the same as a World Gliding Championships (WGC). Those rules state that the CD "shall be in overall operational charge of the Championships and ... is responsible for good management and the smooth and safe running of the Championships."

Fortunately, for both myself and the contestants, an outstanding Organizer's Team was assembled and led by our Contest Manager Virginia Thompson, one of the key members of SOSA. This allowed me to focus on the racing competition aspects of the contest. Team Leaders included Deputy Director & Task Setter Tom Coulson, Chief Task Setter and "Sniffer" (first sailplane launched) Ed Hollestelle, Weatherman Tony Firmin, Scorer Rick Sheppe, Operations Managers Catherine Eaglin & Neil

Wilson, Scrutineering (technical inspections) Dave Ferguson, Chief Tow Pilot Logan Orosz, and Retrieves Pat Wood & Diane Leonard. We also had two FAI officials present to keep us Organizers in line - Jury President John Godfrey and Chief Steward Renato Tsukamoto (all the way from Brazil).

Contestants were present from Argentina (6 pilots), Canada (17 pilots), and the USA (17). Each of these three Teams was managed by a Team Captain. The contest included three sailplane classes - 18 Meter (13 pilots), Handicapped 15 Meter/Standard (14 pilots), and Club (13 pilots). As you can imagine, with 3 classes, 40 pilots, 3 team captains, and an army of volunteers, there were a lot of moving parts to keep track of. The high quality of the pilots, together with the top-notch team of Organizer volunteers, resulted in a highly successful, safe, and fun contest. Even the weather cooperated to allow us to fly 9 of a possible 12 contest days and 3 of 4 practice days.

There were two types of contest tasks that could be set each day - Racing Task or Assigned Area Task. On Racing Tasks the pilots flew to a sequence of 2 or more Turn Points (500 meter circles at specified GPS locations). On Assigned Area Tasks the pilots were assigned a minimum task time and flew to a sequence of 2 or more Turn Areas (typically 10 to 30 km radius circles, centered at GPS locations) and received "credit" for the distance into each Turn Area. Both tasks began and ended at the home field and were scored based on the pilot's average speed around the task - proportionately higher score for faster average speed. Each pilot's final score for the contest was the sum of his/her daily scores. All sailplanes carried GPS flight loggers which recorded their start time, finish time, and turning point locations. Task lengths were 200 to 350 km for the Racing Tasks and 2-1/2 to 4 hours minimum time for the Assigned Area Tasks.

Racing Tasks are generally considered more

difficult for the pilots because they do not have as much discretion regarding where they fly and may find themselves having to fly into in less favorable soaring conditions. Racing Tasks are also more challenging for the Task Setters because, while outlandings (pilot doesn't make it back home) are considered part of the game, we don't want to set a task which unnecessarily results in a large number of outlandings. Besides being a hassle, landing in a farmer's fields exposes the sailplane and pilot to risks not present when landing back at the home airfield.

While the details of the task setting (interpreting the weather information and selecting the turn points) were handled by Task Setters Ed Hollestelle and Tom Coulson, two very well qualified local pilots, the overall mix of task types and the general level of difficulty was primarily the responsibility of the CD. This was one of my greatest challenges during the contest—making sure that we had tasks that were challenging and of WGC style/caliber, but also

not too risky. One of my overall goals as CD was to make the PAGC experience for the pilots as similar to a WGC as possible. It is typical at a WGC for approximately two thirds of the tasks to be set as Racing Tasks and we managed to achieve this same task mix at the PAGC.

Our daily routine started with an early morning weather briefing from Tony Firmin and a 9:00ish task setting meeting with myself, Ed and Tom. During that time, pilots and their crews were positioning sailplanes on the launch grid at their assigned positions according to a daily "grid sheet", passing through a weighing station manned by Dave Ferguson on the way to the grid (the maximum sailplane weights were limited). A daily Briefing (attended by pilots, crews, team captains, contest volunteers, and visitors) was held under a large tent adjacent to the SOSA clubhouse at 10:00. The previous day's winners were announced and given an opportunity to expound on their superior flights, administrative matters were addressed,

the daily weather briefing was presented by Tony, and the daily tasking philosophy was presented. Task sheets were made available by 11:30ish. The launch usually began around 12:30-1:00. Pilots were flying on task typically from 1:30-2:00 until 5:00-6:00. Once they had returned (either by flying across the finish ring, aerotowing home from an airfield, or trailering home from a farmer's field), pilots, crews, and contest volunteers would gather for an evening of refreshments, dinner, and socializing.

While the sailplane race was the stated mission of the PAGC, the underlying motive for all this activity was really to provide an opportunity to further develop and enjoy the strong social connections that exist within the soaring community. If all the participants weren't already good friends before they arrived at SOSA, they certainly were by the time they headed for home.



Up to the Task

Ed Hollestelle

When Virginia asked me to help Ken and Tom with the tasking and be the “sniffer” for the Pan-Ams I could not come up with any good excuses, so I agreed. After all, I have been flying in SW Ontario for about 50 years and kind of know how the weather “works” around here. Having flown national and international gliding competitions for some 40 years also helps one understand how they happen.

CD Ken Sorenson and I had a meeting during the Region 5 competition in Perry, SC to discuss some of the strategies and goals and it became clear that he wanted to task to the max and push for the racing tasks whenever possible in all classes. The Pan-Ams is after all an international event and his research and experience as CD at the 2012 WGC in Uvalde, TX gave us very good insight!

Having relied on my old and trusted weather websites for many years, I decided to add XCSOAR and SkySight and started using and “testing” them early in the summer.

It appeared to me that one of them was trying to predict the exact OD locations and both quite often were wrong in respect to the influence of our lakes with certain wind directions.

I planned to be at SOSA early and work with Ken and Tom only to find out that Ken had some unforeseen events with his motorhome

and would therefore arrive late. Tom was also not there as he was working that week. So, I prepared several tasks that week and the feedback from several pilots confirmed my suspicion that both programs had their flaws in our task area. After Ken and Tom arrived we had some discussions on how to use Tony’s weather predictions and integrate that with other available sites. Ken was amazing in organising and planning all the daily procedures, making sure all details and timing were addressed. Ken’s “no nonsense” and clear insight in all aspects of the competition made all our jobs look easy!

During the practice week Ken set up several WhatsApp groups to accommodate fast and smooth communication with separate key people, which worked quite well. Through this setup Tony would send some early weather to Ken, Tom and myself before breakfast and based on that Tom and I would independently come up with a “play area”, times and distances for the day. At our initial task meeting at 9:00 all this would be altered and modified as later info became available. By 9:45, just before the pilots briefing I would also get Fernando Silva’s latest take on the day (Fernando was a member of the US team and is a well-known weather guru at many US contests).

Shortly after 11:00 the tasks were usually

agreed on, approved by Ken and sent to the team captains.

It was amazing that Tom and I initially had some different ideas about the daily tasks but as the days went on we quite often came up with close to the same. Ken agreed very early on that tasking on what he called the “island” was quite different and difficult because of the influence of all the lakes.

Self-launching first every day to report the development of the conditions was a pleasant relief of the planning part and the fact I could use my engine to re-gain release altitude instead of relighting saved time and (usually) allowed for accurately timing the start of the daily launch.

Thanks to the weather, the organisers and all the volunteers, we pulled off a great, competitive, safe and fair contest. Judging by comments of the competitors and crews, they had (mostly) fun and agreed that flying in this area is always very challenging.

Ken achieved his goal of setting mostly racing tasks for all classes and Annemarie and I made many new friends from Argentina and although I did not fly the tasks, I enjoyed many hours of flying and socializing.

Pan-Am Scrutineering

Dave Ferguson

The scrutineering took on a new dimension when a federal bank inspector from São Paulo arrived at SOSA for his job as Chief Steward. It soon became clear that the process would be much more rigorous than the one that Gary Baker and I had used in the Pre-PanAms held at SOSA in 2018.

And for good reason; Ronato Tsukamoto had experience from past FAI-sanctioned contests where any deficiencies in scrutineering could provide an opportunity for a pilot to appeal a score, where very few points could separate the top pilots.

So the tone was set, the process well defined and the first phase was to weigh, measure and inspect each of the 40 gliders prior to the first official contest day. Ideally, this should have been done in a hangar, but that wasn’t practical, so we set up in an area as flat, and as sheltered from the wind as possible.

Fortunately around that time, Dewey Clawson’s Class A arrived from Pennsylvania, together with Nancy and their golden retriever. Up went the US and the Vietnam MIA Association flags, and he was ready to inspect glider documentation.

For water ballasted gliders, the mass of the glid-

er and the pilot were measured and any excess water was dumped to meet the MAUW or the class-limited weight. As Juan Mandelbaum said as he dumped; ‘that 10 pounds could make the difference between loosing and loosing’; his best Juan-liner. For non-ballasted gliders, any overweight from the IGC limit would increase the scoring handicap.

The tow out gear was then attached to the glider, and a main wheel reference mass established, with or without covers. This is the mass that was checked every day for each glider as they towed out to the grid. Photos of the tow out config were taken.

Wing span and contest markings were confirmed; safely equipment recorded and instrumentation checked. A declaration was signed acknowledging the non-use of any device that would facilitate blind flying.

This process typically took 20 minutes, followed by a mandatory practice of the bailout procedure.

Dino Santarossa and Will Nyland were part of the scrutineering team. When Dino wasn’t weighing gliders, he was kept busy maintaining the water ballast supply for the 18m class pilots.

Will redesigned and built us a more robust weighing platform for the portable scales; it sped up the process by eliminated the continual cleaning and resetting required, as 40 gliders rolled over it. These were good quality scales and properly set up, we could confidently measure within 5 pounds for a 1000 lb glider. Sean Fidler was an early customer each day and we always had him predict his weight for that day; he was consistently within a couple of pounds. The Argentinian club-class pilots were also a good check on the scale setup. We were a bit of an irritant for the pilots wanting to grid; but almost all were good natured about it; very few whiners.

Gary was busy with other stuff as well; he had rented his glider to the Argentinian team so was crewing for the pilot; plus he was keeping the tow planes operational. Dewey was safety flag man for the launch in the afternoons; we enjoyed his many stories of his over 20 years of flying single seat fighters.

So, weighing gliders for the PanAms was actually a lot of fun, with plenty of interesting stuff going on in the background. A small part of the massive organizational effort by Virginia Thompson and Dave Springford.



Left to right: Tom Coulson, Ken Sorenson, Ed Hollestelle. Photo ©Maria Szemplinska

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Towing at the Pan Ams

Herrie ten Cate



You've completed your final checks...you look in the side view mirror and the red flag is waving. You slowly move the Pawnee's throttle forward and start towing the fully watered-up 18-meter competition glider down runway 36. It's a hot, humid day and the density altitude is high. But you're thinking...hey, the grass has just had a crew-cut and the mud has dried out—so how hard can this be?

You've got the stick over and the Pawnee is on the left main wheel in order to deal with the crosswind coming from the West and the rutted runway. The one-wheel on the ground method is a way to keep your teeth from rattling out. You hit that big bump in the runway mid-field, and you've now got air under the wheels. The glider is already airborne and tracking nicely.

Ahead and at the end of the runway—tall trees and wires. At this point, ground-effect is your friend. Your only friend and you ignore the building pucker effect. The trees are getting closer and you're staring them down...you watch the ASI climb to 80 MPH...and start to ease back on the stick. You think to yourself: "I'm happy to be flying the Pawnee and not the under-powered Citabria," as the trees and wires

slip under your wings.

It's the middle of the Pan Am Gliding Championships and we're doing a competition launch with some 40 plus gliders on the grid. We've got three Pawnees from SOSA, a borrowed Pawnee from York Soaring and our own Citabria for a few days of the contest. The rest of the time the Citabria is up at York to replace the borrowed Pawnee.

SOSA's latest Pawnee Whiskey India, was purchased specifically with the contest in mind (if your club needs a tow plane give us a call...we're selling one).

The tow pilots are mostly experienced guys who are commercially rated. Some old dogs and young pups building hours for that coveted first job. The rest of us are just PPL rated but with lots of towing hours and experience. Still, it's a challenge with strong crosswinds and wind shear on numerous contest days.

My fellow tow-pilot Kyle Nordman is flying in the Citabria but only towing the club class gliders with no water. It's not easy because there's now a slight tailwind. With these conditions, I'm happy to be in the 50-year-old Pawnee. The

Citabria was iced by the Contest Director on one or two days because the safety margin was getting close. Nothing dangerous but why tow with a Citabria when we have 4 Pawnees with all the extra power?

The launch grid team is key to a successful contest launch. This group of highly motivated, highly organized, young people made it look easy. Efficiency was their mandate and they delivered. This small swarm of hornets tackled the launch operation like a well-oiled machine. There is always potential for injury with so many moving parts, but the launch team was always on top of every situation large or small.

Gliders at the front of the grid needed to be ready because the last thing pilots want to do is piss-off the launch boss Catherine Eaglin or the waiting tow pilot. On this day, we're landing on runway 03 and as short as possible. We taxi off the intersection with 36 ASAP and head back to the grid for the next glider. It's a very smooth operation.

We're towing the competitors in a racetrack pattern, dropping the gliders to the northwest of the field at 2000 feet. FAI rules mean that the tow pilot is required to wave off the glider at

release altitude. There were one or two glider pilots who whined about a "low" wave-off but the tow plane's altimeter rules. Once the glider is gone, it's full flaps, throttle back to 2000 RPM and head back towards the field.

SA—situational awareness is the key to safety. Where are the other tow planes and where are the gliders gagging? Are there any gliders below 2000-feet? You need to keep your head on a swivel. The FLARM is giving you alerts, and your brain must quickly decide if it's an issue or not. The radio communication is sparse but effective; "Delta Kilo is extending... number two to Whiskey Yankee". Tow pilots are constantly adjusting the flow of landings and take-offs to keep things running smoothly and not bunching up like my old Fruit of the Loom's which need replacing.

A good tow pilot is always thinking...I'm

flying a Pawnee, so my blind spot is under my wing. In the Citabria, it's the reverse. What's above my blind spot? What's below my blind spot? Glider pilots...try putting yourself in the tow pilot's seat. Where are you positioned? Are you in or near the tow circuit? Can the tow pilot see you? Food for thought the next time you're in a crowded sky.

The competition from a towing perspective went off smoothly. We had a few technical issues, but the tow planes were quickly sorted out

and put back into service. A short ferry flight to Burlington and the plane was usually ready for pick-up the next morning before launch time.

Our contest Chief Towpilot, the young budding commercial pilot Logan Orosz, was flying the borrowed Pawnee from York. The tip tanks didn't always drain equally, resulting in the need to fly with a bit of correction but Logan got it figured out quickly. He now has one leg that's just a bit stronger than the other one.

There was one aborted tow at a low altitude. I was flying Pawnee Delta Kilo with a visiting contest pilot behind me. We were somewhere around 600 AGL when I felt the twang of a glider releasing. Tow pilots will know immediately what I mean...it's that "twang" that you feel when the glider lets go.

I banked left and started looking for the glider and couldn't figure out why the pilot had

released. I got on the radio and let everyone know there was a low release and it looked like the pilot was trying to make a downwind landing back at the club. It was going to be close and I couldn't help but wonder what had happened? Did the rope break? Was there a cockpit emergency? The pilot didn't make the runway but landed in a bean-field just East of the club. Another tow pilot got eyes on the pilot and glider. The pilot was out of the cockpit and appeared to be ok, much to everyone's relief.

It turned out that the glider pilot had one spoiler pop out during the tow. A little bit disconcerting to say the least. The pilot held on for altitude and radioed the tow-plane to take him back towards the field. Unfortunately, the radio was either u/s or on the wrong frequency because nobody heard the call.

The in-flight emergency was well handled because in the end, both the pilot and glider were unscathed...well, there was probably some clothing that needed to be thrown out but that's a small price to pay.

The root of the problem was a combination of faulty rigging and a positive control check carried out by an inexperienced crew that were going through the motions but not truly understanding what was required. Lesson learned.

During the duration of the contest, we completed some 452 launches, including re-lights and retrieves. And on most days, we managed to launch the grid within an hour. A pretty good job by any standard.

Towing a contest requires a heightened sense of awareness and you need to work as a team with your fellow tow pilots to keep the launch process running smoothly.

From my perspective, contest towing at the Pan American Gliding Championship was a lot of fun and a good challenge. And let's face it, it's better than any office cubicle. Take up slack and all out...

Herrie ten Cate is a long-time member of the SOSA Gliding Club and has been towing for some 25 years.



Contest Results

18 Meter Class

##	CN	Pilot	Country	Glider	Points
1	XG	Jerzy Szemplinski	CA	ASG 29/18m	6935
2	MS	Sergei Morozov	CA	ASG 29/18m	6830
3	JS	Joerg Stieber	CA	ASG 29/18m	6760
4	JW	Jae Walker	US	Ventus 3	6686
5	90	Bob Fletcher	US	ASG 29/18m	6487
6	F1	Dave Springford	CA	ASG 29/18m	6476
7	7T	Sean Fidler	US	ASG 29/18m	6301
8	5E	Erik Nelson	US	Ventus 3	6267
9	ZO	Rich Owen	US	ASG 29/18m	5313
10	P7	Gary Ittner	US	ASG 29/18m	5128
11	RF	Robin Clark	US	ASG 29/18m	4978
12	Z8	Juan Mandelbaum	AR	Ventus 2c/18m	4593
13	ROY	Roy Bourgeois	US	ASG 29/18m	2299

Handicap Class

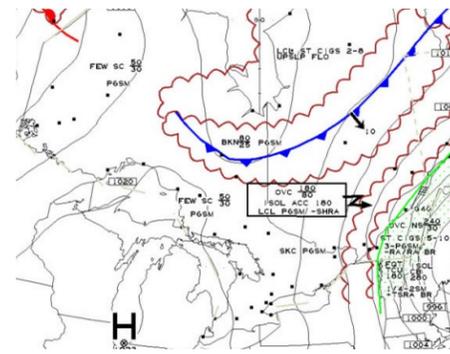
##	CN	Pilot	Country	Glider	Points
1	2W	Luke Szczepaniak	CA	ASW 27B	6333
2	TT	Tim Taylor	US	Ventus 2	6313
3	SK	Sarah Arnold	US	Ventus 2 ax	5928
4	PG	Phil Gaisford	US	Discus 2	5810
5	FP	Francois Pin	US	ASW 27-FES	5587
6	FS	Fernando Silva	US	ASW 27	4665
7	XP	Sylvia Grandstaff	US	Discus 2a	4467
8	DD	Paul Parker	CA	Discus 2	4172
9	QT	Sergio Reinaudo	AR	ASW27	4099
10	AF1	Dave Cole	CA	SZD 55	3714
11	JF	Jim Fryett	CA	LAK 17/15m	3712
12	KO	Stan Maj	CA	SZD 55	3105
13	EZ	Chris Gough	CA	LS 8	2409
14	W	Glenn Betzoldt	US	Discus 2a	2008

Club Class

##	CN	Pilot	Country	Glider	Points
1	PM	Carlos lucci	AR	ASW 20	6609
2	HG	Matias Pasztor	AR	Std. Cirrus	6489
3	DW	Rafael Bravo	CA	LS 4	5990
4	MF	Krzys Wiercioch	CA	Std. Jantar	5934
5	84	Sylvain Larue	CA	LS 4	5675
6	MR	Raul Garda	AR	ASW 20	5657
7	69	Paula Drazul	AR	Std. Jantar	5490
8	CM	Greg Shugg	US	LS 4	5300
9	W2	Chris Wilson	CA	Mosquito	5096
10	BC	Bill Cole	CA	Mosquito	4668
11	JT	Ray Wood	CA	DG 200	3135
12	Z1	Stan Martin	CA	Mini Nimbus	2942
13	JA	Jason Arnold	US	Discus	2409

Pan-Am Forecasting

Whether you like it or not, you're going to fly - Tony Firmin



As I have previously observed, preparing a gliding forecast is like peeling back the layers of an onion. Today everybody has access to satellite shots, various synoptic charts, webcams, global and local forecasts, spot forecasts and then soaring forecasts based on at least half a dozen different models. If all else fails one can look out the window, although as we know that can be remarkably unreliable. Every pilot in the competition potentially has access to this data via their Smartphone.

So why we might ask is a forecaster needed. The reason is that someone or some group is needed to make a statement to the contest committee on what is to be expected so the tasks can be set. Then of course, that same 'someone' is available to take the blame should all that data not lead to what happens. The fact is this job should not be given to 'someone' with a thin skin or who gets easily depressed.

One of the disturbing issues in North America is we have free access to the results of half a dozen weather simulation models run in the US and Canada, as well as Global models from Europe. If they all agreed we would undoubtedly have the correct prediction, but they don't, especially on the microclimate within which the competition operates. Hence the forecaster.

Today the forecaster needs access to a high-speed Internet connection, a reliable computer and a system that permits fast access to all the websites that they choose to check. This is unlikely to be available at the gliding site. In the case of the Pan-Am competition, this led to remote forecasting. Another desirable, if not essential, requirement of the forecaster is that they have flown all over the contest area and hence knows from bitter experience or delightful memories where things can go right or wrong, due to local conditions.

A typical day started around 7am and after about an hour a PowerPoint presentation was available for the contest committee via their local Internet connection. Later that morning the pilots got the same presentation followed by what tasks had been set. It's a good job contests

only last two weeks as this morning regimen gets tiring.

So back to the onion. One is tempted to read the closing chapter of the book to find out what happens, but I prefer to start at the beginning of the story to see how it develops. Typically I started by looking at a satellite image which is somewhat equivalent to looking out the window, then I looked at the synoptic chart to see where the highs, lows and fronts around us were, followed by a spot forecast showing how the temperature, cloud cover wind etc. would develop through the day at Rockton, the site of the competition. Then on to the soaring analysis provided first by Skysight which is currently the flavor of month for soaring data and one that gives a wide variety of parameters shown in a variety of colored contours over the region. It also provided a model run at 8am which if not accurate was reassuringly current. Finally, as a further sanity check I brought up the Teph data for the local sounding based on the latest NAM weather model. All this information led to my summary of the day's forecast, which I always put as the first slide because as I said, most pilots would like to know how the book ends!

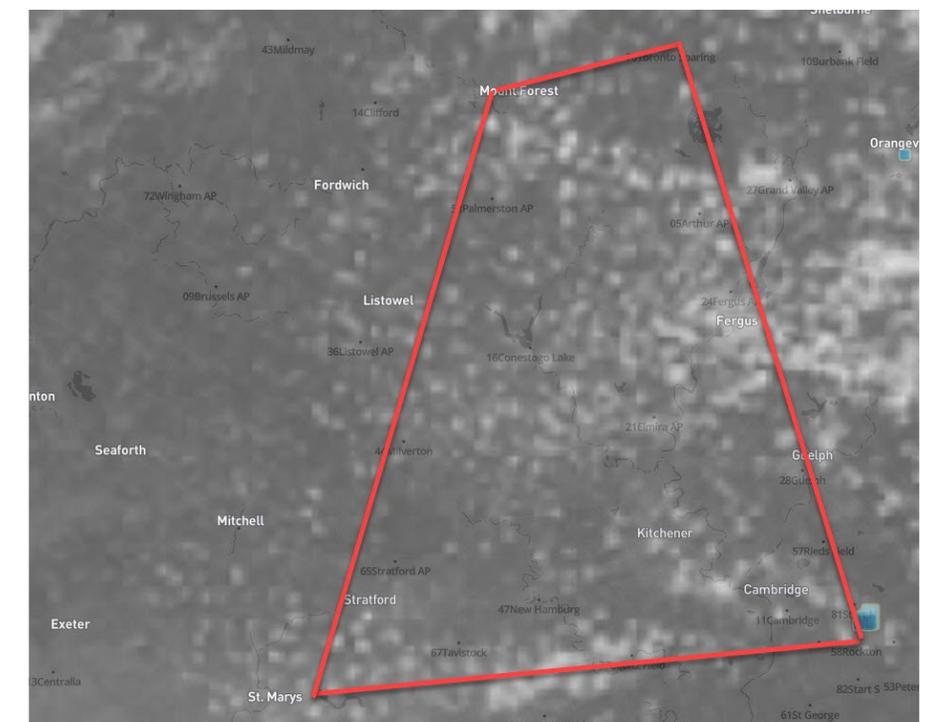
Perhaps one of the most amusing episodes was one morning when I got up, looked out the window and saw a clear blue sky, proceeded with the forecast which was suitably optimistic sent it off, then looked at the webcam at Arthur (in the middle of the contest area) and the area was covered in a thick fog, oops! Another

related to the last day of the contest. For two days prior, the forecast had been for rain that day and I was convinced the night before my job was done. To my surprise a quick look in the morning revealed, holy smokes, "I'm going to have to provide another forecast". Such is the reliability of multiple high-speed computers running all night. Long live the forecaster, his job is never done.

In summary, the real weather was relatively kind to us producing three practice days and nine contest days. There were a suitable number of land-outs early in the competition—at least the task setter knew he was keeping the pilots on their toes. The graphic below illustrates a typical day where the 18m task is superimposed over the satellite image showing the distribution of cu's at one point in the afternoon (got that one right, then).

Most days started around midday with thermal strengths of 5-6 kts by mid-afternoon, a cloud base of 5000-6000 feet, and the day dying rapidly around 6 pm. High humidity on several days was unpleasant for the ground crew and the pilots when they landed!

I conclude that despite the rapid progress of higher and higher speed computers, nature is keeping ahead of them by continuing to produce unpredictable results. Gliding competitions will continue to try the skills of the pilots. The job of the weather forecaster is changing but not dying.



Rough Driving and Smooth Flying

Mike Morgulis - Toronto Soaring Club

Newton's first law of gliding states that a sailplane owner at rest will remain at rest until acted upon by an external force. We all have a "to do" list of things which we have deferred until we can't put it off any more, or until Dave Springford phones in the middle of February asking if I would be willing to rent my Jantar "6-Niner" to a visiting Argentinian pilot for the summer Pan Am soaring contest.

Sporting a new canopy and fresh annual from XU Aviation, I set out to complete the "to do" list in earnest after the winter snow melted. The list included replacing all the trailer wiring and changing to LED lights, changing the wheels and tires on the trailer, installing new mylar gap seals on the control surfaces, a minor panel repair and better re-wiring internally, and when the trusty Dell stopped working I bought an

was directed to a parking space at the distant north end of the field. Upon my return to SOSA a few days later, it had been moved beside the northernmost boundary of the field, home to the entire mosquito population of Rockton.

I followed Paula's progress at work when I was able to get a spare moment. She had some good practise days, and we'd chat back and forth via text and Facebook messenger. At the end of each day she'd text "Your baby is home safe" meaning that my glider was fine. I went to visit on the weekends and met the rest of the Argentinian team, and Louis, their American volunteer. Towards the end of the contest, Paula and everyone else landed out at Guelph Air Park, so Louis insisted that we go retrieve her by trailer rather than an expensive aero retrieve. So I hooked up the trailer to my van and off

I know I checked the hitch and it was definitely locked-on, but somewhere over the lumpy concrete bridge at the bottom of that first hill, the trailer unhitched itself and it rear-ended my Mazda three times as we ground to a halt.

Oudie less than 2 weeks before the contest. I enjoyed some great flights in 6-Niner to shake it down and work out any kinks, the last flight before hand-over was my landout in Lucan.

The pilot who would be flying 6-Niner was Paula Drazul, whom Dave introduced me to via email. I found her on Facebook; we enjoyed a few months of messages and photos prior to the contest. I did my best to help her with licensing, airspace, turnpoints and local references so that she could excel in the Jantar. When she and teammate Carlos Iucci arrived at our club to inspect the Jantar and David Gossen's ASW-20 (Carlos' ride), I was installing the rudder seals as a final touch. "Isn't that something you should have done in the winter?" I don't know what winters are like in Argentina but I definitely can't afford a heated hangar, and frankly, nobody in Ontario applies seals on a good flying day except for me. Paula owns a Jantar nearly identical to mine, so there was no need to go through a litany of instructions.

As my insurance was already paid for the season, and the summer is my busiest time at work, the Jantar would have sat in the trailer most likely, so I presented Paula with a rental agreement for zero dollars; she would only be responsible for the insurance deductible should anything happen. I told her "If you're going to prang it, then make sure it's completely written off; I want a Discus!" I towed it to SOSA and

we went. I'd driven on Safari Road many times with a trailer, and I instantly recalled how much I'd hated it, so I vowed not to return along that route on the way home from Guelph.

We got to the airport, derigged and trailered 6-Niner, and headed for home. I swear my first left turn was no more than 10km/hr but Paula was insisting that I slow down. I trundled through the east side of Guelph at 40km/hr and hit some pot holes in the road; the trailer clunked, and again the protests started from Paula. I liked her a lot, but I was starting to get a bit short-fused with every sigh and "too fast" (I was getting passed continually), so I decided to shorten the trip and return via Safari Road. It was all going so well too... there are only two large hills, the first one took a bit of effort to get up and over, so I decided to let a bit of momentum build up before we went up the second hill. I know I checked the hitch and it was definitely locked-on, but somewhere over the lumpy concrete bridge at the bottom of that first hill, the trailer unhitched itself and it rear-ended my Mazda three times as we ground to a halt. Everything was fine, although Louis had that "deer in the headlights" expression, and when Paula later retold the story she used the term "loco" and made it sound as though the trailer and car were inverted before flailing end over end. The Jantar and trailer were fine, but my Mazda had a scratch on the bumper. I

hooked it all back up; the rest of the trip had an awkward silence.

The chains are wiring harness were worn down as the trailer tongue rode them on the asphalt, so a quick trip to Home Depot and Princess Auto was made the very next night, well after sunset. With the aid of high-beams, I completed the repairs while simultaneously fighting off clouds of mosquitoes. That would have been the conclusion of the excitement however my drive along Cooper Road coincided with the annual frog migration, as it had done many years ago when I was a member of SOSA and my then-trusty Dodge Neon claimed the lives of 300 frogs.

In speaking with Kerry Kirby, the previous owner of 6-Niner, he related similar trailer occurrences and suggested using a 2" ball as the hitch socket had most likely stretched over time. I happened to have one, which worked out well. I was still feeling very sheepish, Kerry assured me that the Jantar trailer had seen much worse over the years including rolling down a driveway into a barn wall somewhere. I knew it had been rear-ended twice on the road as well. If nothing else, it was robust!

I continued to cheer for Paula and Carlos, as well as my club's competitors (Dave and Bill Cole, Stan Maj, and Luke Szczepaniak), and followed them online as much as possible at work. And just like that, the contest was over. My wife and son bought a present for Paula's son, a nice Lego airplane kit. And Paula presented me with an official Team Argentina jersey as a token of gratitude for the use of 6-Niner. My plane was exactly the same as it was before the contest, and Paula remarked to me that it flew nicer than her own plane. I suggested that perhaps my Jantar was just happy to be flown by someone who knew what they were doing for a change!! She logged about 45 hours in 3 weeks whereas I logged about 20 hours over 3 months.

I was very happy for the opportunity to help another pilot, and to see my plane be flown so well. I'm "good enough", but 6-Niner hadn't been flown by a highly skilled competition pilot since it was owned by Kerry Kirby, so I was very happy that Paula was able to fly the Jantar so competitively. The best part is the open invitation to join Paula in Argentina in the near future; I'll let her do the driving.



Ground Operations

Forty Launches an Hour

Catherine Eaglin:

Virginia had asked me in November of 2018 to run the line for the 2019 Pan-Ams in Canada. Having worked the Seniors Soaring Championships at Seminole Lake Gliderport for 5 years, 3 of which as "line boss", I was beyond excited.

Prior to arriving in Canada, which was also my first time to another country, I was worried that I wouldn't be able to teach people how contest operations work and had debated printing documents for the line crew. One thing I hate is showing up to another airport and being told I'm taking over. Every operation has their different ways of doing things- from how they pull out and put away gliders and tow planes, setting up various equipment, all the way to running the line and communication between pilots.

Everyone that Virginia had gathered, a solid crew of 10 students and pilots, were all excited to learn my ways. I spent no more than 5 minutes teaching Neil flag signals, and no more than 3 hours teaching the crew how to run the line, communicate with glider and tow pilots, hook up the gliders, and run the wings. They even decided what roles they did best and had the grid read for launch before I was there. I ended up just monitoring the radios with Dewey most of the time!

Constantly receiving complements from the pilots, crew, and staff, I assured them it wasn't me, but the crew. I was truly just watching them. A well-oiled machine. They told us they had never seen a launch run more smoothly before, and we were being asked to run the next Pan-Ams in Brazil! The group I worked this at

the 2019 Pan-Ams was truly the best group I have worked with during a contest launch and would gladly work with then again.

Neil Wilson:

The launch is always an exciting and important part of any gliding contest regardless of size. Its efficiency and organization are fundamental to the contest running properly. Having coordinated many contest launches at my home gliding club, SOSA, I was honoured when asked to assist with launch operations at the 3rd FAI Pan American Gliding Championships. I learned I would be working closely with Catherine Eaglin from Florida to coordinate the launches. She had run the line at many Senior Soaring contests in the USA, and I knew our combined experiences would ensure smooth and efficient launches.

An average day saw four tow planes launching approximately 40 gliders in an hour's time. Depending on the number of line crew available that day, there were either one or two teams to launch the gliders, with each team alternating gliders. On some days, we were down to three tow planes due to maintenance issues or take-off towing restrictions caused by tailwinds and heat. It was extremely important during these times for the line crew to be as efficient as possible to ensure we would not slow down a take-off. Each day, a line crew briefing was held to discuss if there were any issues from the previous day that needed to be resolved, determine the number of teams flying, and discuss factors that would affect the day's launch.

Gridding time was 30 minutes prior to launch.

There were four gliders in each row and each competitor had a specific gridding number based on the day painted on the runway. At gridding time, myself and a few other line crew members helped push gliders onto the runway and ensured gliders were in the correct order. Halfway through the contest, I started meeting crews as they towed their gliders to the flight-line and advising them the location of their number to make the gridding process easier.

Catherine taught me the flag signals for the launches. While on flag duty, I was responsible for signalling "take-up slack", "all-out" and holding or stopping the launch if needed, as well as communicating with the tow pilots via radio. I worked closely with the Safety Officer, Dewey. Keeping a watchful eye on the circuit, Dewey would stop any launch if he thought traffic was too close or had been missed.

On days when not on flag duty, I would be on the line running ropes, running wings, as well as hooking up gliders. I was able to monitor the launch and prompt the line crew to help make the launch more efficient. This included ensuring wing dollies were taken off ahead of time to avoid delays, organizing people to push a glider forward if the tow rope could not reach, moving gliders off to the side if they were not ready to launch, and monitoring tow ropes for knots and immediately replacing them if required.

Assisting in coordinating the launches of the 2019 Pan Am Championships was a great experience. The success of each launch would not have been possible without our strong and dedicated team of line crew.



Photo ©Martin Brassard

Support for Argentina

David Gossen

It all started with the question from Dave Springford: "Would I consider renting my ASW20 for the 2019 Pan American Soaring Championships, the guys from Argentina are looking?". Well, my clubmates at Toronto Soaring, Dave Cole, Marian Nowak, and Stan Maj had nothing but high praise for the Argentinian flyers. 'No one can beat those people in Jantars or 20's' they said; 'they can fly in any weather'. Well, if you know me and my plane, Papa Mike, I probably spend more time cleaning and upgrading it than flying it, so I am a bit nervous about handing it over to strangers. But since they hosted our guys' need for planes down there, I thought sure, why not support the worldwide family. So, I created a little photo promo kit for PM and sent it to Dave Springford. Sure enough, I am contacted by Sergio Reinaldo the Argentine team captain pretty quickly (after all that cleaning and primping, PM looks good on film!). Dave Cole says Sergio he's top notch, so I am thinking my precious airplane would be in good hands and might win something. So, Sergio and I struck a deal after my probing a bit about Sergio's style and familiarity with 20's, just to make sure. Suffice it to say I'll never likely match his hours in 20's.

Months pass and the season begins, and I get an email from Sergio and he says they have finally nominated a pilot for my plane. I am thinking, "hey, wait a minute, I thought Sergio was going to fly PM. Who's this new guy?". Well, Sergio assures me about the new pilot, Carlos, and his skills. Carlos and I get in touch. We start talking weights and instruments and all that stuff...ice is broken. And since Carlos' questions are taxing my knowledge and experience, I quickly realize I have another pro on the line.

But I soon realized that the challenge for these folks was how to live here for 3 weeks. So, we get talking and next thing I know, most of my camping equipment and some of Dave's is heading for the Argentine encampment. It feels good to be helping out. "Hey Dave, can I order a tent to your address?" he asks. "Sure, but don't do that, borrow mine" I said. Then my generous mood gets out of control. "What about sleeping bags? I got two. And you'll need camp chairs. I got one. How about a table? And containers for storing stuff? I have one I take camping for food. I've got sleep mats too." Carlos' response: "Awesome. Do you like wine?".

The next thing I learn about international competition is the 'red tape'. Barograph trace for the logger, insurance for a foreign pilot, and English language proficiency for Transport Canada and probably more I never heard about. But thankfully I found my barograph trace for

my logger that was still valid, SAC granted half memberships for visiting pilots if they were members of a club, but the last part I couldn't help with, but I hear that took a trip to TC and a little studying.

So, maybe I need to attend to some projects on PM before competition too. Notwithstanding my season started with a failed gas strut on my Komet trailer, which required a shipment from Germany, I also need a new wing wheel because I have this nightmare that my home-made rig comes apart and sends a sharp aluminum rod through the wing. And my tail skid is on its last days and a bit draggy, and my boom mic is too short and maybe not transmitting well, and PM will be embarrassed to be seen in my old rag canopy cover amongst all those sexy new 29's and V3's. So, I best get on the Internet and start looking. Nice to be reminded of the current Cad-US exchange rate!

So, the competition day approaches and the team is on its way to Canada. We arrange to have Carlos and Paula come to Toronto Soaring as Paula is taking Mike Morgulis' Jantar, 69, and we are having a pot-luck as it happens. Carlos agreed and grabbed a nearby hotel for the first night. It was a nice day of getting to know these great people, and to introduce the pilots to their new aircraft. PM seems to live up to expectation and the briefing is, well, brief. These folks own their own 20s there is little new to tell them, but he takes copious notes and pictures to do everything as I do it. Carlos however finds that I could benefit from some mylar seal on the gear doors, so we set out to resolve that; I'll take any advantage I can get. On the other side, he is intrigued by my airflow deflectors between the flap and the fuselage. That would later prove to be an adaptation that the Argentine team took home and was convinced it enhanced the PM's performance compared to the other 20s. I must thank our fallen comrade Derek Mackie for that enhancement, as I copied that from his Mosquito. But overall, I think we spent more time on the deck having a good visit than on the airplanes. Next stop, deliver the ship to SOSA the following week.

Well its delivery day and I am taking one last look at PM, installing a USB charger in the panel (yup, another project) and notice a big scratch in the leading edge. I think I got it from letting a wing overlap the farmers crop alongside the runway during the roll out on the landing on a prior flight and I also notice some cracked gelcoat right in the leading-edge airflow on the left wing. Agghhh! I can't give them the plane like that! Well, its time I learned a bit about sanding gelcoat. With a few strips of various grades of sandpaper and a consult

from Marian and a little tube of repair gelcoat I grabbed off the shelf of a sailing shop last year, I set out for an emergency fix. Two hours in the hot Ontario summer sun later, and the leading edges are clean and smooth! And I am exhausted and now must make the run to SOSA to drop off PM before heading home to downtown Toronto. We arranged a little wagon train of Bill Cole, Rusmir Mujic pulling Bill's camper trailer, and me with PM all snaking our way down through Guelph to Cambridge. Bill's got us on the country tour...right turn, left turn, right turn, left turn...anything to avoid the major roadways, I guess. But it works and we are all there as planned. Ship delivered as promised and in working order. Well almost, they tell me the Club Class has the mosquito zone at the end of the runway...and they weren't kidding. Almost as bad as Manitoba in the summer down that end. I wave Dave Springford over from his grass cutting duties to check out what I think is a good spot, and then Carlos comes to meet me. Final instructions, Carlos' friendly assurances, 'yup, no problem, got it', and then finally exhaustion sets in and I'm heading home.

Then there's the question about rigging and de-rigging. 'Can we leave it rigged at night Dave?' 'Uh, no, I prefer not since the gelcoat seems to be starting to show its age and can't take the morning dew. But if you want to make some covers, be my guest.' Well, next day Carlos sends me a photo of PM rigged and clothed in wing covers donated by one of SOSA's ships. 'Awesome. Less worry about rigging damage!'

Finally, first flight. I am at the office and the text comes in from Carlos, 'nothing bad the PM. Flies like hell !!!'. And then 2nd place on practice day! Then first day of competition and another text, this time a voice text from Carlos, excited and relieved to have made it home ahead of the field on the runway on a hard first day. 'Hello David. I am on the field, I think I am the first, maybe I see another plane, but I made it back...our bird...it's nice! I love your bird!' I am catching the excitement and really appreciate being part of this and proud of my new friend. I'm heading to SOSA on the weekend to check this out in person and see how my baby is being cared for of course. Oh, and I have a couple instruments sent to me from Europe for Carlos to drop off there, after a couple frustrating calls with DHL to clear up taxes and re-deliver the packages. Oh, I had to get a new copy of my trailer registration. Man, it's easy to get complacent on these things. I thought I was organized but somehow it is not where I thought it was or I threw it out accidentally. Nothing a trip to Service Ontario could not fix though.

Arriving at SOSA you see the size of this event compared to our local provincials and even nationals. It is quite a spectacle and a serious place. I take my hat off to SOSA for pulling that event off with what looked like a lot of professionalism and care for the competitors. I find the Argentine basecamp and see SOSA has set them up with a team trailer where they can meet and a basic kitchen. Everyone is busy and, in the mode, and since I don't speak Spanish, I figure I'll wander around and see all the toys. Walking up to the line I see PM sitting in first place for launch, getting a daily rub down with fresh wax under the care of Carlos' ground crew. I wonder if PM will respect me after all this. Walking around I see some local guys I know, and one compliments me on my performance in PM, and I correct him that I am not the pilot but am certainly a proud owner. I am getting the sense that Carlos and PM are attracting some attention this week.

I am hanging around PM and am approached by a SOSA member who asks some questions about my Flarm as they are not picking PM in their tracking program. I just installed a European unit last year and am worried PM might not be transmitting and could imperil Carlos' chances. Yikes, I'll have to work on it after today's race.

Finally, time for launch. It's quite the operation, four Pawnees coming in one behind the other in rapid succession and colored jerseys of the launch crews scrambling to keep things moving. Like I said, it's quite an impressive operation. I see Carlos emerge from the team trailer, heading to the line, PM all set and ready for him. Wow, that's almost regal treatment; I like this ground crew concept. They launch but into low cloud. I try and track Carlos from the ground as most are staying close and one plane in Club class returns for a re-light. Eventually they all break away and I find my way to the clubhouse to work on that Flarm config file.

I get a little intro and then hooked up on SOSA's fantastic internet FLARM tracking system. That is impressive too and destined to be a new cell phone addiction for the next two weeks. Well we think we got it figured out. I did not insert my Transport Canada identification into the broadcast signal, so PM is not recognized in the system. I'll fix that when they land. It is excruciating to see all the ships move around the course but no word on PM.

Well, nothing for me to do so I head into town for some weekend supplies as I am heading up to Toronto Soaring after dinner. I was invited to an Argentine barbeque that night. Just about to leave and I see Zbig Sobelewski from my club who is crewing for Stan Maj. His wife Eva is there. She is an awesome chef who puts on great feasts at our club, so I jest if she has brought lunch for Zbig. 'Yes, I was bored, do you want some?'. 'Uh, sure!' I take a big slice of some tasty Polish cake and mention my afternoon objective to get something to bring

to dinner tonight. Eva dismisses that idea and insists I should take one of her cakes. Well, that certainly is gracious, and I happily accept and march it over to the Argentine kitchen. I am having a great time, glad I came out; the weather is great, and the atmosphere is really friendly.

It's about 4pm and they should be coming back any time. I find Chino, Carlos' crew boss and see what he knows. His English is not great, but we manage to communicate. He has my handheld and is speaking with Carlos. He is first back again and 10k out. Exciting! And then in a few minutes PM appears over the trees. Whoosh! Awesome! A quick circuit and he is rolling up to the grand stand and Ed Hollestelle marches out eagerly to congratulate Carlos, exclaiming "way to go PM!". My pride is booming again.

PM is immediately whisked away to its resting spot at the very end of the runway and I brave the mosquitos again to install the updated config file. I see the contest tech support who helped me earlier and wave him over and he says it is still not showing. Arrgg! I crack open the laptop to see what's missing. This time, it is the privacy switch was set to off. Oops, I remember doing that. Still nothing. But he thinks I have competing files on the SD card and after a log trace of the boot process, he deletes everything, and finally, it works. Well PM is in first place in Club Class and dinner is great and I also feel good for having successfully introduced Old Dutch Salt and Vinegar to the Argentine team.

Next day, I am up at Toronto Soaring on instructor duty, and am quick to my cell phone to track the progress and share the race with others at the club. Pretty cool by all accounts. But after a great ride in the Perkoz on our side of a line of thunderstorms moving through Southern Ontario that afternoon, I am heading back down to reinstall a software upgrade to my vario to hopefully correct a misreading airspeed and Macready reading. Well, those storms shot down just about everyone. I guess that is what it means when the internet tracking shows your plane at 300m 25km out from SOSA and then it disappears from the screen. Another text from Carlos and it is a picture of PM in a freshly cut hay field. Funnily, looks like the photo I looked at when I bought PM in 2007 from Terry Southwood out of Cu Nim Gliding Club. Carlos' crew is on the way so I press on to SOSA to meet up with them. Three hours later at dusk, they roll into sight. Everyone is tired but I am determined to update the software. Blasted mosquitos! But everything is installed and still works, but unfortunately the problem was not resolved as it turns out and Carlos flew the competition with Macready support from his PDA (flash forward...shared pitot connection to close to the instruments).

Well, I am off on a hiking trip to the Yukon in a week, so we say farewells and make arrangements for returning of all the gear as I will not

be around to claim it. But I have full trust in this crew and all the friends from my club and SOSA, so I am not worried. So it is back to work for me and another week of following the contest from my desk and infecting my staff with the regular flow of sexy photos and videos from the contest and the frequent "you gotta see this!" or "first place again!" or "holy crap, he's low!"; truly an amazing advancement for our sport to have this kind of engagement now possible. So, I am in Calgary getting ready to camp in sub-zero temperatures of the Tombstone mountains watching the final day on my phone. Carlos has a hold on first place, challenging the Club Class with fast times and bold long-distance glides in a 43:1 plane. Looks like he's done it! But wait, why does his score look so bad? The text comes in from Carlos 'I made a [mistake]. Touched the airspace by 8 feet on final glide'. An appeal, but the ruling stands and he places low on the day but keep the first place. Carlos and PM have won Club Class! I regret not being there to celebrate. The voice texts certainly relayed a good celebration was underway in the Argentine camp.

As the team is preparing to leave, I am left with photos of all gear in its rightful place tucked away in Bill Cole's camper, and the glider safely tied down at SOSA. And Carlos leaves me with some parting thanks and exclamations that PM is the finest 20 he has ever flown, and I should not change a thing. Despite my numerous upgrades and fixes, that sure makes me feel good. We are still in touch and I am being fed videos of fantastic thermals in Argentina where the season is just beginning, and they come with an open invitation to come south some day.

So, a long journey of preparation, excitement, and new friendship comes to a close. Suffice it to say, this experience was rich in friendship and learning, advancements in my own soaring capabilities, and improvements to my airplane. While renting PM was something I could have easily dismissed, as with many opportunities that come our way that one can convince oneself to be fraught with risk and effort, it was a rich and rewarding one (but still fraught with risk and effort). What I have learned from being immersed in this competition and would like to say about our sporting community in general, is that there is a great happiness to be gained from participating and making the sacrifice to help each other. I strongly encourage everyone to participate when you can. Extend your hand, you don't know what rewards await you.



Reflections of the Pan American Gliding Competition

Jarek Twardowski
Canadian Team Captain

I had the privilege to manage the Canadian Team for the third time at the FAI PANAM championship. This time in our home country hosted by SOSA gliding club near Cambridge, ON.

Looking from the perspective of being Team Captain at several world class events, I have to say that the one at SOSA was rather challenging mostly due to sheer number of Canadian pilots on the team, however it was very enjoyable at the same time! 17 pilots represented Canada.

18M class: Dave Springford, Jerzy Szemplinski, Sergei Morozov & Joerg Stieber

15m/Std class (officially called "Handicapped Class"): Chris Gough, Luke Szczepaniak, Dave Cole, Stan Maj, Paul Parker & Jim Fryett

Club class: Krzys Wiercioch, Sylvain Laure, Bill Cole, Rafael Bravo, Chris Wilson, Ray Wood & Stan Martin

The event was also one of the few with so many flying days. Over the span of two weeks, all classes had 9 task days! Most of them were rather demanding for pilots and crews due to many factors – starting from the daily commute (many pilots stayed at home, meaning they had to get up early to fight rush hour traffic in order to be on time to prepare gliders and be at briefings) until end of the day where they had to park gliders or (as it happened multiple times) to assist with retrievals. And most importantly – flying tasks in conditions that demanded the utmost concentration of our pilots! In certain scenarios, pilots acted as crew for others or for themselves! There were a few memorable days where pilots came back to the airport on their own after landouts in order to get cars with trailers and retrieve their own gliders. What a tremendous determination!

This was an event where FAI asked organizers to practice the use of PEV at the start time. Overall it worked as expected for those who were equipped with modern navigational and tracking equipment. Not so successful for less modern trackers – some pilots received penalty points for not having PEV markers showing in logs. After several days and showing to organizers and officials how difficult, unpredictable and plainly dangerous the forced use of PEV markers could be, FAI dropped that requirement for club class as they were the most impacted. In my opinion FAI should engage with manufacturers and ask to have the option to use PEV with "single click". The extreme opposite was the navigation system that required going over 15 submenu levels in order to "mark" a PEV

event. Practically impossible to achieve before crossing the start line when usually pilots are in "gaggles".

Hats off to the SOSA team of organizers and volunteers led by Virginia, who managed to make this event memorable. We had plenty of support from every angle starting with the event director all the way to the amazing team of flight line crew, tow pilots & local members to name a few.

Sergei Morozov

At the beginning of the season, I had very high expectations for my performance at Pan-Am, but two mediocre results on 15m and 18m US Nationals in May and June (both contests 8th place) didn't support these expectations.

But there was one thing which gave me more confidence for future results – more racing tasks. Pan American as any FAI contest goes by IGC Rules and Guidelines, it gives priority to assign tasks over area tasks and eliminate MAT. I also prefer them, I like to fly in the group and I usually have better results. Our contest director – Ken Sorensen was following these guidelines, his task choices were always challenging, but we had lots of racing days. And that is what I was looking for. Out of six racing days, I won three and had only one mediocre result (6 place in day 3). In the first day my speed was 109.1km/h which was the fastest speed throw entire contest.

With area tasks I wasn't that successful. Out of 3 area tasks days I had one decent result – 3rd place on day 7 and two weak results on day 4(8th place) and 6(7th place). On day 4 – August 5th I had a toughest day and made a lot of costly mistakes. We had 3 hour area task and very challenging weather with big areas covered by overdevelopments and even rain in the first area and on the way home. The only way to finish was to cut task short and come home early, sacrificing speed. I couldn't force myself to turn back in the middle of the nice cloud street which leads all the way to the end of second area and as a result I ended up landing at Guelph airport on the way home. Day 6 – another weak performance, main mistake - went too far in the weak weather in the second area- lost about 15min in it and got POV(pilot event) penalty 25pts on the top. So I have some work to do to fix this area tasks problem for future contests.

In spite of this loses in area tasks, I still finished second overall in 18m class. I think, it is very good result; consider a very competitive group of pilot in my class. Big part of my good results was help and support from my teammates /competitors Jerzy, Joerg, Dave and our

team captain Jarek Twardowski.

Routine - Malcolm McLaren

SOSA was selected to host 2019 PAN-AM competition this year. To get ready for this, a lot of our members were busy with various projects around the club for this event. These projects included, painting and repairing the clubhouse, rebuilding the barbecue area, stump removal, and purchasing new furniture to just name a very few.

I had offered to crew for a club member who was flying in the 15-meter sports class. My day would start at 9:00 a.m. at the club. We would pull the glider out, clean and top it up with water to get ready for the days flying.

We would then head off to the club house where the pilot's meeting was taking place at 10:00 a.m. Here they would provide the weather report for the day and the winning pilots from the previous day's competition would talk on how they managed to come in first and overcome any obstacles that came their way. Following this, we headed back down to the glider as it needed to be towed for weigh in and down to the grid position.

In between helping at the flight line, I would take the opportunity to complete other duties each day which included, topping up the reserve water tanks for the portable trailer showers, stocking all the bathrooms with supplies and refill the refreshment fridge.

I would then head back to the flight line to meet up with my pilot and run his wing for his launch. The tail dolly and wing wheel would then be returned to the hangar until the pilot has returned and landed. While waiting, I would fill the water cans with water and place them in the hangar ready for the next day's refill.

At this point, I took the opportunity to grab some lunch before starting any other chores. Garbage and recyclables were collected from around the club and sorted each day for garbage pickup, which came on Monday mornings.

I learned that this competition could not have happen without a lot of volunteers putting in long hours to get items done. The weather was generally good but came with some challenges. Some of the days were demanding on the pilots along with flying that many days in a row.

I would have to say the competition was very successful. Good weather, great flying and making new friends.

Marketing and Publicity Support

Pavan Kumar

This year I was privileged to join the SAC Board of Directors. Among the tangible benefits of clubs having SAC membership are this great magazine, and another is the support to encourage marketing and publicity by the clubs.

We have all heard how membership in the sport has been decreasing over the years. SAC shares our common goal to grow the sport in Canada. Marketing and Publicity support by SAC was started in 2012 with that goal in mind. The program was not widely subscribed

and most of the funds went to only a few clubs. Smaller clubs are not able to promote themselves enough to survive and grow. When funds are tight promotion is often a lower priority behind flying operations. So, a tweak to this program may help.

Our new model offers the same level of funding to any club regardless of size. This way a level opportunity and simple incentive for clubs to promote the sport exists in all regions of Canada. SAC will now contribute 80% of

Marketing and Promotion costs to any SAC club up to \$1000 from SAC. The 2019 deadline for submissions was Dec 1st 2019. The year for this program is defined as Dec 1st-Dec 1st year to year. This is to give time for Tanya (employee) in the COPA office to get the numbers together before year-end as she is on vacation near the end of December. Dec 1st-31st of a year will count towards the following year's support claim.

Insurance

Keith Hay, the Chair of the SAC Insurance Committee is stepping down. Keith will be missed for his great insurance knowledge, having been involved with the Insurance Committee since 2001.

The SAC Board of Directors is looking for a volunteer to take this position. Please contact Sylvain at sylvain.bourque1@gmail.com for more information.

Until a new SAC member fills this volun-

teer position, insurance questions can be sent directly to Grant Robinson, Managing Director of Jones Brown inc, our SAC insurance plan broker grobinson@jonesbrown.com

Keith will be available to hand over the reins to someone else along with the processes used for keeping the stats up to date and to answer any questions come up. Great information on the SAC insurance plan is available in the 2018 annual report.



ZAJ from SOSA Gliding Club will attend IVSM 2020

Bill Batesole, IVSM 2020 Chairman
2020 marks the 25th anniversary of the first IVSM, originally organized in 1995 by Jan Scott and Paul Schweizer. Prior IVSM gatherings have been highly successful, hosting a variety of international participants and sailplanes at our historic soaring location. We are poised for another successful gathering in 2020 with the

support of the Vintage Sailplane Association, the National Soaring Museum and the flight operations efforts of the Harris Hill Soaring Corporation (HHSC). The poster for IVSM 2020 features the MU-1 Midwest Utility glider. Chad Wille's award-winning restoration of this 1943 glider will be on the hill for the meet and I look forward to seeing it and watching it



fly. Ted Williams, a local artist famous for his aviation art, has created this fantastic poster. Ted recently presented his painting "Zani in the Clouds" which is on display next to the Zania sailplane at the NSM. The NSM website has a dedicated section for IVSM information, including a registration form and schedule of events.

...continued from BIG WAVE on page 9

ed to feel good, and the pilots started thinking about a record they had their eye on (and had declared with thoughts to try to beat). In 2017, a Canadian father and son pair traveled to Namibia and set a record for a 300km out and return flight in a 2-seat glider at 144 km/h.

Typically, wave soaring is characterized by stable, rapidly ascending air. Pilots adjust for wind, so the path of the airplane stays parallel to the mountain range over the ground as wave conditions only occur in fairly high winds. On this day, Environment Canada had issued a wind warning for Pincher Creek and Crowsnest Pass with anticipated winds of 140 km/h—golden.

On the second leg down, speed was up, lift was strong, and both pilots were engaged. They would trade responsibilities of flying and managing the altitude with the spoilers as both

17000' to less than 12500'. 12 minutes later they were still at 16000' flying 100 km/h faster than the last time they went through this area. More drag would be required, and the spoilers had to come out to comply with ATC's instructions.

They ended the 4th leg around the same point SW of Turner Valley - 633 km behind them. This time when they turned south the view looked nearly textbook. Less cloud below, beautiful lenticular monuments above some peaks, and the blinding sun warming the cockpit as sun moved toward the Pacific coast.

The guys weren't sure if there was enough day left for the record run, but it wouldn't hurt to cross the start line. Patrick provided a distance countdown to the start and they crossed the 1km start line in the sky at nearly 12500' with spoilers open and a 151 km leg to the US border and back to challenge the 300 km out and return record. They had a bit of a tailwind and

1,000 km flights haven't been easy to come by—one had never been flown in North America in December.

required constant attention. The margins were thin, consequences severe and coordination critical. Chester engaged Edmonton Centre to obtain clearance into controlled airspace as they flew south at great speed, while Patrick documented some of the epic imagery to Instagram. Now worried about 18000' airspace approaching Waterton Lakes with a goal of adding more southerly kilometres, the pilots pressed on into uncharacteristically rough air which was violently trying to catapult them into Class A airspace. Hitting the turbulence at high speed was very uncomfortable. Chester and Patrick discussed lowering the landing gear to add drag, but if they slowed down to soften the blows the spoilers wouldn't be enough to offset

were covering ground at a rate of between 150 and 300 km/h. When clearance was requested to barrel through the V300 airway into Lethbridge over Crowsnest Pass, the controller gave Class B clearance at Chester's discretion - they cheered!

The southern turnpoint was a tight squeeze leaving just 1km between it and the US border - not enough of a margin of error when seeking certainty and travelling so fast. The turn was made - 150 km left in the task, 190 km to home. Ground speed with a headwind indicated around 195 km/h, and just 1 hour until sunset - could be tight. But the 195 km/h ground speed didn't last, passing Crowsnest Pass speed increased and they crossed the finish line with an average speed on the 300 km task of 208 km/h - obliterating the previous record if it would stand, 40 km/h faster than any other two-place Canadian speed record set anywhere in the world.

1,000 km flights haven't been easy to come by—one had never been flown in North America in December. Chester wasn't sure if there was enough daylight or airspace to complete the distance. It was worth a shot and the pair kept flying north, making use of the Class B access provided a few hundred kilometers prior until they were informed that they had flown further north than the flight plan suggested and were encroaching the trans-mountain airway for Calgary and Vancouver commercial air traffic. No traffic was scheduled in the airway, so the glider pilots pressed on for a few more miles with clearance.

The flight computers in the air aren't always perfect in estimating the maximum distance over 6 legs of a flight in progress, so they added some buffer miles then turned to home

with lots of altitude and little sunlight. With a closing legal flying window and lots of height to lose, they raced back toward Black Diamond, exceeding 335 km/h over the ground along the way before having to once again rely on spoilers to lose altitude, slow down, and eventually put the gear down to land.

Over dinner in Okotoks, Chester and Patrick reflected on the flight with astonishment, dressed like hobo astronauts with snow pants, slippers and toques still on. They had covered 1024km at an average speed of 164 km/h, out of 7:57 of daylight, they flew 7:32 of it. The experience could hardly be described as anything other than epic. Chester, in no uncertain terms, has discovered an unriden wave. A wind pattern that accompanies world record temperature swings and intuitively creates an exploitable, predictable and incredibly powerful wave, orders of magnitude larger in scale than any wave made of liquid water. The flight started precariously at best, legs were cut short, clearances were not requested, and much of the flight was flown by someone who had never flown wave before, a flight limited by more than anything, humility and patience.

Flights like these are monuments, they represent a radical shift in soaring in Canada—self launching wave flying—and in the world vis a vis winter long distance, high altitude soaring flights. The 0.1 % of the soaring world converges on Namibia this time of year in search of epic flights in balmy conditions. Meanwhile, one man and his new friends are bundling up, exploring and exploiting a weather phenomenon that's been described by indigenous people for thousands of years. Today, the history of this system is told with GPS traces and live tracking transponder technologies. Beyond the technology, for the first time in history there are humans daring enough to explore this energy system, in extreme conditions, which can't be explicitly seen, but can certainly be felt, and cannot be denied.

Canada's *Chinook wave* is not an easy wave to ride. But during winter, the Canadian Rockies produce a monumental volume of exploitable energy for the daring, appropriately equipped, and researched pilot. The soaring community in Alberta specifically, and Canada generally, is lucky to have someone as passionate about exploring this phenomenon and willing to share with other daring glider pilots, as Chester is.

Canada's *Chinook wave* is not an easy wave to ride. But during winter, the Canadian Rockies produce a monumental volume of exploitable energy for the daring, appropriately equipped, and researched pilot.

the rising air. Instead, they turned early and headed north - 3 of 6 legs complete.

This time, moving north along the Rockies well west of Claresholm, Chester requested clearance to descend through Class B airspace and was provided 15 minutes to descend from



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